Virtual Focus Group Discussions: exploring new frontiers in qualitative methods

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ABSTRACT *The COVID-19 pandemic triggered reactive innovation using digital technology in research methods. This paper presents experiences from the methodological component of conducting virtual focus group discussions among the highly dispersed island nation of the Maldives during the COVID-19 pandemic. The sample consisted of 99 participants divided among 28 virtual focus groups. The most populated regions of the Maldives i.e., Male', Addu, Laamu, and Kulhuduffushi were selected. Additionally, two smaller islands with a population less than 400 people, namely, Rasgatheem and Madifushi, were also selected. The focus groups were determined by adopting a life cycle approach representing groups from childhood, youth, working age group, and senior citizens. To ensure inclusivity, three separate groups of men, women, and people with disabilities were also selected. The data collected was then subjected to thematic analysis. The findings indicated that with open discussions and engagement, facilitators were able to draw out shy participants and manage dominant participants in the Virtual Focus Group Discussion (VFGD). The caveat, however, is the need for internet connectivity and digital literacy of participants. The findings provided an in-depth understanding of the research problem. VFGD can become a mainstream data collection technique in the social qualitative inquiry especially with difficult-to-access and remote populations.*

Keywords: COVID-19, Virtual Focus Group Discussion, online platforms, Google Meet, Social distancing, Qualitative methods

Conducting a qualitative inquiry using focus group discussions (FGDs) is taxing even during normal circumstances. It is interesting to observe how these challenges are amplified when the prospects of physical access to participants becomes almost impossible. This was the exact scenario when the various social distancing and movement restriction measures were put in place amidst the coronavirus disease (COVID-19) pandemic in the Maldives, which restricted travel to different islands and limited the number of people who could get together at one point of time (Health Protection Agency, 2021). Prior to the COVID-19 pandemic, some researchers have reported experiences of using web-based interactions for conducting interviews as well as conducting online meetings (Archibald et al., 2019; Hewson, 2008; Horrell et al., 2015). These researchers mainly focused on the platform features as opposed to the validity of the data collected through the online mediums (Lobe & Hoffman, 2020).

The data collection for the research project on socio-economic grievances, social tensions and conflict in the Maldives using focus group discussions, started during mid-March 2021. At this time, Maldives was in the state of public health emergency

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measures introduced from the early 2020 that was extended on a monthly basis, with social distancing rules and restrictions on public gatherings in the Greater Male' Region (Health Protection Agency, 2021). The Health Protection Agency in the Maldives further instituted country wide restrictive measures including mandatory use of masks in all inhabited islands and curfew was declared from 2300 hours until 0430 hours (local time) in the Greater Male' Region - Capital city where the maximum number of COVID-19 cases were being recorded (13,000+ cases and raising). On 8th March 2021, the ban on the operation of vehicles was limited to between 1800 hours and 0430 hours (local time) and travel from the capital city to other islands was limited to essential movements only and required special permission (Health Protection Agency, 2021).

Amidst all these restrictions in place, time for data collection was running out and the research team had to consider alternative methods to collect data in these difficult circumstances. In order to successfully work around the social measures that were imposed to contain the pandemic, technological advancements were adopted for collecting qualitative data through Virtual Focus Group Discussions (VFGDs). Drawing lessons from this experience, this paper explores the steps for conducting VFGDs and examines how the recruitment and the training process differed from in-person focus groups. The effectiveness of VFGDs in providing answers to the research questions are discussed along with its limitations and strengths.

Research Context

The research was conducted in the Republic of Maldives. The Maldives archipelago scattered across the Indian Ocean consists of 1,192 islands, out of which only 186 islands are inhabited and separated into a series of 26 naturally occurring atolls (NBS, 2020). Nature based luxury tourism and fishing are the main sources of economic growth. The country enjoys a high middle-income status with a per capita gross domestic product (GDP) of more than 10,000 USD with a population of 379,270 (NBS, 2020). The Maldives saw a steadily growing economy up to the year 2019 with high-end tourism bringing exceptional growth to the Maldivian Gross Domestic Product (GDP). However, the GDP growth declined significantly in 2020 due to the severe impact of COVID-19 pandemic on tourist arrivals. The halt in tourist arrivals came from the Maldivian government's decision to impose travel restrictions with the temporary closure of the international border in March 2020 (World Bank, 2020).

As for poverty and inequality, the Multidimensional Poverty Index (MPI) reveals that, for Maldives, more people were living in multidimensional poverty (28%) out of which most people (87%) were living in the atolls, while only a few (13%) lived in the capital island of Male' (National Bureau of Statistics, Oxford Poverty and Human Development Initiative & UNICEF Maldives, 2020).

Due to the structure of island nation, isolation and insularity, major challenges were faced by people living in highly dispersed island populations separated by vast oceans between islands (Royle, 2001). The disparities across the Maldivian islands are felt on all sides affecting access to different services and employment opportunities for island populations (Manik & Di Biase, 2020). Life in the capital city has presented the inhabitants and residents in Male', with its own unique set

of disadvantages relating to lack of opportunities, inadequate housing facilities, domestic violence, and mental health issues. Given this setting, very often group sentiments are expressed by individuals migrating from the islands as well as those individuals belonging to the city. Maldives, with its unique set of disadvantages, are facing a vicious cycle of inequality, frustration and discontent across the country as well as age groups (United Nations, 2020). These grievances are expressed through commenting on local news, and via social media platforms such as Facebook and Twitter.

Maldives leveraging digital technologies in times of COVID -19 pandemic

The Maldives Development Update (MDU) has emphasized how the Maldives can leverage digital technologies to achieve a more inclusive and resilient recovery from the COVID-19 pandemic (World Bank, 2021). Internet access and use have expanded dramatically over the past decade in the Maldives. For instance, in 2019, it was found that 60 percent of households in the Maldives used the internet, which is 55 percent higher usage than any other South Asian country and slightly higher than predicted for Maldives (World Bank, 2021). Maldives is also ahead when it comes to mobile phone usage, with unique mobile subscribers making up 57 percent of the population. Mobile broadband services are faster and more affordable than fixed broadband services in the Maldives, hence, it is reported that on average, users pay about USD 15 for a monthly data allowance of 1.5 GB, or 2 percent of average monthly per capita income. The quality of the coverage of internet as well as mobile internet connection speed is also relatively good with coverage at 100 percent of the country for 2G, 3G, and 4G wireless technologies as reported by the service provider Dhiraagu (2020). About 73 percent of all mobile data connections occur via 3G and 4G, and the average speed of mobile broadband is 44.3 Mbit/s.65. It is also vital to reference that Maldives is the only country in South Asia to have installed advanced 5G technology launching it commercially in December 2020 (Dhiraagu, 2020). The local internet service providers (ISP's) and operators responded to the Maldivian President's call to offer discounts on Internet packages during the COVID-19 pandemic. In mid-March 2020, local operator Dhiraagu offered a 25 percent discount for small and medium-sized enterprises and guesthouses on select business broadband packages, provided 5GB of data for free to students and teachers for a month, and doubled the amount of data allowances offered with add-ons (President's Office, 2020). Additionally, the government of Maldives also established several digital public platforms to improve access to services for citizens and residents. Thus, the COVID-19 pandemic has demonstrated the potential and the capacity to use digital technologies to improve access to public services in the Maldives. This in turn provided strong justification as to why virtual method of conducting the FGDs for the study was adopted.

The paper, thus, attempts to answer the research question: what are the steps and processes for participant recruitment, facilitator training, and conducting a VFGD. It is anticipated that the knowledge that is produced through this experience of conducting VFGD will aid researchers while conducting focus groups virtually.

Innovating Focus Group Discussions

FGDs are widely used as a method of social inquiry to gain in-depth knowledge and understanding of the deeply rooted issues that confront many societies. FGDs usually adopts a purposive sampling approach as opposed to a statistically representative sample of a broader population (Cornwall & Jewkes, 1995). Usually, the number of participants for a FGD averages for about five participants per group and can last between 40 minutes to two hours depending on the number of participants and the topic of discussion (Bennett et al., 2017; Khadka et al., 2013; Paloniemi et al., 2012). An in-person FGD involves physically assembling a group of individuals to discuss a specific topic, aiming to draw from the complex personal experiences, beliefs, perceptions and attitudes of the participants through a moderated interaction by the researcher (Israel et al., 1998; Simpson & Wood, 2004; Cornwall & Jewkes, 1995; Morgan, 1996). Sociologists and psychologists have used the method since the 1940s (e.g., Merton & Kendall, 1946; Merton, Fiske & Kendall 1956).

However, with the social distancing measures and movement restrictions in place, conducting the traditional in-person focus group discussion became near impossible, challenging the research team to explore the prospects of conducting the discussions on a virtual platform. This is different from the traditional in-person FGDs, in the sense that the VFGDs adopts the internet-based platform where the researcher and the participants are not physically present in one location. The meeting takes place in a virtual environment through the internet, using conference calling, chat rooms or other online means (Kamberelis & Dimitriadis, 2005).

Although the VFGD transcends problems that arise in conducting in-person FGDs, Edmunds (1999) notes that such as cutting on costs incurred for travel, having the meeting from the comfort of your own homes or comfortable spaces, these are not without its disadvantages too. They are only accessible to participants with access to a good internet connection as well as a device for connecting such as a phone, headphone, speakers as well as webcams. It has also been reported that having discussions through the internet are prone to technological problems such as poor or loss of connectivity and failure to capture non-verbal information (Nyumba et al., 2018).

Methods

This research included data collection through VFGDs to identify the socio-economic grievances of the Maldivians from different islands. A total of 26 virtual focus groups discussions (n=99) were conducted to explore the lived realities of socio-economic grievances and social tensions across the country.

The sociology of age has traditionally been distinguished between four basic stages in the life cycle of individuals: childhood, youth, adulthood, and old age (Neugarten, 1973). The participants were selected through adopting the 'life cycle approach' including people with disabilities and the adult groups disaggregated by sex so that the unique set of experiences of different social groups could be included and explored. As willingness to fully engage in a group discussion is instrumental in generating useful data, it has been suggested that such engagement can be achieved more readily within a homogenous group (Nyumba et al., 2018). The specific questions for the FGDs were: what are the grievances of the group;

what are the narratives and rhetoric used; what are the effects of these grievances on their lives; how long have they been facing these grievances; how do they express these grievances; and what do they expect the government or institutions to do to address these grievances?

Establishing validity and reliability of a VFGD: The Pilot

Prior to the rollout of VFGDs, it was important to explore the reliability and validity of conducting VFGDs by looking into the key elements that ensure quality of an FGD. Prior to the rollout of the VFGDs, a pilot was conducted which provided an opportunity to assess the reliability and validity of the data collected and make necessary operational changes. Piloting allows us, firstly, to ensure the data collection process is valid in terms of participant engagement, allowing participants to be at ease, managing instances of poor connectivity, and assuring the level of comfort and openness in answering the questions asked. Secondly, piloting allows us to validate the instrument, make necessary changes to the instruments to ensure that we are asking appropriate questions that are easy to understand for the participants and are not confused by them. Thirdly, it allows us to obtain a sense of the depth of information we are aiming to achieve as research outcomes. Finally, it allows us to identify the bottlenecks in the process of data collection including obtaining informed consent, recordings, connectivity issues, transcribing and translations and make necessary adjustments in the roll out.

Participants were selected through purposive sampling as planned for the study, through the social network of researchers. Purposive sampling is widely recommended since FGDs relies on the ability and capacity of participants to provide relevant information (Morgan, 1988). A group of people (n=6) using life cycle stages was used and one from each of these segments was invited: youth, women, adults, parents, persons with disability, and elderly citizens. Each participant was contacted first by phone and then through email. Once informed consents were obtained from participants, a virtual meeting link for Google Meet platform was shared with the participants. Two of the researchers were always present during the VFGD, one acting as the facilitator and one the observer. The audio was recorded after obtaining the oral consent from each participant. Then, the audio recording of the VFGDs was transcribed and translated. The transcribed and translated details were shared with the participants for determining accuracy of the data captured. For the analysis, content analysis was done using the translated data. The themes on common social grievances, ways of expression, effect on life and expectations to address them were then identified.

The pilot guaranteed us with the fulfillment of the objectives of reliability of conducting FGDs through virtual platforms, content validity of the research instrument used for the FGDs, feasibility and reliability of transcription and translation, time for completing the discussion and identifying periods of participant fatigue. In addition, the pilot allowed us to get a sense of research outputs with regard to more detailed understanding of the research problem. The pilot thus, allowed for enhancing the skills of the researchers involved in the data collection and refining the processes of VFGD data collection and iron out practical issues.

Sampling Procedures

Sampling for the study used a cluster approach and purposive sampling at all stages. Geographically, four densely populated administrative regions i.e., Male' (Kaafu atoll), Addu (Seenu Atoll), Gan (Laamu atoll) and Kulhudhuffushi (Haa Dhaalu atoll) were selected. During the course of the research, after the pilot, stakeholder consultations brought to light that the grievances of small islands may be very different from the grievances of the largerislands. Accordingly, in order to draw out social grievances of least populous islands, two lesser populated regions with island population less than 500 people, namely Rasgatheem (Raa atoll) and Madifushi (Thaa atoll), were also selected.

For each island, there were six focus groups each consisting of four to six members; parents (representing childhood), youth, senior citizens or their caretakers, working age women's exclusive group, working age men's exclusive group, and a group consisting of people with disabilities or caretakers of people with disabilities. However, in the least populous two islands, this was not practical due to the small population numbers, hence one mixed group VFGD consisting of individuals representing each life cycle stage was presented. This method of mixing people from different backgrounds and age, however, is prone to the limitation with regard to willingness of some participants to openly engage in the discussion (Krueger, 1994).

Experiences of recruiting participants for the VFGD

Recruitment can be difficult, and continues to be a source of contentious debate (Krueger & Casey, 2000). In our case, the difficulties were amplified with the social distancing and travel restriction measures in place. From each of the selected islands, a focal point was identified by contacting the local Councils of the particular island via phone and email. The Council directed us to specific focal points who played a significant role in the recruitment of participants. Once a focal point was identified, the next step was to identify participants for the different focus groups.

The focal points were first contacted via telephone and the details of the focus group participant criteria were explained, followed by an email detailing the same. The focal points were paid and additionally, they were also asked to sign a non-disclosure agreement. The focal points were asked to fill the table (see table 1) for each of the groups identifying 6-8 prospective participants in each of the groups and send back to the researchers via email. Also, the focal points gave information about the research to the prospective participants and took consent (verbal) from the participants after which the contact details were shared with the research team.

We chose to have proxy participants (n=31) for children represented by parents and allowed elderly and some people with disabilities to be presented by caregivers. For instance, in the case of people with disabilities (PWDs), there were proxies (n= 6) such as parents, caregivers as a representative. Similarly, for the children/s group all of the participants were proxies as parents (n=18) representing them. We also had a few proxy participants (n=7) representing the elderly citizen's group such as adult children of the aging citizens and caregivers.

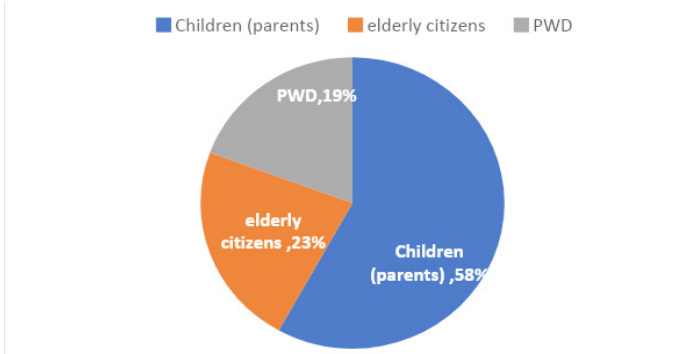

Figure 1. The virtual focus group discussion percentage of proxy participants

Once the research team received the completed form from the focal points, with contact details of participants willing to take part in the FGD, one of the researchers called the participants by phone. Individual calls were made, information provided about the research and asked for consent once again to be part of the VFGD. The online Google Meet platform was used in conducting the focus groups and hence, each participant was inquired about the usage, familiarity and also if they had a good internet connection.

The participants were then provided with the information sheet of the discussion including the questions and the consent form to be signed and shared via email or Viber message. Once consent was obtained, Google Meet link was sent to the participants. Most of the VFGDs were held in the evenings or around 8:00 pm local time. The reason being most of the people found it easier to sit in front of a computer screen uninterrupted after the children and the people in the house have retired for the day.

Even though the participants agreed to take part in the VFGDs, many people backed out at the last minute and some without a prior warning. The overall response rate for the different focus group discussion was calculated at 80% for children (represented by parents) group, 80% for youth group, 70% for working men's age group, 85% for working women's age group, 60% for elderlies' group and 55% for people with disabilities group. Hence, overall, the response rate was calculated at 82.5%.

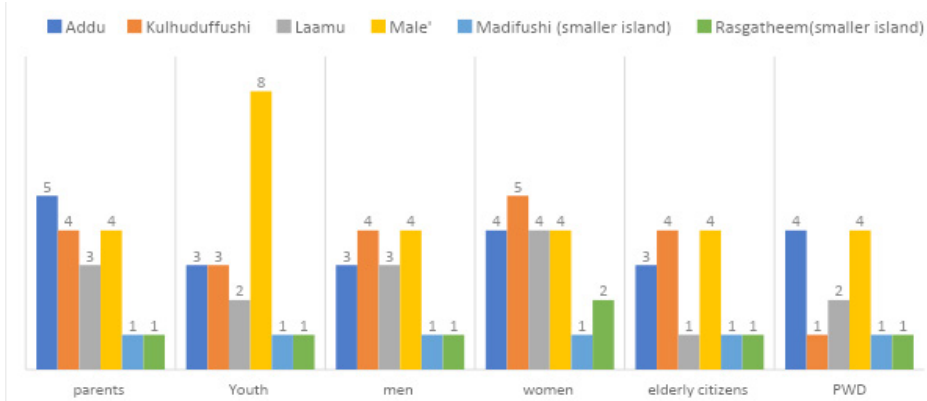

Figure 2. Responses from each island for the Virtual Focus Group Discussions

across the larger islands of the Maldives. *PWD - Persons with Disabilities.

In our experience, just as in-person FGDs, VFGD also lacks the guarantee that all those recruited will attend the discussion. To overcome this limitation, Rabiee (2004) recommends that researchers may over-recruit by 10 to 25%. According to Krueger (1994) participants can also be recruited by offering incentives or through local networks and contacts. Another important consideration is the number of participants to be invited for discussion. Although it is generally accepted that between six and eight participants are sufficient (Krueger & Casey, 2000), some studies have reported as few as four and as many as fifteen participants (Nyumba et al., 2018). We conducted the VFGD with as many as seven participants and as less as three participants. Our experience is that on an average 4 or 5 participants is ideal for the VFGDs. Thus, in our experience, the steps that we followed in order to recruit participants for the VFGDs were effective in recruiting an adequate number of participants for the study.

Experiences of obtaining informed written consent for the VFGD

Our experience to get written informed consent was difficult. Even though we received some of the signed consent forms, we failed to receive signed consent forms from a number of participants. One reason for this is that, although most of the people have digital devices, they had no access to scanners or printers and hence, they were not able to print, sign and scan and send back to us the written informed consent form. Another could have been the movement restriction related to the COVID-19 pandemic that prevents people from accessing places that provide printing and scanning services. However, as a contingency, verbal informed consent was obtained before the beginning of every VFGD via the Google Meet platform.

Experiences of organizing online meetings for the VFGD

Google Meet app was used to conduct all the VFGDs. The Google Meet video-conference service allows one to schedule an online meeting. By scheduling a meeting through the calendar, a meeting invite is created for the specific day and time and sent to the participants' email addresses to confirm access to the meeting link. We had some participants without access to an email address (n=26). Considering this, the meeting link was sent to some of the participants as a phone message. We observed that not all participants had the Google Meet application and attempted to overcome this challenge by contacting and getting assistance from family or friends to set up the application on the participant's mobile devices. However, for those participants, who did not even have this option, we had to solely rely on normal phone calls and SMS for all communications to help them set up the application on their mobile phone device.

Our experience was that the Google Meet platform was quite appropriate for the VFGDs. The Google Meet application has an inbuilt feature to record and so the discussion was recorded after obtaining the verbal consent of all the participants. Good connectivity allowed for the conduct of the VFGDs without much disruption and to obtain clear recording of the conversations. There were only a few instances of disconnections due to internet speed/connectivity and access, during the course of the VFGDs, indicating overall good connectivity, even in the least populous

islands. Only in a few VFGDs, we faced technical difficulties such as loss of signal, leading to dropped calls (n= 6) and segments where audio is missing. A dropped call happens when the device that is connected to a network gets disconnected, because of poor cell signal. In such instances, we prompted the participants to go nearer to the internet router point to get the cell reception back or try to switch off and on the device or the application. We also advised all to keep their webcams off to increase connectivity and strongly advised all to be in a location where there is a good internet signal.

Experiences during the VFGD session

Opening and engagement

The floor for discussion was opened by welcoming the participants for attending, and introducing the research and the role of the participants and thanking the participants for taking the time to participate in the session. This interaction is the first opportunity for the session facilitator to build a good rapport and establish a safe, welcoming environment for participants to share their experiences. We started with the initial introductions from the facilitators as well as the observer and the participants. We asked participants to identify themselves with their names, preferred name, age and if they are working and also if they are engaged in any non-governmental or civil service work. Once the initial introductions were made, we asked the participants to feel free to speak in the local language Dhivehi or even English, whichever the most they were comfortable to express themselves with. English is a commonly spoken language in the Maldives especially among the youth. It is even said to be the unofficial second language of Maldives (Meierkord, 2017). Explanations were also given regarding the sampling approach, the purpose of the data collection as well as how the data will be used in the future.

Next, the role of the facilitator was explained, the expected duration and the way the discussion will progress was also stated. Emphasis was made on the importance of participants' honest responses, and cordial interaction. Ethical considerations, including confidentiality and its limitations, voluntary participation, the right to refuse or withdraw at any point of time in the focus group were also voiced by the facilitator. The discussion started only after the verbal consent was obtained from each participant.

Handling dominant and encouraging shy participants

According to Krueger and Casey (2000), an individual's self-disclosure in a discussion tends to be natural and comfortable. However, for some, it requires trust and effort. In our experience, during the VFGD, some participants were very comfortable using the online platform; however, we found some participants required sometime for them to feel comfortable talking in front of a screen.

The facilitator had to make an earnest effort to ensure all participants contributed to the discussion by coaxing or prompting the participants who were shyer. Several techniques such as using participant names that are comfortable to them (established at the introductions) and also by specifically asking the participants, by name, how they feel about the issues that were being discussed, brought out good responses from shy participants as well. On the other hand, we also had participants who dominated the whole discussion. The facilitator had to

respectfully cut short indicating the time factor as well as indicate we need to give opportunities to others present in the discussion. On one occasion we had to use mute function after politely explaining that another participant was being given an opportunity to respond.

Making note of emotional aspects

Non-verbal data often relies on the behaviors, gestures and actions of respondent's during pre-focus group discussion and post-focus group discussion. Non-verbal data provide "thicker" descriptions and interpretations compared to the sole use of verbal data (Fonteyn et al., 2008). Leech and Onwuegbuzie (2008) outlines the four major sources of qualitative data for analysis: talk, observations, images, and documents. The analysis of all four data sources can be greatly enhanced by incorporating the analysis of nonverbal communication cues in the focus group discussions. In the case of VFGD, the main disadvantage is that we could not document any of the non-verbal cues that can be read through the participants body language as well as facial expressions, as we had to keep the video off for better connectivity. Lack of detection of nonverbal cues can have a negative effect, as offense may be taken more easily by participants and meanings can be subjected to being misconstrued. Further a virtual platform sometimes affords individuals a different sense of freedom of expression, their true faces hidden behind a screen and therefore sometimes may subject themselves to less discretion and tact (Oringderff, 2004).

Maintaining focus and rhythm

It is very important that during FGDs the facilitator has the required skills to handle the FGDs and to ensure that adequate and right information is obtained through the FGDs to answer the research questions (Berg, 1989; Morgan, 1996). Similar to traditional FGDs, VFGDs also need to be moderated from the dominance effect. The facilitator had to be careful not to let the participants be affected by the halo effect whereby the perceived status of a group member might influence the discussion and groupthink (the members in a group tend to think similarly to maintain group cohesion) (Mukherjee et al., 2015).

FGDs also require a team consisting of a skilled facilitator and an assistant (Burrows & Kendall, 1997; Krueger, 1994). Similarly, the assistant's role includes observing non-verbal interactions and the impact of the group dynamics, and documenting the general content of the discussion, thereby supplementing the data (Kitzinger, 1994; Kitzinger, 1995). In our case, the VFGDs were run with the session facilitator and observer always present in the meeting. One, the facilitator, presided over the questions and discussion while the other attended to the digital technicalities such as recording and taking note of participant engagement. The main methods of data collection during the VFGD were audio recording, note-taking, and participant observation (Stewart et al., 2007). Our experience is that in conducting VFGDs, it is important to ensure that facilitators have the set of skills required to handle different functions of the Google Meet platform such as recording, sharing screen, volume and make adjustments or reconnecting where required.

Closing and wrap up

The closing or wrap-up is the transition for ending the FGD. The final wrap up of each of the VFGD included an opportunity for participants to ask any questions that they may have. The session concluded by thanking participants for their comments and participation, assuring participants that their feedback will be shared to cross check if their dialogue matches with our transcriptions and translations.

Experiences during the VFGD session

Ensuring transcript and translation accuracy is foundational for data accuracy and for any study's validity (Clark et al., 2017). The woes of transcription and translation are well-known amongst qualitative researchers, especially for those working in multilingual settings (Chabeda et al., 2018). All of the VFGDs were conducted in the local language (i.e., Dhivehi) since people in the Maldives are the most familiar with the language. However, participants were also given the option to use English or mix both the languages as is the norm (Meierkord, 2018). There were many hidden challenges behind the seemingly straightforward instruction to "transcribe and translate" one's data when the platform became virtual. Transcribing is basically converting data from an audio format into written document format. Doing the transcription is an invaluable way for the research team to really get to know the data. We used the Google Meet record function to record all of the audio of the VFGDs which aided in transcribing and deriving rich thick data themes.

Generally, there are three ways to transcribe (Davidson, 2009). Firstly, by verbatim where each word spoken by the participants are transcribed into text including mumbles such as "uh" or "hum" in conversations; secondly by intelligent transcriptions where a voice recording is converted into text excluding pauses unnecessary for context; and thirdly, the edited transcriptions where in addition to the intelligent transcription, the scribealters existing sentences into sentences that makes sense (Hennink, 2007). We first transcribed the audio verbatim in the local language for the first five focus group discussions. This was then translated to the English language. The whole process was carried out by the research team to ensure that we had a very good sense of the data and study objectives and were able to picture the discussion in context. Once we had the sense of the data, the next twenty-six audio recordings were then translated directly into English language by listening to the audio recordings. Our research team agrees that this was one of the most challenging tasks of the data collection and analysis proceeds, as the initial step of translation and then transcription in the English language was both cumbersome as well as time consuming. The researchers suggest that to make the work more efficient, the recordings could be directly translated in English as one listens to them and then transcribed, which however, requires dual language proficiency, and full vigilance on the part of the person who is doing this work, to avoid any mistakes in transcribing.

Discussion

While our experience of conducting VFGDs proved valuable, we still had a lot to learn. After conducting 26 virtual VFGDs in the highly dispersed island community of the Maldives, four key lessons emerged from our research.

First, participant recruitment for VFGDs requires a specialized element within the social research fieldwork process and needs to be centered around gathering active and eager respondents to take part in the discussions. Many of the best qualitative researchers are able to spot respondents who appear to have attended numerous focus groups (Nyumba, 2018). This is a good indicator for good responses and an important measure of the quality of a qualitative research inquiry (Nyumba, 2018) guaranteeing that they are present for the discussion on time. In our research, the overall response rate and turnout for the VFGDs was 82.5% indicating that the use of island level focal points to identify potential participants, process of recruitment and strategy were effective.

Second, the most important takeaway from the research was using substitute methods of reaching participants and keeping up with the communication. Even though some participants showed eagerness to be part of the VFGD, there were a few who did not participate due to the fact that they were not familiar with Google Meet platform and/or email addresses. We overcame this challenge by contacting and getting assistance from family and friends to set up the application on the participants' mobile devices. We faced this issue mainly with the elderly population as well as with some people with disabilities. Accordingly, alternate methods of reaching and communicating with participants was another important takeaway from conducting the VFGD. Additionally, we also found that the informed consent form for signature had to be sent and received via email addresses as well as Viber app which was very challenging and the completion rate of the informed consent form was relatively less with about a fifth of the participants sending the signed forms through. This could be due to accessibility issues such as unavailability of scanner or a printer to printer, particularly with the restrictions in place to contain the COVID-19 pandemic. To overcome this issue, we also opened the option to simply take a picture of the signed form from their mobile devices and send it back to the research team.

Third, uninformed last-minute cancellation, unfamiliarity with online application were some of the barriers to successful implementation of the VFGD we experienced.. A few participants got disconnected during the course of the VFGD and did not join back due to unforeseen technological issues. Some participants failed to join the Google Meet group due to difficulty remembering and keeping up with virtual appointments despite reminders being sent. Out of the total of n=132 participants who were contacted to participate in the VFGDs, the majority of the participants (n= 99) successfully joined and completed the meeting. We had to reschedule two focus groups as none of the participants turned up for the discussion, and with constant reminders we were able to conduct the session later. Another challenge, though rare, was instances of disconnection, breaks in connectivity, participant not being able to join the session due to connectivity issues. We faced this issue twice during the course of VFGDs. Calls had to be made to all participants who were asked to join the meeting again. Additionally, some participants were not technologically experienced and may not be used to checking links and messages delivered electronically (e.g., email). As communication and

consent processes are moved to internet-based protocols, participants who were not technologically literate required extra attention from our research coordinators, often needing additional phone calls and reminders. VFGDs puts a new burden on participants as they are responsible for verifying that Google Meet is working on their device prior to the meeting. This created some delay the start of the VFGDs and may have also contributed to the loss of some potential study participants. The technological requirements for online meetings may have also especially impacted on our ability to recruit older participants and people with disabilities who may not have reliable internet access or digital literacy and skills to use online applications.

Fourth, we had to remain neutral throughout the discussions as well as constantly check if participants are feeling comfortable expressing themselves in the VFGD. We also had to take extra precautions to not agree or disagree with participants. To ensure this, we told the participants at the beginning of the VFGD that we will be not commenting on the participants' discussion no matter how much we would like to be part of the discussion in order to avoid any kind of biases by praising, negating or agreeing with participants.

Dealing with shy participants was also challenging and tried to elicit further information from shy participants with comments like "Can you tell me more about that?", "Help me understand what you mean", or "Can you give an example?". For some participants this could be due to the novelty of using an online platform as well as not being able to break the ice in the VFGD. We suggest that an online icebreaker could be introduced before the beginning of the session in order to draw out shy participants and have a conversation separately with participants prior to VFGD in order to find out if there are hesitations by participants to express themselves freely on an online platform. On the other hand, we also had to deal with dominant participants who dominated the whole conversation and we tried polite language such as "thank you, what do other people think? We would like to give the opportunity for the other participants to also express themselves" When participants made unclear comments, we also tried to ask them to repeat themselves clearly or try to summarize what has been said. Occasionally, we tried to summarize what has been said very briefly without any suggestions. This was also an assurance to participants that the moderator is actively listening.

Finally, to ensure we get quality data, we had to see to it that participants did not suffer from fatigue. Participants are likely to suffer from fatigue when discussions are lengthier. The rule of thumb is 1–2 hours, based on the complexity of the topic under investigation, number of questions and the number of participants (Nyumba, 2018). Our VFGDs were set for one hour on average. Our shortest VFGD lasted for 26 minutes while the longest VFGD lasted for approximately 2 hours.

The possibilities for using VFGD for conducting qualitative inquiry is growing and hence, the potential of using this method as a mainstream qualitative data inquiry has wide scope. The research team agrees that sharing the knowledge we gained from using this method is not only beneficial but also essential for future researchers to expand on this method of data collection and improve the methodological nuances of VFGDs. However, the overall experience is that, despite the recent COVID-19 pandemic making physical in-person focus group facilitation untenable, this fully-online approach of VFGD enables research to be completed uninterrupted while also maintaining sound methodological rigor.

Conclusion

VFGD offers a promising alternative to qualitative data collection through in-person FGD (Lindau et al., 2022). We observed that online modes were effective as well as challenging. We anticipate that with increasing use of technology, online qualitative inquiry will become a mainstream data collection method. Our study demonstrates that an entirely online approach to data collection is possible for FGD and has the potential to recruit demographically and geographically-diverse participants with low dropout rates, and a VFGD be successfully conducted with minimal technological issues.

While our study was based on the experiences of VFGD conducted in real time (i.e., synchronous), asynchronous VFGD via online message boards can be explored further. In our experience, VFGDs are feasible, valid and provide extensive amounts of data for qualitative research without compromising quality. Technologies can be leveraged and adapted to ensure that qualitative research continues even during challenging times such as the COVID-19 pandemic. We propose VFGD as a feasible and effective method in collecting qualitative data within the setting of social science inquiry. At the same time, the method needs further refining by academics and practitioners keen to innovate qualitative methods into a new frontier.

With the recent advancements in technological video-streaming through various platforms as well as advances in the bandwidth connectivity VFGD' can become one of the most reliable method to collect qualitative data (Rezabek & Roger, 2000). Even though skeptics may remain unconvinced that VFGD can never fully replace real world in-person FGD, our argument is that VFGD simply offers researchers another very viable, valid and valuable means to collect qualitative data and can readily complement the traditional methods of qualitative social research method of in-person FGD (Turney & Pocknee, 2005; Silverman, 2000).

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