Online synchronous Focus Groups and research continuity during the COVID-19 pandemic: Using technology to adapt a mental health intervention for Colombian adolescents

Maria Gabriela Calvo-Valderrama, Arturo Marroquín-Rivera, Erin Burn, Laura Ospina-Pinillos, Victoria Bird, Carlos Gómez-Restrepo

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Maria Gabriela Calvo-Valderrama[1] MD; Arturo Marroquín-Rivera[1] MD; Erin Burn[2] MSc; Laura Ospina-Pinillos[1] MD, PhD; Victoria Bird[2] PhD; Carlos Gómez-Restrepo[1] MD, MSc, PhD

[1]Department of Clinical Epidemiology and Biostatistics Pontificia Universidad Javeriana Bogota CO
[2]Unit for Social and Community Psychiatry Institute of Population Health Sciences Queen Mary University of London London GB

Corresponding Author:
Victoria Bird PhD
Unit for Social and Community Psychiatry
Institute of Population Health Sciences
Queen Mary University of London
Cherry Tree Way
London
GB

Abstract

Background: Although focus groups are a valuable qualitative research tool, face-to-face meetings may be difficult to arrange and time consuming. This has been further compounded by the COVID-19 global pandemic, where the subsequent lockdown and physical distancing measures implemented, caused exceptional challenges to all human activity.
Online Focus Groups (OFGs) are an example of one alternative strategy, requiring investigation. At present, OFGs have mostly been studied and used in high-income countries with little information relating to their implementation in Low-and Middle-Income Countries (LMICs).

Objective: Our aim is to share our experiences of conducting OFGs through a web conferencing service and provide recommendations for future research.

Methods: As part of a broader study, OFGs were developed with adults and adolescents (13-16) in Colombia during the COVID-19 pandemic. Through a convenience sampling method, we invited eligible participants via e-mail in two different cities of Colombia to take part in OFGs conducted via Microsoft Teams®. Researcher notes and discussion were used to capture the participant and facilitator experiences as well as practical considerations.

Results: We conducted 10 OFGs with a total of 42 participants. Data obtained met our expectations and the online methodology did not compromise the quality of our results. Technical issues arose but different measures were taken to minimize them: using a web conferencing service that was familiar to participants, sending written instructions and performing a trial meeting prior to the OFG. Adolescent participants unlike their adult counterparts, were fluent in using web conferencing platforms and did not encounter technical challenges.

Conclusions: OFGs have great potential in research settings especially during the current and any future public health emergencies. It is important to keep in mind that even with the advantages that they offer, technical issues (i.e., internet speed and access to technology) are major obstacles in LMICs. Further research is required and should carefully consider the appropriateness of OFGs in different settings.

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Online synchronous Focus Groups and research continuity during the COVID-19 pandemic

Using technology to adapt a mental health intervention for Colombian adolescents.

Maria Gabriela Calvo-Valderrama[1], Arturo Marroquín-Rivera[2], Erin Burn[3], Laura Ospina-Pinillos[4], Victoria Bird[5], Carlos Gómez-Restrepo[6]

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Results:

We conducted 10 OFGs with a total of 45 participants. Data obtained met our expectations and the online methodology did not compromise the quality of our results. Technical issues arose but different measures were taken to minimize them: using a web conferencing service that was familiar to participants, sending

[1] MD. Department of Clinical Epidemiology and Biostatistics. Pontificia Universidad Javeriana. ORCID ID: 0000-0002-5879-0637
[2] MD. Department of Clinical Epidemiology and Biostatistics. Pontificia Universidad Javeriana. ORCID ID: 0000-0002-8091-6566
[3] MSc. Unit for Social and Community Psychiatry Newham Centre for Mental Health, Queen Mary University of London.
[4] MD. PhD. Department of Psychiatry and Mental Health. Faculty of Medicine. Pontificia Universidad Javeriana. ORCID ID: 0000-0002-7929-1511
[5] PhD. Unit for Social and Community Psychiatry Newham Centre for Mental Health, Queen Mary University of London. ORCID ID: 0000-0002-2053-7679
[6] MD, MSc, PhD. Titular Professor. Departments of Clinical Epidemiology and Biostatistics, and Psychiatry and Mental Health. Faculty of Medicine. Pontificia Universidad Javeriana. Hospital Universitario San Ignacio. ORCID ID: 0000-0002-9013-5384

written instructions and performing a trial meeting prior to the OFG. Adolescent participants unlike their adult counterparts, were fluent in using web conferencing platforms and did not encounter technical challenges.

Conclusions:

OFGs have great potential in research settings especially during the current and any future public health emergencies. It is important to keep in mind that even with the advantages that they offer, technical issues (i.e., internet speed and access to technology) are major obstacles in LMICs. Further research is required and should carefully consider the appropriateness of OFGs in different settings.

Keywords:

Pandemic; COVID-19; online focus groups; qualitative research; technology.

Introduction

Focus groups are a commonly used research method, particularly within health and social care research, where the experience of individuals, service providers and the community are vital to innovation and implementation. They have been an essential tool of qualitative research over the last 50 years [1], aiming to evaluate the different and collective opinions of individuals in a group and paying particular attention to the interaction between participants, therefore, providing varied information on the topic of interest in a relatively short period of time [1,2]. Although offering a valuable method for eliciting a group perspective, their implementation can present a range of challenges. In particular, the need to agree a mutually convenient time and location can pose difficulties, particularly where participants have existing commitments. Additionally, the recent spread of COVID-19, caused a public health emergency worldwide that affected almost all human activity [3,4]. Physical distancing and lockdown during the pandemic, imposed unprecedented challenges to the global population that required innovative strategies to adapt the ways we lived and worked. Scientific research, including qualitative research methods has been no stranger to these new challenges [5], particularly where projects rely on face-to-face data collection [6].

In the past 20 years, the wide use of the internet and the availability of devices such as smartphones has enabled researchers to use online platforms to conduct Online Focus Groups (OFGs). This has overcome some of the disadvantages of traditional focus groups [7–9]. Due to the wide range of online technologies, OFGs can be implemented in various ways. OFGs may be conducted in text-only platforms (i.e., chatrooms, discussion boards, emails), or, following the broad availability of webcams, smartphones and video conferencing services, as virtual group meetings [8]. There are two ways to carry out OFGs, synchronously or asynchronously, depending on whether participants give their opinions simultaneously in the platform or not. Asynchronous OFGs are generally text-based ones, where participants can answer questions through forums, e-mail or chat in a non-simultaneous way. Although the latter may provide a greater sense of anonymity making it easier for participants to discuss sensitive topics [9,10], an important disadvantage however, is that researchers cannot evaluate nonverbal cues such as eye contact, tone or body language that greatly enrich the results of face-to-face FGs. Furthermore, there is a lack of interaction between participants [8]. Using webcams in a synchronous FG can overcome these disadvantages [11]. Researchers often experience a closer interaction, similar to the one obtained face-to-face, and although they tend to have less data production, the quality and level of richness of data is comparable [7,8].

The use of video conferencing software also prevents the need to purchase additional recording devices, overcomes geographical barriers, and it can make the transcription of data easier. However, incorporating new technology in research creates new methodological issues and for OFGs to function properly, some requirements must be fulfilled. For instance, they demand participants have a minimum level of digital literacy and a stable internet connection.
These considerations can be especially challenging in Low-and Middle-Income Countries (LMICs), where the digital gap is greater as internet access is not universal, resources and infrastructure are scarce and there is limited funding and little or no-support from the government for research activities [2,12–14].

Additionally, it is the responsibility of the researchers to carefully select an appropriate web conferencing service to guarantee the privacy and security of participants and the data obtained [2,7,8,15,16]. The latter is of particular significance, since privacy and security breaches have been more frequent during the COVID-19 pandemic, posing serious ethical issues to the conduct of online research [17,18].

Research with synchronous OFGs is a growing field, however, most of it has been developed in high-Income countries. For example, Kite et al. (2017) compared face-to-face with OFGs with adults in Australia [7]. They found that OFGs produced rich data similar to face-to-face interactions and that online methods were able to

achieve an active discussion between participants. However, issues with audio, transcription and high levels of participant withdrawal were associated with the online modality. To the best of our knowledge, the experience of OFGs has not been reported in LMICs.

Due to the potential of OFGs to overcome the barriers associated with face-to-face methods especially during times where physical distancing is required; it is important to evaluate their use in populations with different backgrounds. This includes vulnerable individuals and culturally diverse people living in LMICs, where OFGs offer a potentially cost-effective alternative to traditional methods. Consequently, this paper aims to share our experience conducting OFGs with adults and adolescents during the COVID-19 public health emergency in Colombia.

Methods

We developed OFGs within the framework of the study "Building Resilience in Adolescence-improving quality of life for adolescents with mental health problems in Colombia" (BRiCs). This is an ongoing collaborative research project funded by the MRC between Queen Mary University of London, UK and the Pontificia Universidad Javeriana (PUJ) in Bogotá the capital of Colombia and Duitama an intermediate city. This study aims to improve health outcomes for adolescents with depression and anxiety in Colombia by adapting an existing effective app-mediated intervention called DIALOG+ [19–22]. As part of the adaptation component, ten focus groups were planned in order to collect the end-users' (adolescents and clinicians) and stakeholders (parents, guardians, youth workers and educators) opinions, preferences, and information on how to make a resource-orientated intervention (DIALOG+) relevant in this new context and population.

In March 2020, a state of emergency was declared in Colombia due to the COVID-19 pandemic; thus, mandatory quarantine and physical distancing measures were established by the Colombian government. Most cities were placed in lockdown and all travel was restricted. In order to continue the research and to avoid delays in deadlines; an ethics amendment was requested to change the focus group methodology by replacing the ten face-to-face groups with synchronic OFGs performed through a secure videoconferencing system. Online delivery of the focus groups continued even when lockdown measures were eased, due to the fear of contagion and advice to reduce social contact.

Changes to the research protocol were approved by the Institutional Review Board (IRB) of both academic institutions and clinical settings (Protocol FM-CIE-0084-20)

Participants

Participants (adolescents, parents or guardians, clinicians, youth workers or teachers) were recruited through a convenience sampling method from the two clinical settings in Bogotá and Duitama. To recognize the participant's time, a $40.000 COP (approximately 12 USD) grocery store voucher was offered.

Inclusion criteria for the adolescents was i) between 13 and 16 years of age, ii) with self-reported current or previous experience of depression and/or anxiety, iii) a willingness to share their experience in an OFG and iv) capacity to provide informed consent, both by themselves and by a parent or guardian. Parents or guardians were included if they provided care to adolescents aged between 13 and 16 years-old with current or previous experience of anxiety and/or depression. Finally, clinicians, educators, and youth workers were i) required to have experience working with adolescents undergoing depression and/or anxiety and ii) be >18 years old.

Data Collection and Analysis

The results of this paper focus on the procedures and processes involved in conducting the OFGs. This includes describing in detail processes such as obtaining informed consent, scheduling the meetings and, group facilitation, including any challenges encountered and how they were overcome. Content results of the OFGs regarding the adaptation of DIALOG+ are beyond the scope of this paper and will be reported separately elsewhere.

Data for the present study were collected through participant observation, with the researchers and group facilitators taking notes during the focus groups. The notes focused on the procedures undertaken, the experience of facilitators throughout the group and the differences noticed between online and face-to-face delivery. These observational notes and descriptions of the procedures were gathered by the study coordinator and were discussed during team meetings that took place after the OFGs sessions. These reflexive evaluations allowed the identification of issues and problems and action was taken in order to find potential solutions through the discussion with the research team. Additionally, the content analysis of the OFG transcriptions was analysed when participants expressed opinions or thoughts related to the methodology used. A final revision of these content was performed in order to group the information into seven different categories (consent, booking, facilitation, technical considerations, interaction and content) that we explore ahead. This process was made in order to develop themes and guidance, which may be used to guide the future conduct of OFGs.

Results

The results begin by describing the sample, before outlining the procedures involved in conducting the OFGs, including any challenges faced.

Sample

A total of ten OFGs were conducted. Forty-seven participants were approached and only two did not participate, which is not unlike the withdrawal rate expected with for face-to-face focus groups. One participant did not respond to the invitation e-mail and the other could not take part due to personal circumstances. With a total of 45 participants, the OFGs ranged from 3 to 7 participants. Participants joined the OFGs mainly from their homes and workplaces. Most of the participants used laptops and desktop computers as their device, with a minority using their smartphones. Interestingly, tablets were not used by participants. Table 1 describes the number and general characteristics of participants of each OFG.

Table 1. Participants of each OFG.

Group	Females (n)	Males (n)
Adolescents		
Bogotá (first)	2	3
Bogotá (second)	3	2
Duitama	3	0
Parents/Guardians		
Bogotá	3	0
Duitama	3	0
Clinicians		
Duitama (first)	1	4
Duitama (second)	3	1
Bogotá	5	0
Youth workers/Teachers		
Bogotá	4	3

Duitama	5	0

Online Focus Group Procedures

Obtaining Informed consent

The study coordinator invited participants via e-mail, in the case of parents and adolescents the invitation e-mail was followed by a phone call. The e-mail and the phone call provided participants with information about the study and explained the role of each participant, possible risks and other information required. If participants were interested, informed consent was taken remotely and individuals were asked to complete a sociodemographic questionnaire. For adolescents, an additional invitation letter explaining the project was sent to their parent/guardian, and we verified that their informed consent had both the adolescents and guardian signatures.

As receiving an ink signature for the informed consent was challenging due to the circumstances, we obtained an electronic signature from the participants. For adolescents, we also retrieved a signature from their parents or guardians. To obtain the e-signatures, participants were requested to print and sign the informed consent form and send the scanned file to the study coordinator, who was in charge of verifying that every participant had properly filled and sent it prior to each session. All of the signatures were obtained without difficulty and none of the participants required assistance or had doubts regarding the process.

Procedure

After obtaining consent from participants, the study coordinator sent two invitations for two different meetings. The first meeting included a trial run to check the participant's internet connection and to confirm that all the participants were able to join the OFG and use the videoconferencing software without difficulties. Additionally, during this first trial meeting the coordinator explained further details of the project and solved logistic and participation queries. The second invitation was for the OFG session. For both invitations the time, date and agenda were included.

Booking

Overall, scheduling the focus groups was not problematic. When sending the invitations to the potential participants, an initial date and hour was stipulated by the study coordinator. We did, however, experience an issue with one OFG session with clinicians, the invitation for a session that was scheduled in the morning (am), was mistakenly sent for the evening (pm) due to a typographical error. Fortunately, one of the participants double checked this with the coordinator, and the mistake was rectified in time to enable the rest of participants to join the meeting at the correct time.

Experience of participants and researchers

Focus groups facilitation

Each OFG was facilitated by two core members of the research team (LOP and CGR who are psychiatrists and academic researchers) and an anthropologist, who have extensive experience conducting FGs. Decisions regarding who would facilitate each OFG was based on availability of the team members. Within the group,

we allowed multiple people to speak at the same time to keep the dynamics similar to that of a face-to-face group, however, using the 'raising of hands' function on Microsoft Teams was encouraged.

Initially, the facilitator introduced him/herself, provided a general description of the team and shared the expectations for the session as well as the ground rules (see table 2). We then asked if every participant had read and understood the informed consent, checked that everyone agreed with recording the session (audio backup recording was also in place). We reminded participants that the audio would be transcribed without any identifying data, so anonymity was ensured, and requested both participants and researchers to activate their web cameras in order to obtain visual cues. Each participant was then asked to provide a brief introduction of themselves.
Facilitators followed session guidelines so the topics for discussion were consistent in all OFGs. An observer was off camera taking notes of the visual cues and the process. All OFG were conducted within 90 to 120 minutes. In general, the facilitator role in OFG was more active than in a face-to-face scenario, both for encouraging and moderating participation, as well as maintaining order to avoid simultaneous speaking when discussion was ongoing.

Table 2. Ground rules of Facilitators´ guidelines.

Ground rules
Properly introduce yourself and the team. Clarify the purpose of the session and of the data collected.
Remind participants that the sessions will be audio and video recorded, and transcribed.
Explain how confidentiality is ensured.
Emphasize that there are no right/wrong answers. Just points of view and opinions on the DIALOG+ intervention.
Suggest participants to avoid naming institutions or people when talking about their own experiences, but if they do, remark that it will be erased from transcription.
Participants may use a pseudonym.
Ask participants to speak one at a time to avoid interrupting others.
Clarify time of the session (120 min)
Remind participants that they can leave/ take a break at any point during the discussion

Technical considerations

Currently there are several web conferencing services available to perform video calls. To select the best one, we evaluated different options and asked the Information and Communication Technology Service of the Pontificia Universidad Javeriana (PUJ) for advice. The main criteria was to find a platform that prioritises security and data privacy. We completed the first three OFGs in real-time with the online platform "Cisco Webex ® "[23]. During these first OFGs with clinicians, the initial part of the session was spent resolving issues and concerns related to the platform (such as how to join the meeting and activation of the camera and audio), which made communication slower. Participants mentioned feeling it wasn't as easy as they expected because they were not familiar with the interface, which is not widely used within Colombia. Therefore, we decided to host the remaining OFGs with "Microsoft Teams ® "[24], which is better known within Colombia.

In order to overcome this challenge and familiarize participants with the platform, we sent an instructions manual, via email, explaining how to set up a Microsoft Teams account and join the virtual meeting. To further assist the participants, we scheduled a short meeting with the study coordinator before each OFG, to test connectivity and solve technical issues. As suggested by Kite et al. (2017) we also encouraged early login to the platform on the day of the session [7]. Nonetheless, most participants joined the meeting a few

minutes after the stipulated time.

When using Microsoft Teams, we noticed that joining the meeting was easier for those who had the desktop app installed on their computers than for those using the browser version. We therefore recommended installing the app prior to the OFG. However, we did experience issues with the audio during one OFG session. After the participant changed his microphone and restarted the software on his computer without success, we suggested using the browser version which solved the issue.

In general, all of these measures helped us to fill most of the time of each session with discussion relevant to the research, rather than with technical discussion and made participants more involved, even if personal matters, including children, pets, phones etc. would sometimes distract them momentarily due to participation from their households.

As researchers, organizing conventional face-to-face FGs is challenging, especially in large urban areas like Bogotá, so, OFGs were perceived as a good alternative. In Duitama since it is smaller, we had concerns about facing less stable internet connection, however network coverage was better than anticipated. Therefore, this dismissed our concern regarding internet connectivity and device availability.

As expected with adolescents (both in Bogotá and Duitama), we did not face any technical challenges, their use of the web conferencing service was fluent and in the test meeting we had no discussion about the use of the platform, rather general concerns about the informed consent form and sociodemographic questionnaire were answered.

Adult participants in Duitama seemed to face more challenges when it came to using the web conferencing service, and had more queries about the platform, which had to be solved. It is possible, that as an intermediate city, individuals were not as familiar with conferencing services as compared to within major urban areas, such as Bogotá. Since both settings were urban areas, we did not face problems with internet connection and challenges faced by other authors such as audio quality [7,27], were not a major issue in our experience, which made transcription easy. All sessions were recorded through the web conferencing recording features, and a backup audio recording was made by the study coordinator using the computers´ audio recorder.

Participation interaction

All participants agreed to activate their cameras, this enabled us ensure similar interactions to that expected in a face-to-face focus group. Questions were presented following an order from general to more specific topics according to a previously developed facilitator`s guide. Raising hand via emoji within the software or physically by the participants raising their hand via the camera allowed participants to take turns. Although sometimes participants tended to speak simultaneously making it difficult to hear all opinions, it was the duty of the facilitators to remind individuals to take turns as would happen in a traditional face-to-face group.

The facilitator encouraged all participants to share their opinions on each topic presented. Participation was modest during the initial parts of every FG, which can also be common in face-to-face focus groups [25]. We noticed that after a few questions, engagement increased and participation began to be spontaneous.

Small chats and paired discussions between participants were lacking on this modality. It was obvious that participants who knew each other before the OFG (e.g., Clinicians and teachers and youth workers) were more engaged and participated more than those who did not know each other beforehand. Spontaneous

social interaction and acquaintance between unfamiliar participants did not happen during the groups. Given that the online context can overlook some non-verbal cues, the facilitators had to rely on asking direct questions to invite people to share opinions and make sure that everyone could share their view without interruption.

Overall, the feedback we obtained showed that both researchers and participants perceived OFGs as a good alternative to face-to-face groups. Particular logistical advantages were discussed: in both settings - particularly in Bogotá- OFGs were perceived as less time consuming because there was no need to factor in travel time, which in a large city or rural area can be significant.
Additionally, costs were diminished because we did not have to consider transportation fees, hospitality or additional recording equipment because all sessions were recorded through the web conferencing´ recording features.

Content of the focus groups

Our project discussed an app (DIALOG+) aimed to improve outcomes of depression and anxiety in adolescents based in Colombia. As mentioned, participating adolescents had self-reported current or previous experience with anxiety and/or depression and all stakeholders had experience in this field. Discussing mental health has the potential to open up to sensitive topics that can trigger distressing responses from participants, particularly adolescents, who may require additional support. We did not experience this conducting our research, as none of the participants reported feeling distressed by the topics discussed.
However, we consider that for all focus groups, regardless of modality (face-to-face or online), this scenario must be considered when sensitive topics are discussed as part of the study. Strategies to manage participant distress should be discussed between researchers such as providing additional resources (e.g., helpline and crisis contacts), clinical staff on site or appropriate referral pathways.
In our case, two of the facilitators (CG-LOP) were also clinicians with extensive experience in child and adolescent mental health and were available to be contacted during or after the session if a participant required help, in which case the clinician would evaluate the need for treatment or additional interventions and refer them to the appropriate services.

Discussion

During unprecedented circumstances, OFGs were a useful tool to guarantee research continuity where physical distancing was mandatory [26]. This change of methodology generated new knowledge and skills that our research team did not have beforehand, and allowed us to reduce significant delays in our research deadlines as well as collect significant data that allowed us to complete the aim of this phase of our research project. Furthermore, the ease of organising and scheduling OFGs, especially for clinicians and individuals who lived in large geographical areas, offered a viable alternative to face-to-face meetings. However, with the introduction of a new technology to a traditional research method we expected new challenges. Based on our experience conducting OFGs with multiple stakeholders, a summary of our recommendations on performing OFGs is shown in table 3.

The majority of challenges faced, were related to technology literacy and a lack of familiarity with new videoconferencing software. When it comes to selecting the platform on which to conduct the OFGs, it is important to consider which web conferencing platform is the most suitable for the particular target population [7,8]. We suggest taking into consideration the security and privacy settings offered by each one, as well as the familiarity participants might have with them [11]. Research suggests that participants will be less distracted by the online platform when they are more familiar with it [15]. We noticed less discussion

regarding technical issues when we used Microsoft Teams® compared to Cisco Webex® , maybe because the former is more common in Colombia. Therefore, when considering which platform to use for OFGs, it is important to consider the preference and familiarity of the target population.

To increase participant familiarity with the videoconferencing system, particularly for those that had not used it before, sending instructions on how to join meetings, set-up both microphone and a camera can be useful, as well as prompting individuals to install the desktop app. For this last aspect, verifying that the application can access the microphone and camera is vital (especially on Windows PC's). Prior to conducting a focus group, we recommend (both for face-to-face and online groups), to double-check dates and hours on invitations, paying special attention to any typographic mistakes or auto corrections that might have occurred.

Table 3. Summary of recommendations to perform OFG.

Before the Online Focus Group
Verify dates and hours scheduled. Double check for any typographic mistakes or auto corrections on invitations.
Consider several web conferencing services. Take into account privacy and security settings as well as familiarity of participants according to local contexts.
Schedule a trial meeting of short duration before the actual OFG session to check participant's Internet connection and solve any doubts.
Send a brief instructive explaining: how to join the meeting, activate audio and camera and how to install the selected platform desktop version.
Consider incentives to minimize possible withdrawals.
During the Online Focus Group
Encourage early login and use of headphones with built in microphone if available.
Schedule more time than you would for a face-to-face FG. This allows facilitators to perform ice breaker activities and deal with technical issues that may arise.
Fewer participants (between 4 to 6) may have more interaction and active participation than larger groups.

Another strategy that helped us to use the time of the OFG session for research related topics, was performing a trial meeting the day before, to solve concerns (related to the web platform or the research itself) providing more personalized assistance and encouraging participants to login early on the day of the session. Despite specific instructions and the test trial, minor technical issues still occurred. However, overall, these measures minimized technical and procedural issues greatly. Since technical challenges cannot be prevented in their totality, we consider that it is better to schedule more time than you would for a face-to-face focus group [7]. Allowing additional time may also help because the novelty of the modality can cause participants to be initially apprehensive about participating in the discussion. Therefore, additional time can be used to implement strategies that stimulate contribution from each participant such as introductory and ice-breaker activities.

Since both of the settings of our study were urban (Bogotá and Duitama), access to computers and a reliable internet connection were available and made the conduct of the research easier. Had we aimed to conduct

OFGs in rural areas, we would have faced greater challenges especially in a LMIC like Colombia.

Unlike the experiences reported by Tuttas et al. [27], and Kite et al. [7], we did not face any challenges regarding sound quality. Most participants were using headphones with built in microphones, so we were able to keep all participants microphones open, rather than requiring individuals to go on mute, thus allowing a more fluent discussion without much background noise. This also meant that we did not face any problems with the audio transcription.

Informed consent was a particular aspect we had to pay particular attention to, especially since we had adolescent participants. All participants received the informed consent forms electronically and were able to send a scanned version with their (and parents/guardians if required) signatures without any problems. This avoided any form of face-to-face contact during the pandemic.

Another factor that must be kept in mind, is the number or participants that is optimal for OFGs. In our experience, we consider that the optimum number of participants for OFGs would be between 3—5. This number is fewer than would be expected in a traditional face-to-face focus group [28,29]. Small groups were preferred as they facilitated more interaction. When the number of participants was greater, we observed that some participants answered most questions and the rest would rarely speak (unless directly asked), or the group interactions were less extensive.

We consider that the skills of the facilitator are crucial for directing OFGs. Certain non-verbal cues are present due to the webcam (head nodding or raising of hands) but others, such as direct eye contact that can signal eagerness to speak, are lost. Therefore, interaction has to be more direct. The facilitator has to actively invite people to communicate and has to be tactful when there are multiple interactions, allowing everyone to express their opinion without interrupting abruptly. With this in mind, explaining ground rules on participation at the beginning of the session is of great importance.

Previous studies have shown higher rates of drop outs [11,15] and withdrawal in OFG especially when there is a discussion of sensitive topics [27]. We did not experience this, probably due to the nature of the topic discussed and the incentive of a store voucher could have minimized it. Considering this kind of incentives might help reduce the rates of withdrawal. Another factor that could have contributed, is that these OFGs were conducted during lockdown and the following physical distancing measures. Therefore, most of our participants were working/studying from home and probably had more availability to participate than in another setting.

It is important to highlight an aspect of our research, which is developing OFGs with adolescents. The use of the internet in this age group, can be seen as a less intimidating way of encouraging participation [9] and their familiarity with the online world gives them an augmented sense of control. OFGs were perceived as a less hierarchical interaction than the one in a face-to-face contact [30]. In our case, adolescents were clearly fluent in the use of the web conferencing software, and we noticed that participants, across all groups, actively participated in both study sites.

Limitations

Our major limitation was that given the current situation, the quality of the information obtained with the OFGs could not be compared to that obtained from a face-to-face group. This means that we do not know if the quality of data is significantly different. When using a familiar web conferencing service, participants mentioned feeling comfortable with the methodology and stated that they expressed their opinions without feeling restricted by the form of communication. Therefore, we consider that the quality of information obtained would have been similar if we had conducted a face-to-face focus group. We think that sharing our

experience of conducting OFGs in a LMIC, with adolescents and framed in the COVID-19 emergency, can be valuable for future researchers.

Conclusions

Overall, our experience using web conferencing services to perform OFGs was a successful one.
We consider that the current technological advancements, give OFGs great potential in research settings, especially in the current worldwide pandemic which has made conducting research harder. A positive aspect of the current pandemic may be that a greater number of people that were unlikely to use web conferencing services, are now familiar with them.

It is important to note that even if this modality can overcome geographical barriers, technical issues such as internet speed and access to equipment are great obstacles in LMICs especially in rural areas. The access and knowledge to these platforms show a level of access to technological resources that is not yet universal, which means that many groups can be under-represented [2]. For example, certain groups (such as the elderly or those from lower socioeconomic backgrounds) may lack access to technology and/or the technical competencies required.

For the purposes of our research, OFGs allowed continuity with satisfactory results and the objectives for the initial stage of our study were met thanks to the quality of data obtained. Further testing of this method is required to overcome current limitations.

Conflicts of interest

None declared.

Abbreviations

COVID-19: Coronavirus Disease 2019
LMICs: Low-Middle Income Countries
OFGs: Online Focus Groups

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