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Lived Experiences of the Hearing Impaired in the Nursing Encounter with Nurses at Choma General Hospital: A Hermeneutic Phenomelogical Approach

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Abstract
Background: The World Health Organisation estimates that 466 million people were living with hearing impairment in 2018 and this estimate is projected to rise to 630 million by 2030 and to over 900 million by 2050 (World Health Organisation, 2018). However, it is estimated that there are around 200,000 deaf people in Zambia, which is around 2% of the total population (Samantha, 2019).
Methods: The study employed a hermeneutic phenomenological design. Purposive sampling with snowball sampling was used to recruit seven deaf participants, ensuring data richness and reaching saturation. Data analysis was guided by Van Manen's four existential dimensions of lived experience, alongside Lazarus and Folkman's coping theory for interpretation.
Results: Based on the data collected, participants' lived experiences were categorized into five key areas of communication barriers: lack of sign language knowledge among nurses, difficulty with reading and writing, reliance on nonverbal communication, absence of assistance and Long waiting time. These challenges can lead to feelings of frustration, helplessness and anxiety for the deaf, and can result in poor health outcomes and decreased satisfaction with care
Conclusion: Communication in the nursing encounter between nurses and deaf individuals can be extremely challenging and stressful for both parties. However, with appropriate training and institutional reforms, these challenges can be mitigated, leading to more effective healthcare outcomes and improved nurse-patient relationships.

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Keywords: Communication barriers, Deaf patients. Hermeneutic phenomenology, Lived experiences, Nurses

1. Introduction

The World Health Organisation estimates that 466 million people were living with hearing impairment in 2018 and this estimate is projected to rise to 630 million by 2030 and to over 900 million by 2050 (World Health Organization, 2018). However, it is estimated that there are around 200,000 deaf people in Zambia, which is around 2% of the total population (Samantha, 2019). These numbers show the importance of knowing how to communicate with the hearing impaired patients, not only in Zambia but worldwide.

Hearing impairment can affect one ear or both ears, and leads to difficulty in hearing conversational speech or loud sounds (Kyle *et al*., 2013) [13]. Other terms that are used to refer to hearing impairment (HI) are deaf (Nwadinobi, 2019). 'Deaf' people mostly have profound hearing loss, which implies very little or no hearing.

They often use sign language for communication (Sirch, Salvado and Palese, 2017). According to World Health Organisation, (2015) 'Hard of hearing (HOH)' refers to people with hearing loss ranging from mild to severe, they usually communicate through spoken language and can benefit from using hearing aids, cochlear implants, and other assistive devices as well as captioning.

Hearing impairment is classified in terms of the severity and type of hearing impairment (World Health Organisation, 2015). The severity of the hearing impairment is categorised based on the minimum sound that can be heard with the better ear (World Health Organisation, 2012). Hearing impairment is measured in decibels (dB) (Shaun Scholes, 2015) and the higher the decibel (dB), the louder the sound. Normal sound is between 0 and 25 dB in the better ear (Kotby *et al*., 2008). Deaf people are subjected to increased stress when they enter a health institution, this is because deaf people communicate primarily through sign language, which includes hand motions, facial expressions, and posture of the head and upper torso (Horňáková & Hudáková, 2013) [9]. Deaf persons have the right to utilize health-care facilities in the same way as the general public does, without being discriminated (Lunza & Emma, 2017) [15] as a result, nurses must be able to communicate effectively with deaf patients in order to provide appropriate nursing care (Dickson & Magowan, 2014) [5]. Unfortunately, only a few health care providers have received training in communicating with deaf patients (Santos & Portes, 2019). This has resulted in most deaf people relying on interpreters while seeking health care since they cannot communicate effectively with a health care provider, but using an interpreter can have an impact on the patient's confidentiality and privacy (Heath *et al*., 2023) [8]. However, failing to use an interpreter during an encounter with a deaf person might result in miscommunication and misdiagnoses if the health care provider is unfamiliar with the sign language. Furthermore, communication issues may lead to an increase in medication errors and misdiagnosis.

According to Santos and Portes, (2019), some people with hearing impairment have died, while others have experienced poor health outcomes not because they were unaware of the hospital's location, but because they were not attended to properly due to communication barriers. These barriers to proper access to health care information have led to lower health literacy levels among the deaf community, and this has translated to poorer health outcomes (Chong *et al*., 2019) [2]. However, there is insufficient information regarding awareness on health related issues by nurses to the hearing impaired during a nursing encounter due to barriers in communication as communication is a key element in providing high-quality health care services, leading to patient satisfaction and promotion of health (Fahmi & Hayes, 2016) [7].

Deaf individuals may not receive proper health care or information due to communication barriers between them and healthcare staff (Chowdhry *et al*., 2016) [3]. Lack of communication often starts with a fundamental misunderstanding: that all those who are deaf have the same or similar types of hearing impairment. The hearing needs of each person who's deaf are unique. It's crucial for nurses to assess each person's communication needs to best interact with him or her and to facilitate a higher level of care.

The Zambia Agency for Persons with Disabilities is a quasi-Government Institution established by an Act of Parliament, the Persons with Disabilities Act No. 06 of 2012 of the Laws of Zambia (ZAPD, 2017). The mission of ZAPD is " To coordinate and regulate the provision of inclusive services for persons with disability through targeted coordination and regulation interventions, creation of strategic partnerships and fostering awareness creation on disability issues" (ZAPD, 2017).

In the post-2015 development agenda, universal health coverage (UHC) has been identified as a potential health-related overarching goal (Vega, 2013). Health is a fundamental human right, and Universal Health Coverage (UHC) is widely recognized to be critical for achieving that right. UHC represents the aspiration that everyone should receive good quality health services, when and where needed, without incurring financial hardship (WHO, 2019). Beyond health and wellbeing, UHC also contributes to social inclusion, equality, ending poverty, economic growth, and human dignity. The goal of UHC is expressed in the United Nations 2030 agenda as part of Sustainable Development Goals (SDGs) in Goal 3 which focuses on health (target 3.8). A global picture of such evidence is timely as the recent United Nations Declaration on Sustainable Development Goal 3 emphasises universal health access to quality health and equity in health care as key to achieving the overall health goal for sustainable development. Furthermore, Zambia ratified the Convention on the Rights of Persons with Disabilities (CRPD) as one of the progressive laws and policies in relation to Persons with Disabilities (PWDs) but it is silent on the strategies of enhancing communication with the deaf. However, communication challenges between nurses and the hearing impaired has remained unknown in Zambia hence this study of Choma district to bridge the gap

Theoretical Underpinnings

The current study made use of a two of theories to effectively explore the lived experiences of the deaf during a nursing encounter with the nurses as follow:

Hermeneutic phenomenology

This study employed hermeneutic phenomenology as its theoretical framework to explore the experiences of deaf individuals during nursing encounters. Phenomenology was introduced by Edmund Husserl (Husserl, 1977) [10]. This framework facilitated an in-depth understanding of the participants' experiences, situating the findings within their lived realities and generating detailed insights into the phenomenon. By adopting this approach, the study sought to provide a deeper understanding of the nursing encounter between the deaf and the nurses during a nursing encounter, contributing to the development of strategies to enhance communication and improve care for deaf patients. The study draw on Heidegger's concept of "Being and Time" and van Manen's four reflective thematic areas on lived experiences (Van Manen, 1997), which provide a framework for understanding human experiences in a more comprehensive way. Simui (2019) referenced Van Manen's four reflective thematic areas for understanding lived experiences as: (i) lived space – Spatiality; (ii) lived body – Corporeality; (iii) lived time – Temporality; and (iv) lived human relation – Relationality.

Materials and methods

Study setting

This study was conducted in Choma district, located in the Southern Province of Zambia.

Study design and participants

The study adopted qualitative approach alongside Hermeneutic Phenomenology. The purpose of this research design was to describe lived experiences of individuals, rather than imposing preconceived notions or theoretical frameworks (Simui, 2018). Interpretive phenomenology aims to both describe and interpret lived experiences. The target population for this research were deaf participants from Choma district. The study encompassed deaf individuals who had accessed health care services at Choma General Hospital and had an encounter with a nurse while accessing health care services. Purposive sampling using snowball sampling was employed to recruit 7 deaf participants. This method is particularly useful when the target population is hard to reach or when the researcher is seeking participants with specific characteristics (Creswell, 2013) [4]. Data saturation was reached after interviewing seven deaf participants, where repetition or confirmation of previously collected data occured.

Data generation and Analysis

To interpret the rich and complex narratives generated from participants' accounts of the lived experiences of the deaf during nursing encounter with nurses, I employed the interpretive phenomenological analysis. This method draws on the philosophical insights of Paul Ricoeur (1976) and was further developed by Lindseth and Norberg (2004) [14]. The data for this study was manually analyzed, with the process beginning during data collection and continuing throughout the various stages of the research project after fieldwork. During the interview process, it was noted that fewer new perspectives emerged, which supported the sample size for the research question under study (Eatough & Smith, 2017) [6].

Research findings and discussion

The findings of the study showed that all the seven deaf participants had lived experiences with the nurses during a nursing encounter when they came to access health care services. The analysis revealed that one major theme emerged from the day to day lived experiences in the nursing encounter of the deaf

Communication barrier of deaf

Theme	Subthemes
Communication barriers	• Lack of sign language knowledge among nurse • Difficulty with reading and writing • Reliance on nonverbal communication • Absence of an Assistant • Long waiting time

Source: own illustration based on current study

Below is the presentation of findings cited above from the day to day lived experiences in the nursing encounter of the deaf:

Lack of sign language knowledge among nurses

A significant challenge highlighted by the participants was the lack of sign language knowledge among nurses. This communication barrier made it difficult for deaf individuals to communicate effectively with nurses. John a deaf person expressed his frustration, stating,

"So when I see the nurse at the hospital, you find that they don't know how to sign."

Linda similarly noted,

"When I went to the hospital, it was hard for me to communicate with the nurse. The nurses need to learn how to sign to communicate with deaf people."

David also emphasized the importance of sign language knowledge among nurses, sharing,

"When I was sick, I went to the hospital. I was given medicine, but the nurses did not understand me. It was hard for me to communicate with them."

Linda further illustrated the difficulties she faced, saying, "Sometimes I get the information I want, but sometimes it's hard. Not every nurse understands what I'm trying to communicate. So I face difficulties."

Miscommunication is another significant challenge for deaf individuals in healthcare settings during a nursing encounter due to lack of knowledge in sign language by the nurses, this leads to misunderstandings. Mary shared an example of this issue:

"When I went to the hospital, it was hard for me to communicate with the nurse because nurses do not know how to sign and they cannot understand me when I use sign language."

Difficulties with reading and writing

Some participants also faced challenges with reading and writing, which complicated their ability to communicate through written notes or understand written instructions. This barrier is particularly problematic in healthcare settings, where written communication is often essential. David explained,

"When the nurse writes something, I can understand, but not that much. The deaf use broken English, while the nurses use direct language, so it's hard."

This difficulty underscores the need for healthcare providers to use alternative methods, such as visual aids and simplified language, to ensure that deaf patients fully understand their care instructions.

Reliance on nonverbal communication

Deaf individuals often rely on nonverbal communication methods, such as local sign language or gestures, which can be difficult for nurses to understand. This reliance on nonverbal cues can lead to misunderstandings and hinder effective communication. David described his experience:

"Communication with the nurse is very hard because I use local sign language."

While nonverbal communication can sometimes be effective, it is not always a reliable method for conveying complex medical information.

Absence of an assistant

The absence of an assistant or interpreter is another significant challenge for deaf individuals during healthcare encounters. Without someone to facilitate communication, many deaf patients struggle to express their needs and concerns effectively. Mary mentioned her approach to overcoming this challenge:

"Since I know that it's hard to communicate with the nurses if I go alone, I get someone to help."

This reliance on personal assistants or interpreters highlights

the need for more accessible communication support within healthcare settings.

Long waiting times

Long waiting times were a common experience reported by deaf participants, often caused by communication barriers and the lack of immediate access to interpreters. These prolonged waits not only delay care but also exacerbate the frustration and stress experienced by deaf patients. David shared his frustration:

"It is a problem; you find that people will keep you waiting because I am deaf. If I am tired of waiting, I will call my friend to come and interpret for me to explain everything to the nurse. Mostly, I go and knock and tell them that I am deaf, and they will say wait. Now, if I wait and wait, when I am tired, I call my friend to come and help."

Michael recounted a similarly distressing experience:

"One day, I was sick and went to the hospital with a high temperature. I was told to wait by the nurses. I waited for a long time, sitting, and the nurses should do something so that we don't wait for a long time."

These experiences highlight the need for healthcare facilities to invest in assistive technologies and interpreter services to reduce waiting times and improve patient care. In some cases, the combination of communication challenges and long waiting times drove deaf individuals to seek alternative solutions, such as purchasing medicine without a prescription. David shared his perspective:

"Other deaf people, when they are sick, just go to town and buy medicine because of the same challenge. When they go there, they wait. When I look at the time, I just go to town, buy medicine, and go home. I will be told to keep waiting, but other people without hearing problems are helped, and I have to wait. When am tired of waiting, I just go to town, and then I am free."

Discussion of the Findings

The discussion anchors on the two models namely Hermeneutic Phenomenological model and Lazarus and Folkman theory of coping. Below is the discussion of the lived experiences of the deaf during a nursing encounter from the findings Using Van Manen's existential dimensions lived body (corporeality), lived time (temporality), lived space (spatiality) and lived relation (relationality). The findings from this study highlight the urgent need for changes to address communication barriers between deaf individuals and nurses. Key steps include training nurses in sign language, improving written communication methods, and involving family members or interpreters. Additionally, addressing long waiting times and ensuring that deaf individuals are not discriminated creates a more inclusive and effective healthcare system. All seven deaf participants (corporeality) reported difficulties in effectively communicating with nurses during their encounters. Several participants stressed the critical need for nurses to learn sign language (corporeality) to facilitate effective communication. One participant noted that nurses' inability to sign (corporeality) made it challenging to convey their needs. Similarly, another participant emphasized the difficulty in communication due to nurses' lack of sign language skills and the importance of such knowledge for effective patient care. These findings are in similar with Orrie & Motsohi (2018) who highlighted that health worker often fear attending to deaf people in primary healthcare settings due to communication problems and their inability to understand sign language.

Deaf individuals often rely on written communication when sign language is not an option. The physical act of writing and reading involves bodily effort that can influence the communication experience (corporeality). For literate deaf people, this effort can be a collaborative and engaging process. This bodily engagement in the communication process can foster a sense of teamwork and mutual respect (relationality). Conversely, for deaf people who cannot read or write, the physical effort involved in trying to convey complex information through writing can lead to frustration and exhaustion. However, one participant pointed out that understanding written instruction from nurses can be problematic due to differences in language proficiency. Deaf individuals (corporeality) may use broken English, complicating their understanding of the nurses' direct language. David a deaf participant elaborated how challenging it was to read and write because he uses broken English. This aligns with the concept of corporeality, where the bodily experience of communication can impact the overall effectiveness and emotional state of both parties. McKee *et al*., (2015) [17] notes that written communication can be particularly challenging for the deaf people who may not be proficient in written English, further exacerbating physical and emotional exhaustion . Written communication tends to slow down (temporality) the communication process, allowing for more thoughtful and deliberate interactions. This slower pace can be beneficial, giving both parties time (temporality) to consider their responses carefully, thereby enhancing temporality in communication. The shared effort to communicate through writing can strengthen the relational bond (relationality) between nurses and deaf patients, fostering a sense of teamwork and mutual respect (relationality). Relationality is central to the study's findings, where written communication significantly impacts the nurse-patient relationship. For literate patients, written communication facilitates a clear understanding of their needs and concerns, enhancing relationality. Effective communication is crucial for a good patient-nurse relationship (Machado *et al*., 2013) [16]. Kourkouta and Papathanasiou (2014) [11] supports this by emphasizing that written communication promotes better patient understanding and engagement (relationality).

Themes of disempowerment and fear of the consequences of miscommunication were also evident in the study by Witko *et al*. (2017), where participants expressed that they did not fully understand healthcare information without a professional interpreter. Participants also reported experiencing long waiting times (temporality) and perceived discrimination. For instance, one participant described an incident where they had to wait for an extended period at the hospital and eventually decided to buy medicine in town due to the delays (temporality). This highlights a broader issue of accessibility and prioritization in healthcare services for the deaf individuals. The overall hospital experience (spartiality) can be distressing for deaf individuals because of communication barriers. Participants shared feelings of being ignored or misunderstood, which exacerbates their health problems and erodes their trust in the healthcare system (spartiality).

The concept of the lived body (corporeality) is evident as both the nurse and the deaf experience physical and emotional strain due to the lack of direct communication. The

involvement of a third party (relationality) can alter the communication dynamic, making the patient feel exposed and vulnerable. This study's findings align with (Mweri, 2018), who found that using interpreters or family members can interfere with privacy and confidentiality (relationality). A study by (Sichlindi (2021) noted that the rights to privacy and confidentiality are not always respected, with some interpreters acting as "news reporters," spreading the patient's private information. The patient's inability to express herself without a mediator compromises her bodily autonomy and personal agency in the interaction (relationality). The delay (temporality) in effective communication can exacerbate the patient's anxiety and discomfort, impacting their overall experience and trust in the healthcare system (spatiality). Communication limitations can lead to misunderstandings of patients' needs and incorrect assessments (Kwame & Petrucka, 2021) [12]. These findings highlight the need for a more inclusive approach to communication in healthcare settings (spartiality). Both nurses and deaf patients are faced with significant challenges that hindered effective interaction and compromised the quality of care for nurses. Addressing these issues requires not only improving nurses' sign language skills and access to interpreters but also developing tailored communication strategies that respect the unique needs of deaf individuals. Most health care providers believe that using sign language interpreters to communicate with Deaf signing patients is preferable, but few use interpreters in their practices (Alexander *et al*., 2012) [1].

Conclusion

The study has demonstrated that the deaf frequently encounter communication barriers when interacting with the nurses. These challenges review critical gaps in communication that impact the quality and accessibility of healthcare services. Using Van Manen's existential dimensions lived body (corporeality), lived time (temporality), lived space (spatiality), and lived relation (relationality) the study provided a detailed understanding of how communication barriers manifest and affect the lived experiences of deaf individuals in healthcare settings. Without access to sign language interpreters or nurses proficient in sign language, deaf individuals often rely on gestures, written notes, or family members to communicate, which compromises their ability to express their needs fully and maintain privacy. Challenges with reading and writing further exacerbate these difficulties, as many deaf individuals struggle to understand medical jargon or instructions presented in written form. Despite these obstacles, deaf participants demonstrated resilience, often finding alternative ways to communicate, such as using personal interpreters or purchasing medications independently. However, the absence of structured institutional support leaves many feeling marginalized and underserved. The study concluded that enhancing communication in nursing encounters for deaf individuals requires institutional reforms, such as implementing interpreter services, providing sign language training for nurses, and developing accessible health education materials. With these changes, healthcare experiences for deaf individuals can be significantly improved, fostering a sense of inclusivity, trust, and satisfaction.

Recommendations

Based on the study findings, the following recommendations can enhance the experiences of deaf individuals during nursing encounters:

1. Qualified sign language interpreters should be provided during nursing encounters to facilitate clear communication and reduce misunderstandings.
2. Nurses should be trained in sign language to improve direct communication with deaf patients.
3. The ministry of health to develop visual and accessible communication aids such as pictures, charts and videos, tailored for deaf individuals to explain medical procedures, instructions, and diagnoses.
4. The government and the Ministry of Health should develop specialized facilities that cater to the needs of deaf individuals, ensuring accessible and effective healthcare services.

Research implications

1. Theoretical Implications

The study contributes to the theoretical understanding of communication barriers faced by deaf individuals in healthcare, particularly in nursing encounters, by integrating Van Manen's existential philosophy and Lazarus and Folkman's coping theory. It highlights the interplay between lived space, lived time, lived body, and lived human relations in the experiences of deaf individuals, offering a nuanced framework for understanding how communication challenges shape their healthcare interactions.

2. Policy Implications

The study underscores the urgent need for healthcare policies that ensure accessibility for deaf individuals, such as mandating the availability of sign language interpreters in hospitals and clinics. Policymakers are encouraged to develop guidelines for creating accessible health education materials and ensuring their availability in healthcare settings.

3. Methodological Implications

The study demonstrates the effectiveness of phenomenological interviewing and interpretive analysis in capturing the lived experiences of deaf individuals, providing a model for future qualitative research in similar contexts

4. Knowledge Implications

The study adds to the body of knowledge about the lived experiences of deaf individuals in healthcare, focusing on the unique challenges they face in nursing encounters.

5. Practice Implications

Nurses and other healthcare practitioners are encouraged to adopt patient-centered strategies tailored to the communication needs of deaf individuals, such as using visual aids, simple language, and gestures effectively. Training programs for healthcare professionals should incorporate basic sign language skills and strategies for overcoming communication barriers. Healthcare facilities should establish protocols for scheduling and integrating sign language interpreters into nursing encounters.

Further Research

1. Investigate the effectiveness of sign language training programs for nurses and their impact on communication quality and patient outcomes for deaf individuals.

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Author Contributions
The three authors contributed equally conducting interviews, reviewed analyses, and co-authored the paper.

Conflicts of Interest
The authors declare no conflict of interest

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