

# Lay knowledge regarding the prevention of complications related to childbirth: Perceptions of Congolese pregnant women

Claudine Tshiana,<sup>1</sup> Gédéon Bongo,<sup>2</sup> Oscar Nsutier,<sup>1</sup> Mukandu Basua Babintu<sup>1</sup>

<sup>1</sup>Teaching and Administration Nursing Care, Nursing Sciences, Higher Institute of Medical Techniques, Kinshasa; <sup>2</sup>Department of Biology, Faculty of Sciences, University of Kinshasa, Kinshasa, Democratic Republic of the Congo

Correspondence: Claudine Tshiana, Teaching and Administration Nursing Care, Nursing Sciences, Higher Institute of Medical Techniques, Kinshasa, Democratic Republic of the Congo.  
Tel.: +243 854409147  
E-mail: claudinetshiam@gmail.com

Key words: Perception; pregnancy; lay knowledge; prevention; complication; childbirth.

Contribution: This work was carried out in collaboration among all authors. CT and MBB designed the study, and wrote the protocol, CT and ON carried out the fieldwork. CT interpreted the results of the interview, CT and GB wrote the first draft of the manuscript and managed the literature search. All authors read and approved the final manuscript.

Conflict of interest: The authors declare no conflict of interest.

Availability of data and materials: All data generated or analyzed during this study are included in this published article.

Ethics approval and consent to participate: The Ethics Committee of Public Health School of Kinshasa, Faculty of Medicine, University of Kinshasa approved this study (ESP/CE/038/2015). The study conforms with the Helsinki Declaration of 1964, as revised in 2013, concerning human and animal rights. All patients participating in this study signed a written informed consent form for participating in this study.

Informed consent: Written informed consent was obtained from a legally authorized representative(s) for anonymized patient information to be published in this article.

Received for publication: 7 December 2019.  
Revision received: 11 May 2022.  
Accepted for publication: 11 May 2022.

Publisher's note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article or claim that may be made by its manufacturer is not guaranteed or endorsed by the publisher.

©Copyright: the Author(s), 2022  
Licensee PAGEPress, Italy  
*Qualitative Research in Medicine & Healthcare* 2022; 6:8740  
doi:10.4081/qrmh.2022.8740

This article is distributed under the terms of the Creative Commons Attribution-NonCommercial International License (CC BY-NC 4.0) which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited.

## ABSTRACT

During pregnancy, women sometimes choose certain practices based upon the experience of their family and/or their vicinity to anticipate complications that may occur during childbirth. The main objective of this study is to understand the motivations and perceptions of pregnant women on lay knowledge in the prevention of complications related to childbirth among a sample of Congolese women. We conducted this study at N'djili Referral Hospital in Kinshasa, Democratic Republic of Congo, using a qualitative phenomenological survey and in-depth face-to-face interviews. We interviewed seven women on the phenomenon of lay knowledge practice in the prevention of maternal difficulties and analyzed the data using thematic coding. We provided a consent form to the participants and were careful not to include identifying information. Three main themes emerged: i) discussion of complications related to pregnancy and delivery, ii) perceptions about lay knowledge in preventing complications related to childbirth, and iii) suggestions from participants about using lay knowledge in healthcare settings. Based upon data collected, we argue that lay knowledge about pregnancy can be integrated into formal antenatal training when appropriate and, in doing so, we can build trust among pregnant women toward professional medical instruction.

## Introduction

In many parts of the world, it is common for pregnant women to refer to lay knowledge (i.e., a set of meanings and explanations of a disease, rooted in cultural beliefs and customs) in preventing complications related to health during childbirth.<sup>1-3</sup> Lay knowledge is typically acquired from family, friends, and the local community, as demonstrated among pregnant women in multiple African societies.<sup>2-4</sup>

Lay knowledge about pregnancy, although considered as non-scientific, is reassuring to many pregnant women.<sup>5</sup> Thus, women may turn to their mothers, sisters, mothers-in-law, or others close to them with questions about pregnancy and childbirth, whether it is caring for the mother and child or learning about traditional practices and specific postnatal rites varying from tribe to tribe. Lay knowledge has a profound influence among women and families whose communities emphasize connections to cultural traditions, particularly as they pertain to maternal health.<sup>6-10</sup> In this context, "culture" refers to the local contexts and the dynamic web of meanings through which individuals, families, and communities interact.<sup>11</sup> As such, culture is an

ever-changing, continuous, and emergent set of shared ideas, meanings, and values acquired by individuals as members of a society.<sup>12</sup> Culture thus provides a context in which people come to understand their health status and to comprehend options for diagnoses and treatments.<sup>1</sup>

According to Desgagné,<sup>7</sup> pregnant women and their communities in sub-Saharan Africa often believe that the practice of lay knowledge during pregnancy is the most favorable way to protect, help, and even feed future mothers. Most lay knowledge revolves around three axes: diet in relation to pregnancy, religious beliefs, and domestic work. Lay knowledge is commonly practiced outside of the health system (i.e., outside of the health education received during antenatal consultations and often without the knowledge of medical staff).<sup>13-16</sup> Studies suggest that the main motivation for women's use of lay knowledge is that, despite all the activities organized by antenatal services, antenatal classes seem to be of little help to future parents.<sup>17-18</sup>

In the Democratic Republic of the Congo, lay knowledge about pregnancy and childbirth is poorly documented with little knowledge among nursing staff. This study was inspired by observations made regarding pregnant women in Kinshasa who continue to trust and rely on lay knowledge from friends and family as sources of information concerning their gestational state and its consequences. In Kinshasa's maternity hospitals, pregnant women attend health education classes daily during their pregnancy; however, formal antenatal instruction is often different from, or even contradictory to, lay knowledge, skills, and practices.

This research is intended to contribute to the production of new knowledge about relationships among pregnant women, their community (sources of lay knowledge), and formal, antenatal instruction by nursing staff (sources of medical knowledge). Specific objectives are: i) to identify lay knowledge used by Congolese pregnant women in preventing complications related to childbirth; ii) to disclose their perceptions about lay knowledge; iii) to understand their motivations for using this lay knowledge, and iv) to inquire whether pregnant women advise the use of lay knowledge during formal antenatal classes supporting pregnant women in the acquisition and maintenance of healthy lifestyle habits.

---

## Materials

### Study area

Data collection was conducted at the N'djili Referral Hospital, a health structure representative of the N'djili health area in the N'djili health zone. It is located in the municipality of N'djili, on the eastern outskirts of Kinshasa. Its creation dates back to 1952, the year in which a dispensary belonging directly to the General Hospital was built in the current center of this municipality where only external primary health care had been provided. Although it was under the control of the General Hospital, the dis-

pensary was placed under the direct supervision of the center of Kasangulu until 1960. In view of the increase in population and health needs, the authorities at that time decided to build a dispensary and a maternity hospital in 1958, thanks to the cooperation of the Congolese Government, the World Health Organization (WHO), the United States Agency for International Development (USAID), and other international organizations that had provided funding for the construction of the buildings that house the current hospital in N'djili municipality.

The N'djili Referral Hospital is a complex institution with several services, including surgery, pediatrics, internal medicine, nutrition and dietetics, gynecology, and nursing. This research was conducted in the gynecology service.

### Study design

As an exploratory, qualitative research design intended to better understand Congolese pregnant women's perceptions of lay knowledge in the prevention of maternal complications, we chose phenomenology as the approach because of phenomenology's emphasis on systematic description of what people perceive in their day-to-day experiences.<sup>19</sup> In phenomenology, the main objective is the study of meaning, rather than its explanation of causes.<sup>20-21</sup> Phenomenology explores what is considered to be commonsense knowledge, i.e. knowledge that is already widely present in the community being studied.<sup>22</sup>

### Sampling, sample size, and population

Using a purposive sample,<sup>23</sup> this study concerns pregnant women living in Kinshasa city and attending the N'djili Referral Hospital for antenatal consultation. We were particularly interested in pregnant women who use lay knowledge to prevent complications related to childbirth. We recruited participants during the antenatal consultation with the consent of nurses. We initially interviewed 11 women; however, we noticed that there was a redundancy of information, i.e. we reached saturation, so we limited our data to seven interviews that demonstrated the most diversity in responses.<sup>24-26</sup> Sample selection included four criteria: each participant was i) a married woman, pregnant for the third time or more, ii) had used a practice of lay knowledge to prevent a given maternal complication, iii) was able to express herself in French or Lingala, and iv) understood the consent procedure and agreed to participate in the study. To preserve anonymity, respondents are identified as R 1-7 (see Table 1). Participants' age ranged from 29 to 40 years.

---

## Methodology

### Data collection

We chose a phenomenological method and conducted in-depth interviews using an audio recorder to collect

data. The purpose of in-depth interviews was to gain understanding of what participants think and to learn things that cannot be observed directly, such as feelings, ideas, intentions, etc.<sup>27-30</sup> Among the specific topics that we asked about were how pregnant women feel in general about pregnancy and potential complications, what traditional practices were used to prevent complications in pregnancy, and how pregnant women rate traditional practices in relation to advice received from healthcare providers during antenatal classes.

In order to verify the quality of the instrument, a preliminary interview was conducted with two pregnant women at the Mikonga area in the N'sele health zone. This pretest interview became a guide,<sup>31</sup> helping us adjust various questions for clarity, specificity, and so forth. At the beginning of each interview, an introduction of the interviewer was performed to the interviewee by providing his full identity and describing the purpose of the study. Contact with respondents took place after their antenatal consultation. Interviews took place in a quiet room not far from the antenatal room. One member of the research team conducted the interview, while the other recorded the interview using a smartphone. The team was able to converse with the participant in both commonly spoken languages (French and Lingala). Each interview lasted for approximately 30 minutes.

#### Ethical considerations

After the purpose of the study was clearly explained to the participants, and a consent form was provided for each person. Interviewees were told that they didn't have to answer questions and that they could end the interview at any time. They were also informed about the confidentiality of their responses. Interviews were conducted in a secluded setting for reasons of confidentiality. The Ethics Committee of Public Health School of Kinshasa, Faculty of Medicine, University of Kinshasa approved this study.

Interviews took place between December 23<sup>rd</sup>, 2015, and January 2<sup>nd</sup>, 2016, depending on the availability of respondents. To minimize data transcription bias, we listened to interviews three or four times to ensure that transcriptions were as accurate as possible.<sup>32-34</sup> Transcripts

were coded into themes using syntactic analysis, according to a three-column data matrix: sub-theme, categories and verbatim (see Appendix 1, 2 and 3).<sup>35,36</sup>

## Results

### Perceptions regarding pregnancy complications

Being pregnant has several meanings for a woman as well as for her community. Respondents generally regarded pregnancy to be a happy phenomenon, with some describing it as a divine blessing:

It is not a suffering. Pregnancy is a blessing. You will see it as suffering unless you have picked it up, that is, you did not expect to have that pregnancy or to give birth. (R5)

For me, pregnancy is a happy event for the woman. It is a great joy in the family. (R4)

For me, pregnancy is a blessing from God, although sometimes it comes with a few [concerns] not to eat this or that. (R1)

For me, pregnancy is a blessing. (R6)

Though the pregnancy is seen in positive ways, participants also reported that it has several complications, which the future mother must endure, and that brings fear for some women. Worrisome complications include heavy weight of the child, the child possibly presenting a macrocephaly, or having labor dystocia or an otherwise severely painful childbirth:

For me, one of the difficulties or complications during childbirth is that the child is big and the delivery is painful. (R1)

On my part, I have not yet experienced a complication during all my deliveries, but what I fear is the birth of a child with a big head and not breathing normally. (R2)

In my opinion, the complication that can occur during childbirth is a caesarean section. But as far as I'm concerned, I have never undergone any caesarean section during all my deliveries. (R4)

Well, the difficulties... except only the intense pains that I feel in that specific time during the delivery. Those pains are unbearable. (R6)

Well, for me maybe as you did your pregnancy, if you didn't eat enough, and maybe you suffered from time to time, you will see that on the day of

**Table 1. Research respondents.**

	Age (years)	Marital status	Number of children
R1	40	Married	8
R2	35	Married	5
R3	38	Married	3
R4	38	Married	5
R5	37	Married	3
R6	30	Married	4
R7	29	Married	3

childbirth it will be a little complicated; there will not be enough breath to push during the childbirth. That's how I see it. (R3)

Most respondents associated pregnancy and childbirth with suffering; however, some considered these symptoms to be the normal functioning of the body. For some, non-compliance with food bans can constitute the cause of such complications, whereas other respondents reported that suffering occurring during childbirth is the will of God or a normal circumstance in the life of a woman:

For me, these difficulties represent the suffering that can be caused by the problems that people can have in the community [society]. (R1)

This complication or difficulty for me just represents a certain functioning of the human organism depending on each individual. (R5)

For me, this complication represents the non-respect of the food bans of lay knowledge or it is linked to fetishes. (R2)

Despite potential suffering, participants were prepared to face these challenges, believing that it is a phenomenon that has to happen in their lifetime:

For me, this complication is normal because it is what is promised in the Bible— that the woman will give birth in pain. We do deliver in pain and difficulties, so no ease! (R3)

For me, this difficulty is only a situation that happens. (R7)

Although participants associated pregnancy with hardship, they also thought that complications could be prevented to some degree by respecting food bans and adopting a diet that would ease childbirth, moderating sexual intercourse, and continuing to remain active, albeit in moderation:

I don't eat foods that contain too many vitamins such as beans, so that the child doesn't increase more weight and therefore goes out easily during childbirth. (R1)

I do not eat the fish called "congo ya sika" to [prevent having] a macrocephalic child and even less who is not breathing well. (R2)

As to me, when I'm fat from the advice we receive from the antenatal class, I eat twice as much as what I've always eaten usually in the non-pregnant

state. I eat too much iron for the anemia not to happen. (R2)

In terms of sexual life, I often look at the evolution, especially at the beginning of pregnancy. If I experience discomfort, I abstain from intercourse. Also, I cannot allow having a position which will be uncomfortable to me. (R7)

I work, walk, and do not remain still until the day of childbirth [so that] the child is born without delay. (R1)

For me, I don't do the heavy work to prevent or protect myself against abortion. (R6)

### Perceptions of lay knowledge in preventing complications related to childbirth

Preventive measures taken to reduce pregnancy complications typically include following religious and cultural traditions, often in conjunction with communal support:

In my way of thinking, I find that these practices are simply a help. (R2)

This way of preventing [protecting] oneself is a religious and cultural value for me. (R4)

All these practices for me are just prevention... protection. (R7)

Some respondents expressed their beliefs as a result of direct experience ("It's a personal experience." [R3]), whereas others learned by observing women around them:

I got this from my mother and older sisters. (R6)

These practices of lay knowledge, I learned it from my mother and some friends. (R4).

Acquisition of lay knowledge through observation, in the minds of participants, thus gives pregnant women the opportunity to potentially avoid practices that could put their lives and the lives of their children at risk.

Furthermore, most respondents consider the lay knowledge to be more useful than scientific knowledge ("[I]t is the lay knowledge I use that is more helpful." [R1]), although some think that both lay knowledge and scientific knowledge pursue the same goals:

As for me, I find antenatal classes more theoretical, in the sense that those who sometimes give them have not even experienced this yet; and lay knowledge is more profound because it is a lived experience. (R4)

In my opinion, lay knowledge (prayer) and prenatal classes (medical knowledge) are equally important because if I confide only in prayer, the child may find himself in a bad position. It is the prenatal consultation that will let me know, and I will pray to God who will help me so that the child changes position so that I can deliver normally. (R5)

As far as I am concerned, these practices compared to prenatal classes are also good, because they also help to bring the pregnancy simply to term and give birth normally. (R7)

Both practices (lay knowledge) and antenatal classes (medical knowledge) help. (R1)

The lay knowledge is good, and is equal to the antenatal class. (R6)

In addition, what drives pregnant women to resort to these practices of lay knowledge reflects some degree of doubt and fear about the future pregnancy. When asked if they shared their fears with nursing staff, participants sometimes demonstrated a lack of trust in antenatal staff. Some felt that their own lay knowledge was sufficient, drawing a firm line between professional skills, on one hand, and lay knowledge accompanied by faith in God, on the other:

Antenatal classes are not an insurance. They are only a formality... but one thing is certain: We can indeed follow this as it should be, but in the end, nothing works, and there is only God and God alone who can help. He is the one who helps. (R5)

What drives me to utilize lay knowledge despite the fact that I attend antenatal sessions is fear, the risk of having a macrocephalic baby and who would not breathe normally. (R2)

Well, what drives me to do these practices [apply lay knowledge] is the desire to prevent and protect myself from harm during childbirth, given what has already happened to me in life. (R7)

I don't share this with the antenatal officers because of their attitude to scold so often when we talk to them about this kind of thing. And also, they often follow what is written and don't take into account what we bring them. That is why I avoid it. (R2)

No, because I already know that what I use protects me, and I don't think it's important to share it with them. (R6)

No, I don't share this with the nursing staff, because it only involves me. (R7)

One participant stated that although she didn't talk about lay knowledge with professional healthcare staff, she would be interested in doing so:

No, I don't share these experiences with nursing staff, because I've never found an opportunity. And if I ever find one, I will. (R4)

This statement suggests a willingness to open up about lay knowledge and customs, balanced by a hesitancy to do so, perhaps due to feelings that lay skills would not be accepted by professional staff. Note the emphasis on "sharing," suggesting that communication about pregnancy could be reciprocal, rather than unidirectional.

### Proposals from participants using lay knowledge to the nursing staff

Asked for their advice about using lay knowledge in professional healthcare settings, respondents suggested that nursing staff working in prenatal consultation service integrate lay knowledge classes into antenatal health education. According to participants, these lay knowledge lessons could have a positive impact during pregnancy right up to delivery:

Let nurses working at antenatal also consider popular knowledge in prenatal classes so that the latter are a combination of medical knowledge and popular knowledge because it helps. (R1)

Some participants suggested that healthcare workers should be more attentive to patients' understanding of pregnancy in order to facilitate exchange between lay and scientific knowledge and to help address the challenges arising from complications during childbirth:

[S]ome pregnant women have more experiences than the nursing staff, and these experienced women may share their experiences too. (R3)

[W]e propose that during education sessions or prenatal classes, opportunities be provided where women can ask questions or suggest their experiences of lay knowledge in order to share them and many other things. (R4)

[A]nd, in turn, the nursing staff has to listen to us and not only speak. So, we listen to each other, because their teachings are not always the absolute truth (R3)

Moreover, some participants suggested the combination of scientific and lay knowledge to ensure their well-being and that of their children:

For pregnant women, let them continue to come to

prenatal classes and do everything they know well to give them a safe childbirth. (R7)

... that they continue to use their non-medical practices and also go to antenatal classes to ensure their well-being and that of the unborn children. (R3)

---

## Discussion

### Use of lay knowledge to prevent complications related to childbirth

Findings in this study about faith in lay knowledge are consistent with research by Huizink et al.,<sup>2</sup> Schneider,<sup>3</sup> and Winson<sup>4</sup> reporting that in African communities, the gestational period is a time when nearly 100% of pregnant women make adjustments based on lay knowledge when adapting to the physical and emotional changes associated with pregnancy and the consequences they will face.

According to Desgagné,<sup>7</sup> in sub-Saharan Africa, the context of motherhood is highly culturalized, so the experience of motherhood is inseparable from the family and community experience. The presence and support of family members as sources of lay knowledge is therefore essential for the culturally situated proper conduct of pregnancy and childbirth as well as the transmission from mother to child of a sense of belonging to the extended family and clan.

The findings of this exploratory study suggest that Congolese pregnant women tend to rely upon lay knowledge to explain, predict, and in some cases, endure the challenges of pregnancy. This is in contrast to findings reported by Barry,<sup>15</sup> who found that pregnant women in the Guinean region perceive pregnancy as a rite of passage, confirming women's marital status, rather than a challenge.

Complications during pregnancy and delivery are most often considered to be natural occurrences or the will of God affecting women in general among participants in this study. This seems different from findings reported by Francois,<sup>36</sup> who found that difficulties or complications during pregnancy more often are thought to be results of disobedience or transgression of prescriptions and prohibition during the gestation period, although women in this study did mention the importance of traditional food bans.

With regard to prevention of childbirth-related difficulties, respondents of this study listed practices such as maintenance of food bans, prayer, walking, and working. This is consistent with the three axes—diet, religious practices and domestic work—described by Barry.<sup>15</sup>

### Potential for using lay knowledge in professional healthcare settings

Suggestions collected during the interviews with participants in this study express the desire to share lay knowledge with professional healthcare providers and especially the desire to integrate the lay knowledge into antenatal

classes. These suggestions are consistent with Amuli and Ngoma's<sup>37</sup> recommendation that a person in need of care should seek a good health professional who is sensitive to one's cultural and spiritual beliefs and who will treat her with dignity and respect, regardless of the nature of the condition. Carver et al.<sup>38</sup> pointed out that the provision of antenatal services must be more responsive to the needs of future parents, including their beliefs and culture, rather than relying solely on the beliefs of health professionals about the care deemed appropriate during this period. As suggested by participants in this study, lay knowledge could be built into antenatal education so that nursing staff demonstrate awareness of and sensitivity toward patients' beliefs, but also so that patients might be more trusting and accepting of professional medical expertise.

---

## Conclusions

This research focused on studying pregnant women's perceptions of lay knowledge in the prevention of complications related to childbirth. The majority of our respondents consider lay knowledge and medical or scientific knowledge to be equally important, while some will also suggested that the former exceeds the latter. Given their preference for lay knowledge, it is not surprising that most of our respondents expressed a desire for sharing and integration of lay knowledge in antenatal classes. Although our sample was small, the consistency among our participants suggests that such integration—when efficacious, of course—would be widely appreciated among Congolese women specifically, and African women more generally, thereby facilitating increased trust and acceptance of professional medical advice. As a limitation, the sample size was small, and our narrow focus of data collection did not allow us to consider other aspects of pregnancy such as stress, fear, and complex social dynamics within families and other social groups.

---

## References

1. Nielsen-Bohlman L, Panzer AM, Kindig DA. Health literacy: A prescription to end confusion. Institute of Medicine (US) Committee on Health Literacy, Washington (DC), National Academies Press (US); 2004.
2. Huizink AC, de Medina PG, Mulder EJ, et al. Coping in normal pregnancy. *Ann Behavioral Med* 2002;24:132-40.
3. Schneider Z. An Australian study of women experiences of their first pregnancy. *Midwifery* 2002;18:238-49.
4. Winson N. Transition to motherhood. In Squire C. (ed), *The social context of birth*. London: Radcliffe publishing; 2009: pp.145.
5. Fortin S. Trajectoires migratoires et espaces de sociabilité: Stratégies de migrants de France à Montréal. PhD Thesis in Anthropology, University of Montréal; 2002: pp.335.
6. Singh G, Shariff A. Determinants of maternal health care utilisation in India: Evidence from a recent household survey. Working Paper Series 2002;85:1-41.

7. Desgagné M. Femmes autochtones et maternité. *Le Médecin du Québec* 2006;41:101-3.
8. Fortin S, Le Gall J. Neonatalité et constitution des savoirs en contexte migratoire: familles et services de santé. *Enfances, Familles, Générations* 2007;6:16-37.
9. Khanlou N, Haque N, Skinner A, et al. Scoping review on maternal health among immigrant and refugee women in Canada: Prenatal, intrapartum, and postnatal care. *J Pregnancy* 2017;2017:8783294.
10. Rosliza AM, Muhamad HJ. Knowledge, attitude and practice on antenatal care among Orang Asli women in Jempol, Negeri Sembilan. *Malaysian J Public Health Med* 2011;11:13-21.
11. Dutta MJ. Culture-centered approaches. In Thompson TL, (Ed.), *Encyclopedia of health communication*; 3:285-290. Thousand Oaks, CA: SAGE Publications Ltd; 2014.
12. Dutta MJ. Communicating about culture and health: Theorizing culture-centered and cultural sensitivity approaches. *Communication Theory* 2007;17:304-28.
13. Tillard B. Regard anthropologique sur l'éducation pour la santé. *Rev Rech Education* 2000;25:153-64.
14. Maria de Fatima VM, Remoaldo PCA. Mythes et croyances pendant la grossesse dans la région nord-ouest du Portugal et ses implications dans la sante des femmes. *Rech Soins Infirm* 2007;3:75-85.
15. Barry MC. Perceptions médicales et populaires dans la prévention des difficultés maternelles en milieu rural Peul guinéen. *Afri Studies Rev* 2000;43:1-18.
16. Legault A. Processus décisionnel de la femme enceinte immigrante: Etude exploratoire chez des primigestes et secondigestes. Thesis. University of Montréal; 2014.
17. Deave T, Johnson D. The transition to parenthood: what does it mean for fathers? *J Adv Nurs* 2008;63:626-33.
18. Widarsson M, Kerstis B, Sundguist K, et al. Support needs of expectant mothers and fathers: a qualitative study. *J Peri Ed* 2012;21:36-44.
19. Mohajan KH. Qualitative research methodology in Social Sciences and Related Subjects. *J Econ Develop Environ People* 2018;7:23-48.
20. Kalaldehy MA, Shosha GA, Saiah N, Salameh O. Dimensions of Phenomenology in exploring patient's suffering in long-life illnesses: Qualitative Evidence Synthesis. *J Patient Exp* 2018;5:43-49.
21. Barrow DM. A phenomenological study of the lived experiences of parents of young children with autism receiving special education services. *Dissertations and Theses*. Portland State University; 2017: 338 pp.
22. Vanini A. Interpretive theory. In Littlejohn SW and Foss KA (Eds.), *Encyclopedia of communication theory*, 2:558-562. Thousand Oaks, CA: SAGE Publications Ltd; 2009.
23. DeCarlo M. Sampling in qualitative research. In *Scientific inquiry in social work*. Open Social Work Education; 2018. Available from: <https://scientificinquiryinsocialwork.pressbooks.com/chapter/10-2-sampling-in-qualitative-research/>
24. Saunders B, Sim J, Kingstone T, et al. Saturation in qualitative research: exploring its conceptualization and operationalization. *Quality and Quantity* 2018;52:1893-1907.
25. Deslauriers, JP. *Recherche qualitative: Guide pratique*. Ed. McGraw-Hill, Montreal, Canada; 1991: 142 pp.
26. Luborsky MR and Rubinstein RL. Sampling in qualitative research: Rationale, issues and methods. *Res Aging* 1995;17:89-113.
27. Amuli J, Ngoma O. *Méthodologie de la recherche scientifique en soins et sante: de la conception a la diffusion de résultats*. MediasPaul, Kinshasa; 2012a.
28. Amuli J, Ngoma, O. *Méthodologie de la recherche scientifique en soins et sante. Guide de la rédaction scientifique*. Tome 2eme. MediasPaul, Kinshasa; 2012b.
29. Boyce C, Neale P. *Conducting in-depth interviews: A guide for designing and conducting in-depth interviews for evaluation input*. Pathfinder International Tool Series, Monitoring and Evaluation 2; 2006: 16pp.
30. Fortin S. Les enjeux et défis d'une pratique pédiatrique en contexte pluraliste: réflexions théoriques. In De Plaen S (Ed.), *Soins aux enfants et pluralisme culturel*, Collection *Intervenir*. Montréal, Hôpital Sainte-Justine; 2004: pp. 87-105.
31. Tessier S. From field notes, to transcripts, to tape recordings: evolution or combination? *Int J Qual Meth* 2012;11:446-60.
32. Stuckey HL. The first step in Data Analysis: Transcribing and managing qualitative research data. *Methodolog Issues Social Health Diab Res* 2016;77:161-73.
33. Halcomb EJ, Davidson PM. Is verbatim transcription of interview data always necessary? *Applied Nurs Res* 2006;19:38-42.
34. DeCarlo M. Analyzing qualitative data in: *Scientific Inquiry in Social work*. Open Social Work Education; 2018. Accessed: July 1st, 2020. Available from: <https://scientificinquiryinsocialwork.pressbooks.com/chapter/13-5-analyzing-qualitative-data/>
35. Loubere N. Questioning Transcription: The Case for the Systematic and Reflexive Interviewing and Reporting (SRIR) Method. *Forum Qual Social Res* 2017;18:15.
36. Francois P. *Interprétations populaires des maux de la grossesse et remèdes traditionnels utilisés par les femmes enceintes en Afrique: illustration par une enquête dans des villages sérères, Sénégal*. Travail de fin d'étude en vue de l'obtention du diplôme de sage-femme bachelier, Haute Ecole Provinciale Mons-Borinage-Centre, Institut Provincial d'Enseignement Supérieur de Nursing, 2009, 58pp.
37. Amuli J, Ngoma O. *Sociologie appliquée aux Soins Infirmiers*. Notes de cours deuxième licence en EASI, ISTM/Kinshasa, 2015.
38. Carver NA, Ward BM, Tailbot LA. Using bradshaw's taxonomy of needs: listening to women in planning pregnancy care. *Contem Nurse* 2008;30:76-82.