HEALTHCARE PROVIDERS PERSPECTIVES ON OBSTETRIC EMERGENCY PREPAREDNESS AT VIJIBWENI HOSPITAL IN KIGAMBONI MUNICIPAL, TANZANIA

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By

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A Dissertation Submitted in (Partial) Fulfilment of the Requirements for the Degree of Master of Sciences (Midwifery and Women's Health) of

Muhimbili University of Health and Allied Sciences
October, 2024

CERTIFICATION

The undersigned certify that have read and hereby recommend for acceptance of dissertation entitled: **"*Healthcare Providers' Perspectives on Obstetric Emergency Preparedness at Vijibweni Hospital in Kigamboni Municipal, Tanzania*"** in (partial) fulfillment of the requirements for the degree of Master of science (Midwifery and Women's Health) of the Muhimbili University of Health and Allied Sciences, Dar es salaam, Tanzania.

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Date

DECLARATION AND COPYRIGHT

I,**Consolata Mbeya**, hereby declare that this **dissertation** is entirely my own creation and has not been previously submitted to any other university for a similar or different degree, nor will it be submitted to any other university for any other purpose.

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DEDICATION

To my mother Consolata Haule, my Children Maria, Patricia, Sebastian, Consolata and Rita

Special dedication to My lovely and encouraging husband Mr. Amos Tinde Ng'wenhelwa

ABSTRACT

Background: While the government has launched an initiative to upgrade health facilities and train providers in obstetric emergency services, some gaps still exist in providing the much-needed instruments and materials to complete the service. These deficiencies have contributed to delays in detection that result in maternal morbidity and mortality. Very few studies have focused on the knowledge of health providers regarding obstetric emergency preparedness.

Objective: The study aimed to identify perspectives from health providers concerning obstetric emergency preparedness at Vijibweni Hospital.

Materials and Methods: Data were collected through a descriptive qualitative design from in-depth interviews with healthcare providers at Vijibweni Hospital, including nurse-midwives, doctors, laboratory technologists, and pharmacists. A Kiswahili semi-structured interview guide assisted the collection of data, while content analysis was applied to the data.

Results: The study involve 16 key informants, among all Fourteen out of sixteen healthcare providers interviewed at Vijibweni Hospital in Dar es Salaam were women. Their educational backgrounds were primarily diplomas and bachelor's degrees with various cadres, such as nurse-midwives, medical officers, lab technologists, and pharmacists. Five categories emerged, such as perceived consequences and benefits, continuous education and training, availability of supportive systems with limited infrastructure and material resources, and a healthcare workforce prepared for an obstetric emergency.

Conclusion: Poor infrastructure, lack of supplies, and appropriate referral mechanisms along with shortages of health staff adversely influence preparedness on obstetric emergencies. Continuous education and strong support systems on the other hand improve patient outcomes increase safety, and boost hospital's reputation.

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LIST OF ABBREVIATIONS

AVD	Assisted vaginal delivery
ANO	Assistant Nursing Officer
BEmONC	Basic Emergence Obstetric and Newborn Care
CEmONC	Comprehensive Emergence Obstetric and Newborn Care
DNO	District Nursing Officer
EN	Enrolled Nurse
ENM	Enrolled Nurse Midwife
FGD	Focus Group Discussion
HCP	Healthcare Provider
ICM	International Confederation of Midwives
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MUHAS	Muhimbili University of Health and Allied Sciences
MoH	Ministry of Health
MD	Medical Doctor
NO	Nursing Officer
NGO's	None Governmental Organizations
QCA	Qualitative content analysis
RMNCAH	Reproductive Maternal, Newborn, Child and Adolescent Health

TPB	Theory of Planned Behavior
UN	United Nations
WHO	Word Health Organization

DEFINITION OF TERMS

Midwife: Midwife is person who has successfully completed a midwifery education program that is based on the ICM Essential Competencies for basic Midwifery practice and the framework of ICM Global standard for midwifery Education and is recognized in the country where it is located; who is acquired the requisite and have licensed to practice (1)

Obstetric Emergency: Obstetric emergencies are life- threatening medical problem that develop during pregnancy, labour or delivery Pregnancy-related illnesses and disorders can pose a threat to the health of both the mother and the unborn child. During active labor and after delivery, obstetrical crises can arise (postpartum) (1). Examples of obstetric emergence include but not limited to antepartum hemorrhage, postpartum hemorrhage, pre-eclampsia with severe features, and eclampsia.

Preparedness: preparedness includes having healthcare providers with relevant skills available, having functional equipment and supplies. It also involves the availability of essential equipment, medication, supplies, regular drills, emergency trolley should be available, and readily to use at the time and providers must be prepared to respond quickly all the time. Further, it includes having adequate infrastructure and established protocols for management of obstetric emergencies, awareness about specific roles and responsibilities during emergencies (2,3) .

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the study

According to available data, 15% of pregnant women experience obstetric problems at some point throughout their pregnancy and delivery. If these women do not get appropriate obstetric interventions, maternal deaths are likely to occur(2). The majority of maternal mortality is caused by direct obstetric events such as hemorrhage, hypertension, obstructed labor, sepsis, and complications of abortion (3). According to a World Health Organization (WHO) report, obstetric complications claimed the lives of an estimated 303,000 women worldwide in 2015(2). While almost two-thirds of maternal deaths worldwide happened in sub-Saharan Africa, with developing nations accounting for the majority of these deaths (SSA) (4),

Despite the fact that obstetric problems frequently arise unexpectedly, making pregnancy and childbirth safer and guaranteeing that women who experience obstetric problems have prompt access to obstetric treatment are two ways to prevent maternal mortality (5). Among the general competencies of a healthcare provider (HCP) are prompt diagnosis of illnesses and emergency situations, mastery of the necessary skills, habits, and capabilities, and timely application of crucial and life-saving measures (6).

There are two complementary types of emergency obstetric care (EmOC) facilities; basic emergency obstetric care (BEmOC) and comprehensive emergency obstetric care (CEmOC) facilities (7). A BEmOC facility can provide six crucial obstetric services, known as “signal functions." A CEmOC facility provides cesarean sections and blood transfusions, in addition to the six signal functions of BEmOC emergency (8).

Since 1990, the maternal mortality ratio (MMR) has significantly decreased globally as a consequence of the implementation of obstetric emergencies (8). Nonetheless, there is a notable regional disparity in MMR worldwide, with SSA continuing to maintain a high MMR (2). The Sustainable Development Goals (SDGs) are a new worldwide plan that the United

Nations (UN) established in recognition of this issue. The goal is to lower the global MMR to less than 70 per 100,000 live births by 2030 (9). This target will not be achieved unless the provision of quality obstetric emergency care is strengthened, especially in SSA with the inclusion of Tanzania, where the MMR according to TDHS 2022 revealed that the maternal mortality rate has gone down from 556 deaths per 100,000 live births (2015/2016) to 104 deaths per 100,000 live births (2022), which is equivalent to an 80% drop; therefore, the decline to 104 deaths was a positive sign that the objectives may be met (9). Despite this achievement, more efforts are needed to address preventable causes of maternal death.

The most significant element influencing women's service consumption in SSA was service utilization and unavailability (10,11). Other barriers to access and utilization included healthcare providers lack of knowledge about pregnancy complications (12,13) and poor awareness of the availability of obstetric emergency services (14,15). Poor quality of obstetric emergency services, as defined by a lack of essential medical supplies (16) and a lack of training among healthcare providers, results in a lack of competency (17). Based on higher direct obstetric case fatality rates than the UN requirement of not more than 1%, researchers found that most studies carried out in SSA generally concluded that the quality of obstetric emergency services is generally inadequate (17,18).

An extensive analysis of the obstacles that prevent patients from accessing and using emergency obstetric care at medical facilities in SSA revealed that most maternal deaths occur in health facilities due to a third delay in relation to the provision of obstetric emergency services, which includes a lack of obstetric emergency supplies to perform signal functions, insufficient access to skilled labor, and inadequate oversight of obstetric emergency services (19). Also, shortage of infrastructure, unaccountability, lack of supportive supervision, delayed patient referral system, poor communication system among providers, inadequate implementation standards and protocols, insufficient blood supply, and inadequate training among healthcare workers have been noted to increase the likelihood of incorrect patient diagnosis and treatment, which lead to delay and provision of substandard care at health facilities (19).

According to a study conducted in Tanzania, if all women who had complicated deliveries were able to access health facilities where CEmONC services were available, maternal mortality could drop by at least 80%. Therefore, it is important to explore the perspectives of HCPs on obstetric emergency preparedness at Vijibweni Hospital in Kigamboni Municipality, Dar es Salaam, Tanzania.

1.2 Statement of the problem

The inadequacy of proper preparedness by HCPs can lead to delays in identifying and managing maternal emergencies. This will lead to an increase in the risk of adverse maternal and neonatal outcomes, including maternal morbidity and mortality, as most of the maternal deaths occur in health facilities due to the third delay (3).

Nationally, studies have revealed that Tanzania has improved in the provision of obstetric emergency services, like implemented maternal death audit programs, enhanced skilled delivery procedures, and improved reproductive and child survival services, which are some of the measures used to lower the country's maternal death rate. Coordination and integration of several programs, which include family planning, malaria interventions, adolescent health and nutrition programs, extended immunization programs, and maternity and child health services (4)

While initiatives such as the Tanzania National Road Map Strategic Plan to Improve Reproductive, Maternal, Newborn, Child & Adolescent Health have focused their attention on building the capacity of health facilities for the management of obstetric emergencies from 2016 to 2020, gaps in emergency preparedness still remain at the local hospital level (20). It is in this regard that the preparedness among health providers on the handling of obstetric emergencies has not been fully unraveled especially Vijibweni Hospital in Kigamboni Municipal.

Despite the national efforts, maternal death in Kigamboni Municipal Council was 86/100,000, according to DHS, 2022. The maternal death rate has increased almost to 132/100,000 live births in 2023. The reflection is the same as at Vijibweni Hospital; there were 103/100,000

live births consecutively in 2022 and 151/100,000 (DHIS 2 2023)(21) . According to DHIS 2,2022, the Vijibweni catchment population was 862, and the hospital handled 2921 deliveries a year (21). This is a considerable number beyond the capacity of the hospital; 227 women had complications before and after delivery, while only 78 (34%) received obstetric emergency services. This indicates that there are women who did not receive obstetric emergency services after obstetric complications. This shows the significance of the problem, which could be related to emergency preparedness leading to maternal morbidity and mortality (5,7). Much has not been done to assess the HCP's perspectives on obstetric emergency preparedness. Therefore, this study explore the perspectives of HCPs working at Vijibweni Hospital in Kigamboni Municipal on obstetric emergency preparedness.

1.3 Theoretical framework

According to the theory of planned behavior (TPB) by Ajzen, behaviors are influenced by intentions, which are determined by three constructs: attitudes, subjective norms, and perceived behavioral control. It is also possible for external factors to directly force or prevent behaviors, regardless of the intention, depending on the degree to which a behavior is actually controlled by the individual and the degree to which perceived behavioral control is an accurate measure of actual behavioral control. By doing so, an HCP can have the intention of preparing for obstetric emergencies. In some cases, external forces can also directly influence or prevent HCP behavior, regardless of whether the HCP has a positive or negative intention to provide the service, with regard to the degree to which a behavior is controlled by the HCP.

In studying obstetric emergency preparedness among HCP, TPB can elucidate their perception towards preparedness activities, perceived institutional/environmental pressures, and perceived ability to perform obstetric emergency preparedness tasks regardless of whether HCP has an intention to provide obstetric emergency service with regard to the degree of which a behavior is controlled by an HCP (22).

Obstetric emergency preparedness includes having accessible HCPs with the necessary abilities, as well as functional supplies and equipment. It also entails understanding certain

duties and responsibilities during emergencies, as well as having sufficient infrastructure and established processes for managing obstetric emergencies. Healthcare providers need to have skill in using personnel protective equipment and competency in prompt identification and proper notification of the occurrence of an emergency event. Maternal death can be decreased with appropriate awareness of warning indicators, necessary emergency procedures, and well-equipped obstetric units. All of them are requirements for the provision of fast and adequate care when obstetric emergencies arise(23).

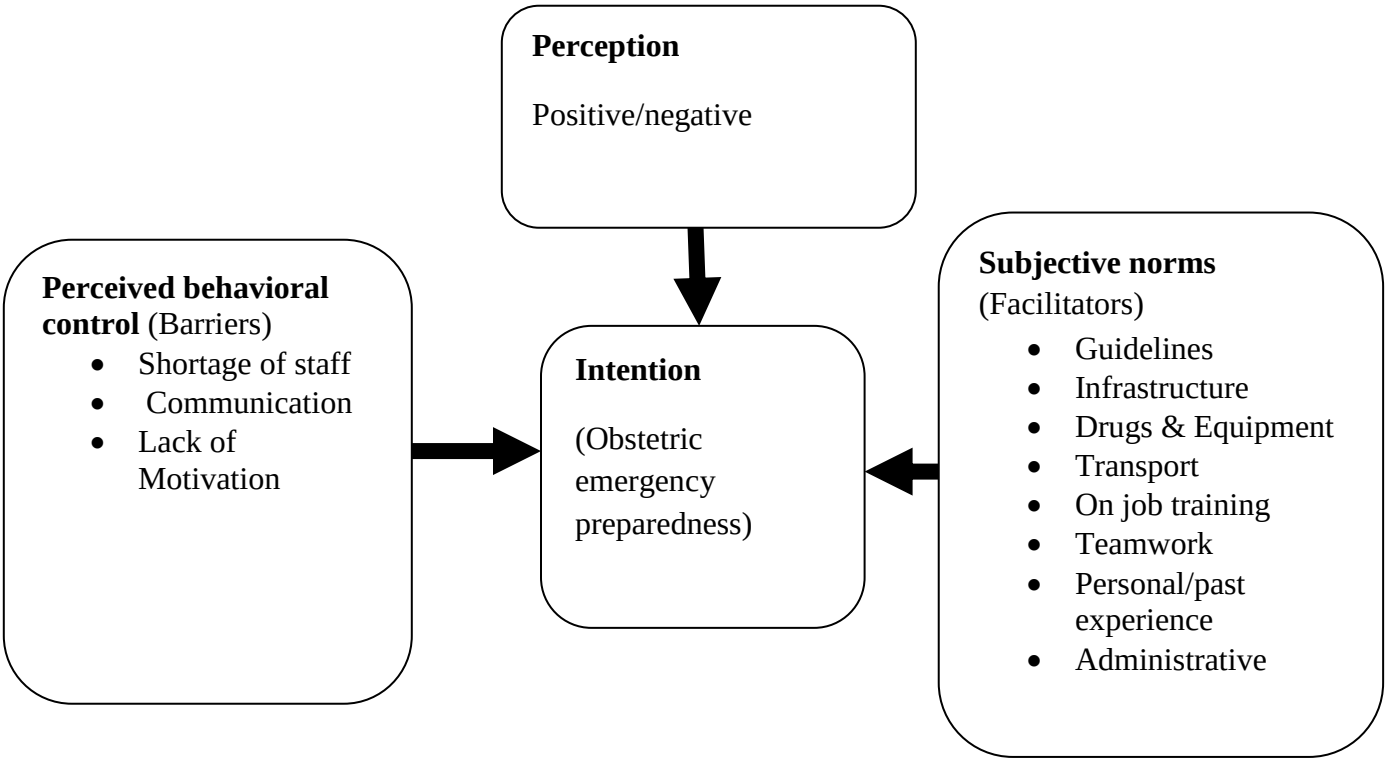


Figure 1: Modified Model of the Theory of Planned Behavior

Perception

Perception refers to the degree to which a person has positive or negative feelings about the behavior of interest. It entails a consideration of the outcomes of performing the behavior (22). This construct will help the researcher explore how HCPs perceive obstetric emergency preparedness. It will also enable the researcher to understand HCP's opinions on the advantages obstetric emergency preparedness, such as reducing maternal mortality and morbidity. Furthermore, it was facilitate understanding perceived disadvantages, increase workload, frustration of HCPs, increase the number of maternal morbidity and mortality toward providing an obstetric emergency, and specifically toward the use of evidence-based practices, which are both applicable in this context. Therefore, an HCP with a positive perception is likely to prepare for obstetric emergency service, and vice versa.

Subjective norms Subjective norms reflect how an individual perceives social pressure to perform or not perform a given behavior. The assumption is that individuals are more likely to perform behaviors that are considered desirable by significant others(22). In this study, subjective norms were conceptualized as an influence of the working environment of health facilities on obstetric emergency preparedness. To HCP, providing obstetric emergency services depends on facilitators and how individuals value those facilitators. This includes how infrastructure supports the preparation and provision of obstetric emergencies, the availability and accessibility of drugs and equipment, transport, on-the-job training, and resources.

Perceived behavioral control

Perceived behavioral control is the degree of perceived controllability and self-efficacy(24). For HCPs, this refers to the individual’s perception of the phenomenon of the extent to which the performance of the behavior is simple or difficult (24) and was considered a social pressure. It includes both the perceived expectations of others and how much the HCP values those expectations. In this study, perceived behavioral control was considered as a perceived

barrier (lack of motivation, communication, and shortage of staff) that HCPs are faced in preparing for handling obstetric emergencies.

1.4 Justification of the study

The findings from this study aimed to inform HCPs about the importance of obstetric emergency preparedness so as to improve services that will lead to a reduction in maternal deaths.

The study findings informed the reproductive maternal child and adolescent health (RMNCAH) stakeholders, including the Ministry of Health (MoH) and other organizations, about the perspective of HCPs who are maternity care deliverers and the aspects of obstetric emergency preparedness that need improvement so as to reduce maternal morbidity and mortality.

The findings from this study provided baseline data for further research on assessing obstetric emergency preparedness to improve maternal and newborn services in Tanzanian health facilities.

For the MoH, the findings might be useful in amending the existing policy and guidelines regarding steps and requirements regarding preparedness for obstetric emergencies.

1.5 Research Questions

The following were the research questions.

1.5.1 Broad Question

What are the HCPs perspectives on obstetric emergency preparedness at Vijibweni Hospital in Dar es salaam, Tanzania?

1.5.2 Specific Research Questions

i. What is the HCPs perception towards obstetric emergency preparedness at Vijibweni Hospital?
ii. What are facilitators on obstetric emergency preparedness among HCPs?
iii. What are the barriers towards obstetric emergency preparedness among HCPs at Vijibweni Hospital?

1.6 Research Objective

1.6.1 Main Research Objective

To explore HCPs perspectives on obstetric emergency preparedness at Vijibweni Hospital in Dar es salaam, Tanzania.

1.6.2 Specific Objectives

i. To explore HCPs perception towards obstetric emergency preparedness at Vijibweni Hospital.
ii. To describe facilitators on obstetric emergency preparedness among HCPs at Vijibweni Hospital.
iii. To describe barriers towards obstetric emergency preparedness among HCPs at Vijibweni Hospital.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter covers the literature review on theory that relates to the study, related studies and research gap.

2.1.1 Perception towards obstetric emergency preparedness among HCP

Eighteen percent of Nigerian nurses and midwives concurred that their employers' hospital policies do not encourage obstetric emergency education. Conversely, a greater proportion (47%) disagreed that their workplaces were ready for obstetric emergency training. The opinions of HCP hold significant implications for healthcare concerning the prevalence of maternal morbidity and mortality (25).

The negative attitudes toward hospital policies that generally do not promote obstetric emergency education may result in delay and cause a high rate of maternal morbidity and mortality, and it is concluded that HCPs, planners, and politicians need to recognize they are responsible for reducing maternal death within the health system(24).

Having HCPs with relevant skills and required equipment ready for use during any emergency and daily health care activities may result in good promotion of obstetric care and enhance attendance (24).

HCPs play a crucial role in obstetric emergency management and, consequently, their perceptions about preparedness affect maternal health outcomes significantly. Studies conducted in sub-Saharan Africa, including Tanzania, have underlined that awareness and attitudes of HCPs regarding emergency preparedness are molded by experience, training, and availability of resources (26). For instance, in Tanzania, one study indicated that HCPs normally acknowledge the need to improve in emergency obstetric preparedness but are constrained by limited accesses to protocols of emergencies and refresher training(27)A study

from Ethiopia also showed that healthcare providers' comprehension of emergency preparedness relates with their exposures to emergencies and training programs (17).Generally, these studies indicate positive perceptions towards obstetric emergency preparedness; however, the depth of preparedness varies based on experience and access to relevant resources.

In addition to being educational and beneficial, the additional training sessions for staff members to refresh their knowledge and skills would help raise obstetric skills. Health workers are eager to learn new things and improve their performance in the workplace (24).

2.1.2 Facilitators of obstetric emergency preparedness

The study in India concluded that the government should provide infrastructure readiness and the availability of trained staff to provide obstetric emergencies at specific times. Although building infrastructure was adequate, drugs and equipment were accessible, and transportation facilities were available, it was still observed that needy women may fail to receive timely and quality obstetric emergency services at the periphery due to a lack of trained staff, low confidence, and a lack of motivation in managing obstetric emergencies (28).

The study in Nigeria on counter-referral practices and referral in obstetric emergencies among health-care providers in health facilities revealed that the availability of referral and counter-referral resources in the health-care facilities studied was not adequate. Adequate obstetric emergency preparedness through appropriate training and retraining of care providers is an empowerment strategy to ensure competency in managing obstetric emergencies among health care providers. Increased budgetary allocation to the health sector for the procurement of all the necessary referral resources and the hiring of competent personnel (29).

The study in Kenya on the perspectives of stakeholders on obstetric emergency preparedness revealed that the intervention's stakeholders not only recognize the importance of obstetric emergency training in enhancing the skills of HCPs but also experience it firsthand.

To guarantee that the benefits of training are completely realized, it would be helpful to address unintended consequences like increased workload in addition to looking into techniques to maximize training results (30).

A study conducted in Tanzania's west and western zones on the practice of obstetric emergency preparedness showed that there was good potential to improve obstetric emergency status due to the high density of obstetric care facilities. However, the current obstetric emergency performance is generally suboptimal, mainly due to policy, training, and supply-related barriers (31).

Generally, recognized facilitators for obstetric emergency preparedness among HCPs include sufficient training, resource availability, and strong institutional support. Training programs in the area of obstetric emergencies, such as BEmONC, have been identified as main facilitators that enhance preparedness in sub-Saharan Africa. It was noted in a study conducted in Tanzania, for example, that "Continuous professional development programs, including simulation-based training have significantly improved the confidence of HCPs in their preparedness to deal with obstetric emergencies" (20). Moreover, well-equipped health facilities with adequate supplies of emergency kits and medicines act as preparedness enablers (32). Supportive leadership and multi-discipline teams are the boosters of response capacity in emergencies, as evidenced from studies in Tanzania where organizational commitment improved preparedness levels (33).

2.1.3 The barriers to obstetric emergency preparedness

In the study on obstetric emergency preparedness in rural hospitals in the District of Maharashtra State, the conclusion was that even with cutting-edge infrastructure, it wouldn't be useful if there weren't enough skilled technicians and support staff to handle emergencies.

Financial constraints for receiving an obstetric emergency, better involvement of private providers in obstetric emergency services and public-private partnership (PPP) schemes needs to be implemented (34).

The study in SSA on barriers to access and utilization of obstetric emergency preparedness at health facilities. The research findings indicate that very complex and multi-faceted obstacles impair women’s ability to get and utilize obstetric emergency care. These barriers are interdependent and occur at different levels. Multifaceted treatments that can take into account the difficulties from both the service providers and consumers' perspectives are needed to overcome these numerous barriers. Even though the contributing elements are essentially the same throughout the SSA, these issues require nation-specific interventions capable of removing the noted obstacles. To reduce barriers that are seen at several levels, intersectoral collaboration should be reinforced, and all stakeholders should collaborate.

To enhance the impact of financial responsibility on the use of health services, women should have access to health insurance (25).

The study in Uganda on barriers to implementing obstetric emergency policies revealed that the implementation context for obstetric emergencies was in contrast with upstream policy expectations. Guidelines for obstetric emergencies were assuming that frontline mechanisms already in place would facilitate the application of new policies put into the available resources.

The systems of obstetric emergency delivery consistently encountered pervasive bottlenecks that were outside the control of frontline implementers, regardless of the severity of treatment and mortality load. Vertical programming and decentralization significantly strained and undermined system capabilities. The outcome of extensively funded initiatives with short implementation durations and uneven overage led to superficial efficiencies that rendered obstetric emergency implementation systems mainly insensitive to obstetric crises that ended in maternal death (35).

The study in Kenya on barriers to obstetric emergency services revealed that delays in deciding to seek medical attention when obstetric difficulties arise and traveling to the hospital cause treatment to be ineffective. Pregnant women's pre-hospital obstacles must be sufficiently taken

into account in interventions to lower maternal mortality and morbidity in order to impact decision-making about the three delays.

But even if elements at the hospitals contribute to maternal morbidity and death, it's crucial to emphasize the importance of the first and second delays, which have a significant impact on the mother's and the unborn child's final outcomes (36).

The study in Tanzania on governing the implementation of obstetric emergencies revealed that **t**he process of implementing obstetric emergencies is fraught with difficulties that call for a multidisciplinary approach to solving them. To ensure a successful partnership, each partner's roles and responsibilities must be clearly outlined in a working framework within the district health system. Partnerships improve the governance of the health system, ensuring that local health policies are implemented effectively (37).

Generally, some of the common barriers to obstetric emergency preparedness among HCPs include poor infrastructure, limited training opportunities, and poor staffing. In Tanzania, similar to most other sub-Saharan African countries, the greatest challenge usually pertains to the lack of essential resources in the form of blood products, emergency medications, and functioning equipment(38). Delays related to systemic issues include poor financing of healthcare and hence poor infrastructure, which in turn causes delays in responding to emergencies, as seen in Tanzania, where preparedness was not timely due to financial and logistic constraints (26).Yet another important challenge in this regard involves a lack of adequate continuous training and professional development. The results of this failing have been to reduce the competence and confidence of HCPs in managing obstetric emergencies, as evidenced in Tanzania (39).

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Research design

This study employed a descriptive qualitative research design, incorporating the phenomenological approach. This design had been selected because it enabled the researcher to explore in-depth the lived experiences of HCPs and their perceptions regarding preparedness for obstetric emergencies at Vijibweni Hospital. Phenomenology as a methodological approach focuses on an explanation of how individuals make sense of their experiences and the meaning they attach to such experiences.

3.2 Study Setting

This study was conducted at Vijibweni Hospital in Kigamboni, Dar es Salaam. The district was bordered north by Ilala district, east by the Indian Ocean, west by Temeke district, and south by Mkuranga district of Pwani Region. According to the census conducted in 2022–2023, the population of Kigamboni is 317,902.

Kigamboni Municipality has 42 health facilities, of which five provide CEmONC services; these include Kigamboni District Hospital, Vijibweni Hospital, Kimbiji, Kigamboni, and Kibada Health Centre. This study was conducted at Vijibweni Hospital in Kigamboni because it was geographically easily accessible from all sides of Kigamboni district; hence, it is a high-volume facility where a large number of women come for childbirth services. The hospital handles 2921 deliveries per year, while the number of beds in the maternity ward is only 32, which includes the antenatal, postnatal, and labor rooms, which have only two beds. It was also revealed from DHIS2 that MMR at Vijibweni was 103/100,000 live births in 2022 and 151/100,000 in 2023; choosing Kigamboni, specifically Vijibweni hospital, as a study setting would yield the maximum results for the study (21).

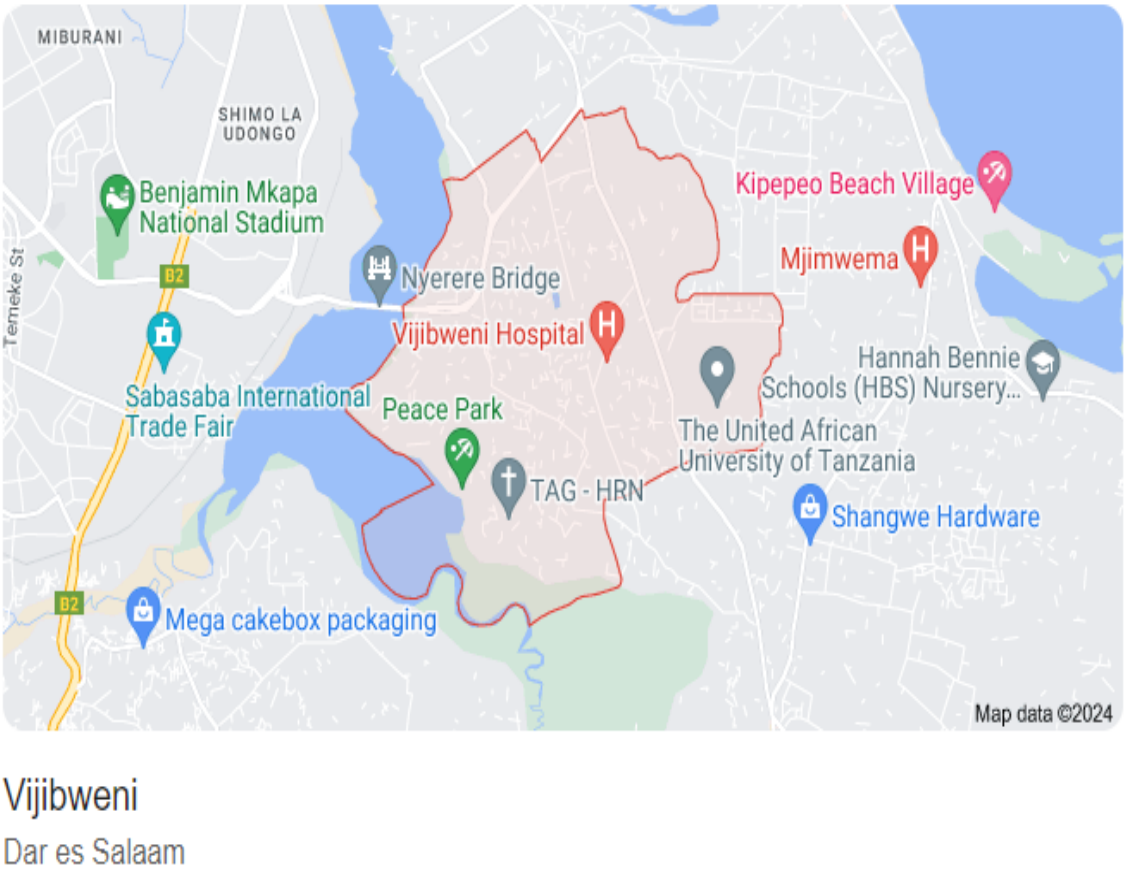


Figure 2: Map showing Kigamboni district and its boundaries

3.3 Study Population

The population of this study was HCPs working and providing childbirth-related services at the maternity ward (antenatal, labor, and postnatal) at Vijibweni hospital, such as nurse-midwives from certificate levels such as Enrolled Nurses (EN) and Enrolled Nurse-midwives (ENM); diplomas named Assistant Nursing Officer (ANO); and bachelor degrees registered as Nursing Officer.

(NO), Medical Doctors (MDs), Pharmacist and Laboratory technicians.

- NO, ANO, ENM, and EN these are nurses and midwives working at maternity ward with experience in prenatal, childbirth, and postpartum care and are the one who is responsible in ordering equipment's, drugs, supplies, and other requirements in handling obstetric emergencies.
- MD these are among HCPs working at maternity ward and are involved in preparation and provision of obstetric emergency preparedness
- Pharmacist is the one who dispense prescription of medication and receive order from the ward.
- Lab technologist is the one who order reagents and perform different investigation which helps in diagnosis process which aids in management of obstetric emergency
- The selection was based on rich-information informants, and consent to participate in the study on obstetric emergency preparedness was enabled to answer study questions.

3.5 Sample Size

An estimated sample size for this study was 20 participants. However, saturation reached 16 participants (40) because there was no new information imaging during the data collection process. It is suggested that approximately 30 to 50 participants/interviews (35), while others suggested only 20 to 30 (40) and another group suggested at least 6 (35,40). Vijibweni hospital had 38 HCPs working and providing childbirth-related services at the maternity ward as per the hospital report (2024); therefore, the selection of 20 participants would have yielded the best result to attain a saturation point(40).

3.6 Sampling Techniques

A purposive sampling technique was used to select 16 participants with rich information for interviews. The sample selected was due to the nature of the research questions, the study goal, and the type of analysis. Participants with experience of two years and above were included in the study, were by medical officer in charge and matron of the hospital assign department in charges to identifying eligible health care providers. This sampling method was

helpful to obtain the in-depth perspectives of HCPs on obstetric emergency preparedness at Vijibweni Hospital (40).

3.7 Data collection methods

Individual interviewees were subjected to audio recording for the purpose of accurately collecting data. An interview guide was developed in English, and then translated into Kiswahili in order to cater for any language needs by the participants. All interviews were performed in Kiswahili, with an iterative approach where simultaneous data collection and analysis were performed during the course of the data collection process. Throughout the data collection, the interview guides had been revised based on insights until saturation was achieved. Informed consent was obtained in writing, and interviews were conducted in a quiet, private room at the health facility where only the interviewer and the interviewee were present. Participants were assured of confidentiality for academic purposes. The library services at MUHAS trained the principal investigator on qualitative data collection, and he also attended some online sessions to widen his understanding of qualitative research.

The PI also employed a research assistant who was a medical professional not from Kigamboni Municipal and had experience in qualitative data collection. The assistant was well oriented regarding the study issue and data collection procedures. Data saturation principle informed the determination of when the data collection was to be concluded (40)**.**

3.7.1 Data Collection Tools

A variety of tools was used in the process of collecting data. These include:

- Notebook, pen, and pencil for note-taking purposes
- Audio recorder for the voice of the interview sessions.

The semi-structured interview guide was composed of questions to ensure that participants could provide their complete view. All the questions had been suitably asked, listened to carefully, and questions for clarification solicited by the research assistant as appropriate. Field notes, written during and immediately after the interview, were used to highlight the

most important observations noted. The interviewing time for each participant lasted between 30 and 50 minutes.

3.8 Data processing and analysis

All recorded information was secured on a computer with a password, which inhibited unauthorized persons from viewing any data. The conversations were transcribed verbatim in Kiswahili, and the codes were developed in English. Before analysis, audio recordings were listened to several times to provide an overview. The researcher read and re-read to get an understanding that resulted in the generation of categories from the information organized one after another using an inductive approach. The qualitative content analysis (QCA) method was used to analyze HCPs perspectives on obstetric emergency preparedness (41). The conversations, concepts, and ideas were organized, which enabled the researcher to categorize and segment the data obtained.

QCA used four steps to reach the conclusion of getting categories based on the evidence and systematic reasoning to identify specific characteristics of the message.

Step one: Meaning unit

In this step, the researcher documented the interviews and identified keywords or phrases in them. These can be keywords, sentences, or paragraphs comprising features related to each other in terms of content and context.

Step two: Condensing meaning unit

The researcher shortened the size of the meaning unit while preserving its quality and original meaning.

Step three: Formulation of codes

In this step, the researcher thought about meaningful labels that allowed the organization of data. This step allowed data to be organized in new and different aspects.

Step four: Formulation of category

The step answered the question what. It combined meaningful labels that shared a commonality. In this step, the researcher ensured that the grouped contents were not falling into two or more categories. But also, the researcher ensured no data being excluded because of missing appropriate categories.

3.9 Trustworthiness of the study

Trustworthiness was ensured throughout the study process as it is a measure of the overall quality of the qualitative data. Four criteria was used to ensure the trustworthiness of the study; Credibility, transferability, dependability and confirmability (41) . The following strategies were employed to maximize the trustworthiness of the study.

Credibility: Refers to confidence in how well data and analysis processes address the intended objectives. An individual interview was used to capture the realities of the study. The use of purposive sampling facilitated the selection of rich informants, which enhanced credibility. Semi-structured interviews were considered the appropriate method to increase participant descriptions and focus on the research aim. The iterative data collection and reading and rereading of the transcript also increase the credibility of the study. Also, the transcript and audio recording were sent to supervisor to ensure credibility before proceeding to another steps. Furthermore, peer debriefing and reviews of data and the emerging of subcategories and categories by the researcher enhanced the credibility of the findings.

Transferability: This was achieved through detailed description of the study population, study setting, data collection and analysis process that might help the readers to judge whether the findings may be transferable to other contexts.

Dependability: Using interview guides for IDIs allowed consistency during the data collection process. Also, the same researcher assistant conducted all IDIs so as to minimize the threats of dependability. After the PI, the research assistant conducted an open discussion to scrutinize the data collection and analysis to promote consistency of the findings.

Confirmability: This was achieved by providing an audit trial that showed detailed steps during data analysis. Kiswahili was used during data collection to ensure a good interaction between the researcher and participants, which allowed participants to freely describe their ideals.

Further, providing examples of the analysis process and describing findings supported with quotes were done to show that the results were grounded in data. Field notes written during data collection, transcription, and coding were used to support the coding and category formation.

Methodological consideration

Positionality refers to the position a researcher has chosen to adopt within a given research study (42). This might compromise participants' ability to disclose information and raise issues of an imbalance of power between the researcher and participants. Therefore, this was achieved by finding the research assistant who collected data in order to minimize bias since the PI is a midwife working at Kigamboni Municipal and is an administrator (District Nursing Officer), which might have influenced the data collection process.

3.10 Ethical Clearance and Consideration

The researcher sought necessary official documents from concerned authorities (MUHAS), municipalities (Kigamboni), and hospitals (Vijibweni). Principles of free consent and the anonymity of their information were ensured. Consent was sought prior to interviews. Also, study participants were assured confidentiality for any information obtained from the field. Furthermore, participants were informed that the study findings that were obtained from the field were mainly for academic purposes.

CHAPTER FOUR

4.0 RESULTS

This chapter aimed to explain the findings of the study of health care providers perspectives on obstetric emergency preparedness, where five categories were generated during the analysis process.

Sociodemographic characteristics of Participants

A total of 16 healthcare providers were interviewed at Vijibweni Hospital in Dar es Salaam. The majority of healthcare providers interviewed were women fourteen out of sixteen. Their educational backgrounds varied, with most holding diplomas or bachelor's degrees. The working experience at the current health center ranged from 2 to 20 years, while their overall professional experience spanned from 3 to 26 years. Details are found in Table 1.

Table 1: Sociodemographic characteristic of study participants (n=16)

Variable	Frequency (n)	Percentage (%)
Age		
29-39	8	50
40-50	8	50
Gender		
Male	2	12.5
Female	14	87.5
Education level		
Diploma	8	50
Bachelor degree	8	50
Profession		
Nurse/midwife	7	44
Medical/clinical officer	5	31
Pharmacist/pharmaceutical technician	2	12.5
Lab technician/scientist	2	12.5
Years of working in the facility		
1-7	11	68.7
8-14	2	12.5
15-21	3	18.8
Overall years of working experience		
1-10	9	56.3
11-20	5	31.2
21-30	2	12.5

Organization of Categories, sub-categories, and codes

Following the analysis, five categories and fourteen sub-categories were generated.

Table 2: Summary of Findings

Categories	Sub-categories	Codes
Perceived consequences and benefits	Patient safety and clinical outcomes	Saving lives Protect patients Improved patient outcomes Decreased risk of further complications Reduced maternal deaths Reduced neonatal deaths.
	Provider and client satisfaction	Building provider-client trust Increase provider comfortability Improved provider confidence Reduced provider stress Increased client satisfaction
	Facility reputation and sustainability	Increased reputation Improved quality of services Increased number of clients Increased facility income
Continuous education and trainings	In-service trainings	Attending continuous medical education Availability of fresher courses Organized weekly discussions Attending regular training District common learning groups
	Client health education	Education during antenatal visits Mitigation of traditional beliefs

		Improve awareness of danger signs Education during pregnancy Information on safe delivery
Availability of supportive systems	Administrative and management support	Clinical supervision Follow-up Provider motivation to staff Conduct regular Audits and evaluation Solve challenges
	Local community support	Blood collection community education Involvement in facility construction Health campaigns on safe delivery
	Use of technology and communication networks	Phone call consultation Online training and meetings Social media groups Access to field updates Online supply chain Patient information management
Limited infrastructure and material resource	Inadequate equipment and supplies	Insufficient equipment Inadequate blood products Mismanagement of emergency equipment
	Unfavorable facility infrastructure	Lack of special units Unfavorable working environment Limited working space Difficulty organizing care
	Poor referral system	Limited number of ambulances Unreliable fuel supply to ambulances Long distance to the higher-

		level facility Delayed pre-referral services
Healthcare Workforce preparedness in emergency	Perceived duties and responsibilities	Ensure availability of equipment and supplies Recognize emergency Respond to emergency Patient escort during referral
	Staffing inadequacy	Shortage of staff Work overload Lack of specialists
	Teamwork and collaboration	Shared decision making Working together Cooperation in managing complicated cases Good team response Flexibility in assuming duties

Category 1: Perceived Consequences and Benefits

This category indicates the outcomes associated with emergency obstetric preparedness and the impact on various aspects, including patients, healthcare providers, and healthcare facilities. It captured both the positive results of effective preparedness and the negative consequences of inadequacies. It was explained under three sub-categories, namely: patient safety and clinical outcomes, provider and client satisfaction, and facility reputation and sustainability.

Patient safety and clinical outcomes

Participants stressed that a lack of preparedness can lead to further complications and higher rates of maternal and neonatal deaths. They noted that insufficient resources and poor preparedness often result in delayed care, which can exacerbate emergency situations. A resource-constrained and unprepared setting offers limited and unorganized services, increasing errors and mismanagement of certain emergency cases.

*"…The patient could lose their life, or it could lead to disability or any other challenge…" (*Participant 2)

Perhaps participants believed that proper preparation and resource allocation could reduce maternal and neonatal morbidity and mortality to a greater extent. They mentioned that being well-prepared increases confidence and allows for immediate and appropriate responses to emergencies, ensuring patient safety and outcomes. Participants further emphasized that having the necessary equipment, trained staff, and efficient systems in place fosters emergency preparedness, leading to better clinical outcomes.

"The first benefit to the patient is receiving immediate and necessary care without delay…. Therefore, the patient benefits by having their life saved..." (Participant 1)

Provider and client satisfaction

Participants highlighted that adequate preparation influences their confidence, reduces stress, and improves their ability to provide high-quality care, which in turn enhances client satisfaction. Clients feel safer and more satisfied when they saw that healthcare providers are well-prepared and capable of handling emergencies efficiently. Participants further stated that proper preparation helps in building better relationships between providers and clients. When clients receive prompt and effective care, it fosters a positive relationship.

''Firstly, it gives you peace of mind to work, knowing that for whatever happens, I have backup and peace in your work If we do not prepare well, it means that work will be done under stress, doing so will have negative results'' (Participant 12).

While they pointed out that a lack of preparedness can lead to increased stress and burnout among healthcare providers, when facilities are not well-prepared to handle emergency situations, clients may not receive timely and adequate care, leading to mistrust and dissatisfaction.

''you yourself won't be comfortable, there could be misunderstandings between you and the client or the client's family'' (Participant 16)

Facility reputation and sustainability

Participants described the influence of preparedness on the perception of the facility among clients and the broader community, as well as the way it affects the facility's reputation and sustainability. They pointed out that clients are less likely to return to or recommend a facility with poor emergency preparedness, which leads to a decline in clients and may eventually decrease revenue. The decrease in income in turn may result in a deprivation of resources, further complicating the overall running of the activities.

''and for the center, it will have a bad reputation because preparations are not made, services are poor, clients will decrease, and the basket fund will decrease, and the center will fail to sustain itself'' (Participant 6).

On the other hand, participants perceived that adequate emergency preparedness boosts the facility's reputation and fosters trust within the community. Participants noted that good service and effective emergency management result in a decrease in maternal and neonatal deaths or further complications, increasing satisfaction and credit for the facility. Adequate preparation leads to better service provision, which, in turn, increases the number of customers and the facility's income generation.

''for the center, we will have greatly reduced the deaths of mothers and children, and it will give us points from the lower levels to the national level. And the center will gain a good reputation as a place where they have been able to solve the client's problem for the mother and child and others will come to learn from us as well'' (Participant 13).

Category 2: Continuous Education and Training

This category highlights the role of education and training as facilitators for obstetric emergency preparedness, as described by participants. It includes descriptions in two sub-categories: in-service training and client health education.

In-service training

Participants viewed in-service training as an essential facilitator for emergency obstetric preparedness. They highlighted its role. Participants described that they engaged in continuous medical education and training programs, knowledge and skills sharing meetings, and online courses that improved their knowledge, skills, confidence, and ability to provide high-quality care during obstetric emergencies. Structured and supervised in-service trainings are essential for improving knowledge, skills, and performance, leading to the provision of evidence-based, high-quality services.

''Here, I can say we receive CME [continuous medical education] training, yes, CME. We get it every Thursday, and as the labor ward, we have internal training every Friday to remind ourselves. Also, when a problem occurs and our performance was not good, we sit down and train each other'' (Participant 11).

Client health education

Participants described that client education needs to be a continuous process throughout the pregnancy and childbirth period. They perceive that awareness of the danger signs is crucial for the timely management of an obstetric emergency condition. Participants stated that their efforts to educate mothers on the danger signs of pregnancy and the importance of timely medical intervention during antenatal visits and community health sessions. Educating mothers on the importance of recognizing danger signs and seeking timely medical care could mitigate the risks associated with harmful beliefs and practices, ultimately leading to better health outcomes for mothers and babies.

"... the whole thing let's try to educate mothers from the level of RCH and continue to educate about the danger signs so that if a mother knows them it is easy to avoid them…" (Participant 2)

Category 3: Availability of Supportive Systems

This category covers the support mechanisms available to facilitate emergency obstetric care preparedness. It includes three sub-categories: administrative and management support, local community engagement, the use of technology, and communication networks.

Administrative and management support

Participants highlighted the importance of supportive supervision and responsive management in addressing challenges and ensuring continuous improvement in emergency preparedness. They stated that the facility management was proactive, conducted regular supervision, responded quickly to emergencies, and provided necessary resources. Participants mentioned that the facility managers were overseeing the allocation of equipment and supplies, staff response to emergencies, and organizing emergency trainings at the center, ensuring that every healthcare provider receives this training.

''Actually, the management is very good, one hundred percent. When there are difficulties, they are active and provide great cooperation. Even if they are not at the center, if you call, they respond immediately and offer assistance...'' (Participant 16).

Participants also mentioned being motivated in terms of being paid overtime. The majority described that this has boosted their motivation to work.

*''Overtime is given... if you work beyond your regular hours, you are paid, or if you work on your off day, you are compensated''. (*Participant 10).

Local community support

Participants described several ways in which the local community, including religious organizations, local leaders, district administration, and local stakeholders, contributes to emergency obstetric preparedness. These contributions include providing education to mothers, assisting in the acquisition of essential supplies like blood, and other forms of support that facilitate better healthcare delivery. Within the local communities, there were

health committees that helped organize various activities, such as blood donation and public health education sessions.

''There is also a blood committee that helps in collecting blood from the community, schools, mosques, and institutions. The collected samples are sent for safe blood storage, and in case of an emergency, they provide us with results, and we deliver the service. These activities happen even if it is not a national blood donation day'' (Participant 4).

The use of technology and communication networks

Participants described various aspects of technology and communication networks, highlighting their role in enhancing emergency obstetric preparedness. Key points include the use of WhatsApp groups for instant communication, access to online resources for continuous learning, and the implementation of digital systems for managing emergencies. They pointed out that technology has eased communication between facilities, allowing for online consultations.

''On the technology side, it helps because instead of following a person physically, we consult a person on the phone in case of an emergency. We call for help, and even in the device, you can call an ambulance. For communication, we still have WhatsApp groups when an emergency occurs, we provide information'' (Participant 2).

Participants also stated the importance of online platforms for accessing information and guidelines, enrolling in online courses, and getting updates in the field. They used the internet to stay updated on best practices and new techniques related to obstetric emergencies.

''Having internet, computers, or phones helps a lot. For example, someone who might have studied a long time ago can now continue learning through the internet, computers, and phones to provide emergency services. This helps them update their knowledge'' (Participant 9).

Some participants highlighted the broader use of digital systems for managing patient information and coordinating care. These systems help streamline operations, ensure better record keeping, and facilitate the efficient transfer of critical patient information during emergencies.

''also, the use of internet helps and the GOTHOMIS system we use here helps to keep records and the DHIS 2 system enters information every month enabling you to know the use for the whole month and we pharmacy we use the ILMS system helps me to order drugs and medical supplies also shows usage and we order every two months so it helps to avoid a lack of drugs at the center'' (Participant 7).

Category 4: Limited infrastructure and material resource

This category addresses the physical and logistical aspects necessary for effective emergency obstetric care preparedness. Participants highlighted the situation of infrastructure and resources in their facility was one of the barriers to obstetric emergency preparedness. This category encompasses three sub-categories including insufficient equipment and supply, unfavorable facility infrastructure, and poor referral systems.

Inadequate equipment and supply

The lack of sufficient equipment and supplies was mentioned as a significant barrier to obstetric emergency preparedness. Participants reported situations where essential items were either unavailable or in short supply, leading to delays and difficulties in providing timely care. For example, the absence of blood products was cited as a major issue during cases of postpartum hemorrhage, where their unavailability could mean life-threatening situations for mothers. The shortage of basic items like gloves, syringes, and drugs was also noted, complicating routine and emergency care alike. Without the necessary tools, healthcare providers are unable to perform their duties effectively, leading to poor patient outcomes. Furthermore, the lack of supplies decreased the confidence of healthcare providers, leading to underperformance.

''.. Sometimes, when a client needs a lot of blood, we have to request it from other places. When we request, we are given one or two units, which is challenging'' (Participant 4)

Even though their facility had inadequate emergency equipment, participants perceived that the availability of adequate equipment and supplies was a key strategy to enhance obstetric emergency preparedness. They emphasized the need for consistent and reliable supply chains to ensure that all necessary items are always in stock. The presence of adequate supplies also contributes to a safer working environment for the staff, decreasing their anxiety and boosting their confidence.

".as a hospital should try to have enough equipment, medicine, and blood'' (Participant 2)

Unfavorable facility infrastructure

Participants described the physical environment and facilities in terms of the design and layout of the healthcare facility, the condition of the buildings, the availability of space, and the lack of specialized units. They mentioned that the existing buildings were often too small, poorly designed, and not properly maintained. This lack of adequate space and proper layout made it difficult to prepare and provide obstetric emergency care efficiently and safely. For instance, the absence of enough delivery beds and the lack of a neonatal unit were highlighted as major issues. Additionally, participants reported that the poor condition of facilities, including insufficient lighting and ventilation, further complicated the delivery of emergency obstetric care.

''.. Honestly, I see the infrastructure is not good at all because even the way to enter when you get an emergency you can get confused the building itself is small all clients stay in one place, also we don't have a neonatal unit, the delivery room is like one with two beds and sometimes you have more than two mothers, so more than one have to give birth to a regular bed where she slept'' (Participant 16).

Participants perceived that the improvement of facility infrastructure may help enhance obstetric emergency preparedness. They suggested that investing in the construction of new buildings or the renovation of existing ones to meet the demands of emergency care is crucial. Ensuring that the design of these facilities promotes efficient workflows and has enough spaces for different aspects of care, such as delivery rooms, emergency units, and neonatal intensive care units (NICU), was also emphasized.

''there is a maternity block under construction that includes a surgical room, so when completed, it will be helpful'' (Participant 6).

Poor referral system

Participants described several shortcomings in the existing referral processes as one of the barriers to emergency obstetric preparedness. One major issue was the lack of timely transportation. Ambulances were often unavailable, deprived of fuel, or shared among multiple facilities, leading to significant delays. These logistical challenges hindered the timely transfer of patients in critical conditions, exacerbating their health risks. Delays in transferring patients to appropriate facilities delay the initiation of specialized management, increasing the risk of morbidity and mortality.

''. I can talk about the ambulance's side, though it exists, the whole system is in trouble with the ambulance because you find an ambulance gives service to the entire district…. and the big problem is fuel'' (Participant 2)

Category 5: Healthcare workforce preparedness in emergency

This category highlights the way human resource for healthcare influences obstetric emergency preparedness. It encompassing the perceived duties and responsibilities, staffing adequacy and teamwork and collaboration.

Perceived duties and responsibilities

Participants described their perceived duties and responsibilities in various aspects of emergency obstetric care according to their carder. They ensured the availability and readiness

of necessary emergency equipment and supplies. The doctors and nurse midwives stated being involved in preparing emergency trays, checking and maintaining the functionality of medical equipment, and organizing delivery kits to ensure everything is accessible and ready for use in an emergency. Laboratory technicians narrated the preparation of blood and blood products to save mothers, and pharmacists stated they were responsible for ordering emergence drugs like magnesium sulfate for eclampsia, misoprostol, and oxytocin for managing PPH. Participants further mentioned engaging in maintaining a clean, organized, and ready-to-use environment.

'' Mhhh first importance for me as a nurse is to ensure that every day and every hour in our maternity ward, the equipment is complete and ready, that readiness that the equipment is clean and ready when I need it, is just to pick up and start providing services''(Participant 1)

Attending trainings, collaborating with others, communicating with patients, and providing health education were also mentioned as responsibilities essential for emergency preparedness.

''. My responsibility is to ensure that the equipment is ready at all times for anything. Also, cooperation and communication with my colleagues when any emergency occurs in the maternity ward so that when I shout for help, it is easy to get assistance'' (Participant 6)

Staffing inadequacy

The shortage of staff was mentioned by the majority of participants as one of the barriers to preparedness and the provision of obstetric emergency services. They described situations where the limited number of healthcare providers, especially during emergencies, strained their ability to deliver prompt and effective care. For instance, participants mentioned scenarios where one person manages more than one ward, including antenatal, labor, and postnatal wards, making it extremely difficult to manage the influx of patients and provide the necessary care. The lack of adequate staffing often led to overworked and exhausted staff, negatively impacting their performance and the quality of care provided.

''The first challenge is that the staff is not enough, you find one doctor in the ward and also serving other wards so it becomes difficult to handle. You find two staff serving 35 patients (Participant 8)

Participants perceived that there is a necessity to increase the number of healthcare providers to meet facility demands and the number of clients. Despite the fact that they attended trainings to improve their knowledge and skills, participants emphasized the need to have specialists within the facility who are capable of providing specialized services and leading the team in case of obstetric emergencies.

''... Increasing specialists, for example, if we had a specialist here, we would not miss one'' (Participant 11).

Teamwork and collaboration

Participants highlighted the importance of teamwork and collaboration in emergency situations and described the situation where teamwork and collaboration facilitated obstetric emergency preparedness. They mentioned the collaboration between different healthcare professionals, such as nurses, doctors, and support staff during emergencies being good at the facility. They worked by sharing decisions and every team member understands their roles during emergencies. Further, they emphasized that during emergencies, it's crucial for all team members to communicate effectively, work in a coordinated manner, and be flexible and adapt to various roles as needed.

''We cooperate across all departments and with all staff and even if there is a medication that can't be used at the moment, we reach an agreement and become one team. So, we cooperate in everything. The first thing that can facilitate the provision of emergency services is the presence of teamwork among the workers themselves'' (Participant 9).

CHAPTER FIVE

5.0 DISCUSSION

The study investigated healthcare providers' perspectives on obstetric emergency preparedness at Vijibweni Hospital in Dar es Salaam, Tanzania. The discussion brings together results regarding consequences and benefits, education and training, supportive systems, infrastructure and material resources, the healthcare workforce, and the existing literature.

Consequences and Benefits

The benefits and consequences of being prepared for obstetric crises were multifaceted, impacting patient safety, treatment quality, provider and patient happiness, and the reputation and longevity of the medical facility.

Patient Security and High-Quality Care: There was alignment between patient safety and improved health and readiness. Participants underlined that being prepared for crises allows for prompt and appropriate action, which in turn reduces the incidence of illness and mortality among mothers and newborns. "Getting the care, they need right away is the primary advantage for the patient," said Participant 1. Research showing that ready healthcare systems result in a considerable decrease in adverse outcomes for moms and newborns supports this conclusion (43)**.**

Provider and Client Satisfaction: Research has demonstrated that adequate preparation boosts the self-assurance of medical personnel and reduces their stress levels, which enhances the quality of care and boosts patient satisfaction. When medical professionals are prepared and adept at handling emergencies, patients feel more comfortable and secure. "Knowing that there is a backup plan gives you peace of mind to work." (Refer to Participant 12). These observations are consistent with research showing that preparedness has a favorable effect on provider and patient satisfaction (44)**.**

Facility Reputation and Future Viability: The healthcare facility's reputation and future were significantly impacted by readiness. A well-prepared hospital draws more patients, increases revenue, and fosters more trust in the community. Conversely, being unprepared can damage credibility and result in a drop in patients and revenue. "The center will establish a solid reputation as a location where they can efficiently handle the needs of the patient." (Refer to Participant 13). This finding aligns with research that emphasizes the relationship between patient trust, care quality, and the long-term viability of healthcare facilities (45)**.**

Education and training

It became clear that improving training and continuing education were essential to being prepared for emergencies. This involved educating clients, receiving training in the field, and adhering to standard operating procedures and emergency measures. Participants underlined the importance of regular training to update skills and knowledge, which is essential for providing excellent treatment during emergencies. "From the standpoint of healthcare professionals, regular instruction on probable situations deepens our comprehension. (Participant 2). Research supports this, showing that continuing professional development is necessary to improve treatment during emergency deliveries(45,46).

Support systems

Enhancing preparedness for birth emergencies required a robust support system that included leadership and administrative backing, community involvement, and the use of technology and communication networks. Ensuring continuous growth and overcoming barriers required proactive community involvement, forward-thinking leadership, and supportive monitoring. Furthermore, the promotion of preparation was greatly aided by the use of technology, such as digital platforms for continuing education and WhatsApp groups for instant contact. "It's beneficial from a technological standpoint because it enables us to ask for help remotely during emergencies. (Participant 2). These findings align with other previous studies (47)**.**

Infrastructure and Allocation of Material Resources

For the management of obstetric emergencies, one must have the necessary tools and equipment as part of their setup. Several participants underscored the importance of having such quantities and stocks in the pharmacy or laboratory, underscoring findings from previous research indicating that having optimal supplies often leads to better maternal outcomes (47,48). However, attrition and badly maintained machinery present major challenges to ongoing shortages in Vijibweni Hospital. In particular, there is concern that a lack of blood products in postpartum hemorrhage has consequences for people's health (Participant 4). This is consistent with other studies performed in resource-limited settings where inadequate supplies interfere with providing optimal emergency care (48,49).

Physical infrastructure is an essential component of preparedness for emergencies as well. For example, Participant 16 said facilities at the hospital were insufficient to meet patient needs (e.g., lack of delivery beds and no neonatal unit), which impacted both cares provided as well as confidentiality. In other Tanzanian hospitals as well, substandard infrastructure has been blamed for delays in emergency care (50). Improved emergency preparedness is seen as central to improving in-facility delivery rates, such as through the construction of a new maternity block with an operation theater (Participant 6).

A reliable referral system is essential for the management of obstetric emergencies. Participants identified inadequacies in the current referral mechanism, especially a delay in transportation and the absence of an appropriate, fully equipped ambulance (Participant 2). These results are concordant with the literature from other contexts, in which a broken system of referral is presented as one of the main barriers to maternal health care(51). However, the participants acknowledged that an appropriate referral system is very efficient in improving specialized maternal services. (Participant14) (51).

The healthcare workforce

When managing obstetric emergencies, the healthcare team plays a critical role and needs to be highly motivated, well trained, and manned. This entails adhering to international standards for emergency obstetric care by keeping a clean atmosphere and making sure emergency equipment is ready (52). At Vijibweni Hospital, however, a major obstacle is the shortage of medical personnel, which results in circumstances where a single nurse oversees many wards and lowers the standard of service. This deficit is a reflection of larger problems with personnel in Tanzanian hospitals. Having motivated, well-trained, and well-staffed healthcare personnel is essential for handling obstetric emergencies. In order to enhance clinical outcomes, it is critical for healthcare providers to work together and make choices as a team during emergencies(53)**.** It is also advised to increase the number of specialists leading teams in obstetric crises, since research indicates that expert-led teams improve the standard of care provided to mothers (54).

5.1 Limitation of the study

The use of individual interviews could have resulted in social desirability responses. Also, since the PI was an administrator, working in the same environment as the administrator can affect the data collection process.

5.2 Mitigation

We established a connection with the participants to enable them to feel more at ease and deliver more thorough responses in order to alleviate predicted barriers. In addition, the research assistant collected data to prevent social desirability responses.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The study clarified the complex viewpoints of medical professionals on obstetric emergency preparedness at Dar es Salaam's Vijibweni Hospital, emphasizing vital aspects like manpower, infrastructure, and training. The deficient physical infrastructure, a lack of necessary supplies, and an inefficient referral system substantially impede efficient emergency management. Moreover, a scarcity of medical professionals hinders the provision of the best possible care. Still, increased patient safety, provider and client satisfaction, and the hospital's reputation are clear advantages of preparedness. Having a strong support network and ongoing education is crucial for improving the outcomes of expectant mothers and newborns.

6.2 Recommendation

Based on the findings of this study, the following are the recommendations targeted at enhancing obstetric emergency preparedness.

Firstly, continuous in-service training and regular simulation drills should be implemented to keep healthcare providers (HCPs) well-prepared and updated on best practices. This will improve the staff’s capacity to handle obstetric emergencies. Ensuring the consistent availability of essential medical equipment and supplies, such as blood products, investing in infrastructure improvements, such as expanding delivery rooms and creating neonatal units, and strengthening the referral system with adequately equipped ambulances and effective transportation are crucial. There is a need to address the staffing shortages by hiring additional healthcare providers, including specialists, and implementing motivation and retention strategies like performance-based incentives. The emergency teams should promote a culture of teamwork and interdisciplinary collaboration among HCPs during emergencies.

Hospital management team to ensure the sustainability of equipment and supplies to enable smooth provision of obstetric emergencies within the facility.

District management team to make sure the referral system functions to save lives for pregnant women and their babies.

Further enhancing community involvement and leadership support, as well as utilizing technology for training and communication, will enhance readiness and healthcare results.

Ministry of Health to employ obstetric specialists at lower levels who will teach, assist, and give advice on obstetric emergencies.

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APPENDICES

Appendix I: Informed Consent (English version)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED HEALTH SCIENCES

DIRECTORATE OF RESEARCH AND PUBLICATIONS

ID. NO

Consent form for participating in a research study

Hello and salutes! My name is Consolata Mbeya and I am a student at the Muhimbili University of Health and Allied Sciences (MUHAS) School of Nursing pursuing a Master of Science in Midwifery Nursing. I'm researching on HCP perspectives on Obstetric Emergence preparedness Vijibweni Hospita at Kigamboni Municipal.

The aim of the study

The purpose of this study is to assess the HCPs perspectives on obstetric emergency preparedness Vijibweni Hospital at Kigamboni Municipal Tanzania. The results of this study will contribute to improve obstetric emergence preparedness depending on the views, facilitators and barriers that have been identified and to inform health providers about importance of Obstetric emergence Preparedness so as improve services reducing delay that will lead to reduction of maternal deaths at Vijibwen hospital.

Procedure

You should participate in this study since your breadth of experience will help to both improve Obstetric emergence preparedness and reduce delay in providing care and offering solutions to research questions If you agree to participate, I will interview you in-depth for 40–60 minutes in order to get the required data.

Confidentiality

The information given will not be shared with other personal; the data you provide will be used only for this research only. To maintain your confidentiality, your identity including names is not required.

Right to refuse or withdraw

You may choose to participate in this study, and you can quit at any time. Regardless of the important data provided to this study, I highly recommend that you participate.

Benefits

Being a participant in this study will immediately help you since the information provided will help to develop way to provide smooth obstetric emergence preparedness and improving working environments.

Risks

You won't be subjected to any risks, threats, or hazards.

Whom to Contact

If you have any questions, please get in touch with the researcher, Consolata Mbeya, a MUHAS student, +255 754800543 via her cell phone. You can contact Dr Nahya Salm the Chairperson of the Senate's Research and Publications Committee, at Tel+2552150302-6, or MUHAS.PO Box 65001, Dar Es Salaam, Tanzania, if you have any queries concerning your rights as a participant.

Signature

Do you agree to participate? Put a tick in the appropriate box.

Participant agrees ☐ participant does NOT agree. ☐

I, …….. have read the contents of this form and understood. My questions have been answered and I agree to participate in this study.

Signature of informant……...Date…….

Signature of researcher ……..…. Date…

Appendix II: Fomu ya Ridhaa (Kiswahili)

CHUO KIKUU CHA AFYA NA SAYANSI SHIRIKISI, MUHIMBILI

KURUGENZI YA TAFITI NA MACHAPISHO

NAMBA YA FOMU

FOMU YA RIDHAA YA KUSIHIRIKI KWENYE UTAFITI

Habari! Naitwa Consolata Mbeya ni mwanafunzi wa Shule ya Uuguzi ya Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili (MUHAS) ninayesomea Shahada ya Uzamiri ya Sayansi katika Ukunga na afya ya akina wanawake. Ninatafiti kuhusu mitazamo ya watoa huduma kuhusu maandalizi ya dharura ya uzazi Vijibweni hospitali katika Manispaa ya Kigamboni.

Lengo la utafiti

Madhumuni ya utafiti huu ni kutathimini mitazamo ya watoa huduma kuhusu maandalizi ya dharura ya uzazi katika hospitali ya vijibweni Manispaa ya Kigamboni Tanzania.Matokeo ya utafiti huu yatachangia kuboresha utayarishaji wa huduma ya uzazi ya dharura kwa kutegemea maoni, viwezshaji na vikwazo vilivyoainishwa na kuwafahamisha watoa huduma za afya kuhusu umuhimu wa kujitayarisha kutoa huduma za dharura zinazohusiana na uzazi ili kuboresha huduma ,kupunguza ucheleweshwaji wa utoaji wa huduma ya dharura zinazohusu uzazi na kupunguza vifo vinavyotokana na uzazi.

Utaratibu

Utashiriki katika utafiti huu kwa kuwa uzoefu wako wa kina utachangia katika kuboresha afua pamoja na kutoa suluhisho kwa maswali ya utafiti. Ili kupata taarifa muhimu, nitafanya mahojiano ya kina na wewe kwa dakika 40 hadi 60 ikiwa utakubali kushiriki.

Usiri

Taarifa utakayotoa haitashirikishwa kwa wengine, taarifa utakayotoa itatumika kwa utafiti huu pekee,ili kudumisha usiri wako,utambulisho wako ikijumuisha majina hayatatumika

Haki ya kukataa/kutoka

Unaweza kuchagua kushiriki katika utafiti huu,na unaweza kuacha wakati wowote,bila kujali taarifa muhimu uliyotoa katika utafiti huu ushiriki wako ni wa muhimu sana

Faida

Ushiriki wako katika tafiti hii utasaidia kuboresha mazingira ya kutolea huduma

Madhara

Hakutakuwa na vitisho, hatari au hatari zozote zitakazowekwa juu yako.

Mawasiliano

Ikiwa una maswali yoyote, tafadhali wasiliana na mtafiti, Consolata Mbeya, mwanafunzi wa MUHAS, +255 754800533 kupitia simu yake ya mkononi. Unaweza kuwasiliana na Dr Nahya Salm Mwenyekiti wa Kamati ya Seneti ya Utafiti na Machapisho, kwa Simu+2552150302-6, au MUHAS.PO Box 65001, Dar Es Salaam, Tanzania, ikiwa una maswali yoyote kuhusu haki zako kama mshiriki.

Sahihi

Je, unakubali kushiriki? Weka alama ya vema kwenye kisanduku husika

Mshiriki ameridhia ☐ Mshiriki hajaridhia ☐

Mimi…….. nimesoma na kuelewa yote yaliyoandikwa kwenye fomu hii. Maswali yamejibiwa na nimekubali kushiriki katika utafiti huu.

Sahihi ya mshiriki …… Tarehe …….

Sahihi ya mtafiti ….……. Tarehe …….

Appendix III: Interview guide (English version)

Interview Guide for Healthcare Providers; English Version

Introduction: Thank you very much for agreeing to participate in this interview. You have been selected among other members because you have experience and knowledgeable in Obstetric emergence. During this interview there are no wrong answers, all answers are accepted so kindly feel free. I would like to remind you that this interview may take 40 to 60 minutes and it will be audio recorded to grasp points that could be difficult to write down but also for easy analysis of the information later on.

Part one: Demographic information

Qn1. I would like us to start by introducing yourself: -

The informant:	
Interviewee's ID No.	
Age:	
Sex (male/female):	
Highest level of education (e.g., Certificate, diploma, degree, post grad degree):	
Designation e.g., Medical Officer, Nurse midwife (EN, ENM, ANO, NO), laboratory technician, pharmacist	
Current medical specialization – if any:	
Past experience/specialisms:	
Years of work at present health facility:	
Years of work at maternity unit	
Years of practice in total:	
Date of interview:	
Time of interview: Start / Finish and Duration	

Part two; Information about obstetric emergence preparedness

Perception towards obstetric emergency preparedness question among HCPs.

You have been working in maternity unit/pharmacy/laboratory for sometimes.

1. How confident do you feel about preparedness on obstetrics emergencies at this facility? Can you give me some examples?
   Probe: What specific training or resources do you believe are essential for improving confidence in emergency response?

2. What are your responsibilities as an HCP in ensuring that you are adequately prepared for obstetric emergencies?

   Probe: how often do you update your knowledge and skills on obstetric emergence preparedness at your facility?

   Probe: How do you collaborate with other HCP on obstetric emergency preparedness? Briefly explain.

   Probe: On how do you maintain obstetric emergency equipment?

3. How do you perceive the importance of being prepared for obstetric emergencies in your practice?

   Probes: In your opinions what are the advantages of being prepared for obstetric emergency? Please Can you explain advantages to clients and health care providers.

4. What are the potential consequences of inadequate obstetric emergency preparedness?

   Probe: Organizational based Consequences, Professional based consequences, Clients based consequences

Facilitator for Obstetric emergence preparedness.

5. What contribute to successful obstetric emergency preparedness among healthcare providers at your facility?

   Probes: Organizational culture and support systems; availability of clinical guidelines in handling obstetric emergencies; referral system; ongoing education and training play in maintaining and improving obstetric emergency preparedness; interdisciplinary collaboration on obstetric emergency preparedness; advances in technology and clinical practice; past/personal experiences with obstetric emergencies; healthcare providers' personal values and beliefs; patient education and involvement in obstetric care contribution to overall preparedness for emergencies.

6. What strategies or initiatives have implemented to enhance obstetric emergency preparedness among healthcare providers at your health facility?

   Probe: Display of different checklist for obstetric emergence cases like PPH, Eclampsia, AMSTL, HBBE, steps of manual removal of placenta

   Call for help e.g. lining bell when obstetric emergence occurs to mobilize the team

   Developments of blood committee who deals on collecting blood to the community

   Select area at labour wad where all risk cases admitted near to nurse station

7. How do you perceive the role of leadership in promoting and supporting obstetric emergency preparedness at your health facility?

   Probe: Can you provide any specific examples of leadership actions or initiatives related to preparedness?

Barriers towards Obstetric emergence preparedness

8. From your previous experience, what are challenges or barriers that HCPs encounter to achieving optimal obstetric emergency preparedness at your health facility?

Probes: Institution/organization barriers; misconceptions or gaps in knowledge among HCPs; resource limitation (equipment availability, staffing shortages); communication barrier; lack of training or experience

9. Can you explain a case you encountered during Obstetric emergency that was difficult to handle?

   Probes: What was the difficult on each case.

10. In your experience, what strategies do you believe are most effective in overcoming barriers to obstetric emergency preparedness and fostering a culture of readiness at your health facility?

    Probes; Can you share any specific examples of those strategies that have improved preparedness at the facility?

Thank very much for your responses. As we are approaching the end of our interview, do you have anything else to share with us regarding obstetric emergency preparedness which we have not discussed?

Our conversation has ended. I express my gratitude for your cooperation. Thank you for spending the time to openly discuss such a sensitive topic.

Appendix IV: Interview guide (Kiswahili version) watoa huduma za afya

Utangulizi: Asante sana kwa kukubali kushiriki katika mahojiano haya. Umechaguliwa miongoni mwa wanachama wengine kwa sababu una uzoefu na ujuzi katika Obstetric emergence. Wakati wa mahojiano haya hakuna majibu yasiyo sahihi, majibu yote yanakubaliwa kwa hivyo jisikie huru. Ningependa kuwakumbusha kwamba mahojiano haya yanaweza kuchukua dakika 40 hadi 60 na yatarekodiwa kwa sauti ili kufahamu mambo ambayo yanaweza kuwa vigumu kuyaandika lakini pia kwa uchambuzi rahisi wa taarifa baadaye.

Sehemu ya kwanza;taarifa za wahojiwa /washiriki

swali1. Ningependa tuanze kwa kujitambulisha

Mtoa taarifa	
Nambari ya kitambulisho cha mhojiwa	
umri:	
Jinsia (me/ke):	
Kiwango cha juu cha elimu (k.m., Cheti, diploma, shahada, shahada ya posta):	
Uteuzi (k.m., Afisa wa Matibabu, Muuguzi mkunga(cheti,diploma,degree), mtaalamu wa maabara, mfamasia n.k.):	
Utaalamu wa sasa wa matibabu - ikiwa wapo:	
Miaka ya kazi katika kituo cha afya cha sasa:	
Miaka ya mazoezi kwa jumla:	
Mahali:	
Tarehe ya mahojiano:	
Muda wa mahojiano: Anza / Maliza na Muda	

Sehemu ya pili; Taarifa kuhusu maandalizi ya dharura yanayohusiana na uzazi

Mtazamo kuelekea Swali la kujiandaa kwa huduma za dharura zinazohusiana na uzazi kati ya watoa huduma za afya.

1. Je, ni mambo gani yanayoweza kukufanya ujiamini katika kujiandaa na utoaji wa huduma ya dharura za uzazi katika kituo hiki? Je, unaweza kunipa baadhi ya mifano?

Uchunguzi;

2. Je, ni mafunzo au rasilimali gani mahususi unaamini ni muhimu ili kuboresha kujiamini katika kukabiliana na dharura zinazotokana na uzazi?

3. Je, ni majukumu gani uliyonayo kama mtoa huduma za afya katika kuhakikisha kuwa umejitayarisha vya kutosha kwa ajili ya dharura za uzazi?

Uchunguzi; je, ni mara ngapi uboresha maarifa na ujuzi wako kuhusu utayari wa kujiandaa na dharura zinazotokana na uzazi kwenye kituo chako?

Je, unashirikiana vipi na watoa huduma nyingine za afya kuhusu kujiandaa kwa dharura ya uzazi? Kwa ufupi eleza.

Je, unatunzaje vifaa vya dharura vya uzazi?

4. Je, kuna umuhimu gani wa kuwa tayari kwa kujiandaa na utoaji wa dharura za uzazi?

Chunguza; unafikiri nini matokeo ya kuwa tayari kwa dharura ya uzazi, kwa mgonjwa, kwa watoa huduma za afya na kwa shirika?

Je, ni matokeo gani yanayoweza kutokea ya kutojitayarisha vya kutosha kwa dharura za uzazi?

Uchunguzi; Matokeo ya kituo, Matokeo ya kitaaluma, matokeo kwa Wateja

Viwezeshaji vya matayarisho ya huduma dharura zinazotokana na Uzazi.

5. Ni nini kinachochangia kufanikiwa kwa maandalizi ya dharura ya uzazi miongoni mwa watoa huduma za afya katika kituo chako?

Uchunguzi; Utamaduni wa shirika na mifumo ya usaidizi; upatikanaji wa miongozo ya kliniki katika kushughulikia dharura za uzazi; mfumo wa rufaa; elimu endelevu na mafunzo katika kudumisha na kuboresha maandalizi ya dharura ya uzazi; ushirikiano wa kada mbalimbali juu ya maandalizi ya dharura ya uzazi; maendeleo katika teknolojia na mazoezi kwa vitendo; uzoefu wa zamani/wa kibinafsi na dharura za uzazi; maadili na imani binafsi za watoa huduma za afya; elimu ya mgonjwa na ushiriki katika mchango wa huduma ya uzazi kwa maandalizi ya jumla kwa dharura.

6. Je, ni mikakati au mipango gani imetekeleza ili kuimarisha maandalizi ya dharura ya uzazi miongoni mwa wahudumu wa afya katika kituo chako cha afya?

Uchunguzi; Onyesho la orodha tofauti yah atua za kumsaidia mteja aliyepatwa na dharura zinazotokana na uzazi kama vile kutoka damu nyingi baada ya kujifungua, kifafa cha mimba, kusaidia utoaji wa kondo la nyuma la uzazi, kumsaidia mtoto kupumua.

Kuomba msaada k.m. kuweka kengele wakati dharula ya uzazi inatokea ili kuhamasisha timu kuja kusaidia.

Kuanzishwa kwa kamati ya damu inayoshughulikia ukusanyaji wa damu katika jamii

Chagua eneo wodi ya wazazi ambapo kesi zote za hatari hulazwa karibu na chumba cha wauguzi

7. Je uongozi una jukumu gani katika maandalizi ya utoaji wa huduma ya dharura za uzazi katika kituo chako cha afya?

Uchunguzi; Je, unaweza kutoa mifano yoyote maalum ya hatua za uongozi au mipango inayohusiana na kujiandaa?

Vizuizi kuelekea utayari wa kutoa huduma za dharura zunazotokana na uzaji

8. Kutokana na uzoefu wako wa awali, ni changamoto gani au vikwazo gani ambavyo watoa huduma za afya hukutana navyo katika matayarisho ya dharura ya uzazi katika kituo chako cha afya?

Uchunguzi; Vizuizi vya Taasisi/shirika imani potofu au mapungufu katika maarifa kwa watoa huduma, ukomo wa rasilimali (upatikanaji wa vifaa, uhaba wa wafanyakazi); kizuizi cha mawasiliano; ukosefu wa mafunzo au uzoefu.

9. Je, unaweza kueleza kesi uliyokumbana nayo wakati wa dharura ya Uzazi ambayo ilikuwa ngumu kushughulikia?

Uchunguzi; Ni nini kilikuwa kigumu kwa kila kesi.

10. Katika uzoefu wako, ni mikakati gani unayoamini kuwa inafaa zaidi katika kushinda vikwazo vya maandalizi ya dharura ya uzazi na kukuza utamaduni wa utayari katika kituo chako cha afya?

Uchunguzi; Je, unaweza kushirikisha mifano yoyote maalum ya mikakati hiyo ambayo imeboresha utayarishaji katika kituo chako?

Asante sana kwa majibu yako. Tunapokaribia mwisho wa mahojiano yetu, una kitu kingine chochote cha kushiriki nasi kuhusu maandalizi ya dharura ya uzazi ambayo hatujajadili?

Mazungumzo yetu yameisha. Natanguliza shukrani zangu kwa ushirikiano wenu. Asante kwa kutumia muda wako kujadili kwa uwazi mada nyeti kama hii.

Appendix V: Approval for ethical clearance

UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR – RESEARCH, PUBLICATIONS AND INNOVATIONS

Ref. No.DA.282/298/01.C/2287 Date: 31/05/2024

MUHAS-REC-05-2024-2287
CONSOLATA COSTANTIN MBEYA
SHOOL OF NURSING
MUHAS

RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: HEALTHCARE PROVIDERS' PERSPECTIVES ON OBSTETRIC EMERGENCY PREPAREDNESS AT VIJIBWENI HOSPITAL IN KIGAMBONI MUNICIPAL, TANZANIA

Reference is made to the above heading,

I am pleased to inform you that the Chairperson has on behalf of the University Senate, approved ethical clearance of the above-mentioned study, on recommendations of the Senate Research and Publications Committee meeting accordance with MUHAS research policy and Tanzania regulations governing human and animal subjects research.

APPROVAL DATE: 31/05/2024
EXPIRATION DATE OF APPROVAL: 31/05/2025

STUDY DESCRIPTION:
Purpose:
The purpose of this observational study is to explore HCPs perspectives on obstetric emergency preparedness.

The approved protocol and procedures for this study is attached and stamped with this letter, and can be found in the link provided: https://irb.muhas.ac.tz/storage/Certificates/Certificate%20-%2015675.pdf and in the MUHAS archives.

OFISI YA MKURUGENZI
IMEPOKELEWA
12 JUN
MANISPAA YA K

The PI is required to:

1. Submit bi-annual progress reports and final report upon completion of the study.
2. Report to the IRB any unanticipated problem involving risks to subjects or others including adverse events where applicable.
3. Apply for renewal of approval of ethical clearance one (1) month prior its expiration if the study is not completed at the end of this ethical approval. You may not continue with any research activity beyond the expiration date without the approval of the IRB. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.
4. Obtain IRB amendment (s) approval for any changes to any aspect of this study before they can be implemented.
5. Data security is ultimately the responsibility of the investigator.
6. Apply for and obtain Data Transfer Agreement (DTA) from NIMR if data will be transferred to a foreign country.
7. Apply for and obtain Material Transfer Agreement (MTA) from NIMR, if research materials (samples) will be shipped to a foreign country.
8. Apply for and obtain permission to publish the results from National Institute for Medical Research. The application should be before submitting to a publisher and not concurrently through the email publications@nimr.or.tz.
9. Any researcher, who contravenes or fail to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine as per NIMR Act No. 23 of 1979, PART III section 10 (2)
10. The PI is required to ensure that the findings of the study are disseminated to relevant stake holders.
11. PI is required to be versed with necessary laws and regulatory policies that govern research in Tanzania. Some guidance is available on our website https://drp.muhas.ac.tz/.

Muhimbili University of Health and Allied Sciences
DIRECTOR
Research, Publications & Innovations
Box 65001

Dr. Nahya Salim Masoud,
Chairperson, MUHAS Research and Ethics Committee

Appendix VI: Introduction Letter

UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR – POSTGRADUATE STUDIES

In reply quote;
Ref. No. HD/MUH/T.450/2022

03rd June, 2024

The Municipal Director,
Kigamboni Municipal Council,
P.O. Box 36009,
DAR ES SALAAM

Re: INTRODUCTION LETTER CONSOLATA COSTANTIN MBEYA

We would like to inform you that the bearer of this letter is **Consolata Costantin Mbeya** with Reg. No. **HD/MUH/T.450/2022** is a student at Muhimbili University of Health and Allied Sciences (MUHAS) "pursuing **MSc. Midwifery and Women's Health.**

As part of her studies, she will be doing an elective research titled: "**HealthCare Providers' Perspectives on Obstetric Emergency Preparedness at Vijibweni Hospital in Kigamboni Municipal, Tanzania."**

The research has been approved by the Chairman of University Senate.

Kindly provide her the necessary assistance to facilitate the conduct of her research.

We thank you for your cooperation.

Ms. Victoria Mwanilwa
For: DIRECTOR, POSTGRADUATE STUDIES

c.c **Consolata Costantin Mbeya**

OFISI YA MKURUGENZI
IMEPOKELEWA
12 JUN
MANISPAA YA K
DAR ES S

9 United Nations Road; Upanga West; P.O. Box 65001, Dar Es Salaam: Tel. G/Line: +255-22-2150302/6; Ext. 1015; Direct Line:+255-22-2151378;Telefax:+255-22-2150465;E-mail:dpgs@muhas.ac.tz;Web:https://www.muhas.ac.tz

Appendix VII: Permission Letter



JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA MANISPAA KIGAMBONI



[Barua zote zipelekwe kwa Mkurugenzi wa Manispaa Kigamboni]

Simu: +255 22-2928468
Fax: +255 22-2928469
Baruapepe: info@kigamboni.go.tz
Tovuti: www.kigamboni.go.tz
Unapo jibu tafadhali taja:

S.L.P. 36009,
KIGAMBONI,
DAR ES SALAAM,
TANZANIA.

Kumb. Na. AC.24/283/01C/142

03/05/2024

MGANGA MFAWIDHI,
HOSPITALI YA VIJIBWENI.

YAH: <u>RUHUSA YA CONSOLATA COSTANTIN MBEYA KUFANYA UTAFITI (RESEARCH).</u>

Tafadhali husika na somo tajwa hapo juu na rejea,

2. Mtafiti kutoka Chuo Kikuu cha Tiba na Sayansi Shirikishi Muhimbili (MUHAS), amekubaliwa kufanya utafiti (Research) juu ya "**Healthcare providers' Perspectives on Obstetric Emergency Proparedness** " katika Hospitali ya Vijibweni.

3. Hivyo, Halmashauri haitawajibika na malipo ya aina yoyote kwa kipindi chote cha utafiti kwa Mhusika.

4. Nawatakia kazi njema.

KNY - MGANGA MKUU
MANISPAA YA KIGAMBONI

Dkt. L. D. Ngamtwa
<u>MGANGA MKUU WA MANISPAA YA KIGAMBONI</u>

NAKALA: Mkurugenzi wa Manispaa ya Kigamboni - Aione kwenye Jalada

Appendix VIII: Plagiarism Report



HEALTHCARE PROVIDERS' PERSPECTIVES ON OBSTETRIC EMERGENCY PREPAREDNESS AT VIJIBWENI HOSPITAL IN KIGAMBONI MUNICIPAL, TANZANIA

ORIGINALITY REPORT

23%	22%	14%	%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	dspace.muhas.ac.tz:8080 Internet Source	5%
2	systematicreviewsjournal.biomedcentral.com Internet Source	2%
3	journals.plos.org Internet Source	1%
4	www.coursehero.com Internet Source	1%
5	uu.diva-portal.org Internet Source	1%
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