ORIGINAL RESEARCH ARTICLE

Perceptions of midwifery students and their lecturers regarding challenges faced by deaf pregnant women in accessing maternity care

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Abstract

Midwives are central to caring for pregnant women in labour, including Deaf women. It is the midwife's responsibility to communicate and establish a relationship with the pregnant woman in labour, despite the accompanying challenges. Explore fourth-year undergraduate Midwifery Students' and their Lecturers' perceptions of the challenges faced by Deaf pregnant women in accessing maternity health care when in labour. A qualitative content analysis approach with purposive sampling allowed for the invitation of Midwifery lecturers (*n*=2) and Bachelor of Nursing Degree Midwifery students (*n*=25). Data were collected through four focus group discussions and two individual interviews. Data analysis was guided by Elo and Kyngäs approach and trustworthiness was achieved. Two categories with four subcategories emerged. All pregnant women, inclusive of the often "inaudible" Deaf pregnant woman, are entitled to equitable, accessible, available person-centred maternal health care. *(Afr J Reprod Health 2023; 27 [9]: 43-56).*

Keywords: Midwifery students, midwifery lecturers, deaf pregnant woman, labour, SASL

Résumé

Les sages-femmes jouent un rôle essentiel dans la prise en charge des femmes enceintes en travail, y compris des femmes sourdes. Il est de la responsabilité de la sage-femme de communiquer et d'établir une relation avec la femme enceinte en travail, malgré les défis qui en découlent. Explorez les perceptions des étudiants sages-femmes de quatrième année et de leurs professeurs sur les défis rencontrés par les femmes enceintes sourdes pour accéder aux soins de santé maternelle pendant le travail. Une approche d'analyse de contenu qualitative avec échantillonnage raisonné a permis d'inviter des professeurs de sages-femmes (n = 2) et des étudiants en sage-femme au baccalauréat en sciences infirmières (n = 25). Les données ont été collectées au moyen de quatre discussions de groupe et de deux entretiens individuels. L'analyse des données a été guidée par l'approche d'Elo et Kyngäs et la fiabilité a été atteinte. Deux catégories avec quatre sous-catégories ont émergé. Toutes les femmes enceintes, y compris les femmes enceintes sourdes, souvent « inaudibles », ont droit à des soins de santé maternelle équitables, accessibles et disponibles, centrés sur la personne. *(Afr J Reprod Health 2023; 27 [9]: 43-56).*

Mots-clés: Étudiantes sages-femmes, enseignants sages-femmes, femme enceinte sourde, travail, SASL

Introduction

Globally five percent of the world's population, an estimated 466 million persons, have disabling hearing loss, with projections that these figures will double by 2050[1]. Statistics South Africa (Stats SA) show a slightly lower percentage (3.6%) compared to global statistics of persons with hearing disabilities[2]; further access to figures showing women in childbearing years with such problems is less evident in sub-Saharan Africa[3]. In addition, statistics do not differentiate between the levels of hearing loss, which can range from mild to profound. Deaf persons have profound hearing loss and use sign language as their first language for communication[1], referred to in South Africa as South African Sign Language (SASL)[4]. SASL is enshrined in the Constitution of South Africa (No. 108 of 1996), which guarantees equality and non-discrimination, and has been the subject of such campaigns as "Solidarity in South African Sign Language". However, in mid-2022, nearly 30 years after the inception of the Constitution, SASL has gained recognition through the South African

President's approval of the Constitutional Eighteenth Amendment Bill for public comment to make it the country's 12th official language[4].

The above highlights that Deaf persons are among South Africa's vulnerable and marginalised population[4], which subjects them to stigma and discrimination, impacting not only their physical but also their mental wellbeing. This level of marginalisation extends to women in lower-middle-income countries (LMIC) who are more susceptible to deafness due to its link to their violation of Sexual and Reproductive Health Rights (SRHR)[5], physical abuse, an increased vulnerability to HIV/AIDS, Meningitis, Tuberculosis, and the treatment of sexually transmitted infections with side effects of numerous drugs affecting hearing[1]. The aforementioned occurs with Sub-Sahara African women with disabilities, despite international documents such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) outlining the rights to health care free of discrimination[5,6]. Deaf persons have little to no functional hearing, and their physical and mental vulnerability lies in their dependency on others for verbal communication and interpretation[7]. Their marginalisation translates into unequal access to healthcare facilities[7]. They are deprived of an equal opportunity to make informed person-centered treatment choices[8]. The marginalisation and vulnerability of Deaf persons are evident in pregnant women whose physical and mental health needs are often ignored by healthcare policies, programs, and ill-prepared healthcare professionals, including midwives[9].

Midwives are central to caring for pregnant women in labour[10], including Deaf women. It is the Midwife's responsibility to establish a relationship with the pregnant woman in labour, despite the accompanying challenges[11]. Establishing a relationship can facilitate effective communication and decrease the possibility of mental ill-health or adverse maternal health outcomes[11]. Furthermore, South African Midwives' Scope of Practise (R2598, Chapter 3) requires the midwife to advocate for all pregnant women, including the Deaf woman enabling her to obtain the healthcare she needs[12]. Midwives' role as an advocate should allow Deaf persons to realise their full human rights, particularly to be understood and receive quality maternal healthcare; however, this is hindered by midwives' lack of preparedness to communicate with Deaf persons[9,11].

Miscommunication can result from the barriers created by Deafness with the possible outcome of incorrect interpretation of the pregnant woman's needs, subsequent errors in the delivery care[7] and the potential to negatively influence maternal mortality and morbidity due to lack of access as well as communication barriers[13]. Communication can involve the use of pictures, gestures, sign language, visual aids, and the involvement of interpreters[4].

Numerous challenges accompany the engagement of interpreters. One of the challenges is that the demand for skilled interpreters outweighs the supply thereof[8]. The short supply of interpreters can be accompanied by financial challenges where a fee ensues with disparities in amounts charged, interrupting the goals of Universal Health Coverage (UHC)[8]. UHC goals stress that in order to improve health coverage, the healthcare workforce needs not only to be accessible but also to have the capacity to deliver people-centred integrated quality care[14]. A further concern in using interpreters is the risk of a breach of confidentiality of intimate information[8], in particular through the presence of a stranger in a sensitive space such as labour. The lack of preparedness of the interpreter in health issues can lead to changes in the message or omission of vital information being communicated[15], which can have medico-legal outcomes for the midwife[8,16.] As a further complication, there is no regulatory body monitoring interpreters in South Africa, further complicated by the shortage of registered interpreters[9], which is associated with a disproportionate risk for adverse reactions and decreased clinical care[17]. The midwife is not only accountable for service delivery but also responsible for the attainment of Sustainable Development Goals (SDG) 3.1 and 3.2[18]. Midwives needs to understand of challenges faced by Deaf women when seeking maternity care services.

Hence, a need for a study of this nature aimed at exploring fourth-year undergraduate Midwifery Students' and their Lecturers' perceptions of the challenges faced by Deaf pregnant women in accessing maternity health care when in labour.

Methods

Research approach and design

Underpinned by the Social Constructivism paradigm, the study adopted a qualitative research approach, which is exploratory and descriptive in nature. Social constructivism was deemed necessary for this study because the researchers relied on the participants' perceptions of the situation being studied[19,20]. Specifically, the researchers relied on the perceptions of midwifery students and their lecturers to gain an understanding of the challenges faced by Deaf pregnant women in accessing maternity health care when in labour. Furthermore, the qualitative research approach was deemed necessary for two key reasons. Firstly the study intended to answer questions about perspectives on the challenges faced by Deaf pregnant women in accessing maternity health care when in labour from the standpoint of the participants[21]; while the qualitative research approach is non-limiting in nature, thus affording the researcher an opportunity to engage in discussion with the participants, similarly investigating in-depth meanings as expressed by participants in their own words[22]. Furthermore, a descriptive exploratory design enabled the researchers to accurately describe and explore the full nature of the phenomenon, how it manifested, and factors relating to it by asking open-ended questions with probes, allowing the researchers to gain a deeper understanding and generate new knowledge on the topic under discussion.

Study setting and context

The study was conducted in the Nursing discipline of a select university in KwaZulu-Natal, South Africa, which offers a Bachelor of Nursing Degree embedded within a competency, problem-based curriculum, placing the student at the centre of the teaching and learning process[23]. In South Africa, nursing qualifications are governed by the Nursing and Midwifery professional body, the South African Nursing Council (SANC), under Nursing Act, No 33 of 2005[24]. Nursing and Midwifery education are embedded into the same programme qualifying a student as a Registered Nurse and Registered Midwife at the end of the training[24]. Aligned with the aim of the study, the researchers selected this study setting because of its history of student-centered teaching and learning, thus allowing the students to decide their learning material and how they learn. Therefore, the students in this study setting were perceived as able to share their perceptions of the challenges faced by Deaf women accessing maternity healthcare services when in labour. The Midwifery group is split into a Semester-1 and a Semester-2.

Study population and sampling

In the recruitment process, non-probability, purposive sampling was used to select participants who were knowledgeable on issues under discussion, thus contributing to the richness of the data and similarly addressing the aim, objectives and study questions[26]. In this study, such participants were fourth-year Bachelor of Nursing students registered for the Midwifery module in 2022 and were willing to participate in the study and could articulate in English. The select population was perceived suitable, given their current interface and potential to interface with Deaf women in labour. In alignment with section 12 of the Protection of Personal Information Act[26], all the students (*N*=86) in the two targeted groups were invited via the two class representatives to participate in the FGDs. Any student registered for any other module apart from Midwifery in the Bachelor of Nursing degree or unwilling to participate in the study were excluded. Secondly, purposive sampling allowed for the invitation of the four lecturers of the Midwifery module at undergraduate and postgraduate levels. Similarly, all Lecturers not teaching the Midwifery module either at undergraduate or postgraduate level (n=22) or those teaching Midwifery module but not willing to participate were excluded from the study (n=1).

Data collection

Data from the Midwifery students were collected in January 2022 (Semester-1; n=14) and June 2022 (Semester-2; n=11) from four focus group discussions (FGDs), referred to as FGD1-FGD4. According to Nyumba *et al.*[27], FGDs are used to gain an in-depth understanding of social issues, which within the context of this study were on the challenges faced by pregnant Deaf women when accessing maternity healthcare services during

labour. In addition, two individual interviews (INDs), referred to as IND1 and IND2 with the lecturers, were conducted in July 2022. According to Rutledge and Hogg[28] INDs allowed the participants, midwifery lecturers, to shed light on their perceptions about the challenges faced by Deaf women in accessing maternity healthcare services during labour.

Data from FGDs and INDs were collected by the principal investigator herself (OBB), with the assistance of the co-facilitator (MAJ), who also assisted with attending to technicalities such as readmitting participants if they were dropped from the Zoom conference and capturing field notes. Zoom cloud-based video conferencing was used to meet virtually for the FGDs and the two INDs. The same interview guide was used for both focus group discussions and individual interviews. The duration of the FGD ranged from 30 minutes to 52 minutes, while the IND lasted, on average, 55 minutes. The FGD's included fourth year student Midwives (*n*=25), predominately female students (*n*=19; 76%). The students' ages ranged from 21 to 25 years (*m*= 22.5 years). In addition, two female lecturers were interviewed, for whom their ages were withheld for ethical reasons. The researchers (OBB, MAJ) were both faculty members at the study setting and were involved in data collection while MAJ attended to the online technicalities and monitored the process. The researchers were mindful of the possible power imbalance between themselves and the undergraduate student Midwives[29]. The power imbalances between the two parties of learner and faculty could have created inertia in the learning body; hence data were collected prior to the commencement of teaching the Midwifery module. The earlier commencement of data collection did not only lessen the power dynamics between the Midwifery lecturer and student Midwives, but contributed to a relaxed atmosphere between the parties to feel psychologically comfortable. The aims and objectives of the study guided the development of the interview guides for both the Midwifery students and the Midwifery lecturers. The outcome of developing the interview guide was an inductive process. Four FGDs were conducted in two separate sessions via Zoom web conferencing at a time convenient to the undergraduate Midwifery students. These sessions were audio recorded. The interview guide asked for a central question to be answered and began with one central open-ended question, which firstly asked***: "What are your perceptions regarding the challenges faced by pregnant Deaf women in seeking maternity health care during labour?"*** This central question was followed by probing questions to elicit richer data from the participants and add clarity to the discussion.

In July 2022, the researchers not involved in teaching the Midwifery module conducted the two INDs via Zoom web conferencing (audio-recorded) with the two consenting Midwifery Lecturers at separate times convenient to each of them. The researcher posed a central open-ended question to the lecturers similar to the one asked of the students: ***"What are your perceptions regarding the challenges faced by pregnant Deaf women in seeking maternity health care during labour?"*** This central question was followed by probing questions to elicit richer data from the participants and add clarity to the discussion.

Interviewing skills were adhered to during both FGDs and INDs, that is probes were used, which encouraged the participants to elaborate further and the researcher (OBB) was able to clarify some issues, which seemed unclear during the discussions. At the end of the interviews the researcher (OBB) with the assistance of the co-facilitator (MAJ) made sure, she summarised the core points and issues that transpired during the interview. Lastly, the participants were also given an opportunity to add any final comments.

Data analysis

The inductive approach of content analysis designed by Elo and Kyngäs[30,31] guided the process of data analysis in this study. This is a systematic technique for compressing many words of text into fewer content categories based on explicit rules of coding. The content analysis processes are categorised into three main phases; Preparation, Organising and Reporting[30]. The PI (OBB) led the data analysis and the co-researcher (MAJ) co-coded the data. The constant data comparison involved meetings between the two researchers (OBB & MAJ) over five weeks.

Preparation of the data: FGD and INDs were transcribed word for word[30] by one of the researchers (FW); two recorders (OBB & MAJ) were used to ensure audibility for the transcription. Participants were allowed to choose pseudonyms of

their choice to identify them while remaining anonymous, and for direct quoting to enhance the credibility of the discussion and findings. Field notes were read while listening to the recorder to ensure consistency of the data. The PI listened to all the recordings from both FGDs and INDs to ensure verbatim transcription.

Organisation of the data: As FW transcribed the data, she listened repeatedly to the recorded data[30] learning about the challenges faced by Deaf women in accessing healthcare when in labour as voiced out by the student midwives and their lecturers. As indicated by Erlingsson, & Brysiewicz[31] re-reading of data was done across all FGDs and INDs, developing a general sense of whole allowing the researchers to reflect on its meaning; any underlying meanings were written on the side of the margin. When transcribing was completed, hard copies of data were printed. Underlying meanings from FGDs and INDs were written in the margins. The third FGD showed data saturation, and the fourth group was conducted to ensure no new information was emerging. The two Midwifery Lecturers interviewed shared similar perceptions of the challenges faced by Deaf women in accessing maternity healthcare services when in labour. In the data coding, text segments were distinguished, underlined, and highlighted in answering the research question [31]. Both researchers (OBB & MAJ) agreed on probable headings best representing the text segments, thereby formulating the codes and consulting the literature to guide the grouping of the codes to identify subcategories

Reporting the findings: Table 2 represents the summary of findings, categories and subcategories. Findings are further represented in the form of an in-depth description, with direct quotation from the participants. An integration of the literature review and findings was completed to extend and explain the categories and add to the richness of the findings through the discussion.

Trustworthiness

Trustworthiness was achieved through enhancing the criteria postulated by Shenton[32] as indicated in Table 1. Further, the reporting met the criteria in the checklist for the consolidated criteria for reporting qualitative research (COREQ)[33].

Credibility

The following techniques were used to establish credibility:

Prolonged engagement: Enough time was spent with the participants during data collection[34]. This ensured the participants were comfortable with the researcher (OBB), thus able to communicate their perceptions regarding the challenges faced by Deaf women when seeking healthcare during labour. Before starting with the actual interview, OBB spent time discussing general issues with the participants, for example, with the Midwifery participants the following questions were asked, "**How is midwifery as a subject?" "Do you like it?" Do you see yourself working as a midwife in the future?".** The Midwifery Lecturers were asked the following questions, "***How is it teaching midwifery?" "For how long have you been teaching midwifery?".*** This ensured the participants were relaxed and at ease before the actual interview was conducted[35].

Triangulation: This was another technique applied to ensure the truth-value of the study. After identifying the emerging categories themes, the truth-value of the categories was confirmed by: a) researchers regularly meeting to discuss the themes b) using varied relevant literature to conceptualise the results of the interviews[36].

Authority of researchers: Both researchers are females with 15-20 years of teaching experience, have, PhDs, and supervised and graduated students who have conducted qualitative research methodology[32,33]. Furthermore, OBB is an experienced advanced clinical midwife and MAJ is a highly skilled psychiatric nurse, with experience in interviewing skills.

Field Notes: As indicated by Stahl and King[34], the co-facilitator (MAJ) kept field notes, which supplemented the findings. Similarly, after each interview OBB and MAJ compared and discussed the field notes. Main issues that transpired during the interviews were discussed between the two and confirmed with the participants before conducting another interview[37]. The field notes included the feelings, tone of voices and emotions exhibited by participants. In this way the OBB did not miss any detail during the interview.

Frequent debriefing sessions between researchers: In order to reduce own bias, the three researchers (OBB, MAJ "&" FW) frequently communicated "and" analysed the data separately, following which a meeting was arranged for comparison and confirmation of the analysed data. This ensured credibility of the study findings, through verification of all stages of the research[35].

Transferability

Due to the qualitative nature of the study, which deals with smaller samples within a context, generalisability of the findings may be a challenge[34]. In order to minimise this, the researchers provided the thick dense detailed description of the study context, sampling methods, data collection methods and data analysis. This will enable other researchers and scholars, who wish to transfer findings to different or similar contexts, make an informed judgment of how appropriate the transfer would be[32,33].

Dependability

To ensure dependability of the study and its findings, the researchers provided a thick and dense description of the research methodology, which was followed during the study, inclusive of a dense description of sample characteristics, context of the study, data collection methods and data analysis processes were detailed, in addition to supportive literature[32]. The code-recode procedure was ensured by involving two researchers (OBB & MAJ). Lastly, audio recordings were transcribed verbatim and returned to participants for checking[32,33].

Confirmability

The researcher created an audit trail to ensure the accuracy, relevance and meaning of data[38]. This included the following: FGDs and INDs were audio-recorded and transcribed verbatim[33], with written field notes [37]; data were collected until data saturation and redundancy was achieved[39]; the researchers did independent data coding to ascertain consensus about the emerging themes[32].

Ethical considerations

Ethical approval to commence the research study was obtained from the select university (HSSREC/00001077/2020), including gatekeeper permission from the university registrar. The researchers are both faculty members at the select university and have access to the participants, i.e. students, through classroom and clinical teaching. Similarly, lecturers were accessed through encounters with the researchers on a day-to-day basis in the workplace. The process followed recruit participants aligns with Section 12 of the Protection of Personal Information Act (POPIA)[40], participants were recruited face-to-face. A covering letter seeking their permission to participate was followed by written consent, which included audio recording of the FGDs and INDs. The participants were informed that they may withdraw from the study at any time with no due penalty or repercussion[41] to the lecturer/learner interaction or collegial relationships. Furthermore, all participants were assured that no information divulged by them would be shared with another person without their consent[42]. The participants did not receive monetary benefits, however, where data collection extended beyond their meal time, participants were each compensated with a meal or a meal voucher. Similarly, the participants did not incur any costs during online data collection, majority of the students/participants connected from the university residences with free Wifi, and those who did not reside on-campus used their free monthly data allocation issued by the university to connect remotely. The participants were allowed to ask any questions prior to voluntarily signing the consent.

Results

Profile of the participants

The demographic profile of the participants, both Midwifery Students (*n*=25) and Midwifery Lecturers (*n*=2) are presented in Table 1.

The data analysis revealed two categories (three pronged obstacles, and advancing physical and psychological maternal health care delivery) (Table 2).

Category 1: Three pronged obstacles to maternal health care access by Deaf women in labour **.**
During both the FGDs and INDs, the participants highlighted three key pronged obstacles that had not only interrupted the Deaf pregnant woman's access

Table 1: Demographic profile of participants (*n=27*)

FGD / INDs with lecturers	Date, Semester	Participant No.	Sex (Male / Female)	Age (years)
Focus Group Discussions with the undergraduate student midwives				
FGD 1	Semester 1	P1	F	22
	January 2022	P2	F	24
		P3	F	22
		P4	F	21
		P5	F	21
		P6	F	22
		P7	M	24
FGD 2	Semester 1	P1	F	23
	January 2022	P2	F	22
		P3	F	21
		P4	F	21
		P5	F	22
		P6	F	23
		P7	M	23
FGD 3	Semester 2	P1	F	21
	June 2022	P2	F	22
		P3	F	24
		P4	M	21
FGD 4	Semester 2	P1	F	24
	June 2022	P2	F	23
		P3	M	24
		P4	F	23
		P5	M	25
		P6	F	22
		P7	M	21
Midwifery Lecturer interviews				
IND 1	July 2022	IND 1; L1	F	Withheld
IND 2	July 2022	IND 2; L2	F	Withheld

Table 2: Categories and sub-categories

Category	Sub-category
1: Three pronged obstacles to maternal health care access by Deaf woman in labour	1.1: Obstacle One: Disability discrimination as an obstacle against equitable maternal health care delivery to Deaf women in labour
	1.2: Obstacle Two: Disability stigmatisation as an obstacle to maternal health care access for Deaf women in labour
	1.3: Obstacle Three: Ill-equipped health system as an obstacle to maternal national and international health goal attainment
2: Advancing physical and psychological maternal health care delivery to Deaf woman in labour	2.1: Positive outcomes to health seeking behaviour of Deaf women in labour

to maternal health care but also interfered with the Midwives' maternal health care delivery during labour. The obstacles which ultimately could influence the attainment of national and international maternal health goals are shown in Table 2.

Subcategory 1.1: Obstacle One: Disability discrimination as an obstacle against equitable maternal health care delivery to Deaf women in labour.

All the data the sources mentioned disability discrimination as one of the 'biggest' challenges

faced by Deaf pregnant women daily. According to the participants, Deaf pregnant women, in their attempt to seek maternity healthcare experience disability discrimination. Furthermore, the participants mentioned that the disability discrimination experienced by Deaf pregnant women predispose them to unequitable maternity health care during labour. The below extracts by some participants highlights their perceptions of the discrimination experienced by Deaf pregnant women when in labour.

"…because they are deaf and pregnant we look at them differently, we treat them differently, we basically discriminate against them (FGD1:P1) …the discrimination affects them in accessing fair maternity healthcare facilities" …. (FGD3:P4) …because they (Deaf pregnant women) suffer so much discrimination at healthcare facilities, they do not receive the fair and equitable care that any other women receive (FGD4:P4) …when they in clinical facilities no one talks to them that according to me is how they get stigmatised (IND2:L2)" "…midwives do not know how to communicate or work with deaf pregnant women that's why they get discriminated…(FGD4:P5)

The unequitable maternal healthcare to the Deaf pregnant women was further evidenced by the participants seeing fewer Deaf pregnant women seeking care when in labour. The below extracts are supportive of this statement:

"Healthcare services are not fair to them (Deaf pregnant women)…..(IND2:L2)…which is why , we seeing very few uum deaf and pregnant women," (FGD1:P5)…I saw a Deaf person in a hospital like once or twice, like where do they deliver, because I know of deaf women who have children of their own…" (FGD3:P4)… but they do give birth somewhere…" (FGD4:P6) "they don't come because the system stigmatise them"(FGD2:P2)

Subcategory 1.2: Obstacle Two: Disability stigmatisation as an obstacle to maternal health care access for Deaf women in labour

The data sources reflected on stigmatisation as a consequence of poor communication, which further built on the Deaf woman's limited equitable access to maternity health care when in labour. According to these sources, communication connects midwives and the pregnant woman in delivering maternity care. All participants agreed that effective midwife-patient communication is a key element of quality midwifery care and that stigmatisation was superimposed by communication obstacles between them and the Deaf pregnant women. The extracts below demonstrate how poor communication between midwives and Deaf pregnant women subjected them to stigmatisation thus limiting their ability to access maternity care service: discrimination, denial of their rights and unequal access to basic services.

"for me I think the first challenge starts with communication …mmm…because midwives cannot talk to them and they cannot talk to midwives they just get stigmatised from everything (IND1:L1)…in the labour ward or anywhere in hospitals we communicate with our patients, communication is key to everything but when it comes to the Deaf pregnant women, because we don't understand their language, they experience so much stigmatisation under our care as midwives" (FGD3:P2)…communication is a two-way thing, if I cannot communicate with you as midwife I just forget about you and focus on patients who can talk to me, this is how Deaf pregnant women gets discriminated" (IND1:L2) "Because we as midwives cannot communicate with Deaf pregnant woman, they suffer stigmatisation to getting equal treatment like any other pregnant woman" (FGD2:P1)… "*Communication is important in the clinical setting, but we cannot communicate with these women so they will be stigmatised because no one pay any attention to them"(FGD1:P1)*

Some of the participants further mentioned that Deaf pregnant women, due to the stigmatisation do not have access to clear and efficient communication in the maternity healthcare system, which deprives them of critical health information and quality midwifery care. The below extracts support this statement:

"according to my perception, because they (Deaf women) cannot communicate with us we stigmatised them (IND1:L1), and with stigmatisation unlike all other patients who can communicate, they do not get all the critical information and quality midwifery care"

Two participants who agreed with the other participants elaborated further on the consequence of stigmatisation, as a result of communication breakdown. Below is exactly what she said:

"as per my perception, I believe and have observed that Deaf pregnant women are at a higher risk of adverse health outcomes as compared to the hearing pregnant patients because of the

stigmatisation as a result of communication breakdown" (FGD4:P3) …communication failure often leads to deaf pregnant women being misdiagnosed" (FGD2:P4)

Subcategory 1.3: Obstacle Three: Ill-equipped healthcare system as an obstacle to maternal national and international health goal attainment

Both the student Midwives and their lecturers perceived the healthcare system as ill-equipped for the Deaf pregnant woman. According to them, the ill-equipped healthcare system subjected the pregnant Deaf women to avoidable and preventable pregnancy-related complications. The extracts below show the student midwives' and their lecturers understanding of the implications of the ill-equipped healthcare system on maternal morbidity and mortality with ultimate negative impact in the attainment of UHC, SDG goals 3.1 and 3.2.

"As midwives we have a responsibility to comply with and ensure that the SGDs are reached…"(FGD4:P1) "…but when it comes to pregnant Deaf woman it becomes difficult if not impossible" (FGD2:P4), "we don't understand the language they speak, I can't hear what deaf labouring women say, she (deaf woman) cannot hear what I'm there is basically miscommunication between us which may lead to unnecessary complications for mother and baby…" (IND1:L1) "…misinformation may lead to incorrect care being rendered leading to death and the sustainable development goals 3.1. and 3.2 will not be achieved …" (FGD3:P4) "... I mean like what is recommended by the Universal Health Coverage, free health for all does not benefit the Deaf community…" (FGD1:P5) …

Furthermore, both student midwives and their lecturers expressed their awareness that maternal health care services lacked a user-friendly approach to whom Deaf pregnant woman were stereotyped as the inaudible. This according to their perceptions is an ill-equipped healthcare system. For example, they expressed concerns about the lack of autonomy and that proxy signing of consent, which was most often possibly a "pseudo-proxy" because of the unavailability of trained interpreters on site. The Deaf pregnant woman was portrayed as a passive victim of an ill-equipped service by the data sources as indicated below:

"I agree with XXX, the hospitals are not equipped enough to offer services for pregnant Deaf woman, I don't know of any healthcare facility with available trained interpreters on site (IND1:L1)… we do not have trained interpreters in the healthcare"(FGD2:P3) "…we rely on their (deaf women) relatives who themselves are not equipped with sign language…" (FGD4:P6)…"If a Deaf woman is to go for operation maybe caesarean section someone must consent to that for them …" (IND1:L1), "…as a midwife I'm not sure that is what Deaf woman wants does she understands what is happening and so forth…" (IND2:L2)

As the FGDs progressed and the student midwives appeared to reflect on the outcome of the service level gap for the Deaf pregnant woman as subjecting her to further stigmatisation and discrimination, which might keep her from accessing the services. Through this reflection, they were able to verbalise what they saw as unfair practices.

Category 2: Advancing physical and psychological maternal health care delivery to Deaf women in labour. As much as the obstacles described in Category 1 can be likened to a three-pronged pitchfork of challenges, discrimination and stigmatisation, on the opposite side through Category 2 and its subcategory shines a light representing a path of hope to Deaf pregnant women in labour.

Subcategory 2.1: Positive outcomes to health-seeking behaviour of Deaf women in labour

The participants highlighted that if the maternal health care facilities accommodated the Deaf pregnant woman, it would increase her willingness to access the services. Equity in access was recognised as an important contributory factor towards, firstly, the Deaf pregnant woman developing her independence and secondly towards improving or establishing provider-patient relationships. Equitable access was seen by the data sources to allow for the previously invisible and inaudible Deaf pregnant woman to become an active role player in the decision-making process involving her and her unborn child's health. Below evidences the perceived significance of the autonomy or supported decision making towards positive outcomes for the Deaf pregnant woman's health seeking behaviour.

"If Deaf pregnant woman is offered care like everyone one else, they will be independent like any pregnant woman (FGD3:P1), they will be able to

have relationships with us as Midwives, thereby participating in the decision making about their own and baby's health (FGD2:P4)…"Midwife-patient relationship and shared decision making is key in the success of care and treatment during labour and this does not exclude deaf pregnant women" (FGD2:P2)"…off course with availability of interpreters" (FGD4:P5)…. "pregnant Deaf woman will be willing to come to us to seek health

advice when they are pregnant we will see an up rise of these women delivering in our hospitals…." (FGD1:P).

Discussion

This paper endeavoured to bring to light challenges faced by Deaf pregnant women in accessing maternity health care when in labour as perceived by the Midwifery students and their lecturers.

Disability and pregnancy continue to pose a public health challenge in LMICs and developmental agencies globally[43]. Globally women with disabilities experience persistent disparities in healthcare access and outcomes compared with able bodied women[43]. This is confirmed by the current study findings which highlighted the three-pronged key obstacles which, according to the data sources, impeded the Deaf pregnant woman's access to maternity health care when in labour. The data sources also state that the pregnant Deaf woman experiences disability-related stigma and discrimination in attempting to seek maternity care services when in labour. Our study findings agree with that of de Souza and colleagues[44], who mentioned that the patients with deafness received insufficient and/or substandard healthcare delivery relative to their hearing counterparts, leaving them feeling discriminated against and stigmatised.

Furthermore, this study revealed that poor midwife patient communication and the quality of the interactions with midwives emerged as central to the discrimination and stigmatisation experienced by pregnant Deaf women. Pregnant Deaf women seeking maternity care services are challenged by communication barriers in their attempt to interact with the hearing midwives, similarly resulting in inadequate maternity care service delivery and poor satisfaction with care; this is what study participants said. According to the data sources, communication difficulties further influenced Deaf women's decisions in seeking maternity healthcare. Many studies, although not only focussed on Deaf pregnant women accessing maternity care services, mention difficulties with two-way communication as a significant barrier to Deaf persons accessing maternity healthcare services[15,45,46]. This is despite the iteration by Haricharan and colleagues[47] that successful healthcare is dependent on effective and efficient communication between patient and the healthcare provider to ensure safe, timely, efficient and patient centered maternity healthcare delivery. The literature further evidences that communication barriers encountered by Deaf persons are not unique to Africa; other countries like the United States of America and Brazil share similar sentiments of Deaf persons experiencing communication barriers in their attempt to access healthcare services, thus compromising their health seeking behaviour[48,49].

Of interest in this study is that the participants were aware that the unsuccessful two-way communication between them (midwives) and the Deaf pregnant women manifested as a negative attitude from them (midwives) to the Deaf women. This, according to the data sources, did not only negatively impact on Deaf women's access to quality maternity care when in labour but continued to put Deaf women at high risk for avoidable pregnancy-related complications due to the challenges they face in accessing maternity healthcare at the face of midwives' attitudes. This study's finding agrees with the study of Adigun and Mngomezulu[13], who mention in their study that the attitudes of healthcare workers towards Deaf pregnant women are a major contributory factor to them seeking or not seeking healthcare, adding to their risk of preventable pregnancy-related complications.

The data sources of this study further alluded that within the South African context, communication barriers are further exacerbated by the lack of and inaccessibility of trained and qualified interpreters within the healthcare sectors. According to them, the lack of reliable provision of quality interpreting for the Deaf pregnant woman is a communication barrier adversely affecting maternity healthcare treatment and outcomes for Deaf South African pregnant women. This particular study finding is congruent with the Nigerian study by Arulogun *et.al*[50], who, in their work, mentioned challenges with interpreters such

as unavailability, costs and the discomfort of patients in sharing their private, confidential information in the presence of the third person. All communication of instructions and vital health information in maternity healthcare sectors is transmitted verbally, further adding to the exclusion and marginalisation of the Deaf women due to their inability to hear and understand what is being said around them. Hence, the data sources of our study are of the opinion that sign language interpretation service remains a significant and effective element in the two-way communication between the Deaf woman and the caring midwife. In agreement, another South African author Senne[51], concluded in her study that "Skilled South African Sign Language (SASL) interpreters are needed in order to access both the justice system and the health care sector in terms of their particular needs as women, in relation to domestic abuse and obstetric health care".

The findings from this study showed that communication barriers do not only lead to a sense of isolation and discrimination against Deaf women, but also poses a threat to the attainment of national and international maternity healthcare goals. The findings from this current study supported Masuku, Moroe and Van Der Merwe[52], who maintained that the pregnant Deaf woman's poor access to healthcare leads to inadequate maternity care delivery and health information gaps, with dire maternal and neonatal outcomes[9,47]. Furthermore, Adigun and Mngomezulu[13] alluded that "Deaf pregnant women, by the nature of their hearing loss and inability to actively respond to auditory stimuli, may be highly susceptible to greater risks associated with maternal and/or child mortality". In agreement Schniedewind, Lindsay, and Snow[53], had this to say "patients with communication problems, which includes Deaf patients, are three times more likely to experience a preventable adverse event in acute care settings". Hence a threat to the attainment of universal health coverage (UHC) and Sustainable Development Goals (SDG 3.1 and 3.2).

Lastly, despite the barriers, the study participants acknowledged that eliminating the aforementioned obstacles holds hope for Deaf pregnant women in accessing equitable maternity care when in labour. This study's findings are consistent with previous studies, which revealed that a non-discriminatory, non-stigmatised environment hinged within effective communication is more likely to positively impact Deaf women health seeking behaviours[3,52].

Conclusion

All pregnant women, inclusive of the often "inaudible" Deaf pregnant woman, are entitled to equitable, accessible, available person-centred maternal health care. This study drew attention to student midwives and their lecturers' recognition of the vulnerability of the pregnant Deaf woman. The outcome of midwives understanding the challenges faced by the Deaf pregnant woman will afford pregnant Deaf women a better healthcare experience, creates the potential to strengthen healthcare systems and contribute to meeting national and international health goals.

Limitation

The authors reflect in their writing of this paper that the Deaf pregnant woman remains inaudible, and their voices are not heard in the data, but proxy voices are heard through the student midwives' and their lectures perceptions.

Recommendation

A study to explore Deaf pregnant women's perceptions of maternal health care delivery and their conceptualisation of the "ideal" midwifery care service.

Ethical approval

University of KwaZulu-Natal Humanities and Social Science Research Ethics Committee reviewed the study, following which the protocol: (HSSREC/00001077/2020) was granted.

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Conflict of interest

The Authors declare no conflict of interest.

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Authors' contributions

Author Contributions: Conceptualisation, OBB and MAJ; methodology, OBB; data analysis, OBB and MAJ; data collection, OBB.; writing original draft preparation, OBB, MAJ and FW; writing-review and editing, OBB, MAJ and FW. All authors had access to the data, have read and agreed to the published version of the manuscript.

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