Methodological Guidelines for Focus Groups with Children from Developing Regions

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Abstract

Qualitative research with children has gained recognition in recent years. Nevertheless, special considerations should be analyzed before conducting focus groups with children from developing countries where methodological guidelines are scarce. This article provides methodological guidelines for conducting focus groups with children from developing countries based on an extensive literature review and our experience in urban and rural areas in Ecuador. Peculiarities of urban and rural contexts are highlighted, and child-friendly strategies are proposed. We conclude that focus groups can be conducted successfully with urban and rural children from low-and-middle-income countries if their specific circumstances, such as language and cultural diversity, are contemplated and all the materials are tested beforehand.

Keywords

children, low-and-middle-income-countries, focus groups, qualitative research, methodological guidelines, rural settings, urban settings

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Acknowledgements

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Qualitative research with children has gained recognition in recent years. Nevertheless, special considerations should be analyzed before conducting focus groups with children from developing countries where methodological guidelines are scarce. This article provides methodological guidelines for conducting focus groups with children from developing countries based on an extensive literature review and our experience in urban and rural areas in Ecuador. Peculiarities of urban and rural contexts are highlighted, and child-friendly strategies are proposed. We conclude that focus groups can be conducted successfully with urban and rural children from low-and-middle-income countries if their specific circumstances, such as language and cultural diversity, are contemplated and all the materials are tested beforehand.

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Introduction

Focus groups give voice to vulnerable populations, allowing a reasoned discussion of complex issues (Carey & Asbury, 2016). This technique reveals cultural, emotional, and cognitive processes, motivations, attitudes, and opinions that would not come to light in quantitative research (Houghton et al., 1995; Kennedy et al., 2001). While data collection focuses on the topic, the participants' interactions and social dynamics are also emphasized (Carey & Asbury, 2016; Noaks & Wincup, 2004).

Even though focus group standards were developed for an adult population, they can also be applied to children (Balen et al., 2006; Danby & Farrell, 2004; Qvortrup, 2015). These groups have the potential to reduce the moderator/child power imbalance (Carey & Asbury, 2016) when cognitive, linguistic, social, and psychological developmental characteristics are considered (Macnaghten, 2017). Additionally, interactive material, such as vignettes and pictures, might promote discussion and active participation (Morgan et al., 2002). Nevertheless, this technique is scarcely applied in developing regions and is often carried out by professionals without expertise in children's development (Irwin & Johnson, 2005).

Methodological guidelines have been published to implement focus groups with children. However, most of these guidelines originate from developed countries; thus, they lack recommendations for educational, ethnic, and rural settings (Hoban, 2017). The latter is crucial in Latin America, where culture, language, and socioeconomic status are diverse (Alger et al., 2009). This paper aims to provide methodological guidelines on the applicability of focus groups with children from developing regions with different socioeconomic and cultural backgrounds living in urban and rural settings.

Methods

This paper is comprised of (i) a report of a literature review on the recommendations to implement focus groups with children and (ii) guidelines to implement focus groups in developing countries. The guidelines were developed by contrasting the literature review results with the researchers' experiences using focus groups in previous studies, with particular emphasis on a study conducted among children from urban and rural areas in Ecuador between January and February 2018.

Literature Review

Scientific articles in English and Spanish were searched using Google Scholar, PubMed, and EBSCOhost databases with the following keywords: "children," "focus group," "qualitative research," "discussion group," and "qualitative methodology." Six relevant articles were identified by title and abstract. Snowball and citation-searching techniques were applied to identify other relevant missing publications. Having identified these documents, key recommendations were summarized to plan and implement focus groups with children. Finally, according to the authors' experiences, articles considered relevant to elaborate comprehensive recommendations were included.

Background of the Qualitative Study

The primary study used to elaborate the guidelines was conducted among school-going children in three cantons (Cuenca, Pucará, and Morona) in southern Ecuador between January and February of 2018. Cuenca, located in the Andean region, is the most populated canton in southern Ecuador, with a poverty rate of 38%. Spanish is the primary language, most of the population lives in urban areas (65%), and 90% identifies as mestizo (a mix of Spanish descendants with South American indigenous). Pucará, located in the occidental Andes, is one of the most remote areas, with a poverty rate of 91%. Spanish is the primary language, although Quichua is spoken in minority groups; most of the population lives in rural areas (91%) and 94% identify as mestizos. Morona is in the Amazonian region (East) with a poverty index of 66%. Spanish and Shuar are the primary languages, 46% of the population lives in urban areas, and 40% is indigenous.

Cuenca and Morona have similar educational levels: five percent of the population is illiterate, and the average schooling is 10.4 and 9.7 years, respectively. In contrast, in Pucará, 18% of the population is illiterate, and the average formal education lasts 4.9 years (Sistema Nacional de Información, n.d.). The Ecuadorian school system comprises public and private schools; however, private schools are generally unavailable in rural settings. In isolated rural areas (i.e., rural Pucará) and multigrade schools (i.e., first, second, and third grade of primary education), sharing a single classroom with one teacher is common.

The study used a phenomenological qualitative approach to identify the perceptions of schoolchildren living in the Andean and Amazonian regions of Ecuador regarding factors that influence healthy eating and physical activity. The research was part of a mixed-methods study designed to improve our understanding of individual and environmental factors influencing diet and physical activity to propose health promotion strategies in school settings. In total, 120 children aged 8-13 participated in the study. The participants' age groups correspond to the cognitive development stage of Concrete Operations (Piaget & Inhelder, 1997) where children can perceive external stimuli, form an opinion, modify their environment, comply with rules, make decisions based on their experiences, and create value judgments (Fuentes et al., 2012; Piaget & Inhelder, 1997). Participants were included by using a nomination selection criterion

which consisted of asking third parties (i.e., schoolteachers) to provide a list of potential participants (i.e., to nominate); the third party must be able to identify participants who meet the inclusion criteria without any discrimination or preference (Krueger & Casey, 2014). In our study, teachers from public and private schools nominated students to ensure an appropriate and diverse selection process; however, it is important to consider that teachers would not necessarily be impartial in selecting children. To avoid selection bias, we highlighted the need for diverse opinions. The teachers were explicitly asked to select children with different characteristics, avoiding selecting only the best or most participative students.

Additionally, a double-layer design was used in our study (Figure 1; Krueger & Casey, 2014). In double-layer studies, researchers select participants representing different groups; in this way, the results can be contrasted between the selected groups. We selected participants from different geographic areas (i.e., urban and rural areas from Andean and Amazonian regions) as the first layer and from different school types (i.e., private and public schools) as the second. The layer selection was made considering that: (i) Ecuador is a megadiverse country, with significant variability in food availability across geographical regions; and (ii) school type is related to the children's economic level. Children living with families from lower socioeconomic status are concentrated in public schools, while children belonging to higher socioeconomic strata tend to attend private schools (Madrid Tamayo, 2019).

Based on previous experiences and a literature review (Van Royen et al., 2015; Verstraeten et al., 2014), we considered it relevant to contrast the factors influencing children's dietary intake and physical activity according to geographic location and the children's economic levels. In previous qualitative studies aiming to identify the factors involved in children's healthy eating and physical activity behavior, the socio-cognitive theory and socio-ecological model were the most common theoretical frameworks to guide the research. Considering the complexity of dietary intake and physical activity behaviors, combining both frameworks allows for identifying individual and environmental influential factors with sufficient detail to provide a clear overview and construct conceptual frameworks. A questioning route was constructed based on the selected theoretical backgrounds. The number of focus groups was defined a priori (eight focus groups with 8 to 9.11-year-olds and eight with 10 to 12-year-olds). The focus groups were conducted at schools during regular class hours with the researchers and the participants only.

The research team comprised professionals from different fields with experience in qualitative research and focus groups. The focus group sessions were conducted by a psychologist (MP) with extensive experience with children, mainly in inclusion and neurodevelopmental disorders, and knowledge of children's behavior and executive functioning. The observer (NA) who took field notes on verbal and nonverbal behavior and group interactions is an educational psychologist who administered an elementary school for several years and has extensive knowledge of research on human behavior and gender. Both psychologists were trained before data collection about the research topic (healthy eating and physical activity) by the principal researcher (AO), a medical doctor with experience in mixed methods research on dietary intake and physical activity behaviors among children and adolescents from urban and rural settings.

The psychologists' experiences ensured adequate interaction with the children during data collection. A nutritionist (GZ) with experience in nutrition-related research served as an assistant to organize the support material and guide the discussions (i.e., the assistant facilitated the use of photographs to guide the discussion; these procedures are described in detail in subsequent sections). An educational psychologist (EJ) specializing in educational management, human sexuality, family, and qualitative research, provided methodological feedback throughout the process. AO and MP designed the questioning route, which was

commented on and revised by NA and EJ before pilot testing and application. The research team held regular meetings to plan fieldwork and evaluate progress.

The focus group sessions were audio-recorded and conducted in Spanish. Data saturation criterion was considered in each session. In this case, the field researchers (MP, NA, and GZ) maintained working sessions after each focus group to analyze the focus group's discussion content and particularities. In addition, they met periodically with the leading researchers (AO and EJ) to revise the audios and field notes taken by the observer (NA). During the meetings, the researchers analyzed whether the discussion content was new; if the content was repetitive, it was decided that data saturation had been reached.

Figure 1
School Distribution by Layer
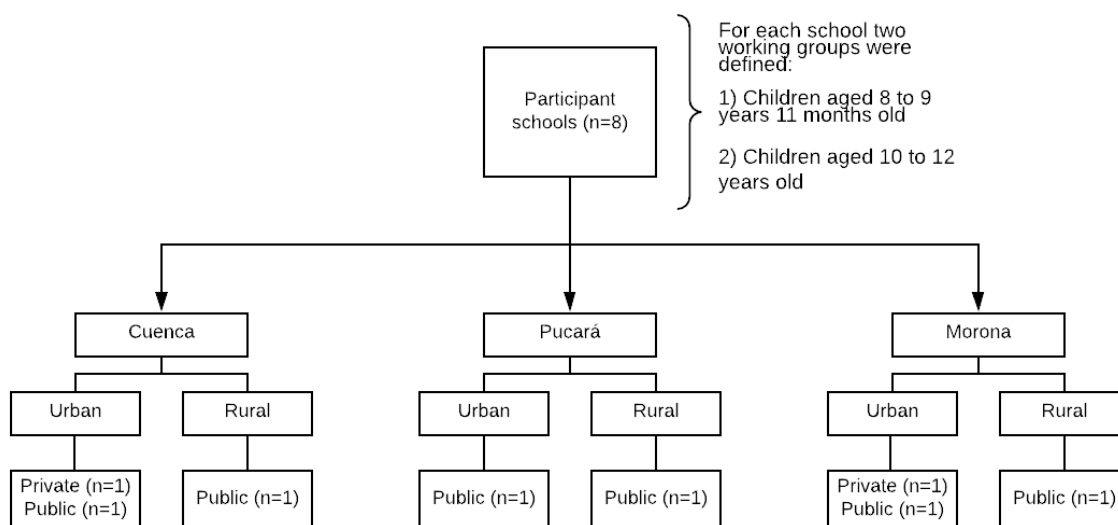
Ethical Considerations

The Universidad San Francisco de Quito-Ecuador Ethics Committee (2017-090E) and the Ecuadorian Ministry of Education approved the research protocol. Parents/guardians signed informed consent, and children assented to participate.

Results

In the following section, first, we present the articles identified after the snowball and citation-searching techniques were applied. Twenty-seven additional relevant articles were found apart from the six articles identified in the first literature review (Table 1). The research team reviewed all articles and formulated specific recommendations for conducting focus groups with children. Afterward, we introduce specific recommendations to conduct focus groups in developing countries by contrasting the literature review with our experience conducting focus groups. The recommendations are organized in subsections in chronological order. Although the recommendations are not definitive, they represent guidelines that could be adapted and enriched.

Table 1

References Identified After Snowball and Citation Searching Techniques

SNOWBALL SEARCHING	REFERENCE ARTICLES (FIRST LITERATURE REVIEW)	CITATION SEARCHING
---	(Kennedy et al., 2001)	(Heary & Hennessy, 2006) (Elyazgi, 2018)
(Mauthner, 1997) (Mahon et al., 1996) (Morrow & Richards, 1996)	(Morgan et al., 2002).	(Darbyshire et al., 2005) (Fargas-Malet et al., 2010) (Huang et al., 2016) (Quinn & Fantasia, 2018)
(Horner, 2000) (Hill et al., 1996)	(Faith Gibson, 2007)	(Krueger & Casey, 2014) (Carter & Ford, 2013) (Gibson et al., 2018)
(Rodríguez-Pascual, 2006). (Thomas & O'Kane, 1998)	(Gómez Espino, 2012)	---
(Feldman, 2011) (Irwin & Johnson, 2005) (La Greca, 1990) (Docherty & Sandelowski, 1999) (Harden et al., 2000) (Kortesluoma et al., 2003)	(Gibson, 2012)	---
(Colucci, 2007) (Bissell et al., 2000) (Peterson-Sweeney, 2005)	(Hoban, 2017)	---

Note. --- indicates that no new relevant articles were found.

Recommendations for Conducting Focus Groups with Children

Participants' Age and Age Range

According to the literature review, the minimum age to provide accurate and valuable information (Feldman, 2011; Kortesluoma et al., 2003) and express opinions (Docherty & Sandelowski, 1999; Gibson, 2012; Irwin & Johnson, 2005; La Greca, 1990) is seven years old (Peterson-Sweeney, 2005). However, based on our experience, the age to conduct focus groups with children varies between urban and rural areas in developing regions, such as Latin America; seven-year-olds might not be ideal for implementing focus groups in isolated, poor rural areas. For this reason, we recommend including children of age ten years and older in such areas. On the other hand, eight-year-olds are ideal for implementing focus groups with children living in urban areas. In our experience, eight-year-old children in urban Cuenca and Morona felt confident, and the discussion was fluent. Nevertheless, the same-age participants from rural Pucará were less expressive and participative, probably due to differences in

educational quality (Calderón Contreras, 2015; Madrid Tamayo, 2019), poverty rates (Castillo & Brborich, 2007) and literacy skills (Vernon-Feagans et al., 2001). For example, shortcomings in literacy skills were evident while signing the written assent and filling out the socio-demographic form; many children in rural Pucará and Morona had difficulties understanding and writing simple information (i.e., parents' data, date of birth, home address). The moderator needed to make a greater effort (i.e., be more structured and give constant motivation) to obtain active participation from younger rural children. On the other hand, children over ten in rural areas could express themselves better, had better communication skills, and participated in fluid discussions.

The literature suggests that the participants' age range should be no larger than two years (Gibson, 2007; Gibson et al., 2018; Kennedy et al., 2001) to guarantee the responses of younger participants (Gibson, 2007; Horner, 2000; Mauthner, 1997; Peterson-Sweeney, 2005). Our experience supports that this age range perfectly applies to developing urban and rural regions; we noted that the discussions, experiences, and perceptions were homogeneous for the suggested age range.

Groups' Structure

Regarding the structure of focus groups, the literature presents various recommendations. First, it is recommended that children familiar with the topic be recruited to facilitate an active discussion (Quinn & Fantasia, 2018; Hernández Sampieri & Mendoza Torres, 2018). Thus, to ensure that children were familiar with the topic, our study recruited healthy children without dietary restrictions, injuries, or diseases that might limit their physical activity.

Other aspects that might influence active participation are power, gender, and cliques (Hoban, 2017; Mauthner, 1997). For general topics, the literature suggests that the group could include boys and girls (Horner, 2000). Following such recommendations, as dietary intake and physical activity are not considered sensitive topics, we involved boys and girls in the same focus groups. In urban settings, active participation was irrespective of the children's gender; nevertheless, in rural areas, boys dominated. Additional effort was necessary to guarantee female participation. In isolated rural settings, where power imbalance between genders might be present (Tepichin Valle, 2011), we recommend performing separate focus groups for boys and girls, even for non-sensitive topics. Although separating boys and girls could limit their interaction, we hypothesize that in rural settings, the information would be richer when including separate groups and that females would express themselves more openly without male figures present, even when discussing non-sensitive topics. However, this should be tested in future research that analyzes the richness and content of the discussions in separate groups of males and females versus mixed groups in rural areas.

Another recommendation from the literature is a double-layer design which consists of selecting participants from different regions or contexts (i.e., layers) when variability in the perceptions between layers is expected (i.e., geographic areas, social groups; Krueger & Casey, 2014). In Latin America, cultural and customs diversity is broad; therefore, the double-layer design seems to be the most suitable in developing areas. In this case, the layer selection would depend on the setting and research question.

In Ecuador, living conditions are diverse according to geographic regions and urban-rural contexts (Madrid Tamayo, 2019; e.g., in rural areas, multigrade schools are typical). For this reason, including urban and rural participants in the same group might be a mistake. For example, during the pretest with our focus groups, urban children did not have trouble identifying certain food items, such as ultra-processed hamburgers or pizzas. However, participants from rural areas had never seen or tried these foods. When describing a hamburger

picture, one of the rural children stated: "*I have no idea; it seems like a meat sandwich, maybe?*" As this example illustrates, such differences might generate an inappropriate environment if urban and rural participants are mixed instead of having a double layer based on geographical location.

Additionally, we recommend that support materials and the questioning route enable the collection of relevant information for all layers, taking special care that no substantial differences are present that prevent contrasting results. Due to the nature of our study, the research team decided to have pictures of ultra-processed foods and incorporate photos of foods relevant to each geographic area (e.g., cassava in the Amazon area and maize in the Andean region), with both urban and rural focus groups. This decision was made because the availability of ultra-processed foods with poor nutritional value is an important influencing factor in eating behavior. Understanding whether children are familiar with these ultra-processed foods provides information about food environments. Therefore, we suggest pretesting supporting material to include relevant content for all layers. Furthermore, we recommend analyzing whether and to what extent supporting material should differ between the layers to ensure relevance to all contexts and enable contrasting results.

According to the literature, another recommendation regarding the structure of the focus groups is that the sessions should include six to eight children (Krueger & Casey, 2014); larger groups impede optimal organization (Eder & Fingerson, 2002), and smaller groups do not enrich the discussion. Over-recruiting children ensures the minimum number of participants (Gibson et al., 2018; Peterson-Sweeney, 2005). Based on our experience, children might be absent on the day of the focus group, even if the informed consent/assent forms have been signed. We recommend selecting the maximum number of children (*n*=8) and at least five potential replacements. If there are not enough participants present, rescheduling the session is recommended; otherwise, the focus group should be carried out with the children present, according to the original protocol. Researchers should evaluate the data collected to decide whether to use the data of a focus group with fewer attendants in their analyses. They might omit these discussions from the analysis or include them if the content is judged new, relevant, and rich. However, a new focus group with the recommended number of children should be planned to ensure the discussion is rich and involves sufficient points of view.

Ethical Issues

The literature suggests that an official ethics committee must approve the study protocol (Gibson, 2007). Even for non-sensitive topics, children are a vulnerable group (Morrow & Richards, 1996). We obtained permission from a local university's ethics committee and the Ecuadorian Ministry of Education to ensure school access. Because the required permissions may vary between countries, we recommend carefully reviewing the local rules and regulations before planning the research. Once all the official entities have approved the study, the researchers must contact the school principal or other gatekeepers (intermediaries between researchers and participants) in advance. Showing credentials is an excellent strategy for transmitting a good first impression and inducing trust.

In rural areas in developing countries, as gatekeepers, teachers are usually admired and inherently trusted leaders (Ramírez-González, 2015). A good relationship with the gatekeeper generates a sense of security in parents; to achieve this, consistent interactions (i.e., by phone calls, in-person visits, WhatsApp/text messages) and fulfilling any offer and requests whenever possible are essential. To avoid misunderstandings, the researchers must be clear about offers and rewards to the extent of available funds and the capabilities of the research team. For example, in rural Morona, the principal requested a parent workshop on gender equality and the donation of educational materials and furniture. The team experts in gender research

delivered a workshop. Considering that the university constantly transfers materials and furniture no longer in use to storage rooms, we provided school directors with a detailed description of the processes involved in requesting such materials.

Another ethical consideration is to obtain informed written consent from the parents/guardians (Homan, 1991). In our study, we asked gatekeepers to prepare a list of potential participants, taking special care to ensure that the group was diverse and that we did not invite only the most active guardians. At this point, guardians were utterly unaware of the research; therefore, we organized informative sessions with volunteer assistance in the school to sign the written consent. We explained the study objectives, and methodology, including the rights and obligations of guardians and children, and solved all the doubts. We invited the parents/guardians to group sessions in the urban area; the sessions lasted no longer than one hour and involved around ten guardians managed by two researchers.

Researchers must respect parents' time and willingness. Thus, even if just one parent attends, the activities should be carried out as planned. Suppose the number of parents/guardians attending is higher than expected. In that case, we recommend planning activities in a waiting room, such as maintaining conversations about expectations and experiences in previous research and providing information unrelated to the project (i.e., health information on topics other than the one addressed in the focus groups). Some guardians might attend with young children; for this eventuality, one researcher should be ready to perform recreational activities with these children to ensure the guardians can focus on the meeting.

As in rural areas, many parents/guardians have functional illiteracy; we do not recommend organizing group sessions to sign informed consent. Instead, in our study, field staff provided personalized sessions. The number of parents/guardians invited to the sessions must agree with the available field staff. In this regard, the field staff must be familiar with the research protocols and informed consent, and the explanations must be homogeneous and adapted to the representatives' language and level of education. According to our experience, absenteeism in the informative sessions can reach 40-50%; for this reason, additional parents should be invited. This strategy is crucial in rural areas where parents have limited accessibility since sometimes the only way to reach the school is by walking long distances. Moreover, research processes are new, so fear or shyness can prevent participation.

In our study, teachers invited parents/guardians to meet with the researchers voluntarily. The teachers explained in advance that the parents/guardians would participate in discussions about the children's nutrition and physical activity and that the risks, benefits, rights, and obligations would be explained in detail during the meeting with the research team. Parents' main concerns during the sessions were about the classes their children would miss and how invasive the procedures would be. Thus, we recommend addressing these issues at the beginning to save time.

Another aspect of ethics is ensuring confidentiality (Gibbs, 1997). In rural settings, the word "confidentiality" generated resistance; some parents associated it with hiding information from them. For this reason, the connotation of confidentiality should be explained using plain language. We usually explain to the parents that confidentiality is an obligation of the researchers and that no one (except the researchers) can access the participants' data or link the research results with the participants' identities. We also explain that names are never recorded and that in the focus groups, pseudonyms are used. All children whose parents attended the meetings and filled out an informed consent form were included in the research (after signing an informed assent) without additional calls.

Once the parents agree for their children to participate, researchers must obtain the children's voluntary assent (Fargas-Malet et al., 2010; Gibson, 2007, 2012; Gibson et al., 2018; Hill et al., 1996; Huang et al., 2016; Mahon et al., 1996; Tait & Geisser, 2017), beginning at seven years old (Morrow & Richards, 1996). Children must be aware of the benefits of their

participation, which will consist of at least understanding how it may help other children or what compensation they will receive. The explanations must be adequate to the participants' capabilities and should be provided in a comfortable context with sufficient time (Fargas-Malet et al., 2010; Gibson, 2012) using plain language (Gibson, 2012; Harden et al., 2000; Huang et al., 2016).

According to our experience, children had no difficulties understanding the term "voluntary participation" in urban areas, whereas these words were unclear in rural areas. We recommend using straightforward language in rural areas, such as: "*you can decide if you want to participate or not,*" instead of "volunteer participation." Writing and reading limitations in rural children were evident; the time needed to obtain their assent was more than double that of their urban peers. As with parents, we recommend personalized assistance to complete the documents with children in rural settings. An in-person approach is the best option. The informed assent signature is an excellent exercise to establish first contact with children. This activity should be managed by the moderator and the observer to generate familiarity with the participants.

Child protection protocols are mandatory (Bradbury-Jones & Taylor, 2015; Gibson et al., 2018). Respect is essential; the belief that, because of their life stage, children's perceptions are automatically wrong must be avoided (Morrow & Richards, 1996; Thomas & O'Kane, 1998). Additionally, in Latin America, various ethnic groups and indigenous cultures are prevalent (Cruz-Saco, 2018). Thus, unconditional acceptance of different religions, cultural beliefs, traditions, and customs is essential. We recommend establishing previous meetings with community members or someone familiar with the local contexts (i.e., the teachers) to understand particularities, prevailing beliefs, and customs. By considering this, potential conflicts can be identified, and if necessary, a more suitable moderator can be selected. The researchers should be careful not to show their position regarding the participants' thinking or acting, even if it is a shared position.

Location and Meeting Space

The literature recommends that focus groups should be conducted in familiar settings, such as schools (Gibson, 2012; Heary & Hennessy, 2006; Hill et al., 1996), where children are insiders, and the power imbalances between them and researchers are leveled-off (Morgan et al., 2002). The presence of parents is unnecessary when the focus groups are conducted at schools, enhancing participants' expression (Bissell et al., 2000). Using a space within the school other than children's classrooms prevents the feeling of being in their usual academic setting (Darbyshire et al., 2005; Gibson, 2012; Greene & Hogan, 2005; Morgan et al., 2002). Amply accessible and well-lit spaces with comfortable temperatures must be selected (Huang et al., 2016; Krueger & Casey, 2014), as well as chairs and a table, which may be needed (Hennessy & Heary, 2005). Also, children must be free to move around (Darbyshire et al., 2005; Gibson, 2012; Morgan et al., 2002). A circular arrangement allows the moderator and the observer to sit among the participants, avoiding an authoritarian climate (Gibson, 2007).

Based on these considerations, focus groups were held at schools in our study. Transportation for children was not required, making logistics easier. Although separate rooms were available in urban areas (i.e., workshop rooms and teacher rooms), this was not the case in rural schools. In such cases, the sessions were performed in classrooms different from those regularly used by the participants (e.g., classrooms from high school were used with elementary school children); this enabled participants to separate from the academic notions and rules that their usual classroom may evocate (e.g., the notion of correct and incorrect answers).

Following this line, we also ensured that the furniture arrangement differed from that of a traditional classroom (e.g., desks arranged in rows) to provide a suitable environment. A

circular arrangement gave the moderator an unrestricted view of the participants; consequently, the environment departed from the typical classroom distribution and dynamic (e.g., teacher-student hierarchy, correct/incorrect answers, and peer competition). The fact that children over ten years old actively participated in the rural area indicates that this strategy worked. It is essential to consider that the rural schools in our research presented multiple deficiencies in infrastructure, furniture, and materials (e.g., lack of meeting rooms, teachers' rooms, and basic or poorly maintained furniture). Thus, complying with the recommendations of an ideal location for implementing the focus groups was challenging. Researchers must be creative and devise strategies that prevent the locations where focus groups are conducted from looking like traditional classrooms. We recommend that future research test different strategies for setting up classrooms for focus groups in poor rural areas where school infrastructure is not ideal.

To prevent unforeseen circumstances, we recommend that researchers arrive at the location at least half an hour in advance to arrange the furniture and material, as was the case in our research. This instills confidence and makes the children feel important and expected. Despite the preparatory activities, unforeseen complications are common; reminder phone calls to the gatekeepers the week and the day before the session are recommended. Noise associated with recreational and sports activities is also likely; if possible, researchers should request rooms far from sports facilities or physical education classes. Undertaking the sessions at recess is not a good option because of the noise; moreover, participants' recreational and rest time must be respected.

Generating the Right Environment

Previous studies on focus groups highlight that reducing anticipatory anxiety is critical before starting with the focus group (Gibson, 2007; Hennessy & Heary, 2005; Kennedy et al., 2001). Ice-breaking activities might reduce anticipatory tension (Colucci, 2007; Gibson, 2007). The research field staff should build trust and reduce the symbolic barriers (e.g., resistance to participation; Gibson, 2012; Harden et al., 2000).

In our research, the moderator cared to become a leader but not an authority during a playful ice-breaking activity. We identified the most popular games by observing the children during recess and talking with teachers about the children's preferred activities. Because humor and movement reduce tension, we considered that children would enjoy games as ice-breaking activities. We began the session by writing the children's nicknames on name tags: nicknames generated an informal and comfortable environment. Then we asked the participants, including the moderator, to form a circle; the moderator started the game by loudly mentioning someone else's nickname and throwing a rubber ball to that person. This person had to catch the ball, throw it to another participant, and so on. All the participants had to be attentive to catch the rubber ball. More balls were progressively incorporated during the activity until six balls were circulating. As the game continued, several mistakes occurred, and sometimes several balls went to the same person; this reduced anxiety by generating laughs, humor, and confidence. Including the moderator in the game had two advantages: she became part of the group and involved participants whom their more active peers ignored.

According to the literature reviewed, to guarantee an active and participative discussion, the moderator should explain that there are neither right nor wrong answers (Gibson, 2007; Kennedy et al., 2001). The format (i.e., some questions will be answered by drawing), nature (i.e., we seek to understand why you choose to buy your food), and rules (i.e., avoiding talking at the same time) must be explained (Gibson, 2007; Kennedy et al., 2001).

In our research, the agenda, timing, objectives, and rules were explained at the beginning of the focus group. Among the rules, we recommend asking children to (i) raise their hands to participate, (ii) respect other people's opinions, (iii) express every thought, (iv)

remember that there is no right or wrong answer, and (v) participate actively. Children were allowed to move during the session, but the moderator ensured that the movement did not disrupt the group's harmony and active participation.

In the rural areas and urban Pucará, children were shy at the beginning, despite the strategies applied, which produced some tension. For this reason, we included a second playful activity with excellent results to reduce this tension. We played a hand game following the instructions from a song (Semilla Espacio Creativo, 2020).

Another challenging aspect, especially in urban schools, was to justify the need to avoid the presence of teachers or school staff to supervise the focus group sessions. When other adults, such as teachers or parents, are present in a children's focus group, participants could seem shyer or need approval (Bissell et al., 2000). Therefore, avoiding the presence of these authority figures enhances children's active participation. In our experience, the schools are willing to accept this requirement when they trust the research team. To this end, researchers should explain to school staff about permits, ethical aspects, procedures, and credentials; moreover, permanent contact between the research team and the school authorities is highly valued. School staff should be aware of advances in research by phone, e-mail, or in person, especially before and during the fieldwork period. Additionally, we recommend asking adults (parents/guardians and teachers) not to train the children in the research topic nor to suggest "correct" information to share; however, it is valuable to recommend parents/guardians talk with children about the study in succinct terms to reduce anticipatory tension.

Moderator Skills

According to the literature, moderators should master the subject (Krueger & Casey, 2014). Experience and confidence in handling a group of children (Darbyshire et al., 2005), using straightforward language, speaking slowly, and using plain language are critical (Hoban, 2017). The moderator must have a good memory, listen actively (Gibson, 2007; Kennedy et al., 2001), show empathy, leadership, ability to interview, warmth, patience, and humor (Kennedy et al., 2001). Additionally, the moderator must minimize the asymmetric position of being an adult by showing interest, validating the participants' opinions, recognizing his/her own mistakes (Gibson, 2012; Gómez Espino, 2012; Mahon et al., 1996; Morgan et al., 2002; Rodríguez-Pascual, 2006), and avoiding a dominant and judgmental leadership (Gibbs, 1997).

We recommend taking special care in selecting the moderator and conducting pretests to ensure that the moderator can adequately manage a group of children, generating empathy and a cordial and fun environment. Selecting the right moderator is critical to overcoming the age difference barrier between the moderator and the children. In our research, the moderator (MP) is a psychologist with extensive experience managing focus groups with children and is skilled in using straightforward language and motivating active participation.

Language diversity is essential in developing regions, such as Latin America. In rural areas, most people usually speak the official language (i.e., Spanish in Ecuador) and native languages (i.e., Quichua, Shuar). Thus, it is necessary to analyze whether to involve a moderator who speaks the native language. Potential signs of resistance include the children answering in their native language or speaking among themselves in their native language. Our study analyzed whether the participants resisted communicating in Spanish with the moderator. In Morona, the rural children belonged to the indigenous Shuar ethnic group, whose primary languages are Shuar and Spanish. However, language restrictions did not occur; children understood the questions and spoke exclusively in Spanish. Occasionally, children answered in Shuar, but other participants alerted them that the moderator could not understand. Communication barriers did not occur in this case. We recommend previous in-person contact with the target audiences to ensure that the moderator is well received.

Academic restrictions were similar in all the rural areas, and all participants showed comparable limitations in their writing and reading skills. Considering there were no barriers to communicating in Spanish, we decided that the research team's trained moderator would conduct all focus groups. Future studies should explore differences in children's responses with a local community moderator (Fern & Fern, 2001; Parsons & Greenwood, 2000).

While the literature does not analyze the moderator's gender, a female moderator might be better in rural areas where gender imbalances might occur; a male moderator could inhibit female participation. With a female moderator, we noticed slight differences in the time needed to earn the trust of girls and boys. Girls showed comfort faster than boys. Humor is the primary strategy to gain boys' confidence and comfort with a female moderator.

According to the literature, the moderator may intervene to maintain the children's attention and motivation (Hamui-Sutton & Varela-Ruiz, 2013). In our experience, urban children participated actively; their emotions indicated enthusiasm, security, and comfort. However, children in rural areas needed extra motivation to encourage thoughtful and detailed responses. Apart from ensuring active participation, researchers should be attentive to systematic inconsistencies. In our study, in one focus group performed in urban Morona, discrepancies were identified in one participant's comment. To mitigate this situation, the moderator consulted if the information was a "joke." The term "joke" could be used instead of "lie" or "invention." The strategy was beneficial; the child kept participating actively, and the classmates' comments, which initially pointed out the child as a liar, were dismissed. In this case, other children's remarks can help detect inconsistencies in the discourse.

Speech inconsistencies in younger children (up to eight years old) are evident because of the magical content of what they say (e.g., *I don't eat vegetables because my dinosaur friend eats all of them*); this is common because of the magical thought that characterizes this developmental stage (Piaget, 1929). In older children (nine and ten years old), maintaining discourse and opinions throughout the conversation or the ability to deepen a response are indicators of speech consistency. Children tended to deviate from the central topics, mainly in urban areas. In this situation, the moderator should listen, highlight what is interesting about their comment, and return to the central topic. By doing this, the moderator will prevent children from feeling that something they said is not valuable or interesting. This highlights the importance of having a moderator with sufficient knowledge of the participants' cognitive developmental stage.

Apart from the moderator, the literature recommends that the research team involves an observer (Peterson-Sweeney, 2005). A third person can be an assistant (Faith Gibson, 2007), who could be responsible for audio recording and logistics. The observer takes notes of the speakers' name, their first words, and other relevant information (Darbyshire et al., 2005; Elyazgi, 2018; Faith Gibson, 2007). Our research team included a moderator (MP), an observer (NA), and an assistant (GZ), all Ecuadorian Spanish speakers. The observer took notes and alerted the moderator when a child wanted to participate. The assistant's role was to prepare the necessary materials, allowing the moderator to keep constant attention on rapport.

Data Collection

The literature recommends collecting socio-demographic data (e.g., gender, ethnicity, age; Gibson, 2007). A flexible questioning route is beneficial and might include introductory activities to establish rapport, main specific questions, and closing tasks (Elyazgi, 2018; Gibson et al., 2018). Fun tasks and creative games help to maintain children's attention and active participation (Colucci, 2007; Hill et al., 1996; Hoban, 2017). Children tend to give monosyllabic answers when the questions are irrelevant to their experiences (Gibson, 2012; Hill et al., 1996; Mahon et al., 1996; Morgan et al., 2002). Open and straightforward questions

with natural language should be included (Hoban, 2017). Easy questions at the beginning make the children feel comfortable and capable of participating (Mauthner, 1997), while interactive activities generate confidence and constant attention (Carter & Ford, 2013; Colucci, 2007; Fargas-Malet et al., 2010; Irwin & Johnson, 2005).

Our study applied three data collection tools: a socio-demographic form, an observer guide, and a questioning route. The children filled out the socio-demographic form before the focus group session with the research team assisting them. The following information was collected: the child's date of birth, gender, village/city, home address, school name, and main parental work activity. In rural areas, the children did not know data such as age, date of birth, and home address. We advise obtaining this information from the school archives.

The research team developed the observer guide. Each item included columns to record the prevalent answers and nonverbal behavior, offering a first summary of the main results that can be used to analyze data saturation and represent a valuable tool if data is urgently needed. The observer paid particular attention to rapport and dynamics (i.e., leadership, isolated participants, and participation by gender).

The researchers designed a questioning route with semi-structured questions, validated by experts in the field, and piloted with a group of children outside the final group of participants. The questioning route consisted of two simple opening questions, an introductory question, seven main questions with transition questions, and two ending questions. For each question, we included an alternative to clarify or to rephrase. Prompt questions were added to deepen answers (e.g., *Is there anything else you want to say?*). Finally, next to each item, a reminder of the expected information (i.e., theoretical construct) was included to indicate the question's objective in case the moderator needed to deepen the discussion and to support the observer in making sure that an answer was given to each question (Table 2). The questioning structure was especially helpful in rural areas and urban Pucará.

Table 2
Questioning Route Extract

Section: 3 School			
● To understand what children do and eat during school recess.			
Question/Activity	**Alternative question**	**Theoretical Determinant**	**Expectations**
What do you do during recess? Evaluate all possible responses. If they answer play, ask: *What do You usually play at recess?*	What do you like to do during recess?	Collective efficacy, Facilitation, Individual, Social.	To understand what the children usually do during recess. To know the reason why. To document the availability of materials, the influence of friends, school rules, etc.
Why do You do that at recess?	What are the reasons? Why do You do this?		Consider whether the reasons for the answers are external to them. (Example: because other children play like this, because teachers make us play because there is no space, etc.)

The questions were organized with the support of two sets of pictures. The first set aimed to identify healthy and unhealthy food items, and the second to illustrate physical activity and sedentary behaviors. The pictures allowed the association with specific objects, motivating the expression of criteria, perceptions, knowledge, and habits. The selected pictures enabled the discussion of influential factors of intake of essential food groups (i.e., whole grains, sweetened beverages, traditional recipes) and activities (i.e., games) that the children do not often mention (i.e., they tend to mention only fruits and vegetables as healthy food). Before being used in the focus groups with children, the pictures were socialized with a nutritionist, an expert in physical activity, and children from urban and rural areas (not included in the final sample). They were asked to analyze each picture's relevance and accuracy.

The initial version of the questioning route and support material were tested in urban and rural settings to assess verbal and nonverbal responses. The pictures captured children's attention, avoiding imitation of their peers' responses, monosyllabic responses, boredom, and distraction. Besides, pictures improved children's comprehension, generated a dynamic environment, reduced interrogatory perception, and empowered them. All the children, even those shy, reacted with laughs, enthusiasm, and active participation. The images revealed that some foods and sports were unknown in rural areas. This information could not have been obtained without the pictures. Using unfamiliar pictures must be applied cautiously; researchers should contextualize the support material to ensure that familiar images are included to maintain children's confidence.

Although a consensus on the duration of a focus group with children has not been established, one hour might be adequate (Gibson, 2007). A pilot is recommended to test the most appropriate timeframe (Keim et al., 1999; Krueger & Casey, 2014). The sessions must be recorded to register all the responses and interactions; audio recording is recommended (Hernández Sampieri et al., 2014; Keim et al., 1999; Mauthner, 1997), and the recorder battery should be checked in advance. We recommend making a list of all the material and preparing everything in advance.

On average, our focus groups involving eight to ten-year-olds lasted 45 minutes, while with ten to twelve-year-olds, they lasted 35 minutes. This time does not include previous activities (i.e., completing the socio-demographic form). In the rural areas and urban Pucará, focus groups required extra time to deepen each explanation and to motivate children. Additional time should be contemplated in rural areas.

Regarding audio recording, the recorder was placed in the middle of the table; in case of external noise, we moved it closer to the person speaking. In the urban area, traffic, ambulances, and other external sounds were frequent; in the rural area, some children's tone of voice was low, especially at the beginning. We recommend placing the recorder in different places considering background noise or tone of voice; the observer can take this task over carefully. Before starting the focus group, the moderator should explain that this would be done to improve recording quality. When external noise is uncontrollable, two recorders on opposite sides of the table are a good option.

Recognition for Participation

Acknowledging children's contributions shows respect and ethical fairness (Bradbury-Jones & Taylor, 2015). Compensation or rewards depend on the resources and research approaches. Monetary rewards must be the last option. An alternative is asking children with similar characteristics what they would like to receive (Fargas-Malet et al., 2010; Gibson, 2007). The rewards should be appropriate for the participant's age, approved by parents, and equitable for all the participants.

At the end of our focus groups, we highlighted the importance of the children's interventions and thanked them. A healthy snack was used as a reward; we chose good quality local apples, nuts, and healthy cookies, which were well received. If food is used as a reward, as was our case, the children should consume it inside the workspace to avoid discomfort among classmates that did not participate in the focus group. Other forms to recognize children's participation are toys, gifts, certificates, art supplies, or clothes (Rice & Broome, 2004).

School staff and parents are central figures; we also recommend recognizing their participation. In our case, healthy eating and physical activity teaching materials previously developed and validated by the research team (Ochoa-Avilés et al., 2017) were delivered to each school. In addition, workshops were organized with teachers/parents; the subjects were chosen according to the needs of each school and the research team's background. Experts organized the workshops, and leaflets with relevant information were also delivered. All the rewards were well received.

Conclusions

This paper provides timely and detailed recommendations for conducting focus groups with urban and rural children in low-and-middle-income countries. Our experience demonstrates that focus groups are helpful in studies with children from these regions. As highlighted, researchers should formulate a solid strategy, provide sufficient methodological training, pretest the supporting materials and methods, and identify researchers with experience in children's group management. Additionally, the empathetic role of the moderator is vital to generate a relaxed, trustworthy environment in which children can express themselves with respect and sincerity.

Properly developing the questioning route is essential; the participants' cognitive development stage should be considered. Age-appropriate activities should be included to maintain children's motivation and attention while supporting their understanding of questions. In the case of our study, pictures proved to be proper support material for focus groups with eight to twelve-year-olds. Specific images facilitate children's responses and evoke their experiences, which are expressed as perceptions. The research setting's particularities should be noticed. Children's educational levels might influence active participation.

Additionally, we conclude that ten years old might be a better minimum age to perform focus groups in rural, remote areas. Finally, having an assistant in developing regions is crucial due to inherent social dynamics in which frequent unforeseen events (i.e., interruptions, lack of commitment) are frequent. Figure 2 displays the critical elements for focus groups with children from developing areas according to our experience.

Figure 2

Critical Elements for Focus Groups in Developing Regions According to our Experience
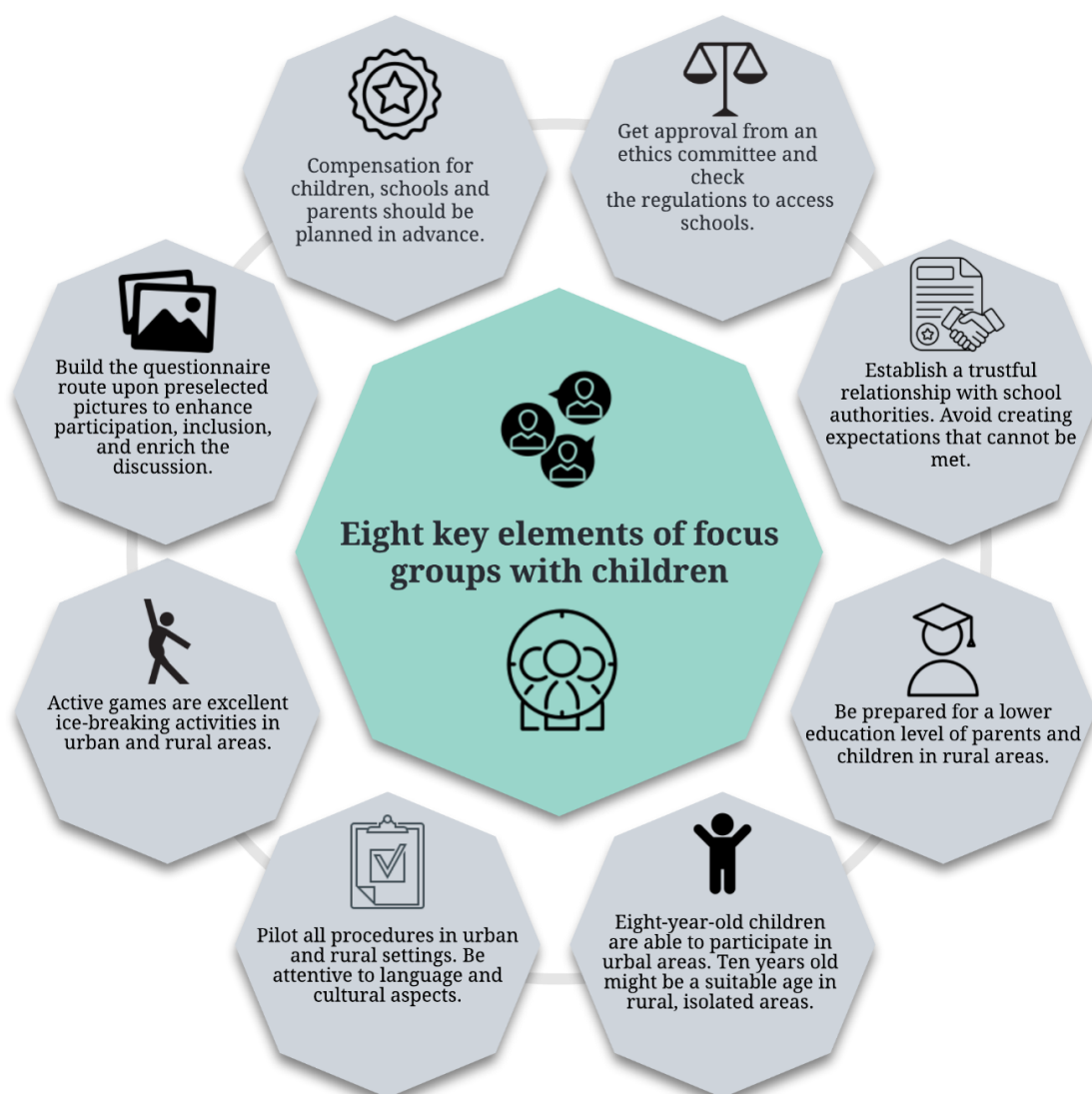
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Author Note

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