CME Article

Focus group discussion: a tool for health and medical research

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ABSTRACT

Focus group discussion is a research methodology in which a small group of participants gather to discuss a specified topic or an issue to generate data. The main characteristic of a focus group is the interaction between the moderator and the group, as well as the interaction between group members. The objective is to give the researcher an understanding of the participants' perspective on the topic in discussion. Focus groups are rapidly gaining popularity in health and medical research. This paper presents a general introduction of the use of focus groups as a research tool within the context of health research, with the intention of promoting its use among researchers in healthcare. A detailed methodology for the conduct of focus groups and analysis of focus group data are discussed. The potentials and limitations of this qualitative research technique are also highlighted.

Keywords: focus group discussion, healthcare research, medical research, qualitative research technique

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INTRODUCTION

Focus group discussion is a form of qualitative research method in which the interviewer (also called the moderator) asks research participants specific questions about a topic or an issue in a group discussion. Focus groups, unlike individual interviews, provide the added dimension of the interactions among members. In conducting the focus group, the emphasis should be placed on the interaction among group members. Instead of the moderator asking questions, the group members are encouraged to communicate with one another, exchanging ideas and comments on each other's experiences or points of view.[1]

PURPOSE

Focus group discussions are frequently used to obtain knowledge, perspectives and attitudes of people about issues, and seek explanations for behaviours in a way that would be less easily accessible in responses to direct questions, as in one-to-one interviews.[2,3] Group discussions help researchers tap into many different forms of communication that people use in day-to-day interaction, including jokes, anecdotes, teasing, and arguments. There is a tendency that during group discussions, attitudes and perceptions are developed through interaction with others in the groups.[2] In this sense, focus groups showed dimensions of understanding that often remain untapped or inaccessible by other forms of data collection.[3]

In the context of healthcare and medical research, focus groups are particularly apt due to the fact that most health-related conditions are created by social environments and made within the social context.[4] Thus, focus groups are a popular method for assessing public experience and understanding of illness,[5,6] identifying ideas concerning health-risk behaviours and danger,[6,7] and discovering the public's perception of causes of diseases.[8] Focus groups are also exceptionally effective for study of sensitive issues as well as issues that are difficult to access, such as acute mental distress, HIV/AIDS, or sexual health issues. They can also be used to gain insights into people's experiences of ill health and health services,[9,10] and explore the attitudes and needs of healthcare providers.[11]

In the literature, focus groups have been used to examine a wide range of health- and medical-related issues, including, for example:

- People's attitudes toward smoking and second-hand smoke;[12]
- Identification of commonly-used local terminology of symptoms or diseases;[13]
- Understanding of sexual abuse and associated factors;[14]
- Health needs of gays and lesbians;[15]
- Identification of psychosocial issues of patients.[16]

In relation to health services, focus groups have also been used to explore issues, such as: [3]

- Professional responses to changing management arrangements;[17]
- Developing ways to improve medical education and professional development.[18]

PROCEDURE

Conducting a focus group requires a high level of resources. The process involves formulating research questions, developing protocols, soliciting participants, arranging venues, facilitating focus groups, transcribing, analysing data, and reporting the findings.

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Formulate research questions

A clear and specific purpose statement is needed in order to develop the right questions and elicit the best information from focus group discussions. For example, "To find out how people define a healthy interpersonal relationship", "To identify the healthcare needs of children living with HIV/AIDS", or "To assess the impact of sexual harassment on individuals' lives at work and at home". Focus groups are better used to explore specific or narrowly-focused topics; otherwise, the data obtained is likely to be diffused, thus making data analysis a difficult task.[2,3]

Discussion guide

The purpose of the discussion guide in a focus group discussion is to provide a framework for the moderator to ask and probe questions. Using a discussion guide increases the comprehensiveness of data collection and makes data collection more efficient. The guide merely provides the moderator with topics and issues that are to be covered at some point during the group discussion. It is not the equivalent of a survey instrument, and is not to be followed in detail or even necessarily in order. The probing questions in the discussion guide is to stimulate further discussion, but not direct the discussion too much.[2]

The guide should proceed logically from one topic to another, and flow from the general to the specific. In a particular topic of discussion, the initial questions should be general, and as the discussion continues, the questions should become more specific and focused. Questions should be open-ended, simple, unbiased and non-threatening. Pre-testing the guide with several "mock" focus groups is essential. A well-designed focus group guide should allow the flexibility to pursue unanticipated yet relevant issues that may be generated during the discussion.

Recruiting participants

Generally, participants are recruited on the basis of their experience or involvement related to the research topic, and whose opinions the researchers are interested in hearing; for example, people with a particular disease, caretaker who is familiar with the patient, healthcare providers or government officials. In identifying the person to represent the group, it has been suggested that purposive sampling can be employed.[19] Participants can be recruited from hospitals, community centres, via advertising in the local newspaper or by writing letters to local organisations. Snowballing recruitment technique is also favourable, where initial contacts are asked to suggest people who would make interesting contributions to the discussion.[20]

Size of the group

Most focus groups consist of between six and 12 people. The group should not be so large as to preclude adequate participation by most members nor should it be so small that it fails to provide significant greater coverage than that of an individual interview.[21] Small groups are easily dominated by one or two members, or discussion may fall silent if too few people contribute. On the other hand, a large group lacks cohesion and may possibly break into side conversations, or participants may become frustrated if they have to wait for their turn to respond or get involved. However, the number of participants depends on the objective of the research; for example, smaller groups (four to six participants) are preferred when the participants have an intensive experience to share about the topic[2] or when the researcher wants participation from each subject.

Number of focus group sessions

The number of focus group sessions to be conducted will be mediated by factors such as the purpose and scale of the research, as well as the heterogeneity of the participants.[22] Often, a diverse range or participants is likely to necessitate a large number of sessions. Time, cost and availability of participants may also limit the number of sessions that can be held. Another guideline to the number of focus group sessions is to use the concept of saturation,[20] to continue conducting focus group sessions until it seems to reach a saturation point, where there is repetition of themes and no new information is shared.

Group composition

Group members in a focus group may be homogeneous along some dimensions, and heterogeneous along others. The decision is also largely determined by the purpose of the research. Some diversity in the composition of the group may enhance discussion. However, a very heterogeneous group can be threatening to participants and can inhibit disclosure. This is particularly evident in the discussions about sensitive issues, such as factors associated with child sexual abuse, the sharing of experience, and the sense of "everyone in the same boat" is particularly important to facilitate disclosure.[23]

On the other hand, homogeneity within the group may help to capitalise on the participants' shared experiences, as they are more likely to talk freely and share experiences if they feel they have a lot in common. It is particularly essential that some issues are better discussed by people of similar experiences or in the same situations, where their disclosures are encouraged in a nurturing environment. For example, in a discussion on sexual behaviours, younger and older women should participate in separate groups. Younger women may be reluctant to discuss sexual behaviours in the presence of the elderly.

The ideal is, therefore, a point of balance between the two extremes of heterogeneity and homogeneity.[24]

When it is desirable to obtain data from different groups, a general recommendation is to conduct a series of focus groups using homogenous participants.[24] For instance, if a study's aim is to explore public's view on HIV/AIDS, one might conduct separate focus groups with healthy people, people living with HIV and AIDS (PLHIV), and family members of PLHIV.

Setting

When setting up a focus group session, it is important to give careful consideration to the physical setting. The venue has to be comfortable and conducive to discussion. In selecting a focus group site, it is important to make it geographically convenient for the participants. Locations that are hard to find may cause delays and scheduling problems. Often the tape-recorder will pick up background noise; thus, the discussion room should be free from outside distractions. Participants should be arranged to sit around a table to enable them to see and hear one another.

Role of moderator and note-taker

Focus group discussions require a small team. Ideally, two people will be needed to conduct each focus group, one as the moderator and the other as the note-taker. Focus group moderators serve as discussion leaders. The moderator is responsible not only for guiding the participants through the discussion, but also for looking after the group dynamics to ensure all participants join in the discussion. When some participants dominate the discussion, the moderator should address questions to individuals who are reluctant to talk, in order to balance out participation.[25]

The note-taker will have to capture what was said and expressed, noting the tone of discussion, the order in which people spoke (by participant number or name), as well as phrases or statements made by each participant. It is extremely important for the note-taker to capture the information from the discussion as accurately as possible. Non-verbal expressions, such as facial expressions or hand movements, should also be noted. The note-taker should include a sketch of the seating arrangements, writing the name or the assigned number (Fig. 1). The notes will help greatly in transcribing the discussion to ensure the information is matched correctly.

Conduct discussion

The focus group should begin with a welcome. The moderator then introduces himself/herself and the note-taker, and gives a brief overview of the topic of discussion and objective of research, ground rules, and duration of discussion (usually 45–90 minutes). The moderator must also explain how the session is being recorded (in writing and/or tape-recorded), convey the expectation that everyone should contribute, that all contributions are valued and will remain confidential and anonymous, and why and who will have the access to the information.

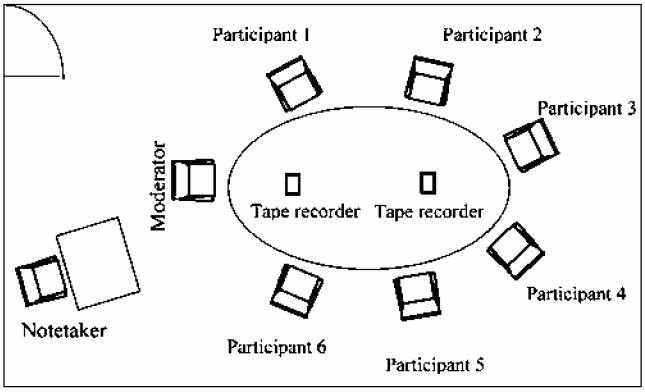

Fig. 1 Sketch of a focus group seating plan.

After the introduction, the moderator typically have group members introduce themselves. This can help to "break the ice" and build rapport among group members. To preserve confidentiality, the moderator may ask participants to introduce themselves by a pseudonym. The moderator must brief the participants to speak one at a time to avoid garbling the tape-recording. It is also essential for the moderator to assure participants that all their contributions are valuable and important, and to emphasise that there are no "correct" or "wrong" answers.

In the process of discussion, the moderator should use phrases such as, "Could you further elaborate what you have said?" "Can you tell me more?" or "Would you give me an example?" to obtain additional information. To encourage in-depth exploration of a particular issue, the moderator may provide some ideas by probing (refer to focus group guide prepared prior to the discussion). The following is the example of a core question and the probes:

Core question: "Does your hospital use men to be involved in Pap smear screening?"

Probes:

- What are the strategies used to get men involved?
- What were the responses received?
- What are the barriers of men involvement in the programme?

It is important for the moderator to summarise each time before moving from one topic to another; for example, "Before moving on to the next topic, let me see if I have understood your point-of-view correctly, that is, that men's involvement greatly enhances cervical cancer screening among women?" To curb a dominant participant, the following phrase is helpful: "There are a few people who wish to add to this point, we will come back to that idea if we have time", and to encourage a quiet participant: "Do you have anything you would like to add to on this

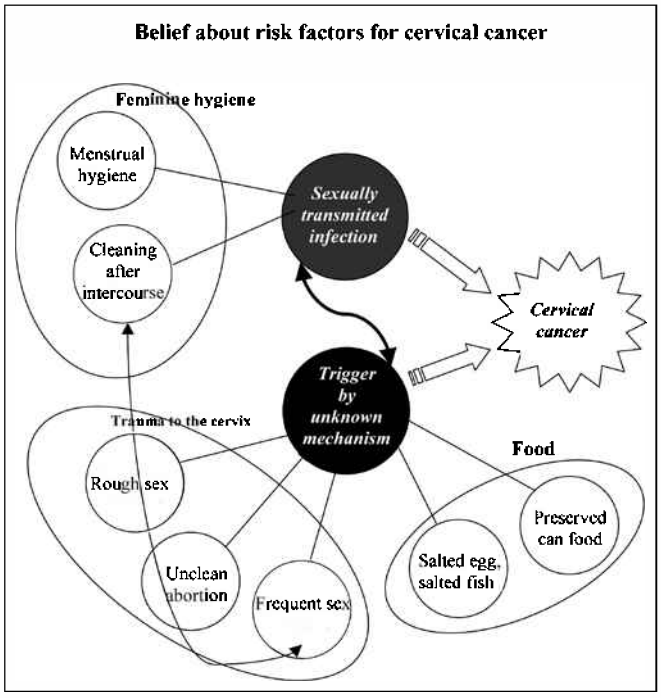

Fig. 2 Illustration of relationship and linkage between themes and categories.

issue?"

Moderators must be unbiased, respectful and able to listen. It is important that the moderator must not pass judgment, but should be a listener and should not be too actively involved in the discussion except to guide it and to keep it focused. Biased responses, such as "That's a very good point!", "Exactly!" or "Correct!" may introduce bias to participants' responses. At the end of the discussion, overall summarisation of important points should be made by the moderator to ensure correct interpretation as well as to allow the participants to elaborate their points further, if any have been are left out.

Analysing the data and reporting findings

Basically, analysing focus group data is similar to analysing other qualitative data. The actual words and behaviours of the participants are the basis to the answer of a research question.[26] The first step is to produce a verbatim transcript of the entire discussion. If the focus group has been recorded in a language different from the language in which the analysis takes place, the transcription must be translated. The complete transcript should then be compared with the handwritten notes taken by the note-taker to fill in the gaps.

Once the transcribing is done, the next step is coding the data in the transcripts, which involves sorting the data and assigning them to categories.[27] Coding can be done manually, by "cutting and pasting" and using of coloured pens to categorise data. More recently, a number of computer software packages (NUDIST, NVivo, Atlas/ti, [QRS Int, Melbourne, Australia], and Ethnograph [Qualis Research Associates, Colorado, USA]) have been developed to make the task relatively easier. Nevertheless, the researcher remains responsible for the interpretive process of the analysis.

Above all, the coding merely allows the researcher to establish a connection of the data to facilitate data analysis. The actual data analysis process can be classified into two levels. The basic level of analysis is merely a descriptive account of the data: explanation of what was said and no assumption is made. The second level of analysis is interpretative, which involves the comprehension of the themes (or perspectives), creates links between the themes, demonstrates how those themes emerged and generates a theory grounded in the data.[28,29] Using a model to illustrate the relationship and reciprocal influences of each of the categories and themes is encouraged (Fig. 2).[30]

In reporting focus group findings, the results should be presented in the context of the discussion within the groups, from a series of sessions rather than from a single focus group session. Researchers must consider the intensity of respondents' comments, as well as the specificity of probe responses.[31] Focus group results are often expressed in impressionistic terms, and should be replete with statements, such as "many patients mentioned...,", "several disagree..." and "almost none of the patients had ever..." Support findings by using direct quotes to illustrate the different ways responses were expressed, and these should be reported anonymously. For example: When asked to define their understanding about HIV, one participant noted, "I don't know exactly what HIV means, but it's something to do with soldiers protecting the body. It kills the soldiers of the body."[13]

Although it has been suggested that numerical terms is inappropriate in reporting results of focus groups,[29,31] it has been argued that some qualitative data can be dealt with in a quantitative way. If a theme repeatedly appears in the data, it is alright to quantify how often it appears. Simple statistical frequencies can be used to describe the important characteristic of the themes, although a generalisation is not possible. It should be noted that the sampling method and the number of members of a focus group[2] is usually not large enough to be a representative sample of a population. Thus, the data obtained is not necessarily representative of the general population, unlike in a survey.

POTENTIALS AND LIMITATIONS

Focus group discussions have several advantages. It is an excellent method for collecting qualitative data where participants are able to build upon one another's comments, stimulate thinking and discussion, thus generate ideas and breadth of discussion.[1,2] It can produce high quality data because the focus group moderator can respond to

questions, probe for clarification and solicit more detailed responses.[24] Focus groups may aid in conceptualisation and generate hypotheses, if the researcher is exploring a new area. Information told by group members can be turned into hypothetical-type of questions used in surveys (inductive method).[32]

However, focus groups have some limitations. 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.[1,3] 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.[24]

CONCLUSION

This article has outlined the main features of focus groups and examined methods for conducting a focus group discussion. The interactive element makes focus groups ideally suited to explore issues related to medical and health research. Nevertheless, if used appropriately and judiciously, focus groups may produce high quality data. Although they require careful and tedious planning, followed by intricate analyses, focus groups remain an invaluable research tool in health and medical perspectives.

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SINGAPORE MEDICAL COUNCIL CATEGORY 3B CME PROGRAMME

Multiple Choice Questions (Code SMJ 20083A)

	True	False
Question 1. How have focus groups been used in health research?		
(a) To develop a testable hypothesis.	☐	☐
(b) To assess the effectiveness of health promotion programmes.	☐	☐
(c) To test the efficacy of drugs.	☐	☐
(d) To study the needs of marginalised groups.	☐	☐
Question 2. State whether the following statements are true or false:		
(a) The moderator's role is to generate as many different views as possible from the participants.	☐	☐
(b) The moderator need not have adequate knowledge about the topic.	☐	☐
(c) In an ideal focus group, all the participants are very comfortable with each other, but none of them know each other.	☐	☐
(d) Heterogeneity is the key to maximising disclosure among focus group participants.	☐	☐
Question 3. When is it important for the focus group moderator to involve himself/herself during discussion?		
(a) When the participants begin to discuss a completely irrelevant topic.	☐	☐
(b) When the participants become passionate about the subject.	☐	☐
(c) When the moderator wants to share his/her own experiences and perceptions.	☐	☐
(d) When the moderator disagrees with a wrong view made by participants.	☐	☐
Question 4. Focus group sessions should end when:		
(a) The researcher is able to present information and draw linkage of the themes or views.	☐	☐
(b) Groups eventually give similar views.	☐	☐
(c) When issues discussed contradict each other, and linkage or pattern of themes fail to be identified.	☐	☐
(d) No more new ideas emerge.	☐	☐
Question 5. The following are limitations of a focus group:		
(a) The possibility for the group to conform to one dominant opinion.	☐	☐
(b) The focus group does not allow for large volumes of data to be collected.	☐	☐
(c) The findings cannot be projected onto the entire population.	☐	☐
(d) Unprofessional moderating can lead to inaccurate conclusions.	☐	☐

Doctor's particulars:

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SUBMISSION INSTRUCTIONS:
(1) Log on at the SMJ website: http://www.sma.org.sg/cme/smj and select the appropriate set of questions. (2) Select your answers and provide your name, email address and MCR number. Click on "Submit answers" to submit.

RESULTS:
(1) Answers will be published in the SMJ May 2008 issue. (2) The MCR numbers of successful candidates will be posted online at www.sma.org.sg/cme/smj by 15 May 2008. (3) All online submissions will receive an automatic email acknowledgment. (4) Passing mark is 60%. No mark will be deducted for incorrect answers. (5) The SMJ editorial office will submit the list of successful candidates to the Singapore Medical Council.

Deadline for submission: (March 2008 SMJ 3B CME programme): 12 noon, 25 April 2008.