

## Execution and Challenges of Using Focus Group Discussions as a Research Tool for Secondary School Students

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### ABSTRACT

**Introduction:** Focus group discussions (FGD) are a valuable method to obtain information and explore attitudes, feelings and views on a subject of research, especially when existing knowledge of the subject is inadequate. We used FGD as a tool to develop a cardiovascular disease (CVD) behavioural intervention programme for secondary school students. In this paper, we describe the planning and execution of the FGD and the various challenges faced. We believe that FGD will lead to development of a suitable and relevant intervention programme for our target group. **Methods:** Four out of nine districts in Selangor state were selected at random using the table of random numbers. In each of the selected districts, three schools were selected at random from the total list of schools. Participants to the FGD included students, teachers, parents and canteen operators who were then selected from the schools based on a voluntary basis of participation. Twenty-one facilitators and 20 scribes were trained to conduct the FGD. Questions for the FGD were semi-structured around six themes: CVD and its risk factors; diet; physical activity; self-image; smoking; and miscellaneous. Training for facilitators was provided using a Facilitator's Guide. **Results:** A total of 33 focus group discussions were conducted involving 297 participants from 11 schools. Discussions were scribed, audio taped and transcribed. Incentives for transport, certificates of participation and favourable venue were important motivating factors for participation. **Conclusion:** Detailed planning is important for the successful implementation of a FGD. An adequately planned and well-managed FGD can serve as an important tool to explore views of a research target population and develop a CVD behavioural intervention programme.

**Keywords:** Behavioural intervention, cardiovascular disease, focus group discussion, schools, Selangor

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### INTRODUCTION

Focus group discussions (FGD) are structured discussions with a group of individuals in a controlled setting. It is a valuable method to obtain information and explore attitudes, feelings and views on the subject of research. These discussions are particularly effective when the existing knowledge of a subject is inadequate.<sup>[1]</sup> FGD have been employed for eliciting information on various health programmes including heart disease prevention for

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low-income women<sup>[2]</sup>, menopause and midlife health risks of black women<sup>[3]</sup>, abortion amongst Nigerians<sup>[4]</sup>, prevention and care amongst HIV-infected African-American men<sup>[5]</sup>, tobacco cessation in Alaskan adolescents<sup>[6]</sup> and human papilloma virus vaccination amongst adolescent girls in Hong Kong.<sup>[7]</sup> In this article, the planning of a FGD to develop a cardiovascular disease (CVD) intervention programme in secondary school students is described.

Cardiovascular disease (CVD) is responsible for 30% of all deaths worldwide.<sup>[8,9]</sup> In Malaysia, CVD has been the leading cause of death for the last 40 years. Children and adolescents with a CVD risk factor profile (overweight, physically inactive) have an increased risk of the disease in adulthood.<sup>[10]</sup> In a study of 34 North American and European countries, 77% of the countries examined had 10% overweight youths and 20% obese youths.<sup>[11]</sup> CVD risk factors are also evident in Malaysian adolescents. In a national study of 16,440 subjects, prevalence of hypertension for individuals  $\geq 15$  years was 27.8%.<sup>[12]</sup> In a cross-sectional study of 3333 secondary school children in the Klang district, 19.6% were obese, 8.2% overweight and 11.4% at risk of being overweight.<sup>[13]</sup> A school-based pilot project is being carried out to reduce the prevalence of CVD risk factors in Malaysian adolescents. Towards this end, a cardiovascular disease (CVD) behavioural intervention programme for secondary school students is being implemented. School-based interventions are ideal for population-based interventions in students as they spend almost half of their waking hours in school and take 1-2 meals there daily.<sup>[14]</sup>

The FGD approach was employed as a tool to identify and determine suitable intervention strategies for the development of a behavioural intervention programme. For the effective conduct of an FGD, the characteristics of the participants are of utmost importance. Discussions with students, parents and school members were held to conduct a formative evaluation of their needs. The discussions were crucial to ensure a relevant intervention was tailored with the target population in mind. In this way, compliance to the intervention programme may be better. Furthermore, the focus group discussion approach generates a sense of empowerment amongst the participants,<sup>[1,2]</sup> which is particularly pertinent for our target group of adolescents. This article describes details of the planning and execution of the FGD, including recruiting participants, developing FGD questions, collecting and analysing data. The outcomes of the focus group discussion are discussed in a separate article.

## METHODS

### *Participants*

Written permission was obtained from the Ministry of Education to carry out this study in the state of Selangor. Four of the nine districts were selected at random using the table of random numbers. In each of the selected districts, three schools were selected at random from the total list of schools. Participants included Forms 1, 2 and 4 students, teachers, parents and school canteen operators. The study protocol was approved by the Ethics Committee, Faculty of Medicine and Health Sciences Universiti Putra Malaysia and the Ministry of Education.

### *Recruiting Participants*

Phone calls and personal visits were made to meet each of the selected school's Principal or Student Affairs Vice Principal to obtain consent and cooperation for the project. Some schools preferred the researchers to first meet school counsellors to discuss the project. They were briefed on the project outline and given an information sheet outlining the research project, its study design and the number of participants required. The recruitment of students, teachers, parents and canteen providers was organised by the school. Within schools, written parental consent was required for the individual students to participate. All participants signed an informed consent form.

### *Focus Group Questions*

Questions for the focus group discussion were semi-structured around six themes: CVD and its risk factors; diet; physical activity; self-image; smoking; and miscellaneous. Facilitator's Guides were provided for all facilitators and contained details of the following: (i) introduction of the programme; (ii) purpose of the focus groups; (iii) focus group themes; (iv) participants of the focus groups; (v) role of the facilitator; (vi) tips for the facilitator; (vii) pre-focus group preparation; (viii) focus group discussion schedule; (ix) scripted introduction; and (x) focus group questions. An expert panel vetted the Facilitator's Guide for content validity. All questions were scripted in the Malay language. The various approaches used for the focus group questions included prompting with pictures, discussion-type topics, and questions. Supplementary questionnaires were also distributed to collect demographic data, assess knowledge on CVD risk factors<sup>[15,16]</sup> and to determine food intake at school canteens and home. All questionnaires underwent translation and back-translation.

### *Facilitator Training*

A mock FGD was conducted as a training-of-trainers exercise. Students and staff of the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia who were interested in becoming facilitators for the project were invited to attend the mock session. Mock focus group participants (n=8) were recruited from faculty support staff not directly involved in this research project. A member of the research team with experience in facilitating focus group discussions facilitated the session. The participants were subjected to the same questions and questionnaires to be used for the actual focus group discussion sessions. Potential facilitators observed and took notes during the session. The session was also videotaped for use in further training.

### *Setting*

FGD sessions were carried out on two separate Saturdays at the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia. The discussions were carried out in tutorial rooms. The various challenges faced by the researchers throughout planning of the FGD are listed in Table 1 along with the various measures to overcome them.

**Table 1.** Various issues that arose during planning of the FGD

Issue	Solutions
Transportation	<ul style="list-style-type: none"> <li>a. Schools were asked to make bus arrangements for transportation. Transportation fees were covered by the project.</li> <li>b. Maps to the venue were faxed to the schools.</li> </ul>
Convincing parents and school canteen operators to attend	<ul style="list-style-type: none"> <li>a. Parents with children already attending the focus groups were encouraged to come along.</li> <li>b. Parents of the Parents-Teachers Association (PTA) were approached to take part.</li> <li>c. School canteen operators were encouraged to use the transportation booked by the school to avoid any personal expenditure.</li> </ul>
Conducting focus groups on a weekend	<ul style="list-style-type: none"> <li>a. Schools have activities on most weekends. Participation in the focus group was recorded as a school activity.</li> <li>b. Facilitators for the focus groups were given time-in-lieu.</li> </ul>

### *Focus Group Discussion - Implementation*

On the day of the FGD, participants were greeted by the researchers and registered. Each participant was given a welcome pack that included the following items: a bottle of mineral water, sweets, a pen and a notepad. They were also given certificates in appreciation of their involvement. The mobile phone numbers of two researchers were given to the facilitators and scribes in case of any technical malfunction, e.g. tape recorder not working, insufficient forms and handouts.

Participants were ushered into tutorial rooms and each group was assigned a facilitator and scribe. Trained facilitators conducted the focus groups and a scribe took field notes and audio-taped the sessions. The homogenous groups (same age group/background) for each FGD session were (i) Form 1 students, (ii) Form 2 students, (iii) Form 4 students, (iv) teachers, (v) parents and (vi) canteen providers. For the student groups, each group consisted of students from the same Form and school. There were a maximum of 12 participants per FGD group. Light refreshments and lunch were provided in a common area for all participants.

### *Data Analysis*

All audiotapes, transcripts and questionnaires were collected following the focus group discussion. Questionnaires were analysed with SPSS version 15.

## **RESULTS**

### *Participants*

Eleven of the 12 schools selected agreed to participate in the FGD, giving a response rate of 91.7%. The school that did not consent cited reasons of being overburdened with numerous extra curricular activities and awareness campaigns as their major reason for not participating. As compliance and receptiveness is pivotal to intervention programmes, the researchers did not pressure the school into participation.

**Table 2.** Distribution of respondents by category

Status	Frequency	Percent
Students	239	80.5
Teachers	39	13.1
Parents	11	3.7
Canteen operators	8	2.7
Total	297	100.0

**Table 3.** Characteristics of respondents (students) by gender, ethnicity and household income

Characteristics of respondents	Frequency	Percentage
<i>Gender</i>		
Male	101	42.3
Female	138	57.7
<i>Ethnicity</i>		
Malay	191	63.4
Chinese	19	34.3
Indian	29	2.3
<i>Household income</i>		
<500	14	5.9
500-999	43	18.0
1000-1499	45	18.8
1500-1999	17	7.1
2000-2499	13	5.4
2500-2999	13	5.4
3000- 4499	17	7.1
4500 & above	16	6.7
Not available	61	25.5

Table 2 shows the distribution of respondents by category. The table shows that of the total of 297 participants, the majority (80.5%) were students, followed by teachers (13.1%), parents (3.7%) and school canteen operators (2.7%).

The majority of the students were female (57.7%; Table 3). In terms of ethnicity, Malay students represented the largest percentage (63.4%), followed by Chinese (34.3%) and Indians (2.3%). Monthly household income ranged from less than RM500 (7.9%) to more than RM4500 (9%) (median income = RM2750 - RM3749).

### *Focus Group Discussion*

A total of 33 FGD were organised over two separate Saturdays. Flow of the discussion and wording of the Facilitator's Guide was improved following the mock FGD. Other lessons learnt during the mock session include (i) some pictures used for the discussion were not self-explanatory and required captions; (ii) the term 'cardiovascular disease' was not understood by participants and was replaced with 'heart disease'.

It is important to consider whether having a facilitator of a similar age group as the participants is necessary. In our study, facilitators for student groups were undergraduate students of the faculty, whereas lecturers were trained to be facilitators for the adult groups. The focus groups were conducted for 4.5 hours, with sessions running for no longer than 2 hours before a 0.5-hour break. During the break, participants were encouraged to explore the faculty and many took advantage of this, which helped create a relaxed and hospitable atmosphere. Groups were also limited to 10-12 participants to ensure that all had an opportunity to discuss their perspectives.

Participants were seated in a round-robin style seating with the facilitator and scribe facing them. The facilitator and scribe introduced themselves and asked participants to follow suit. The facilitator then reviewed the purpose of the focus group discussion. Participants were reminded that the scribe would be audio taping the session and taking notes. Confidentiality and anonymity were discussed and participants were encouraged to ask questions on these issues. Assurance from the researchers allowed participants to discuss their opinions more freely.<sup>[1]</sup> Facilitators also spent time to describe the mode of operation of the discussion; including importance of participation from all members and to express only honest and not idealistic opinions. They were assured that there were no right or wrong answers and no one will be judged on their views. It is the opinion of the authors that this initial setting-the-scene exercise is pivotal to ensure smooth running of the focus group discussion as it encourages the free-flow of discussion without inhibitions. The facilitator proceeded to distribute a profile questionnaire to gather demographic information. Participants were assured that data collected from this questionnaire would be used for descriptive purposes only.

Facilitators then began the discussion based on the Facilitator's Guide. Participants were encouraged to speak up to ensure the audiotaping was clear. Facilitators probed further when comments and answers from participants were ambiguous or lacked detail. Participants who spoke up less were encouraged to give their opinions to ensure there was an even level of participation within each discussion group. The scribe noted non-verbal communication (e.g., shrugging, nodding) that would otherwise go unrecorded.

### *Focus Group Themes*

There were six themes for the FGD as outlined in the Facilitator's Guide. For each theme, FGD questions were designed for specific motives. These are outlined in Table 4.

At the end of the discussion, participants were thanked for their time and commitment to the focus group discussion. The facilitator summarised how data collected from the focus group discussion would be used to design an intervention programme for secondary

**Table 4.** Focus group themes

Theme	Details
CVD risk	<ul style="list-style-type: none"> <li>▪ To determine current knowledge and perceptions on CVD.</li> <li>▪ Are participants aware of CVD risk factors?</li> <li>▪ Do participants realise that unhealthy living habits during adolescence can lead to CVD later in life?</li> </ul>
Diet	<ul style="list-style-type: none"> <li>▪ What are participants' perceptions and practices regarding healthy food?</li> <li>▪ What are the barriers to preparing/eating healthy meals?</li> </ul>
Physical activity	<ul style="list-style-type: none"> <li>▪ Attitudes and practices towards physical activities.</li> <li>▪ Barriers to implementation.</li> <li>▪ Determination of motivational factors.</li> </ul>
Smoking	<ul style="list-style-type: none"> <li>▪ Attitudes and perceptions on smoking.</li> </ul>
Self-image	<ul style="list-style-type: none"> <li>▪ Determination of motivational factors.</li> </ul>
Miscellaneous	<ul style="list-style-type: none"> <li>▪ Naming the intervention programme.</li> <li>▪ Determination of activities that can encourage ownership of the intervention programme by the participants.</li> </ul>

school students. Participants were also given the contact details of the research leader, including an e-mail address, where they could continue to share their thoughts and opinions.

#### *Data Analysis*

Audiotapes were listened through while comparing with transcripts to get a sense of each discussion session. They were then listened to a second time while jotting down the various responses to questions and prompts. Similar concepts were grouped together.

## **DISCUSSION**

Planning is essential to conduct a successful FGD.<sup>[2]</sup> Issues to consider include accessibility and availability of participants, recruitment of participants, homogeneity of the group and developing the FGD guide. As the objective of the intervention programme was to improve CVD-related healthy behaviours in secondary school students, it was important to speak to all relevant individuals who could provide insight on the issue. These included the students themselves, teachers, parents and school canteen operators. These individual groups of people would almost certainly have very different perspectives, and it was important to consider all their opinions before designing an intervention programme. Careful consideration was given to an ideal group setting to allow for easier exchange of opinions. Focus groups were as homogenous as possible to ensure participants were able to discuss their thoughts freely,<sup>[17]</sup> without apprehension of causing disagreement between members.

A contact person, selected by each school, liaised with the researchers to aid in recruiting participants. Repeated phone calls were made to discuss with them the FGD and its logistics. This communication was important as participants had to be clear about the details of the FGD, and this subsequently encouraged participation. A week before the FGD, the schools faxed us name lists of participants. Although we requested the school authorities for random sampling of student participants, ultimately recruitment of participants was left entirely to the school's discretion. Most schools were reluctant to commit to random sampling, as they were concerned that randomly selected students may not show up for the FGD. This is true of FGD, as there has to be an element of self-selection due to the voluntary basis of participation.<sup>[17]</sup> Nonetheless, we requested that student participants include all races and gender.

It is important to choose a time and venue that is convenient for participants.<sup>[17]</sup> The FGD were organised over two separate days and on weekends, when the faculty is relatively quiet and there are no classes in session. Initially, the FGD were to be held in each district, whereby a school will be selected as the 'host' and all participants within a district were to meet at the hosting school for a focus group discussion. This was suggested, as we were concerned that parents and school canteen operators may not be willing to travel to an unfamiliar venue for the focus groups. However, through discussions with the school officials it became clear that it would be more suitable to conduct the focus groups in our faculty. Reasons given by the school principals included (i) lack of rooms to conduct discussions as many school activities were conducted during weekends; (ii) students and teachers enjoy day trips; (iii) a university setting may set a good example for aspiring students. Furthermore, it would be ideal to have the focus groups in a neutral setting<sup>[1,2]</sup> and participants from other schools may not feel as comfortable as participants from the 'host' school. During the FGD, participants were very excited to be in a university setting and during breaks, they were allowed to walk the grounds and visit the library.

During the FGD, some participants were concerned that the sessions would be audio-taped. This was also an issue that was raised during the mock focus group discussion we had conducted previously. Facilitators explained that sessions were audio-taped to ensure none of the conversations were taken out of context and participants were ensured of anonymity at all times. Discussions were encouraged with the use of pictures and handouts and were usually animated.

Valuable lessons were learnt from the first focus group discussion day, including feedback from the participants' themselves; these were incorporated and improved upon during the second session. From the first session, we learnt that it was important to provide breakfast for participants. The sessions began at 8.30am and we assumed that participants would have had breakfast at home; therefore refreshments were only served at 10am. However, for the second session we decided to include a malted drink and biscuits into their welcome pack.

Encouraging participation to the FGD was our utmost priority. We were concerned that as this discussion involved not only secondary school students but also teachers, parents and canteen school operators, there had to be a suitable strategy to bring these people together for a common cause. From discussions with principals, teachers and counsellors from all the schools involved, we realised that participants were very receptive to the FGD

and willing to participate especially when transportation to the venue was organised for them. We requested each school to organise the necessary transportation with cost of transportation provided by the research funding. This, we believe, showed the school officials that we were indeed serious about this programme and were willing to support the schools where possible. School officials also requested for certificates of participation, which we gladly complied to. This was very important to show participants that we appreciated their commitment. Certificates can also be used to demonstrate the student's activities for the academic year.

The information gathered from the focus group discussions will help design a targeted and relevant CVD behavioural intervention programme for secondary school students. Although studies demonstrate the varying effectiveness of FGD, focus groups can serve as a highly insightful method to gather information. We believe that the organisation of the focus group discussion described in this paper may serve as a model for similar intervention studies in schools.

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