

Assessment of Community Knowledge on Non-Medical Causes of Maternal Deaths in Urambo District Council, Tanzania

Hamisi Iddi Hamisi¹

¹Assistant Lecturer, Department of Water Supply and Sanitation Engineering, Water Institute, Dar es Salaam, Tanzania

Publication Date: 2026/07/30

Abstract: Maternal deaths remains a major public health challenge globally and in Tanzania. Globally, the maternal death ratio stood at 197 deaths per 100,000 live births in 2023. It is still far above the Sustainable Development Goal (SDG) 3.1 target of less than 70 deaths per 100,000 live births by 2030. In Tanzania, the Five Year Development Plan III targets a reduction to 242 deaths per 100,000 live births by 2025/26. However, Tanzania has not achieved the global SDG target, with current estimates remaining more than 7 times higher than 70 deaths per 100,000 live births. Objective of this study was to assess community knowledge on non-medical causes of maternal deaths in Urambo District Council, Tanzania. A quantitative descriptive survey was conducted among 100 community members in Urambo District Council. Data were collected using a structured questionnaire with 20 items on non-medical causes of maternal deaths. Knowledge was classified as higher >80%, medium 60-79%, and lower <60% average score. Data were analyzed using frequencies, percentages, and average scores. The study obtained a total score of 948 out of a possible 2,000, equivalent to an average score of 47.4%. This indicates that community knowledge on non-medical causes of maternal deaths was lower. The three most commonly identified non-medical causes were: failure to recognize danger signs 86% (n=86), distance from home to the health facility 75% (n=75), and delay in leaving home 71% (n=71). The least recognized causes were: inadequate skills of healthcare providers 19% (n=19), gender insensitivity of healthcare providers 21% (n=21), and lack of accompaniment to the health facility 21% (n=21). Given that Tanzania has not yet achieved the global SDG 3.1 maternal death ratio target, strengthening community education and health promotion targeting health system responsiveness and support mechanisms is recommended to reduce delays and accelerate progress toward Five Year Development Plan II (FYDP III) and SDG 3.1 targets.

Keywords: Community Knowledge, Non-Medical Causes, Maternal Deaths.

How to Cite: Hamisi Iddi Hamisi (2026) Assessment of Community Knowledge on Non-Medical Causes of Maternal Deaths in Urambo District Council, Tanzania. *International Journal of Innovative Science and Research Technology*, 11(7), 1830-1839. <https://doi.org/10.38124/ijisrt/26jul722>

I. INTRODUCTION

Maternal death remains a major public health challenge globally and in Tanzania. Globally, the maternal death Ratio was estimated at 197 deaths per 100,000 live births in 2023. According to the United Nations (UN) report on trends in maternal deaths from 2000 to 2023, global maternal death ratio declined by 40% during this period, from 328 deaths per 100,000 live births in 2000 to 197 deaths per 100,000 live births in 2023 (UN, 2023)). However, the Sustainable Development Goal (SDG) 3.1 target of less than 70 deaths per 100,000 live births by 2030 has not been achieved at the global level, as the 2023 maternal death ratio remains nearly three times higher than the target.

At the continental level, Sub-Saharan Africa recorded 70% of all global maternal deaths in 2023 (UN, 2023). The

SDG 3.1 target has not been achieved in Africa. African Union instruments such as the Maputo Plan of Action 2016-2030 and the Campaign on Accelerated Reduction of maternal death in Africa emphasize community knowledge, birth preparedness, and timely decision-making as key strategies to address non-medical causes of maternal deaths.

In the East African region, which falls under Sub-Saharan Africa, the region continues to bear a disproportionate burden of maternal deaths, accounting for 70% of global maternal deaths in 2023 (UN, 2023). The SDG 3.1 target has not been achieved in East Africa. The East African Community Sexual and Reproductive Health and Rights Strategy highlights the role of community awareness and male involvement in reducing delays in seeking maternal health services as critical to achieving regional targets.

In Tanzania, the maternal death ratio was 556 deaths per 100,000 live births as per the 2015-2016 Tanzania Demographic and Health Survey and Malaria Indicator Survey, which serves as the baseline for The Five Year Development Plan III (FYDP III). The FYDP III 2021/22-2025/26 sets a national target to reduce maternal death ratio to 242 deaths per 100,000 live births by 2025/26 (The United Republic of Tanzania, 2021). The United Nations report on trends in maternal death from 2000 to 2023 provides the most up-to-date estimates for 2023 that the SDG 3.1 target of less than 70 deaths per 100,000 live births by 2030 has not been achieved in Tanzania (UN, 2023). FYDP III identifies strengthening community knowledge on danger signs, birth preparedness, and reducing delays as key interventions (The United Republic of Tanzania, 2021).

II. RESEARCH METHODOLOGIES

➤ Research Design

This study employed a descriptive survey research design. This design was appropriate for assessing and describing the current status of community knowledge on non-medical causes of maternal deaths in Urambo District Council (Creswell et al., 2023). Descriptive survey designs are commonly used in public health research to collect data from a sample and describe patterns, attitudes, and practices within a population at a specific point in time (Kothari et al.,

2022). The study adopted a quantitative research approach. This approach was suitable because it facilitated the collection of numerical data through a structured online questionnaire, which allowed for measurement and statistical analysis of community knowledge levels (Babbie, 2023). Quantitative analysis of frequencies, percentages and averages was conducted to determine knowledge levels and identify priority areas. Data collected were coded, cleaned, and analyzed using Microsoft Excel. Descriptive statistics including frequencies, percentages and averages were generated to summarize findings on community knowledge of non-medical causes of maternal deaths (Field, 2022). The use of Excel enabled systematic tabulation and presentation of results in tables for interpretation.

➤ Population of the Study

Urambo District Council has a population of 260,322, of which 127,424 are males and 132,898 are females. The sex ratio (SR) is 96. The council has 47,039 number of households (NH) with an average household size (AHS) of 5.5 persons. The reproductive age population of 15 to 49 years is 109,012, with 52,041 males and 56,971 females (National Bureau of Statistics et al., (NBS, 2022)). Data were collected from 100 respondents using convenience sampling, a non-probability sampling technique was applied whereby the online questionnaire was distributed to available and willing participants (Taherdoost, 2022) (Table 1).

Table 1 Population of the Study

Total Population			Reproductive Population			SR	NH	AHS
Total	Male	Female	Total	Male	Female			
260,322	127,424	132,898	109,012	52,041	56,971	96	47,039	5.5

Source: NBS, 2022

➤ Operational Definition of Variables

The study was guided by three major variables; community knowledge, non-medical cause and maternal death.

- **Community Knowledge** means the understanding, awareness and information that members of a community have regarding health problems, their causes, prevention and available services (World Health Organization, (WHO, 2023)). In maternal health, WHO emphasizes that community knowledge on danger signs and non-medical delays is critical for reducing maternal death, because decisions to seek care are made at household and community level. Community knowledge means the level of awareness and understanding within communities about maternal health risks, rights, and care-seeking behaviors (African Union Commission, 2016). The Ministry of Health, Tanzania in the National Road Map Strategic Plan to Improve Reproductive, Maternal, Newborn, Child and Adolescent Health [One Plan III 2021-2025] defines community knowledge as the extent to which community members are aware of maternal health issues, danger signs, and non-medical factors that contribute to maternal deaths.

- **Non-Medical Cause** means non-medical causes are factors outside the direct clinical management of obstetric complications that contribute to maternal death (WHO et al., 2022). In other words, medical causes means socio-cultural, economic, and logistical factors that prevent women from accessing timely and quality maternal health services (African Union Commission, 2016). In line with the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC), Tanzania in Maternal and Perinatal Death Surveillance and Response (MPDSR) Guidelines defines non-medical causes as non-clinical factors contributing to maternal deaths, including community-level delays, socio-economic barriers, and inadequate care-seeking behaviors.
- **Maternal Death** means the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (WHO, 2022; African Union Commission, 2016). In other words, the death of a woman during pregnancy or within 42 days after pregnancy ends, from causes related to or

aggravated by the pregnancy, excluding accidental or incidental causes (MoHCDGEC, 2019).

➤ *Study Instruments*

The primary instrument used in this study was a structured online questionnaire. First, online data collection was chosen to reach both urban and rural respondents across the area of the study within limited time and budget. Next, the study chosen online survey based from the fact that respondents are more honest on online survey than on in-personal survey. Then, online questionnaire was designed to collect quantitative data on community knowledge regarding non-medical causes of maternal deaths in Urambo District Council. It consisted of 20 items listing possible non-medical causes of maternal deaths. Respondents were required to select all applicable items from the list.

Structure of the instrument had two sections; Section A: Demographic information that captured basic characteristics of respondents and Section B: Knowledge on non-medical causes of maternal deaths that contained the 20-item checklist. Each item selected contributed 1 point to the total score. In scoring and classification, the study had 100 respondents and 20 items, the maximum possible score was 2,000, representing 100% average knowledge.

Community knowledge was then classified into three categories based on average score; Higher knowledge >80% average score, Medium knowledge 60-79% average score and Lower knowledge <60% average score. The online questionnaire was distributed to 100 community members in Urambo District Council. Responses were automatically captured and exported for analysis.

➤ *Ethical Considerations*

This study complied with standard ethical principles for research involving human participants. First, permission to conduct the study in Urambo District Council was obtained from district authorities prior to data collection, as required by the National Health Research Ethics Guidelines (NHREC, 2022).

Next, respondents were provided with an online information sheet explaining the study purpose, procedures, risks, benefits, and right to withdraw at any time without penalty. Electronic informed consent was obtained before respondents accessed the questionnaire. For the one child respondent, parental/guardian consent and child assent were obtained in line with WHO guidance on research involving children (WHO, 2023). Therefore, ethical approval and was obtained and informed consent was secured from all respondents prior to data collection. Participation was voluntary and each respondent was allowed to submit only one response.

Then, no personal identifiers were collected in the online questionnaire. Data were stored in password-protected files and accessed only by the researcher. These procedures align with the Tanzania Data Protection Act No. 11 of 2022 and WHO recommendations on digital data security in health research (United Republic of Tanzania, 2022; WHO, 2023).

After that, the study posed minimal risk to participants. Findings will be shared with district health authorities to inform community health education programs aimed at reducing maternal death, thereby ensuring potential benefit to the community (NHREC, 2022).

III. DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

The study considered six demographic characteristics of respondents: sex, age group, education level, marital status, parental status and place of residence.

➤ *Distribution of Respondents by Sex*

The study classified sexes of respondents as male and female. A total of 100 respondents participated in the survey. Females comprised 61% (n=61) of the respondents while males were 39% (n=39). This implies that the higher representation of females is a strength for programs related to maternal and child health, as women are often primary caregivers and decision-makers. Also, inclusion of males allows for understanding male perspectives on family health and support (Table 2).

Table 2 Distribution of Respondents by Sex

Sex	Frequency (n=)	Percentage (%)
Male	39	39
Female	61	61
Total	100	100

➤ *Distribution of Respondents by Age Group*

Age was categorized as 0-17 years (child), 18-59 years (adult), and 60+ years (older people). Out of 100 respondents, majority of respondents were adults aged 18-59 years 99% (n=99), with 1% (n=1) aged 0-17 years and 0% (n=0) aged 60 years and above. This near-complete

representation of adults in their productive years ensures that findings reflect perspectives of those actively making health, household, and economic decisions. This strengthens the relevance of the data for programs targeting working-age populations (Table 3).

Table 3 Distribution of Respondents by Age

Age Group (Years)	Category	Frequency (n)	Percentage (%)
0-17	Child	1	1
18-59	Adult	99	99
60+	Elderly	0	0
Total		100	100

➤ *Distribution of Respondents by Education Level*

Education levels of respondents were categorized into seven (7) categories; below primary education, primary education, Ordinary Level Secondary School (O'Level Secondary Education), Advanced Level Secondary School (A'Level Secondary Education), College Education, Graduate Education and Postgraduate Education. Respondents were highly educated. College education was the most common at 38% (n=38), followed by graduate 30%

(n=30), A'Level secondary education 12% (n=12), O'Level secondary education 12% (n=12), postgraduate 5% (n=5), and primary 3% (n=3). No respondent had education below primary level 0% (n=0). High education levels suggest strong literacy and comprehension capacity among respondents. This enhances the quality and reliability of responses and indicates potential for effective communication of complex health and social messages (Table 4).

Table 4 Distribution of Respondents by Education Level

Education Level	Frequency (n)	Percentage (%)
Below primary education	0	0
Primary education	3	3
O'Level secondary education	12	12
A'Level secondary education	12	12
College education	38	38
Graduate education	30	30
Postgraduate education	5	5
Total	100	100

➤ *Distribution of Respondents by Marital Status*

Marital statuses of respondents were classified as single, married, divorced, widowed and remarried. Out of 100 respondents, slightly over half of the respondents were married 51% (n=51), 48% (n=48) were single, and 1% (n=1)

were divorced. No respondent reported being widowed 0% (n=0) or remarried 0% (n=0). This implies that the balanced representation of married and single respondents supports the design of interventions that address the needs of families as well as young adults (Table 5).

Table 5 Distribution of Respondents by Marital Status

Marital Status	Frequency (n)	Percentage (%)
Single	48	48
Married	51	51
Divorced	1	1
Widowed	0	0
Remarried	0	0
Total	100	100

➤ *Distribution of Respondents by Parental Status*

Parental statuses of respondents were distinguished as respondent with child (children), respondent with no child (children) and infertile respondent. Out of 100 respondents, most respondents, 70% (n=70), reported having children, while 30% (n=30) had no children. None reported being

infertile 0% (n=0). The large proportion of parents provides direct insights from current users of maternal, newborn, and child health services. The inclusion of respondents without children enables understanding of future demand and prevention needs. This makes findings highly relevant for family-centered programming (Table 6).

Table 6 Distribution of Respondents by Parental Status

Parental Status	Frequency (n)	Percentage (%)
Respondent with child (children)	70	70
Respondent with no child (children)	30	30
Infertile respondent	0	0
Total	100	100

➤ *Distribution of Respondents by Place of Residence*

Places of residence of respondents were classified as rural and urban. A total of 100 respondents participated in the survey; urban residents made up 60% (n=60) of the sample and rural residents 40% (n=40). This mix of urban and rural

respondents supports development of interventions that are relevant to both facility-based service delivery in urban areas and community outreach in rural areas, improving equity and generalizability (Table 7).

Table 7 Distribution of Respondents by Place of Residence

Place of Residence	Frequency (n)	Percentage (%)
Rural	40	40
Urban	60	60
Total	100	100

IV. RESULTS

The study assessed community knowledge on non-medical causes of maternal deaths based on three (3) major variables, namely; level of community knowledge on non-medical causes of maternal deaths, the top three (3) known non-medical causes of maternal deaths and the bottom three (3) known non-medical causes of maternal deaths.

➤ *Level of Community Knowledge on Non-Medical Causes of Maternal Deaths*

The study classified community knowledge on non-medical causes of maternal deaths into three categories:

higher knowledge >80% average score, medium knowledge 60-79% average score, and lower knowledge <60% average score. Respondents were required to select all applicable items from a list of 20 possible non-medical causes. With 100 respondents, the maximum possible score was 2,000, which would represent 100% average knowledge. The study obtained a total of 948, equivalent to an average score of 47.4%. This indicates that community knowledge on non-medical causes of maternal deaths was lower (Table 8).

Table 8 Community Knowledge on Non-Medical Causes of Maternal Deaths

Non-Medical Cause	Frequency (n)	Percentage (%)
Delayed arrival to the referred facility	68	68
Delayed management after admission	46	46
Delayed from home	71	71
Delayed referral from one facility to another	36	36
Distance from home to the health facility	75	75
Failure to recognize danger signs	86	86
Fear of ill-treatment at health facility	27	27
Gender insensitivity of health care provider	21	21
Human error or mismanagement after admission	29	29
Inadequate supplies, equipment or infrastructure at the facility	53	53
Inadequate skills of healthcare provider	19	19
Lack of accompaniment to the health facility	21	21
Lack of healthcare provider at the health facility	38	38
Lack of money for transport	65	65
Lack of roads	37	37
Lack of support from family or community members	41	41
Lack of transportation	59	59
Traditional practices	73	73
Unavailability of someone to take care of children or house	25	25
Unwillingness to seek professional medical help	58	58
Total Required Points: 2,000	948 Points Obtained	47.4 Average Score

➤ *The Top Three Known Non-Medical Causes of Maternal Deaths*

The study identified failure to recognize danger signs, distance from home to the health facility, and delay in leaving home as the three most commonly known non-

medical causes of maternal deaths. Among 100 respondents, 86% (n=86) identified failure to recognize danger signs, 75% (n=75) identified distance from home to the health facility, and 71% (n=71) identified delay from home as non-medical causes of maternal deaths (Table 9).

Table 9 The Top Three Known Non-Medical Causes of Maternal Deaths

Non-Medical Cause	Frequency (n)	Percentage (%)
Failure to recognize danger signs	86	86
Distance from home to the health facility	75	75
Delayed from home	71	71

➤ The Bottom Three Known Non-Medical Causes of Maternal Deaths

The study found that inadequate skills of healthcare providers, gender insensitivity of healthcare providers, and lack of accompaniment to the health facility were the least recognized non-medical causes of maternal deaths. Out of

100 respondents, only 19% (n=19) identified inadequate skills of healthcare providers, while 21% (n=21) identified gender insensitivity of healthcare providers and 21% (n=21) identified lack of accompaniment to the health facility as non-medical causes of maternal deaths (Table 10).

Table 10 The Bottom Three Known Non-Medical Causes of Maternal Deaths

Non-Medical Cause	Frequency (n)	Percentage (%)
Gender insensitivity of health care provider	21	21
Lack of accompaniment to the health facility	21	21
Inadequate skills of healthcare provider	19	19

V. DISCUSSION

The study assessed community knowledge on non-medical causes of maternal deaths using a 20-item checklist. Knowledge levels were classified as higher >80% average score, medium 60-79% average score, and lower <60% average score. With 100 respondents, the maximum possible score was 2,000. The study obtained a total of 948, equivalent to an average score of 47.4%. This indicates that community knowledge on non-medical causes of maternal deaths was lower (Table 8).

This finding aligns with recent studies in sub-Saharan Africa that continue to report low community awareness of non-clinical contributors to maternal death. For instance, Mbachu et al. (2023) in southeast Nigeria found that only 44.2% of community members had adequate knowledge of social and health system factors linked to maternal deaths. Similarly, Abeguz et al. (2022) in Ethiopia reported that 52.1% of respondents had poor knowledge of non-medical delays contributing to maternal death. Therefore, the low score in the current study reflects a persistent gap documented in the literature, where communities often prioritize biomedical causes over structural and social determinants (WHO, 2023).

However, the score of 47.4% is slightly higher than findings from Tessema et al. (2024) in rural Ethiopia, who reported a mean knowledge score of 38.6% on non-medical causes. The difference may be explained by the high education level in the current sample, where 68% had college education and above. Recent evidence shows that higher education is strongly associated with better health literacy and maternal health knowledge (Adeleke et al., 2022; United Nations Population Fund (UNFPA, 2023)).

Despite the overall low knowledge, the study found that failure to recognize danger signs, distance from home to the health facility, and delay in leaving home were the three most commonly known non-medical causes of maternal deaths. Among 100 respondents, 86% (n=86) identified failure to

recognize danger signs, 75% (n=75) identified distance from home to the health facility, and 71% (n=71) identified delay from home as non-medical causes of maternal deaths (Table 9).

The high recognition of these three factors is consistent with recent findings from Tanzania and Malawi. Mgawadere et al. (2022) in Tanzania reported that 81% of community members identified danger signs and distance as key barriers, while Banda et al. (2023) in Malawi found that delays in decision-making and transport were the most cited non-medical causes. This suggests that community health programs and antenatal care (ANC) counseling in the region have successfully emphasized these aspects of the "Three Delays Model" (Thaddeus et al., 1994; WHO, 2022).

A key dissimilarity emerges when comparing with studies in South Asia. Alam et al. (2023) in Kibria et al. (2024) in India found that cultural norms, such as need for husband's permission and traditional birth practices, were more frequently cited than distance or delay. In contrast, respondents in the current study ranked these lower. This difference may reflect ongoing shifts in gender dynamics and stronger community health worker programs in East Africa compared to South Asia (UNFPA, 2023).

On the other hand, knowledge was markedly low for system-level and support-related factors. The study found that inadequate skills of healthcare providers, gender insensitivity of healthcare providers, and lack of accompaniment to the health facility were the least recognized non-medical causes of maternal deaths. Out of 100 respondents, only 19% (n=19) identified inadequate skills of healthcare providers, while 21% (n=21) identified gender insensitivity of healthcare providers and 21% (n=21) identified lack of accompaniment to the health facility as non-medical causes of maternal deaths (Table 10).

This low recognition mirrors recent findings from Ghana and Kenya. Osei et al. (2022) in Ghana reported that only 23% of community members linked provider attitude to

maternal outcomes, and Ndwiga et al. (2023) in Kenya found that disrespectful care was rarely mentioned by community respondents. Communities still largely perceive health facilities as safe by default, which limits demand for accountability and respectful maternity care (WHO, 2023).

However, this contrasts with studies from Latin America and Rwanda where provider behavior is more openly discussed. Chavez et al. (2022) in Peru reported that 58% of women cited mistreatment by providers as a reason to avoid facility delivery. Similarly, Mugeni et al. (2024) in Rwanda found that 64% of respondents identified lack of family accompaniment as a risk factor, due to national programs promoting male involvement. The 21% in the current study suggests that social support and quality-of-care issues have not been sufficiently integrated into local health education (MoHCDGEC, 2022).

In summary, the findings show both convergence and divergence with recent literature. Like other studies from 2022-2024 in Africa, communities are most aware of logistical and individual-level barriers, while system and support factors remain poorly understood (Mgawadere et al., 2022; Osei et al., 2022). The dissimilarities with South Asia and Latin America highlight how context, culture, and policy shape community knowledge (Alam et al., 2023; Chavez et al., 2022).

VI. CONCLUSION

Based on the classification used in this study, community knowledge on non-medical causes of maternal deaths was lower. With a total score of 948 out of a possible 2,000, the average community knowledge score was 47.4%, which falls under the <60% "lower knowledge" category. This indicates that overall community understanding of non-medical causes of maternal deaths remains inadequate.

Among the 20 non-medical causes assessed, knowledge was relatively higher for visible and experience-based factors. The top three known non-medical causes of maternal deaths were: failure to recognize danger signs (86%), distance from home to the health facility (75%), and delay in leaving home (71%).

In contrast, major gaps were observed in areas related to health system and social support. The bottom three known non-medical causes of maternal deaths were: inadequate skills of healthcare providers (19%), gender insensitivity of healthcare providers (21%), and lack of accompaniment to the health facility (21%).

The findings suggest that while communities are somewhat aware of delays and access barriers, there is very limited knowledge on provider-related factors and support during care seeking. This lower level of community knowledge on non-medical causes of maternal deaths highlights the need for targeted health education that addresses both community practices and health system factors.

VII. RECOMMENDATIONS

With an average community knowledge score of 47.4% on non-medical causes of maternal deaths, the community falls under the <60% "lower knowledge" category. This points to the need for Ministries, Departments and Agencies (MDAs), UN agencies and Non-Governmental Organizations (NGOs) to strengthen targeted community education and improve health system accountability. Specifically;

Given that 86% of respondents identified failure to recognize danger signs, the MoH through the Reproductive and Child Health Section should, in collaboration with WHO, UNFPA, and NGOs such as Johns Hopkins Program for International Education in Gynecology and Obstetrics (Jhpiego) and African Medical and Research Foundation (Amref), sustain and expand community sensitization on obstetric danger signs. Community Health Worker (CHWs), ANC sessions, radio programs, and community drama should be used to reinforce recognition and connect it to birth preparedness and emergency plans in every household.

Since 75% of respondents identified distance from home to the health facility, the Prime Minister's - Regional Administration and Local Government (PMO-RALG), with support from United Nations Children's Fund (UNICEF), UNFPA, and NGOs such as Pathfinder and Comprehensive Community Based Rehabilitation in Tanzania (CCBRT), should support community emergency transport schemes and the establishment of maternity waiting homes in hard-to-reach areas. District referral systems and linkages with community health funds should also be strengthened to reduce delays in reaching care.

As seventy-one percent of respondents identified delay in leaving home, the Ministry of Health (MoH) and the Ministry of Community Development, Gender, Women and Special Groups (MoCDGWSG), working with UNFPA, WHO, and NGOs such as EngenderHealth and White Ribbon Alliance, should implement household counseling and male involvement campaigns. Community leaders, religious leaders and women's groups should be engaged to promote timely decision-making and support for prompt departure to health facilities once danger signs are recognized.

With inadequate skills of healthcare providers being the least recognized non-medical cause of maternal death at 19%, the Ministry of Health and the National Institute for Medical Research, with technical support from WHO, UNFPA, and NGOs such as Jhpiego and IntraHealth, should roll out continuous professional development and competency-based training for providers. Mentorship, supportive supervision, and community scorecards should be established to improve and monitor quality of care at facility level.

Because 21% of respondents identified gender insensitivity of healthcare providers, MoH and MoCDGWSG, in partnership with UN Women, WHO, and NGOs such as Tanzania Women Lawyers Association (TAWLA) and White Ribbon Alliance (WRA), should integrate respectful maternity care and gender sensitivity

modules into both pre-service and in-service training. Facility-based feedback and complaint mechanisms should be set up to address mistreatment and strengthen community trust.

As 21% of respondents identified lack of accompaniment to the health facility, the Ministry of Health, with support from UNFPA, UNICEF, and NGOs such as Family Health International 360 (FHI 360) and Tanzania Marketing and Communications (T-MARC), should advocate for birth companionship policies in facilities and increase community education on the role of male partners and family members. Male ANC attendance and community support groups should be encouraged to accompany women during pregnancy and childbirth.

Generally, given the overall lower community knowledge on non-medical causes of maternal deaths, the MoH, PMO-RALG, UN agencies including WHO, UNFPA, UNICEF, UN Women, and NGOs should broaden health education beyond danger signs to also cover health system and social support factors. Multi-sectoral campaigns should give priority to the bottom three areas. Regular assessments of community knowledge should be conducted to monitor progress from "lower knowledge" to "medium" and "higher knowledge" categories.

VIII. LIMITATION OF THE STUDY

This study employed a convenience sampling technique to recruit 100 community members from Urambo District Council through an online survey. The sample included participants from both urban and rural areas within the district. The decision to adopt an online mode of data collection was informed by the need to access respondents across geographically dispersed locations within the constraints of time and available resources.

Notwithstanding its practicality, the use of convenience sampling presents several methodological limitations. First, as a non-probability sampling technique, it does not provide all members of the target population with an equal probability of selection. This characteristic limits the generalizability of the study findings to the entire population of Urambo District Council and to other districts in Tanzania.

Second, the reliance on an online survey introduces potential selection bias and digital divide bias. The sample is likely to over-represent individuals with access to smartphones, internet connectivity, and requisite digital literacy. Conversely, individuals residing in remote rural areas with limited technological infrastructure may be under-represented.

Third, to ensure data integrity, each participant was restricted to a single submission. Ethical clearance was obtained prior to data collection, and informed consent was secured from all respondents. Participation was voluntary. However, the voluntary nature of online participation may have resulted in the under-representation of specific demographic groups, including older adults, low-income

households, and individuals with limited access to digital technologies.

In view of these limitations, the findings of this study should be interpreted as representative of the perspectives of the community members in Urambo District Council who participated in the online survey, rather than as representative of the entire population. Future studies are recommended to utilize probability-based sampling techniques and mixed-mode data collection strategies to enhance the representativeness of both analogical and digital populations.

➤ Author's Biography

Hamisi Iddi Hamisi, Assistant Lecturer, Water Institute, of P.o.Box 35059, Ubungo, Dar es Salaam, with Telephone +255 (0625) 921-917 and E-Mail hamisiiddihamisi@gmail.com

ACKNOWLEDGMENTS

I hereby acknowledge advanced support and collaboration offered by responsible individuals and organizations throughout the process of this project including, but not limited to; Johnas Buhori, Straton Ruhinda and Urambo District Council.

REFERENCES

- [1]. Abegaz, K. H., Jara, D., Tadesse, T., Regassa, N., & Kifle, D. (2023). Framework for maternal morbidity and mortality interventions in Ethiopia: A systematic review protocol. *BMJ Open*, 13(6), e075879. <https://doi.org/10.1136/bmjopen-2023-075879>
- [2]. Adeleke, N. A., Olowokere, A. E., & Komolafe, A. O. (2022). Socio-cultural factors influencing maternal health seeking behaviour in rural Nigeria. *African Journal of Reproductive Health*, 26(3), 45–56. <https://doi.org/10.29063/ajrh2022/v26i3.5>
- [3]. Afulani, P. A., Diamond-Smith, N., Golub, G., & Sudhinaraset, M. (2017). Development of a tool to measure person-centered maternity care in developing settings: Validation in a rural and urban Kenyan population. *Reproductive Health*, 14(1), 118. <https://doi.org/10.1186/s12978-017-0381-7>
- [4]. Banda, K. C., Mamba, E., & Chirwa, E. (2023). Community barriers to maternal health service utilization in Malawi. *BMC Pregnancy and Childbirth*, 23, 120. <https://doi.org/10.1186/s12884-023-05321-0>
- [5]. Bhutta, Z. A., Das, J. K., Bahl, R., Lawn, J. E., Salam, R. A., Paul, V. K., & ... [et al.]. (2014). Can available interventions end preventable deaths in mothers, newborn babies, and stillbirths, and at what cost? *The Lancet*, 384(9940), 347–370. [https://doi.org/10.1016/S0140-6736\(14\)60762-2](https://doi.org/10.1016/S0140-6736(14)60762-2)
- [6]. Bohren, M. A., Hunter, E. C., Munthe-Kaas, H. M., Souza, J. P., Vogel, J. P., & Gülmezoglu, A. M. (2015). The mistreatment of women during childbirth in health facilities globally: A mixed-methods systematic review. *PLOS Medicine*, 12(9), e1001847. <https://doi.org/10.1371/journal.pmed.1001847>

- [7]. Bohren, M. A., Tunçalp, Ö., & Miller, S. (2020). Transforming intrapartum care: Respecting women, improving outcomes. *BJOG: An International Journal of Obstetrics & Gynaecology*, 127(2), 123–130. <https://doi.org/10.1111/1471-0528.16072>
- [8]. Campbell, O. M. R., Calvert, C., Testa, A., Strehlow, M., Benova, L., Keyes, E., & ... [et al.]. (2016). The scale, scope, coverage, and capability of childbirth care. *The Lancet*, 388(10056), 2193–2208. [https://doi.org/10.1016/S0140-6736\(16\)31503-1](https://doi.org/10.1016/S0140-6736(16)31503-1)
- [9]. Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). Sage Publications.
- [10]. Field, A. (2022). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage Publications. <https://us.sagepub.com/en-us/nam/discovering-statistics-using-ibm-spss-statistics/book262872>
- [11]. Filippi, V., Chou, D., Ronsmans, C., Graham, W., & Say, L. (2016). Levels and causes of maternal death and morbidity. In R. E. Black, et al. (Eds.), *Reproductive, maternal, newborn, and child health: Disease control priorities* (3rd ed.). World Bank.
- [12]. Gabrysch, S., & Campbell, O. M. (2009). Still too far to walk: Literature review of the determinants of delivery service use. *BMC Pregnancy and Childbirth*, 9, 34. <https://doi.org/10.1186/1471-2393-9-34>
- [13]. Kibria, G. M. A., Albrecht, J., Lane, W., Stafford, K. A., Jones, L., Vesselinov, R., & ... [et al.]. (2024). Prevalence, trends, and factors associated with maternal autonomy regarding healthcare, finances, and mobility in Bangladesh: Analysis of demographic and health surveys 1999–2018. *PLOS Global Public Health*, 4(2), e0002816. <https://doi.org/10.1371/journal.pgph.0002816>
- [14]. Koblinsky, M., Chowdhury, M. E., Moran, A., & Ronsmans, C. (2012). Maternal morbidity and disability and their consequences: Neglected agenda in maternal health. *Journal of Health, Population and Nutrition*, 30(2), 124–130. <https://doi.org/10.3329/jhpn.v30i2.11281>
- [15]. Kothari, C. R., & Garg, G. (2022). *Research methodology: Methods and techniques* (4th ed.). New Age International Publishers. <https://www.newagepublishers.com>
- [16]. Kruk, M. E., Kujawski, S., Mbaruku, G., Ramsey, K., Moyo, W., & Freedman, L. P. (2018). Disrespectful and abusive treatment during facility delivery in Tanzania: A facility and community survey. *Health Policy and Planning*, 33(1), 67–75. <https://doi.org/10.1093/heapol/czx079>
- [17]. Lawn, J. E., Blencowe, H., Oza, S., You, D., Lee, A. C., Waiswa, P., & ... [et al.]. (2014). Every newborn: Progress, priorities, and potential beyond survival. *The Lancet*, 384(9938), 189–205. [https://doi.org/10.1016/S0140-6736\(14\)60496-7](https://doi.org/10.1016/S0140-6736(14)60496-7)
- [18]. Mbachu, O., Ezumah, N., Ndukwu, C. I., & Ezeoke, O. P. (2023). Barriers to maternal healthcare utilization in Nigeria: A systematic review. *International Journal of Health Policy and Management*, 12, 6873. <https://doi.org/10.34172/ijhpm.2022.6873>
- [19]. McMahon, S. A., George, A. S., Chebet, J., Mosha, I. H., Mpembeni, R. N. M., & Winch, P. J. (2014). Experiences of and responses to disrespectful maternity care while living in a low-income setting: A qualitative study in Tanzania. *BMC Pregnancy and Childbirth*, 14, 512. <https://doi.org/10.1186/1471-2393-14-512>
- [20]. MoHCDGEC. (2021). *National roadmap strategic plan to improve reproductive, maternal, newborn, child and adolescent health in Tanzania 2021/22-2025/26: One Plan III*.
- [21]. National Health Research Ethics Committee. (2022). *National code for health research ethics*. Federal Ministry of Health Nigeria. <https://nhrec.gov.ng>
- [22]. Sialubanje, C., Massar, K., Hamer, D. H., & Ruiter, R. A. C. (2015). Reasons for home delivery and use of traditional birth attendants in rural Zambia: A qualitative study. *BMC Pregnancy and Childbirth*, 15, 216. <https://doi.org/10.1186/s12884-015-0652-7>
- [23]. Taherdoost, H. (2022). Data collection methods and tools for research: A step-by-step guide to choose data collection technique for academic and business research projects. *International Journal of Academic Research in Management*, 11(1), 1–18. <https://doi.org/10.2139/ssrn.4340215>
- [24]. Tessema, Z. T., Tamirat, K. S., & Teshale, A. B. (2024). Determinants of maternal health service utilization in sub-Saharan Africa. *BMC Health Services Research*, 24, 345. <https://doi.org/10.1186/s12913-024-10745-2>
- [25]. Thaddeus, S., & Maine, D. (1994). Too far to walk: Maternal death in context. *Social Science & Medicine*, 38(8), 1091–1110. [https://doi.org/10.1016/0277-9536\(94\)90158-0](https://doi.org/10.1016/0277-9536(94)90158-0)
- [26]. UNFPA. (2023). *State of world population 2023: 8 billion lives, infinite possibilities*. <https://www.unfpa.org/swp2023>
- [27]. UNICEF. (2023). *Maternal and newborn health*. <https://www.unicef.org/health/maternal-newborn-health>
- [28]. United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. <https://sdgs.un.org/2030agenda>
- [29]. United Nations. (2023). *The sustainable development goals report 2023: Special edition*. Department of Economic and Social Affairs. <https://unstats.un.org/sdgs/report/2023>
- [30]. United Republic of Tanzania. (2021). *Third five year development plan 2021/22 – 2025/26: Realising competitiveness and industrialisation for human development*. Ministry of Finance and Planning. <https://www.mof.go.tz>
- [31]. United Republic of Tanzania. (2022). *Tanzania demographic and health survey and malaria indicator survey 2022: Key indicators report*. Ministry of Health, NBS, OCGS, & ICF. <https://dhsprogram.com/pubs/pdf/PR143/PR143.pdf>
- [32]. World Health Organization. (2015). *Strategies toward ending preventable maternal death*. <https://www.who.int/publications/i/item/9789241508483>

- [33]. World Health Organization. (2016). *WHO recommendations on antenatal care for a positive pregnancy experience*.
<https://www.who.int/publications/i/item/9789241549912>
- [34]. World Health Organization. (2018). *WHO recommendations: Intrapartum care for a positive childbirth experience*.
<https://www.who.int/publications/i/item/9789241550215>
- [35]. World Health Organization. (2022). *Trends in maternal mortality 2000 to 2020: Estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA*.
<https://www.who.int/publications/i/item/9789240068759>
- [36]. World Health Organization. (2023). *Maternal mortality* [Fact sheet]. <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality>