

**HAWASSA UNIVERSITY COLLEGE OF MEDICINE AND HEALTH
SCIENCE, SCHOOL OF NURSING**

**PALLIATIVE CARE PRACTICE, PERCEIVED BARRIERS, AND
ASSOCIATED FACTORS AMONG NURSES WORKING IN SELECTED
PUBLIC HOSPITALS IN HAWASSA CITY, SIDAMA, ETHIOPIA**

MSc THESIS

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HAWASSA UNIVERSITY, HAWASSA, ETHIOPIA

November, 2023

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Advisors Approval Sheet

I hereby certify that I have read and evaluated this thesis entitled "Palliative Care Practice, Perceived Barriers, and Associated Factors among Nurses Working in Selected Public Hospitals in Hawassa, Sidama Ethiopia," prepared under my guidance by Beyene Feleke. Therefore, I recommend that it be submitted as fulfilling the thesis requirement.

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Examiner Approval Sheet

We, the undersigned, members of the Board of Examiners of the final open defense, have read and evaluated his or her thesis entitled "Palliative Care Practice, Perceived Barriers, and Associated Factors among Nurses Working in Selected Public Hospitals in Hawassa, Sidama Ethiopia," and examined the candidate. This is, therefore, to certify that the thesis has been accepted in partial fulfillment of the requirements for the degree of Master of Emergency Medicine and Critical Care.

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Statement of the Author

I declare and affirm that this thesis is my work by signing below. In the preparation (proposal work), data collection, data analysis, and completion of this thesis, I followed all of the ethical standards of scholarship. All scholarly matters that are included in the thesis have been given recognition through citations. I confirm that I have cited and referenced all sources used in this text. Every attempt has been made to avoid plagiarism in the preparation of this thesis.

This thesis is submitted in partial Fulfillment of the Master's degree requirement at Hawassa University. The thesis is deposited in the Hawassa University library and is made available to users under the library's policies. I solemnly declare that this thesis has not been submitted to any other institution anywhere for the award of any academic degree, diploma, or certificate.

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Date of Submission: _____

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List of Abbreviations and Acronyms

AGH	Adare General Hospital
AOR	Adjusted Odds Ratio
BSc	Bachelor of Science
COR	Crud odd ratio
CI	Confidence interval
EOL	End-Of-Life
ER	Emergency room
ETB	Ethiopian Birr
FATCOD	Frommelt’s attitude toward care of dying
HIV	Human Immunodeficiency Virus
HUCSH	Hawassa University Comprehensive Specialized Hospital
HTPH	Hawela-Tula Primary Hospital.
ICU	Intensive care unit
KII	Key informant interviews
MSc	Master of Science
NRR	Nonresponse rate
OR	Operation room
PC	palliative care
PCQN	Palliative Care Quiz for Nursing
PI	Principal Investigator
SSA	Sub-Saharan Africa
SPSS	Statistical Program for Social Sciences
VIF	Variance inflation factor
WHO	World Health Organization
WHPCA	Worldwide Hospice Palliative Care Alliance

Abstract

Background: Palliative care is a comprehensive approach that enhances the quality of life of patients and their families facing problems related to life-threatening illnesses. Since nurses play an active role in managing patients' disease diagnosis and treatment in clinical palliative care practice, identifying their practice level is critical. However, there is a lack of data regarding palliative care practice, barriers, and associated factors among nurses in the study area.

Objective: To assess the palliative care practice, perceived barriers, and associated factors among nurses working in selected public hospitals in Hawassa, Sidama, Ethiopia.

Methods: An institutional-based cross-sectional study design using quantitative supplemented by qualitative data collection methods was employed among 319 nurses and 8 key informants, respectively, at a selected public hospital in Hawassa City, Sidama, Ethiopia, from March 15 to July 30, 2023. Simple random sampling techniques and purposive sampling techniques were used to collect data. Data were collected using pretested, self-administered questionnaires and an in-depth interview. Epi-Data and Statistical Program for Social Sciences software were used for data entry and analysis.

Descriptive, bivariate, and multivariable logistic regression analyses were utilized. A p-value of <0.05 on multivariate logistic regression was declared for the associated variable. For qualitative data, thematic analysis was used.

Results: The response rate among the 313 nurses who completed the questionnaire was 98%. Around three-fourths, 76.6% [95% CI, 72–81] of participants had poor palliative care practices. Type of hospital, age, education level, experiences, and training were significantly associated with overall palliative care practices. This study explored four main themes in qualitative findings: knowledge deficit, negative patient attitudes, spiritual care, and modern medicine clash, issues with healthcare providers, and inadequate hospital facilities.

Conclusion and recommendations: Overall, nurses had poor palliative care practices. Type of hospital, age, education level, experiences, and training were factors associated with practice towards palliative care, and a sub-category of themes emerged from a qualitative study. Therefore, it is necessary to provide basic education and continue on-the-job training for nurses to bridge the gap of poor practice.

Keywords: Barriers, Hawassa, Nurses, Palliative Care, Practice

CHAPTER ONE

1. INTRODUCTION

1.1. Background

Palliative care (PC) is a comprehensive approach that enhances the quality of life of patients and their families facing the problems associated with life-threatening illnesses by preventing and alleviating suffering. This is undertaken via early identification, correct assessment, and treatment of pain and other problems, whether physical, psychosocial, or spiritual (WHO, 2020). PC is a basic human right that should ideally be initiated at the time of diagnosis and provided alongside all other disease-directed or curative treatments (WPCA, 2014; Kelley & Morrison, 2015). Hospice care is a PC option for patients with a six-month life expectancy that provides pain medication and allows them to live their final days (Gomes *et al.*, 2016).

The current history of PC began in 1967, when Dame Cicely Saunders founded St. Christopher's Hospice, a pioneer in this field, in London. Since then, it has seen global development where PC is recommended for different types of terminal diseases (Musleh, 2017). In Ethiopia, hospice care was formed in 2003, and palliative care was started by Sr. Tsigereda Yisafowessen (Solomon, 2021). PC is generally appropriate for patients with any major illness that compromises their quality of life, including acute trauma, heart failure, renal failure, liver failure, neurologic diseases, cancer, HIV, severe burns, and chronic obstructive pulmonary disease (Rogers *et al.*, 2017; Lee Gan, 2019; Connor *et al.*, 2020).

PC practice is strictly multidisciplinary care, and it is delivered by a variety of professionals, including physicians, nurses, support workers, paramedics, pharmacists, physiotherapists, and volunteers, in support of the patients and their families (WHO, 2020). Nurses are key members of the health team in clinical PC practices and play an active role in managing patients' disease diagnosis and treatment, as well as meeting their physical, spiritual, cultural, and religious needs during different periods (Lukovsky *et al.*, 2021; Keshia, 2021; Vernon, 2021). The nurses must possess the essential knowledge and skills to provide effective PC to patients and their families (Anyanwu & Agbedia, 2020).

1.2. Statement of the problem

The demand for palliative care is increasing rapidly worldwide because of population aging, the burden of serious health-related suffering, successes in using new technology to prolong the lives of individuals, and increased interest in quality of life (WPCA, 2014; Sleeman *et al.*, 2019; Agom *et al.*, 2021). Every year, over 56.8 million people worldwide are estimated to require PC, with 25.7 million nearing the end of their lives (EOL)(Connor *et al.*, 2020). It is estimated that by 2060, globally, more than 48 million people will die yearly from severe health-related diseases that require PC services. As a result, the need for PC is expected to nearly double (Sleeman *et al.*, 2019).

Despite the relevance of palliative care, studies on the subject have not paid much attention to palliative care practices among nurses (Ajayi *et al.*, 2014). However, as per the study globally, only a few studies were undertaken on nurses' practices towards palliative care. Those studies showed a different level of palliative care practice. Outside of Africa, certain countries, including Iran, Philippines, and India, have reported that nurses have poor palliative care practices (93.7%, 76.8%, and 63.5%)(Hosein *et al.*, 2019; Pasaol, 2019;Walia *et al.*, 2020),respectively.

Out of the 56.8 million people who require PC each year, 78% live in low- and middle-income countries, with almost half of them living in Africa (Connor *et al.*, 2020). On the African continent, a study conducted at Assiut University, Egypt, Dierout Fever Hospital, Egypt, Nigeria, and Kenya found that palliative care practice is low among nurses (58.6%, 63.3%, 74.1%, and 58.4%)(Hassan, 2016;Ajisegiri *et al.*, 2019; Mohammed *et al.*, 2020; Rose Wangui N, 2021), respectively. This was owing to the fact that the education of health workers who provide palliative care in nursing and the medical area has been limited (Boatema *et al.*, 2022).

In Ethiopia, the need for effective palliative care services may become even more pressing (Challinor *et al.*, 2016; Getie *et al.*, 2021). Like in other countries, very few studies conducted in Ethiopia revealed that nurses' palliative care practice is considered low (65.8%; 74.8%; 88.11%) (Tesfaye, Anbessie, and Gizaw, 2018; Teklay *et al.*, 2020;Ayteneu *et al.*, 2022), respectively.

The PC implementation is a global health challenge, especially in developing countries, because the service is isolated in the majority of African countries, scattered in scope, not well supported, heavily donor-dependent, has unclear policies, limited healthcare resources, role unfamiliarity, poor perception, low level of practice, and low knowledge about benefits among service users, healthcare workers, and the supporting community (Tesfaye, Anbessie, and Gizaw, 2018). Pain is perceived as one of the most common health problems and serious symptoms experienced by patients in need of PC, and its management is an integral concept in the practice of palliative care (Mohd Azmi *et al.*, 2022; Reville & Foxwell, 2014). However, unnecessary restrictions on morphine and other essential controlled palliative medicines prevent patients from receiving adequate palliative care (WHO, 2020). According to a 2015 International Narcotics Board assessment, Ethiopia's per capita opioid consumption is extremely low. This suggests that pain is poorly managed (Reid *et al.*, 2018).

Nurses are vital in palliative care because they spend the most time with patients (Lindley *et al.*, 2017). However, different studies have shown that nurses and other healthcare professionals are inadequately prepared to care for patients with PC. This has affected their practice of palliative care but also causes anxiety, stress, and burnout (Andersson *et al.*, 2016). The major barriers preventing healthcare professionals from practicing PC are lack of interest, inadequate knowledge, financial burden, sole responsibility in the absence of team support, lack of resources, ignorance about palliative care, and restrictive nurses who are responsible for providing palliative care (Hawley, 2017, Boatemaa *et al.*, 2022). Since nurses play a crucial role in providing palliative care, nurses, as well as other healthcare providers, need training and education about PC to achieve desired goals (Abdallah EL Sayed *et al.*, 2021).

The above discussion gives much evidence to suggest that very little is known about the practices of palliative care among nurses. To the best of my knowledge, there was limited information on palliative care practice as well as perceived barriers concerning patients in need of PC among nurses in Ethiopia in general and in Hawassa City in particular that were addressed with a mixed approach. Thus, the current study was conducted to fill this gap by assessing and presenting an important finding about the level of nurses' practice of palliative care, perceived barriers, and associated factors among nurses working in selected public hospitals in Hawassa city, Sidama, Ethiopia, in 2023.

1.3. Significance of the study

This study offers valuable insights into palliative care practice by identifying barriers and associated factors, and enabling health professionals to identify and address these issues that interfere with the provision of palliative care. The study's findings will assist the hospital in providing up-to-date data in the study area to deal with patients of all ages who require palliative care for life-threatening diseases. This study might contribute to quality of life improvement for patients and their families by identifying the barriers and filling nursing practice gaps in palliative care delivery.

The findings of this study will be used as a reference for other researchers interested in studying palliative care practice and barriers on an advanced scale, and it will also be helpful as input for policymakers and healthcare planners to expand their understanding of current practices in palliative care and inform future policy development. Additionally, it will contribute to filling the gap in the literature on palliative care practice and barriers in our country, particularly with regard to mixed studies.

CHAPTER TWO

2. OBJECTIVES

2.1. General objectives

To assess palliative care practice, perceived barriers, and associated factors among nurses working in selected public hospitals in Hawassa, Sidama, Ethiopia, in 2023.

2.2. Specific objectives

1. To identify the level of nurses' practices toward palliative care at selected public hospitals in Hawassa City, Sidama, Ethiopia.
2. To identify factors associated with palliative care practice among nurses at selected public hospitals in Hawassa City, Sidama, Ethiopia.
3. To explore the perceived barriers to palliative care practices among nurses in selected public hospitals in Hawassa City, Sidama, Ethiopia.

CHAPTER THREE

3. LITERATURE REVIEW

This review of the literature looks at palliative care from the perspective of nurses in order to better understand their palliative care practice, barriers, and associated factors. Also, this literature review is used to collect data from numerous previously conducted studies on nurses' palliative care practices and service delivery barriers.

3.1. Nurses' practice of palliative care

A descriptive study was conducted in New Delhi, India, to assess critical care nurses' knowledge, attitudes, practices, perceived barriers, and support surrounding palliative care and end-of-life care. According to the study, 63.5% of nurses had poor palliative care practice (Walia *et al.*, 2020). A study conducted in Iran on nurses' knowledge, attitude, and practice toward palliative care found that 93.7 percent had poor practice towards palliative care (Hosein *et al.*, 2019). A study on the assessment of knowledge, attitude, practice, and barriers to palliative care among pediatric oncology health care providers was conducted in the Southern Philippines. The result shows that 76.8% of palliative care practices are ineffective (Pasaol, 2019). According to a study conducted in Nigeria on palliative care for people living with HIV: Factors influencing healthcare workers' knowledge, attitude, and practice in public health facilities, the results showed that 74.1 percent had poor practice towards palliative care (Ajisegiri *et al.*, 2019)

According to a study conducted at Egypt Dierout Fever Hospital on the knowledge and practices of critical care nurses regarding palliative care of cancer patients and suggestions for a nursing guidelines booklet, 63.3 percent had unsatisfactory palliative care practice (Hassan *et al.*, 2016). Another study, conducted at Egypt's Assiut University, examined nurses' knowledge, practices, and attitudes about end-of-life care in critical care units: Suggested booklets found that (58.6%) of them practiced poorly (Mohammed *et al.*, 2020).

In a study on knowledge, attitude, practice, and barriers to providing pediatric palliative care among healthcare professionals at Kenyatta National Hospital, the results showed that 58.4% had poor practice towards palliative care (Rose Wangui N, 2021). According to the findings of a study conducted in Addis Ababa on the assessment of knowledge, attitude, practice, and

associated factors towards palliative care among nurses working in selected hospitals, 76.2 percent had poor knowledge of the implementation of palliative care practice (Hiwot Kassa *et al.*, 2014).

According to a study conducted in Amhara Region hospitals, one hundred and ninety-six (55.7%) of the participants had poor palliative care practices (Anteneh *et al.*, 2016). A facility-based cross-sectional study was conducted in Gondar on the quality of palliative care practice and its associated factors among working nurses. This study found that the majority of study participants, 341 (88.11%), had poor palliative care practices (Ayteneu *et al.*, 2022).

According to the findings of a cross-sectional study conducted in Tigray, almost three-fourth (74.8%) of those polled had poor knowledge of aspects of palliative care practice (Teklay *et al.*, 2020).

According to the findings of a Jimma University study on palliative care practice and associated factors among nurses, a total of 237 nurses responded correctly, yielding a response rate of 97.5%. Around two-thirds [65.8%] of the study participants had poor palliative care practices (Tesfaye, Anbessie, and Gizaw, 2018).

3.2. Factor associated with palliative care practice

According to the findings of a study conducted in New Delhi, India (Walia *et al.*, 2020), there was a significant association between nurses' younger age group and practice, which was also positively correlated with their attitude, knowledge, and practice toward palliative care. Another study conducted in Bihar, India, found a significant association between younger age groups and palliative care practices (Nair *et al.*, 2021). According to a study conducted in Iran on nurses' knowledge, attitude, and practice towards palliative care, ward and level of education had a significant association with nurses' practice towards palliative care. The nurses who worked in the ICU had good practice with palliative care. Nurses with master's degrees had good practice in terms of palliative care (Hosein *et al.*, 2019).

A survey on healthcare providers' knowledge, attitudes, and practices regarding palliative care services was conducted at Kibagabaga Hospital in Rwanda. The study's findings revealed that

there was a statistically significant positive association between healthcare providers' attitudes and practices regarding palliative care (Christine Murebwayire, 2022).

According to a study conducted in Nigeria on the practice of palliative care among nurses in selected hospitals, the study was conducted from October 2018 to June 2019, and the results revealed that there was no significant association between the type of hospital facility nurses work in and their palliative care practice (Anyanwu & Agbedia, 2020). Another study conducted in Abuja, Nigeria, was a cross-sectional descriptive study among healthcare workers on palliative care for people living with HIV: Factors influencing healthcare workers' knowledge, attitude, and practice in public health facilities. The results show that professional qualification and highest academic qualification were positively associated with good practice, whereas secondary health facility, undergraduate training, and in-service palliative care training were negatively associated with health care workers' HIV palliative care practice (Ajisegiri *et al.*, 2019). According to the findings of Tanta University, Egypt, there was an association between years of less than five experience and total practice scores (Abd El-Aziz Basal, 2017).

According to the findings of a study conducted in Addis Abeba, a cross-sectional quantitative study design was carried out on 252 nurses on the assessment of nurses' knowledge practice and associated factors towards pediatric palliative care of nurses working at selected hospitals in Addis Abeba, Ethiopia, and the results show that gender, age, and year of working experience were associated with palliative care practice. Female respondents reported more practice than male respondents; the higher the year of working experience, the less practice was recorded, and respondents aged 41-50 reported less practice than other age groups (Mandesh, 2014).

A study on the quality of palliative care practice and its associated factors among nurses working in Gondar was conducted. The study discovered that nurses' quality of palliative care practice was positively associated with knowledge and attitude towards PC, as well as B.Sc. degree holders' educational level and nurses having 11–15 years of working experience (Aytenew *et al.*, 2022). According to the findings of a Jimma University study on palliative care practice and associated factors among nurses, age between 26 and 30 years, clinical area

in maternal and child health, chronic illness clinic OR, ICU, and psychiatry unit, five to ten years of experience, and a monthly salary of 2000–3000 and 300–1500 are significantly associated with overall palliative care practices, and nurses with good knowledge were negatively associated with palliative care practices (Tesfaye, Anbessie, and Gizaw, 2018)

3.3. Perceived barriers to palliative care among nurses

According to a study conducted in Canada, the most common barriers to accessing palliative care in low-income countries were a lack of resources, ignorance about palliative care, nurses' reluctance to provide palliative care, and restrictive nurses who are responsible for providing palliative care (Hawley, 2017).

According to a study conducted in India, one of the most reported perceived barriers by critical care nurses was their workload of 95.1% in providing palliative care (Walia *et al.*, 2020). According to a Malaysian study, inadequate pain assessment (71.2%) and inadequate staff knowledge (53.6%) were identified as the most significant perceived barriers to managing pain in palliative patients (Mohd Azmi *et al.*, 2022). According to a study conducted in Carolina on barriers to accessing pediatric palliative care, the major themes identified were: a lack of consistent and adequate funding mechanisms at the payment level; a lack of pediatric palliative care programs and workforce at the health system level (Emily *et al.*, 2018).

An Egypt survey on Critical Care Nurses' Knowledge, Practice, Obstacles, and Helpful Measures towards Palliative Care for Critically Ill Patients found that lack of time to provide quality end-of-life care, poor unit design, continuing treatments for a dying patient, and a lack of nursing education and training are the most significant barriers to providing palliative care (Abd El-Aziz Basal, 2017).

According to a study conducted in Ghana titled "Evaluating Knowledge, Practices, and Barriers of Pediatrics Pain Management among Nurses: A Descriptive Cross-Sectional Study," the nurses most frequently reported barriers to pediatrics pain management as a lack of staffing, inadequate pediatrics pain assessment tools, and a lack of knowledge in pain management (Abubakari Wuni *et al.*, 2020) The other study conducted in Ghana found that lack

of interest, inadequate knowledge, limited time to provide quality end-of-life care, financial burden, sole responsibility in the absence of team support, and formal requirements like forms and prescriptions are other obstacles to palliative care in Ghana (Boatema *et al.*, 2022).

According to the findings of a study on knowledge, attitude, practice, and barriers to providing pediatric palliative care among health care professionals at Kenyatta National Hospital, the main barriers to palliative care service delivery include a lack of knowledge, stigma, bureaucracy, poor and late referral processes, and a lack of staff (Rose Wangui, 2021).

A study in Addis Ababa city to assess nurses' attitudes, practices, and barriers regarding cancer pain management showed that a lack of courses related to pain in the undergraduate classes, a lack of continuing training and work overload, role confusion, and a lack of motivation, including salary, were the identified barriers to adequate pain management (Getachew Mullu, 2014). A study on the barriers to palliative care practice among healthcare providers was conducted in Jimma. This study included 27 healthcare providers from two public hospitals and one local nongovernmental organization; fourteen were health professionals and thirteen were peer educators; 20 (74.07%) were females and 7 (25.93%) were males. The unavailability of drugs, an unfavorable working environment, patient-related issues, and a lack of recourse have all been identified as barriers to providing palliative care (Tekalign *et al.*, 2019).

3.4. Conceptual Frame Work

This conceptual framework was developed from different literature reviews and guideline sources, and the concepts that are directly and indirectly related to the major variables of the study were taken. Among these personal characteristics of nurses, education, experience, barriers, attitude, knowledge, and area of work are expected to affect the dependent variable of the study (Kassa *et al.*,2014; Ayed *et al.*,2015; Tekalign *et al.*, 2019; Tesfaye, Anbessie, and Gizaw, 2018; Boatemaa *et al.*, 2022; Aytnew *et al.*, 2022;Christine Murebwayire, 2022).

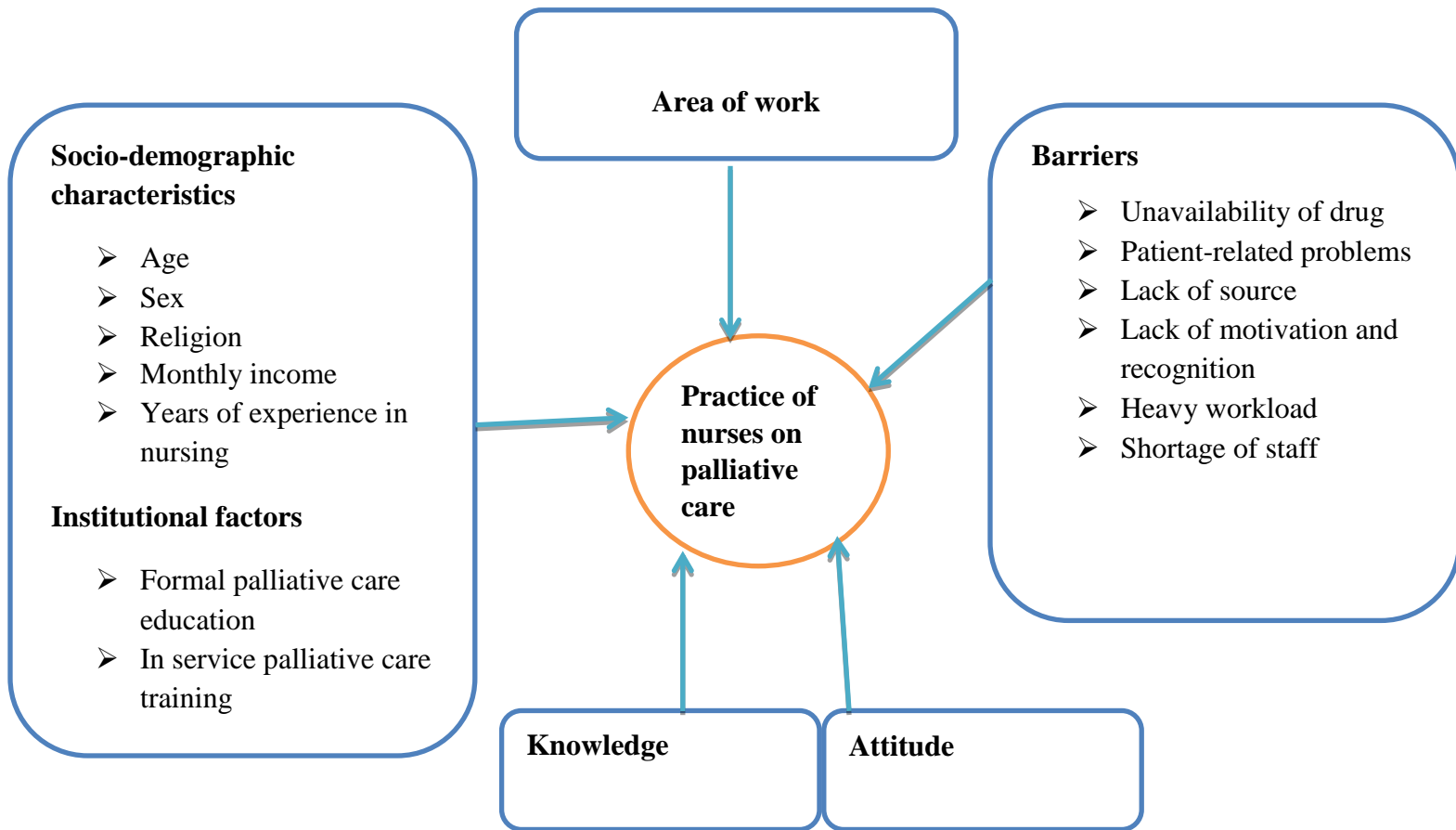


Figure 1: Diagrammatic representation developed from reviewed literature to show factors associated with palliative care practice among nurses working in selected public hospitals in Hawassa City, Sidama, Ethiopia, 2023.

CHAPTER FOUR

4. MATERIALS AND METHODS

4.1. Study area

The study was carried out in the city of Hawassa. Hawassa City is the capital of the Sidama regional state, located 275 kilometers south of Addis Abeba. According to current projections based on the 2008 population census, the total number of persons residing in the city administration is 386,773, with 195,320 men and 191,453 females. There are four public hospitals in Hawassa City: one comprehensive specialized hospital, one general hospital, and two primary hospitals. Of the total number of institutions found in the city, three were selected randomly. They were Hawassa University Comprehensive Specialized Hospital (HU-CSH), Adare General Hospital (AGH), and Hawela-Tula Primary Hospital (HTPH).

HU-CSH is a treatment and teaching hospital for students of medicine and health sciences. With 487 nurses and other healthcare professionals, it currently serves over 25 million people in the Sidama and Southern Nations, Nationalities, and Peoples' Regions, as well as the neighboring Oromia Region. AGH was upgraded from its primary level to General Hospital in 2008 E.C. The hospital currently employs 189 nurses and other medical professionals to provide a wide range of medical services to the general population, including emergency, outpatient, and inpatient care. HTPH was established in 2017. It began by providing a wide range of medical services with a limited number of healthcare experts and has since expanded to provide inpatient, outpatient, and emergency care, and the hospital now employs 79 nurses and other medical professionals (**source:** From each hospital's human resources office in 2023).

4.2. Study Period

This study was conducted in Hawassa City at selected public hospitals in Sidama, Ethiopia, between March 15 and July 30, 2023.

4.3. Study design

An institutional-based cross-sectional quantitative study design supplemented with a qualitative approach was employed.

4.4. Populations

4.4.1. Source population

All nurses who were working in public hospitals in Hawassa City, Sidama, Ethiopia

4.4.2. Study population

For quantitative data, all sampled nurses' who fulfilled inclusion criteria and were available during the study period were involved in this study.

For qualitative data, head nurses'

4.4.3. Study Unit

Selected individual nurse

4.5. Eligibility criteria

4.5.1. Inclusion criteria

Nurses working in Hawassa City public hospitals with experience of at least 6 months and above participated in the study.

4.5.2. Exclusion Criteria

Nurses who were on sick leave, maternity leave, or annual leave at the time of the data collection period.

4.6. Sampling

4.6.1. Sample size

For quantitative data:

Sample size determination for the first objective: The sample size was determined by using a formula for estimating a single population proportion and taking the proportion (p) of poor palliative care practice, which was conducted in Tigray at 74.8% (Teklay *at el.*, 2020) with a 95% level of confidence and a 5% margin of error. **$n = (Z \alpha/2)^2 p (1-p)$**

d2

Where

n = sample size

The Z value at the 95% level of significance is 1.96.

P = proportion (74.8%)

d = margin of error assumed to be 5% (0.05%)

n = the study's required minimum sample size

$$n = \frac{(1.96)^2 \cdot 0.748(1-0.748)}{(0.05)^2} = \frac{(3.8416) (0.748) (0.252)}{(0.0025)} = 290$$

Therefore **n=290**

Adding 10% of the non-response rate, the total sample was **319 nurses**.

Sample size determination for the second objective: To determine the required sample size for the second specific objective of this study, various factors that are significantly associated with the outcome variables with a confidence level of 95% and power of 80%, a ratio of 1:1, have been taken into account, and the sample size was calculated using the Open Epi Info 7.2.5 StatCalc software program. An attempt was made to select the maximum sample size. However, because the maximum sample size is 218 with a 10% non-respondent rate in the second objective, which is less than the first objective sample size, the first sample size of 319 was used as the the final sample size (Table 1).

Table 1: Sample size determination for settled second objectives for palliative care practice, barriers, and associated factors among nurses working in selected public hospitals in Hawassa city, Sidama, Ethiopia, 2023

Variables	CI	Power	P	AOR	Ratio	NRR	Final sample	Reference
	%	%			1:1	10%		
Knowledge	95	80	17.30	2.91	1:1	10%	183	(Ayteneu et al., 2022)
In-service training	95	80	87.6	0.29	1:1	10%	165	(Ajisegiri <i>et al.</i> , 2019)
Educational level	95	80	60.12	2.73	1:1	10%	198	(Ayteneu et al., 2022)
Attitude	95	80	24.63	2.45	1:1	10%	218	(Ayteneu et al., 2022)

Key: NRR= non-response rate; P= proportion of outcome among the population without the exposure of interest.

For qualitative studies

A total of eight head nurses participated in this study through key informant interviews from selected hospitals.

4.6.2. Sampling technique and procedure

For quantitative data

To select the study participants, the total sample size was allotted proportionally based on the number of nurses who were working in a selected public hospital. The respondents were selected by using a simple random sampling technique, which is a lottery method. To obtain the final individuals, a list of nurses in each work area was used as a sampling frame, and lists were obtained from the human resources office and nursing service administration (Figure 2).

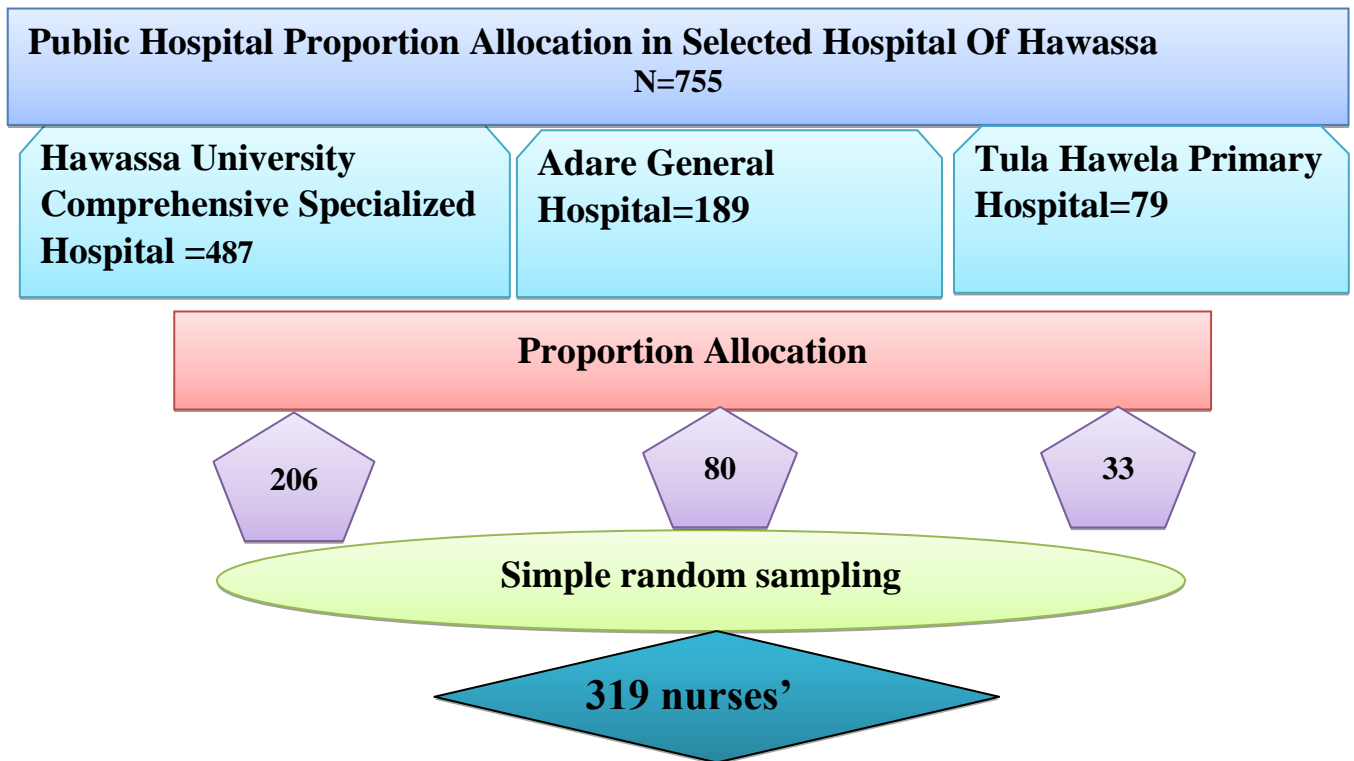


Figure 2: Schematic representation of a sample procedure for quantitative data on palliative care practice, perceived barriers, and associated factors among nurses working in selected public hospitals in Hawassa, Sidama, Ethiopia, 2023

For qualitative data

A purposive sampling was used to select key informants for the in-depth interviews in Hawassa city at selected public hospitals based on the established criteria, which included nurses who served as head nurses of the ward and had at least 5 years of experience in emergency, intensive care unit, medical, oncology, pediatrics, and surgical ward because in those wards /unit, serious and/or life-threatening patients were frequently admitted who need PC service, and the purpose of sampling head nurses of the ward was to get detailed information from those nurses who meet the criteria since they have long work experience, and a great deal of experience in positions and can experience the various barriers that can affect PC services in practice. Hence, they can provide detailed information on the barriers to PC practice from many viewpoints, which strengthens the study. All nurses interviewed in in-depth interviews were not part of the quantitative study. The sample size was not decided before the actual data collection period; however, it was planned to interview eight head nurses of the ward, taking into account homogeneity considerations. Based on the plan, all planned ward head nurses were interviewed, and the obtained data was heard and read repeatedly for several minutes. Finally, with the seventh respondent, idea saturation occurred, and the qualitative sample size was reduced to seven.

4.7. Variables of the Study

4.7.1. Dependent Variables

- ❖ Practice in palliative care

4.7.2. Independent Variables

Socio-demographic characteristics

- ❖ Age, Sex
- ❖ Religion
- ❖ Monthly income
- ❖ Educational level
- ❖ Work experience

Institutional factors

- ❖ Palliative care education

- ❖ In-service palliative care training

Area of work

- ❖ Medical ward
- ❖ Surgical ward
- ❖ Oncology ward
- ❖ Pediatrics ward
- ❖ ICU, ER.

Barriers to palliative care services

- ❖ Drug inaccessibility
- ❖ Working environment
- ❖ Patient-related problems
- ❖ Lack of motivation
- ❖ Heavy workload

Knowledge

Attitude

4.8. Data collection tools and procedures

For quantitative data

For data collection, an English version of a structured and pretested self-administered questionnaire was used, which was adapted from different previous studies and reviews of the literature (Kassa *et al.*,2014; Ayed *et al.*, 2015;Gedamu *et al.*, 2019;Boatema *et al.*, 2022).The questionnaire consists of three parts. The first part contained socio-demographic characteristics; it contained 10 items, including the name of the institution, age, sex, marital status, religion, monthly salary, experience in the nursing profession, training, level of education, and work unit or ward.The second part contained eight knowledge-related items; each question had a group of answer points; one point was awarded for each correct answer; and an incorrect answer took zero. The third part contained the nurse's attitude-related items; it has 11 items. It was assessed using a 5-item Likert scale (ranging from strongly agree to 5 to strongly disagree to 1).Some questions were worded positively, and others negatively. The fourth part contained self-reported palliative care practices; it contains 10 items. At each

hospital, the aim of the study was clearly explained to the study participants before they filled out the questionnaire. Three BSc nurses for data collection and one MSc candidate for the supervisor who is not employed by the studied hospital were recruited for data collection.

For qualitative data

Data was gathered in Amharic using open-ended questions written primarily in English, which were adapted from a study done in Jimma (Tekalign *et al.*, 2019).

A tape recorder and note-taking were used to fully capture the original opinions after they were told about the objective of the study and participants' consent was obtained. It is an individual interview with open-ended, non-directive questions to explore the perceived barriers to palliative care practices among nurses and other related issues. The interview was conducted in a quiet place where participants felt safe by the principal investigator and modulated by one MSc candidate. The audio-recorded interview session lasted 30–40 minutes. The interview was finalized by taking the overall conclusion ideas from the participants. The collected data was stored on the computer by protecting it with a password.

4.9. Data quality control measures

For quantitative data

Data quality was controlled by giving training to data collectors and supervisors for one day on data collection methods, the purpose of data collection, the content of the questionnaires, how to approach the respondents, and how to handle challenges that may arise during the data collection period by the main investigator. Pretest questions were conducted at Motite Furra Primary Hospital by taking 5% (16 nurses) based on the sample size one week before the actual data collection to check for clarity of language, acceptability, validity, and completeness of the questionnaires. Then appropriate corrections and modifications were made, such as the logical order of some questions; some difficult words were revised; and some items were removed.

Every day after the data was collected; supervisors and the principal investigator checked the collected data for completeness. The overall standardized Cronbach's alpha for the internal reliability score of measurement was 0.82 for 5% of the sample nurses. The principal

investigator made an ongoing checkup each day during the data collection to ensure the quality of the data by checking filled-out questionnaires. The data was saved as a file in a safe area where only the investigator had access to it and confidentiality was ensured by not recording his/her names or any other personal identity

For qualitative data

For the validity and reliability of the study, the Lincoln and Guba (1985) criteria were taken into account, which are as follows:

Credibility: To ensure credibility, data coding, analysis, and interpretation were discussed throughout the research process with advisors and investigators. **Dependability:** The findings were checked and verified by the advisor and investigators in order to examine the data. Audio records and the data analysis process are available for cross-checking. **Transferability:** To ensure transferability, the participant statement was quoted directly and clearly distinguishes the context of the study from the study itself. **Conformability:** To establish conformability, the interviews were conducted in a quiet, safe area. Notes were taken during the interview. Audio recordings and raw data were kept. The data analysis process included coding, categorizing, and developing themes to reduce personal biases.

4.10. Data Processing and Analysis

For quantitative data

Following the data collection, the data was rechecked for completeness, entered into Epidata version 4.6, and then exported to SPSS version 26 for analysis. Running descriptive statistics allowed me to inspect my data for outliers, missing values, and the fulfillment of assumptions. The variables were computed and re-coded by the transform function of SPSS. Results are summarized using descriptive statistics like frequencies, percentages, and median with an interquartile range, which are then finally presented using figures, tables, and text. Knowledge was assessed using eight true and false questions and dichotomized into good and poor knowledge after computing. Attitudes are assessed with eleven measuring items and dichotomized into favorable and unfavorable attitudes after computing. The practice of PC was computed from all relevant ten Likert practice items and dichotomized into good and poor

practice. First, binary logistic regression analysis was done to sort candidate variables for multiple logistic regression with a p-value less than or equal to 0.25 at a 95% confidence interval. A multivariable logistic regression analysis was conducted to identify factors strongly associated with palliative care practice. Finally, the association was declared with a p-value less than 0.05 and an adjusted odds ratio (AOR) at a 95% confidence interval level. I applied the "Enter Selection" method to select explanatory variables. Multicollinearity was checked to see the linear correlation among the independent variables by using the variance inflation factor (VIF), tolerance, and standard error. None of the variables yielded a variance inflation factor >10 , tolerance <0.1 , or standard error >2 (VIF >1.022 , tolerance >0.961 , and standard error <0.059), respectively, and they were not dropped from multivariable analyses. Hosmer and Lemeshow's test was found to be insignificant (p-value = 0.989), and the Omnibus test was significant (p-value = 0.000), which indicates that the model was fitted.

For a qualitative study

The qualitative data were analyzed manually. The audio-taped interviews, field notes, and interview notes were transcribed verbatim and checked for accuracy and completeness by listening to the tapes and comparing them to the transcripts. Transcription was done from Amharic to English verbatim to obtain the whole sense. This translated English version was read again and again by the investigator, who narrated the individuals' ideas word for word. Data analysis using thematic was started at the same time as the data collection period, and each interview was transcribed verbatim and analyzed before the next one took place, each interview providing the direction for the next one. The in-depth interview was stopped after data saturation occurred and no more codes were identified. The interview transcripts were reviewed several times, and the data were coded by number. Then the categories were formed from the codes in such a manner that similar codes were grouped into the same categories. Finally, the concepts extracted were presented in narratives and triangulated with the quantitative. Qualitative data was collected to provide a deeper understanding of the quantitative findings.

4.11. Operational definition

Practice: nurses who have scored $\geq 75\%$ of palliative care practice-related questions were said to have good practice, whereas those nurses who have scored $< 75\%$ of palliative care practice-related questions have poor palliative care practice (Teklay *et al.*, 2020). **Knowledge:** nurses who have scored $\geq 75\%$ of the overall score of the Palliative Care Quiz for Nursing (PCQN) scale have good knowledge about PC, while those nurses who have scored $< 75\%$ on the PCQN scale have poor knowledge (Gedamu *et al.*, 2019). **Attitude:** nurses who have scored $\geq 50\%$ of the overall score of Frommelt's attitude toward the care of dying (FATCOD) scale have a favorable attitude, while those nurses who have scored $< 50\%$ of the whole score of the FATCOD scale have an unfavorable attitude (Gedamu *et al.*, 2019). **Barriers** are problems that hinder people from performing something or limit what they can do. In this research thesis, it is also referred to as care—any factor (physical, environmental, organizational, or personal) that impedes the implementation of palliative care.

4.12. Ethical consideration

Ethical clearance was obtained from the institutional review board of Hawassa University College of Medicine and Health Science School of Nursing. An official letter was written to the Hawassa University Comprehensive Specialized Hospital, Adare General Hospital, and Hawela Tula Primary Hospital administrations, respectively. Accordingly, the permission letter is then given to each hospital nurse's matron by the hospital manager. After the aim of the study, the purpose of the study, and the non-invasiveness of the data collection procedure were clearly explained to the participants, all study participants were provided with informed oral consent. The information was kept confidential, and respondents were assured that they were remaining anonymous. Then respondents were given the chance to ask anything about the study and were made free to refuse or stop at any moment if that was their choice.

4.13. Dissemination and Utilization of Results

The study findings will be disseminated through the scientific presentation and submission of hard and soft copies to relevant authorities (the School of Nursing, HUCSH, and Hawassa City Health Department offices). Furthermore, efforts will be made to publish in reputable local or international journals.

CHAPTER FIVE

5. Results

5.1. For quantitative data

In total, 319 nurses participated in the study. Three hundred thirteen (313) of them have responded to the questionnaires, resulting in a 98% response rate. Six questionnaires were excluded from the analysis due to missing data. Three of them had insufficient demographic information, and three nurses missed work due to annual leave.

5.1.1. Socio-Demographic Characteristics

The numbers of participants by hospital were Hawassa University Comprehensive Specialized Hospital 203 (64.9%), Adare General Hospital 79 (25.2%), and Hawela Tula Primary Hospital 31 (9.9%)(Figure 3). It was found that 145 (46.3%) were between 20 and 30 years old, and the median age of the participants was 31 years (interquartile range 27–34 years). More than half 175 (55.9%) of the respondents were female. One hundred thirty-nine (44.4%) of the participants were Protestant religious followers, and 132 (42.2%) were Orthodox. The majority of respondents, 207 (66.1%), hold a Bachelor of Science (BSc) in nursing. In terms of their current workstation, more than one fourth of respondents 85 (27.2%) worked in the medical unit. Half of the participants 158 (50.5%) were married, and the majority 153 (48.9%) of the respondents had five to ten years of working experience, and the median work experience in the nursing profession was 6 years (interquartile range 4–8 years). About 128 (40.9%) of the respondents earn a monthly salary of 6001–7000 ETH birr, and the median monthly salary of the nurses was 6500 (interquartile range 6000–7500 ETB). Around two-thirds 215 (68.7%) of nurses had no training related to palliative care (Table 2).

Table 2: Socio-demographic characteristics of nurses working in a selected public hospital in Hawassa City, Sidama, Ethiopia, August 2023 (n = 313)

Socio-demographic Characteristics	Frequency	Percent
Name of Work Institution/Hospital		
HUCSH (Tertiary)	203	64.9

Adare (General)	79	25.2
Hawela Tula (Primary)	31	9.9
Age in years		
20-30 years	145	46.3
31-40 years	118	37.7
41-50 years	50	16.0
Sex		
Male	138	44.1
Female	175	55.9
Religion		
Orthodox	132	42.2
Muslim	35	11.2
Protestant	139	44.4
Catholic	7	2.2
Qualification		
diploma in Nursing	40	12.8
BSC Nurse	207	66.1
MSC Nurse	66	21.1
Clinical area/working unit		
Medical ward	85	27.2
Surgical Ward	82	26.2
Intensive Care Unit	35	11.2
Emergency Department	49	15.7
Oncology ward	13	4.2
Pediatrics ward	33	10.5
Others(OR, phy)	16	5.1
Marital status		
Married	158	50.5
Single	139	44.4
Divorced	10	3.2
Widowed	6	1.9
Work experience		
<5 year	110	35.1
5-10 years	153	48.9
11-15 years	50	16.0
Monthly salary (Eth. Birr*)		
4000-5000	10	3.2
5001-6000	82	26.2
6001-7000	128	40.9
7001-8000	72	23.0
>=8001	21	6.7
Training in palliative care		
Yes	98	31.3
No	215	68.7

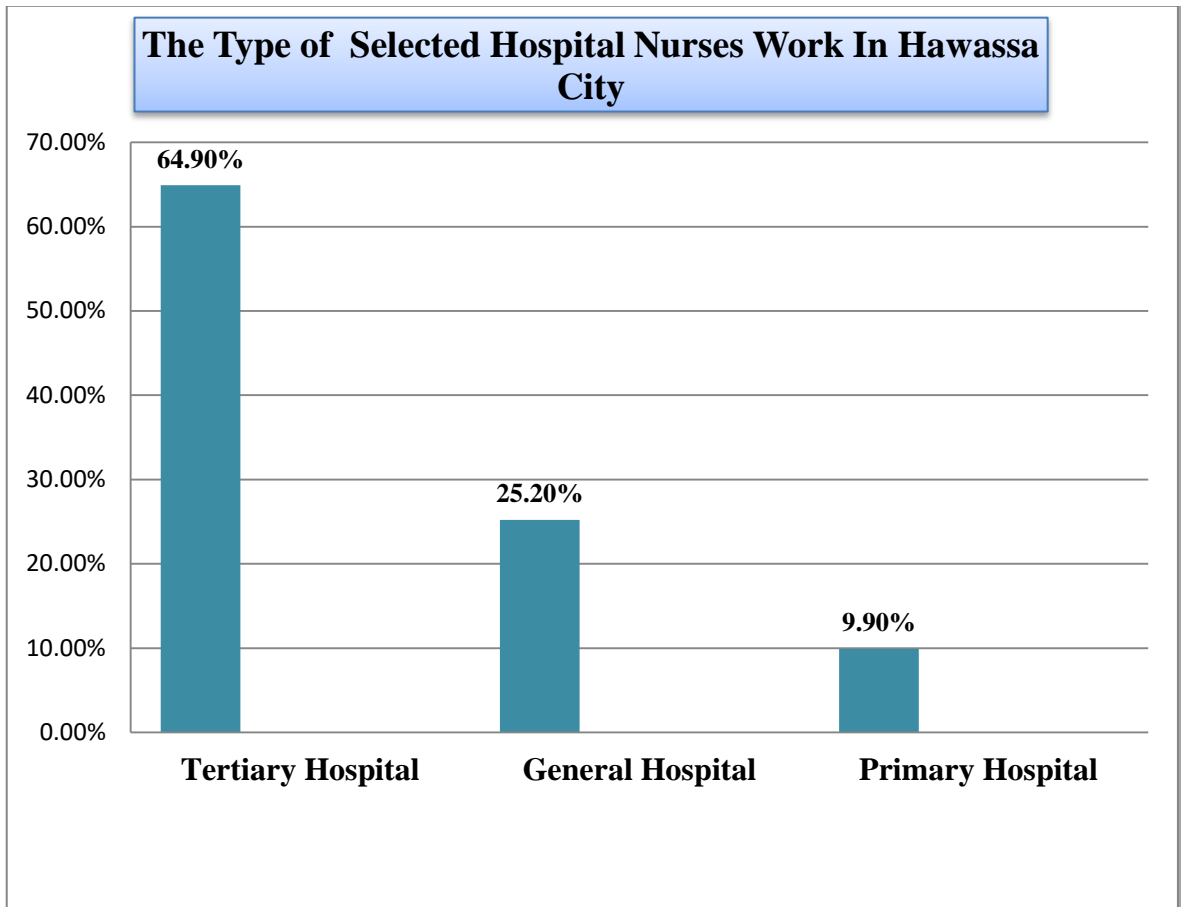


Figure 3: Percentage of the type of hospital facility in which the nurses work in Hawassa City, Sidama, Ethiopia, 2023.

5.1.2. Knowledge-related characteristics

Of the total respondents, 249 (79.6%) had poor knowledge, and only 64 (20.4%) nurses working in selected public hospitals in Hawassa City, Sidama, Ethiopia, had good knowledge of palliative care practice(Figure 4).

Table 3: Distribution of knowledge questions towards palliative care services among nurses working in a selected public hospital in Hawassa city, Sidama, Ethiopia, August 2023 (n= 313)

Variables		Frequency	Percent
Palliative care is appropriate only in situations where there is evidence of a downhill trajectory.	True	158	50.5
	False	155	49.5
Morphine is the standard used to compare the analgesic effects of other opioids	True	251	80.2
	False	62	19.8
It is crucial for family members to remain at the bedside until death occurs.	True	195	62.3
	False	118	37.7
Getting spiritual support is important for terminally ill patients.	True	196	62.6
	False	117	37.4
Palliative care should only be provided for patients who have received curative treatment.	True	120	38.3
	False	193	61.7
During the terminal stages of an illness, drugs that can cause respiratory depression are appropriate for the treatment of severe dyspnoea.	True	149	47.6
	False	164	52.4
Suffering and physical pain are synonymous.	True	154	49.2
	False	159	50.8
The pain threshold is lowered by anxiety or fatigue.	True	222	70.9
	False	91	29.1

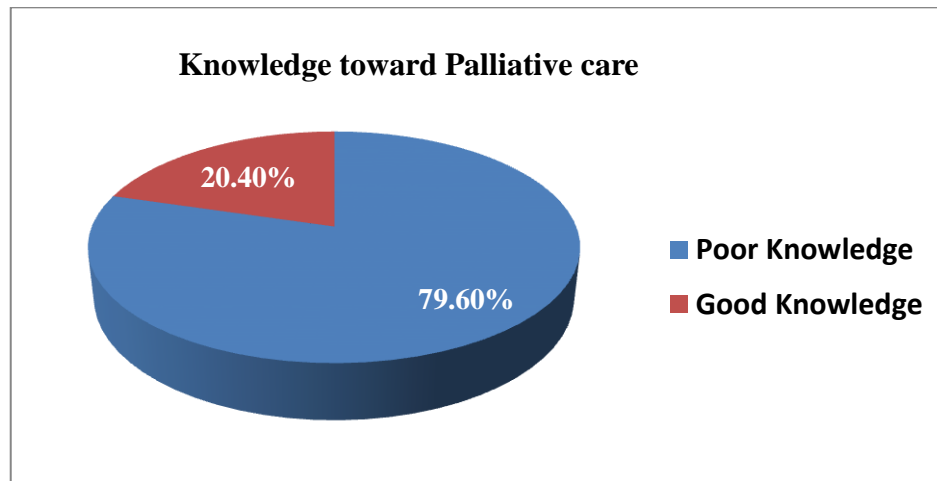


Figure 4: The overall palliative care knowledge among nurses working in selected public hospitals in Hawassa City, Sidama, Ethiopia, August 2023.

5.1.3. Attitude towards Palliative Care

Of the total study participants, half of them, 157 (50.2%) nurses, had an unfavorable attitude, and around 156 (49.8%) nurses working in selected public hospitals in Hawassa City, Sidama, Ethiopia, had a favorable attitude towards palliative care practice (Figure 5).

Table 4: Distribution of Nurses' Attitudes Towards Palliative Care Practice Working in a Selected Public Hospital in Hawassa City, Sidama, Ethiopia, August 2023 (n = 313)

Statements	SD (%)	D (%)	U (%)	A (%)	SA (%)
Giving care to a dying person is a worthwhile experience.	58(18.5)	57(18.2)	36 (11.5)	116(37.1)	46(14.7)
Nursing Caring for the patient's family should continue throughout the period of grief and bereavement.	28(8.9)	64 (20.4)	29(9.3)	114(36.4)	78(24.9)
I would be uncomfortable if I entered the room of a terminally ill person and found him or her crying.	7(2.2)	156(49.8)	1(0.3)	146(46.6)	3(1.0)
I would not want to care for a dying person.	117(37.4)	115(36.7)	32(10.2)	38(12.1)	11(3.5)
I would be upset when the dying person I was caring for gave up hope of getting.	57(18.2)	83(26.5)	61(19.5)	96(30.7)	16(5.1)
When a patient asks, "Am I dying?" I think it is best to change the subject to something cheerful.	35(11.2)	73(23.3)	66(21.1)	111(35.5)	28(8.9)
The family is involved in the physical care of the dying person.	32(10.2)	82(26.2)	25(8.0)	138(44.1)	36(11.5)
I am afraid to become friends with a dying person.	76(24.3)	119(38.0)	47(15.0)	55(17.6)	16(5.1)
I would feel like running away when the person actually died.	98(31.3)	99(31.6)	44(14.1)	61(19.5)	11(3.5)

Families need emotional support to accept the behaviour changes of the dying person.	18(5.8)	30(9.6)	43(13.7)	161(51.4)	61(19.5)
Families should be concerned about helping their dying member make the most of his or her remaining life.	18(5.8)	29(9.3)	40(12.8)	156(49.8)	70(22.4)

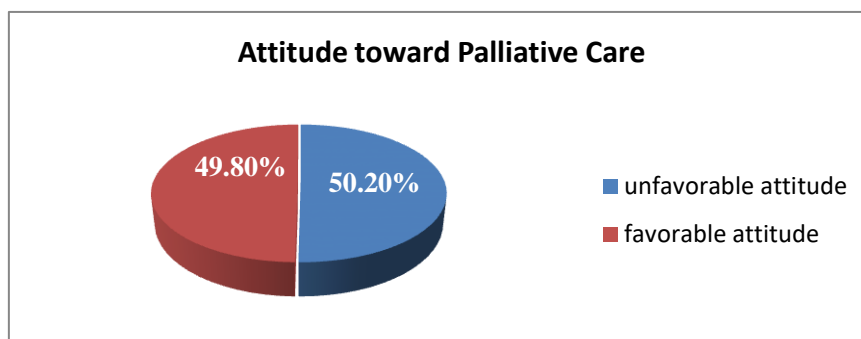


Figure 5: The overall nurses' attitude towards palliative care among nurses working in selected public hospitals in Hawassa City, Sidama, Ethiopia, August 2023.

5.1.4. Practice of nurses towards palliative care

Almost three-fourth (76.6%) of study participants had poor palliative care practice, and only 74 (23.4%) scored greater than 75% (Figure 6). The majority of the respondents, 190 (60.7%), had to initiate a PC discussion with patients during diagnosis. Spiritual/religious 181 (57.8%) and cultural 94 (30.2%) factors were respectively the most and least considered factors by participants when dealing with terminally ill patients' conditions, and 188 (60.1%) of the nurses reported that they understood patients' reactions when addressing the spiritual issue.

Regarding cultural assessment during patient care, 138 (44.1%) of the participants included language and family communication. Regarding psychological issues, 149 (47.6%) of participants preferred to counsel them, while 178 (56.9%) provided emotional support to the patients, and 219 (70.5%) participants hid the truth from the patients. Concerning decision-making, 158 (50.5%) and 107 (34.2%) of the respondents revealed that they were involved

with the family and other health professionals in the decision-making, respectively, and 216 (69%) of the study participants perceived terminally ill patients concerns as their right.

In their current practice, the majority 195 (62.3%) of nurses manage patients' pain using paracetamol or ibuprofen to alleviate the pain of terminally ill patients. More than half of the participants 162 (51.8%) did not understand the need for a multidisciplinary team, though they failed to recognize its composition. Regarding patient pain assessment, 236 (75.4%) of them graded with the face, 193 (61.7%) assessed intensity, and 126 (40.3%) focused on location (Table 5).

Table 5: Palliative care practice among nurses working in a selected public hospital in Hawassa City, Sidama, Ethiopia, August 2023 (n = 313)

Characteristics	Multiple responses	Yes	No
When do you initiate a palliative care discussion?	During diagnosis	190(60.7)	123(39.3)
	When the disease progress	131(41.9)	182(58.1)
	At the end of life	87(27.8)	226(72.2)
What are the factors considered when dealing with terminally ill patients?	Spiritual/ religious	181(57.8)	132(42.2)
	Medical condition	123(39.3)	190(60.7)
	Cultural	96(30.7)	217(69.3)
	Psychological condition	133(42.5)	180(57.5)
What do you consider before addressing the spiritual issue?	Connect with a spiritual counselor	189(60.4)	124(39.6)
	Listen with empathy.	110(35.1)	203(64.9)
	Impose your own view.	86(27.5)	227(72.5)
	Understand patient reaction	188(60.1)	125(39.9)
	Truth-telling and decision-making	123(39.3)	190(60.7)
	Preference regarding disclosure of information	85(27.2)	228(72.8)
Cultural assessment during patient care	Dietary preference	102(32.6)	211(67.4)
	Language, family communication	138(44.1)	175(55.9)
	Perspective on death, suffering, and grieving	118(37.7)	195(62.3)

Addressing the psychological aspect of the patient while giving palliative care	Emotional support	178(56.9)	135(43.1)
	Counselling the patient	149(47.6)	164(52.4)
	Hiding the truth	219(70.0)	94(30.0)
In your current practice, whom do you involve in the decision-making process?	Family	158(50.5)	155(49.5)
	My own	112(35.8)	201(64.2)
	Other health professionals	107 (34.2)	206(65.8)
How do you perceive terminally ill patients' concerns or questions?	Doubting your professionalism	156(49.8)	157(50.2)
	Attention-seeking behavior	188(60.1)	125(39.9)
	Patient right	216(69.0)	97(31.0)
What are the most commonly used medications in your practice for severe pain?	Paracetamol/ibuprofen	195 (62.3)	118 (37.7)
	Pethidine	84 (26.8)	229 (73.2)
	Morphine	151 (48.2)	162 (51.8)
Do you deliver palliative care as a team?	Yes/No	151(48.2)	162(51.8)
How do you assess patient pain?	Grade with face	236(75.4)	77(24.6)
	Intensity	193(61.7)	120(38.3)
	Location	126(40.3)	187(59.7)

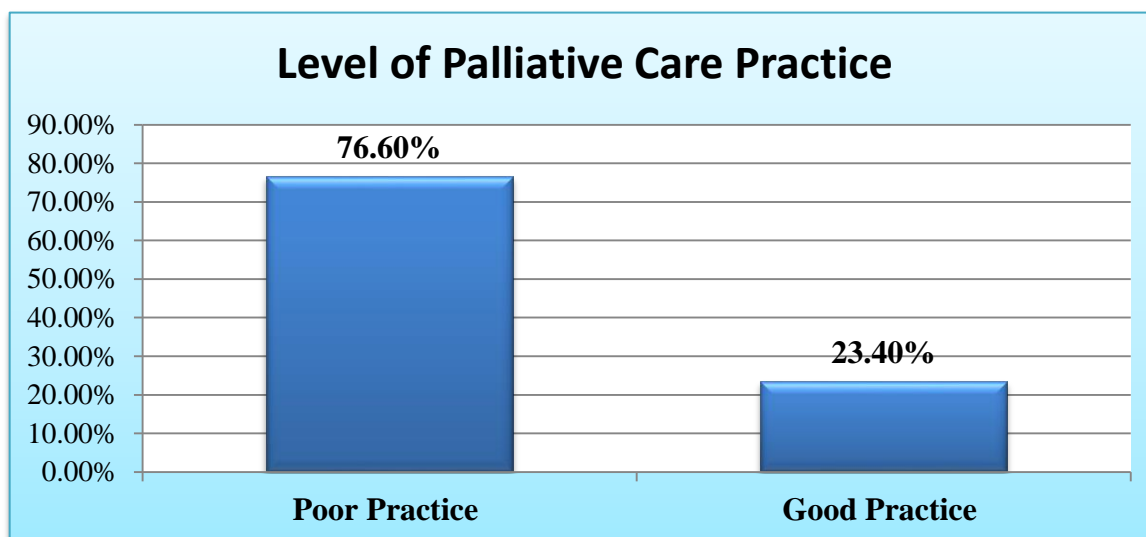


Figure 6: Level of Palliative Care Practice of Nurses Working in Selected Public Hospitals in Hawassa City, Sidama, Ethiopia, August 2023 (n-313).

5.1.5. Factors Affecting Palliative Care Practice

In bivariable analysis, variables that are candidates for multivariable analysis were the type of hospital, age, years of experience, monthly salary, level of knowledge, level of education, and palliative care training, which are variables with a p-value less or equal to 0.25. They were then subjected to a multivariable analysis to control the effect of confounders. According to this study's findings from multivariable logistic regressions, type of hospital, age, level of education, work experience, and training in palliative care are identified as factors associated with practice in palliative care among nurses.

The odds of having poor PC practice among nurses working in general and primary hospitals were 73.9% (AOR of 0.261 at 95% CI (0.116, 0.592), $p = 0.001$) and 85% (AOR: 0.150 at 95% CI (0.039, 0.577), $p = 0.006$) less likely as compared to nurses working in tertiary hospitals, respectively.

The odds of having a poor PC practice among nurses aged 20–30 and 31–40 years were 4.4 and 3.6 times higher, with an AOR of 4.367 at 95% CI (1.403–13.599) $p = 0.0011$ and 3.609 at 95% CI (1.115–11.680) $p = 0.032$, respectively, as compared to those aged 41–50 years. The odds of having a poor PC practice among diploma nurses were 4.6 times more likely, with an AOR of 4.619 at 95% CI (1.720, 12.404) $p = 0.002$ as compared to those who had MSc nurses.

The odds of having a poor PC practice among those with less than five years of experience were 4.5 times more likely, with an AOR of 4.503 at the 95% CI (1.520–13.336) ($p = 0.007$) as compared to those with eleven to fifty years of experience. The odds of having a poor PC practice among those who had no training in palliative care services were 4.6 times more likely as compared to those who had training in palliative care, with an AOR of 4.609 at 95% CI (2.117–10.035), $p = 0.000$.

Table 6: The association between explanatory variables and the practice of nurses towards palliative care at Hawassa City in selected public hospitals in Sidama, Ethiopia, August 2023 (n = 313)

Explanatory variable	Category	Practice level		COR (95%CI)	AOR (95%CI)	P-value
		Poor	Good			
Type of Hospital	Tertiary	142	61	Ref	Ref	
	General	69	10	0.337(0.163-0.699)	0.261(0.116-0.592)	0.001*
	Primary	28	3	0.249(0.073-0.852)	0.150 (0.039-0.577)	0.006*
Age	41-50	46	4	Ref	Ref	
	20-30	102	43	4.848(1.643-14.305)	4.367(1.403-13.599)	0.011*
	31-40	91	27	3.412(1.126-10.336)	3.609(1.115-11.680)	0.032*
Knowledge	Good	43	21	Ref	Ref	
	Poor	196	53	0.554(0.303-1.013)	0.672(0.338-1.336)	0.257
Level of education	MSc	56	10	Ref	Ref	
	Diploma	20	20	5.600 (2.234-13.579)	4.619(1.720-12.404)	0.002*
	BSc	163	44	1.512(0.714-3.203)	0.999(0.447-2.236)	0.999
Experience	11-15	44	6	Ref	Ref	
	<5	76	34	3.281(1.276-8.432)	4.503(1.520-13.336)	0.007*
	5-10	119	34	2.095(0.823-5.333)	2.365(0.821-6.808)	0.111
Monthly salary	>8001	11	10	Ref	Ref	
	4000-5000	9	1	0.122(0.013-1.144)	0.255(0.021-3.117)	0.285
	5001-6000	69	13	0.207(0.073-0.587)	0.317(0.094-1.066)	0.063
	6001-7000	98	30	0.337(0.130-0.870)	0.363(0.120-1.096)	0.072
	7001-8000	52	20	0.423(0.156-1.150)	0.367(0.116-1.163)	0.088
Training in Palliative Care	Yes	87	11	Ref	Ref	
	No	152	63	3.278(1.640-6.552)	4.609(2.117-10.035)	0.000*

NB: * = statistically significant in multivariable; Ref = reference group.

5.2. For qualitative data

5.2.1. Demographic Characteristics of the Key Informant Interview (KII)

In-depth interviews were conducted with the selected hospital wards and unit heads. The ages of the study participants ranged from 28 to 41 years old. The working experience ranged from 7 to 14 years in nursing. In this qualitative study, eight head nurses were interviewed (seven men and one woman). Finally, for those seven participants, the analysis begins with transcription, followed by repeated reading, coding, classification, and theme-thematic analysis. Participants in this study are listed in the table below (table 6).

Table 7: Socio-demographic characteristics of nurses working in a selected public hospital in Hawassa City, Sidama, Ethiopia, August 2023 (n = 7)

Characteristics		Frequency
Sex	Male	6
	Female	1
Professional	Nurses	7
Institution	Hawassa University Comprehensive Specialized Hospital	3
	Adare General Hospital	2
	Hawela-Tula Primary Hospital	2
Educational status	MscDegre	1
	BscDegree	6

5.2.2. Perceived barriers of nurses towards PC practice (nurses' head view)

In the last section of the questionnaires, the study intends to assess the other hurdles, which include the barriers for nurses to deliver PC for terminally ill patients. The study revealed several barriers faced by nurses in PC practice from the perspective of head nurses, who were interviewed and transcribed accordingly. After the transcribed data was coded in Microsoft Word manually, it was finally viewed within these themes: 1. Knowledge deficit 2. negative attitudes among patients and family; spiritual care and modern medicine clash 3. issues with healthcare providers, and 4. inadequate hospital facilities (Table 7).

Table 8: Themes and categories of barriers to palliative care practice in selected public hospitals in Hawassa City, Sidama, Ethiopia, in 2023

Main theme	Category	Subcategories
Deficient of knowledge	-Inadequate education	- The nurse is not updating himself.
	-Inadequate training	- Lack of education
	-Lack of life experience	- Lack of training -Lack of work experience
Negative attitude among patients and family, and Spirituality and medical treatments	-Patients' and families' attitudes and beliefs about palliative care	- Patient and family resistance - Refuse to accept the diagnosis
	- spiritual care and medical medicine clash	- Want to move traditional medicine - Spirituals support
Problem related to health care providers	-Lack of a multidisciplinary team	- Lack of team approach -Lack of coordination amongst services
Inadequate hospital facilities	-Lack of motivation and recognition	- Lack of motivation, recognition, and praise for nurses
	-Drug inaccessibility	- Lack of anti-pain medications
	-Heavy workload and Shortage of staff.	- poor design of units that do not allow for privacy - feel discomfort regarding service provision
		- lack of standard guidelines

1. Deficient inknowledge

Inadequate palliative care education and training

Lack of PC education and training opportunities was the most frequently reported barrier to the implementation of palliative care practice by key informants, which hindered them from providing for the patient.

A 37-year-old male nurse with 8 years' experience said that *"nurse [tertiary hospital] palliative care practice is directly related to their academic background and level of awareness regarding palliative care practice. What primarily affects nursing palliative care practice is a lack of in-service training on palliative care."*

A 30-year-old male nurse with experience of 10 years stated, *"When we see [general hospital] palliative care as an institution in the current state of our country, palliative care is not understood by professionals. One of the biggest barriers is a lack of professional knowledge because palliative care has its own science and discipline."*

A 32-year-old female nurse with experience of 7 years said: *"First of all, palliative care is not a field that pays well; palliative care as a system is an ignored service, and there is a shortage of trained providers in the hospital [primary hospital], which often results in delayed care."*

Another 35-year-old male nurse with 14 years of experience said, *"I am providing the service [at the tertiary hospital] because I have around fourteen years of work experience in nursing, but the biggest barrier for me is that I haven't taken in-service training on palliative care."*

Lack of life experience

In terms of experience, most of the KII participants expressed their experience that when nurses start working with critically ill patients, they should be paired with other experienced nurses.

A 32-year-old female nurse with experience 7 said, *"What I have seen from my work experience and what I'm still doing is that when we do a nursing shift or round every six months with our nursing management, we do assign nurses with good working behavior, and when nurses start work here in our unit, I'll pair them with other experienced nurses because I expect that nurses who don't have work experience have low readiness levels for the provision of palliative care services."*

2. Negative attitude among patients and family, and conflict between spiritual care, and modern medical

Negative attitudes among patients and families and beliefs about palliative care

Some participants perceived that patients' and families' own attitudes and beliefs around palliative care often serve as barriers to its access and provision.

A 28-year-old male nurse with experience of 7 years stated that *"after they [the family] hear about the condition of the sick person [in a general hospital], they refuse to accept the diagnosis and say that this is a cursed disease, saying that they don't need hospital services [medical treatment], and they move to traditional medicine."*

Another 35-year-old male nurse with experience of 8 years stated, *"When a person enrolls in palliative care [at a tertiary hospital], family estimates; it's just that he's finished, so why do we waste our time? Why do we invest our money there? Why don't we enter the house? They don't accept the service."*

A 30-year-old male nurse with experience of 10 years stated, *"In the hospital, there are those who leave the service saying that I [patients] don't want my family to pay for the high cost of money. I don't want to be here any longer. I want to go home."*

Spiritual care and modern medicine clash.

In Ethiopia, the conflict between spirituality, faith, and modern medical interventions is a common dilemma for critically ill patients. Traditional healing is an influential community-based resource that impacts the utilization of drugs as key informant interview participants; however, they advise using both concurrently.

A 37-year-old male nurse with experience of 8 years said, *"After being diagnosed and starting medicine, the patient wants to use "holy water" and "prayer" with their spiritual counselor, and we instruct them not to stop taking the medication and to use both together."*

A 32-year-old female nurse with experience of 7 years stated that *"they [patients] also need help with their religion because it is believed that when spiritual things become stronger, other things become stronger as well."*

3. Inadequate hospital facilities

Drug inaccessibility

Most of the key informant interview participants raised the fact that access to pain medication is one component of palliative care, but the inaccessibility of pain medication makes it difficult to manage pain symptoms.

A 29-year-old male nurse with experience of 8 years stated, "*There is a huge challenge to managing pain currently; there is a shortage of pain medication in our hospital [a tertiary hospital], especially morphine, and it is difficult to manage pain appropriately.*"

Another 28-year-old male nurse with experience of 7 years supported this idea: "*There is a big problem in the supply of medicine in our hospital [general hospital], especially morphine. In the absence of morphine, we use the usual low sedation, for example, paracetamol and ibuprofen, and patients are suffering due to pain.*"

Heavy workload and a shortage of staff (health professionals).

Participants in key informant interviews mentioned that heavy workloads, staff shortages, and poor unit design in the department result in less attention and do not allow for patient and family privacy, which were identified as major barriers to the provision of palliative care.

A 29-year-old male nurse with 8 years of experience stated, "*The nurses are busy in the emergency unit throughout the day and night (even for three shifts) due to workloads because a lot of patients come from the nearest regions, district hospitals, and health centers with referral cases because it's the only referral hospital in our city, which results in less attention on palliative care practice.*"

Another 41-year-old male nurse with 10 years of experience strength this idea: "*Sometimes patient flow increases in our hospital [primary hospital], and during that time we cannot provide palliative care for patients because of a shortage of health professionals, so I hope the workload will decrease if additional nurses are hired in the future and the service for critically ill patients will also increase.*"

Lack of motivation and recognition for nurses

Participants in key interviews stated that in order to improve palliative care service delivery, nurses needed to be motivated and recognized, but this was not being done at their facility.

A 35-year-old male nurse with 8 years of experience said, *“One day, the health of a professional may get bored; to encourage the profession, he or she needs recognition, motivation, and praise, but in our setup [the tertiary hospital], these things are not being done, and this may result in less attention for palliative care practice*

4. Problem related to healthcare providers

The lack of a multidisciplinary team

Even though the participants agree on the importance of a multidisciplinary approach in providing palliative care, the presence of sole responsibility in the absence of team support challenges them to give the service.

A 30-year-old male nurse with experience of 10 years stated, *“A coordinated team is needed to provide this service [palliative care]. If the group existed, it would have been given smoothly, but the lack of a coordinated team in our hospital [general hospital] does not provide the service properly.”*

A 29-year-old male nurse with experience of 8 years stated, *“It should be multidisciplinary, but the team is not organized in our hospital [primary hospital], there is no understanding, and the manpower is not complete.”*

Another 37-year-old male nurse with experience of 7 years says, *“I think it can only happen when it is multidisciplinary, but multidisciplinary did not get interconnected in our hospital [a tertiary hospital], and as a result, palliative care service missed the opportunity to expand more than that.”*

CHAPTER SIX

6. DISCUSSION

The aim of this study was to assess the level of palliative care practice, perceived barriers, and associated factors among nurses working in selected public hospitals in Hawassa City, Sidama, Ethiopia. The quantitative finding showed that from multivariable logistic regressions, type of hospital, age, level of education, work experience, and training were identified as factors associated with practice towards palliative care, as well as the lack of a multidisciplinary team, patients, and families attitudes, drug inaccessibility, inadequate palliative care education and training, a heavy workload and shortage of staff, and a lack of motivation and recognition for nurses, which were the critical issues raised by key informants.

In this study, overall, three-fourths of respondents had poor palliative care practices; 76.6% [95% CI, 72–81] of nurses in those studied public hospitals. This is in line with the studies conducted in Addis-Abeba (76.2%), Nigeria (74.1%), the Philippines (76.8%), and the Tigray region (74.8%) (Kassa *et al.*, 2014; Ajisehiri *et al.*, 2019; Pasaol, 2019; Teklay *et al.*, 2020).

This finding, however, showed a higher level of poor palliative care practice than the findings of a study conducted in the Amhara Region (55.7%), Egypt (63.3%), Jimma (65.8%), Egypt's Assiut University (58.6%), India (63.5%), and Kenya (58.4%) (Anteneh *et al.*, 2016; Sayed *et al.*, 2016; Tesfaye, Anbessie, and Gizaw, 2018; Mohammed *et al.*, 2020; Walia *et al.*, 2020, and Rose Wangui, 2021). This might be due to the absence of palliative care units in the majority of hospitals in this study area. Also, cultural and religious views might influence palliative care services. *According to qualitative data, the level of palliative care practice has decreased due to a lack of motivation, recognition, and praise for nurses.* Contrary to these findings, a high level of poor palliative care practice was reported in Gonder (88.11%) (Ayteneu *et al.*, 2022). The possible reason for this discrepancy might be that in the current study, some respondents received palliative care training, but none of the nurses 100% got palliative care training in Gonder during the study period that could help them practice palliative care.

The majority of respondents (57.8%) said that the thing to be considered before addressing the spiritual issue is connecting with a spiritual counselor. This could be because the majority of Ethiopian people are religious followers, and they believe that God heals them in addition to medical intervention. *This was supported by qualitative data: after being diagnosed and starting medicine, the patient wanted to use "holy water" and "prayer" with their spiritual counselor.* This finding was in contradiction to a study conducted in Kenya (Rose Wangui, 2021). It could be a result of Ethiopian spiritual and cultural diversity.

The majority of respondents (70.0%) in this study addressed the psychological issues of the patient by hiding the truth while giving palliative care. This is in line with the study conducted in Jimma (70.9%) (Tesfaye, Anbessie, and Gizaw, 2018). This may be due to just the fear of accepting the condition; in some cases, keeping the reality hidden is necessary, which is supported by quantitative data done in Switzerland (Testoni *et al.*, 2020). *You feel a bit like a betrayer because they should trust you, but you keep hiding things from them. The qualitative findings support this: the family refuses to accept a certain diagnosis of a sick person's condition and avoids hospital services instead, choosing traditional medicine.* This finding was lower than the study done in Gondar (85.79%) (Ayteneu *et al.*, 2022). Time differences among studies might have contributed to this result.

Pain management is one of the most common practices among nurses. This study revealed that most nurses (62.3%) use ibuprofen or paracetamol to relieve severe pain in patients who are terminally ill. This is in line with a study conducted in the Amhara region (63.6%) (Anteneh *et al.*, 2016). This finding contradicts the studies conducted in Nigeria (Ajisehiri *et al.*, 2019) and Ghana (Boatema *et al.*, 2022). This might be due to the severe side effects of opioid analgesics and the fact that nurses are not recommended to prescribe opioid analgesics (Teklay *et al.*, 2020). The other reason might be due to the unavailability of opioid analgesics and/or a lack of understanding of WHO analgesic ladder use, which is supported by quantitative data done in Malaysia (Mohd Azmi *et al.*, 2022) and Ghana (Abubakari Wuni *et al.*, 2020). *This is confirmed by qualitative data. The interview reveals that there is a lack of pain medicine, especially morphine, making it difficult to treat pain adequately.*

The current study showed that more than half (51.8%) of the participants did not understand the need for a multidisciplinary team, though they failed to recognize its composition. *This is supported by qualitative data showing that a multidisciplinary care team should be important, but there is sole responsibility in the absence of team support*, which is supported by quantitative data done in Ghana(Boatemaa *et al.*, 2019). However, this study contradicted that of Thailand (Prachyakoon *et al.*,2017). This might be due to variations in trends to perform activities in groups among countries as well as the level of individual recognition and willingness towards the need for a multidisciplinary team.

According to this study, there was a significant association between the types of hospital facilities in which the nurses worked and their practice of palliative care. Nurses working in general and primary hospitals were 73.9% and 85% less likely to have poor PC practice, respectively, as compared with tertiary hospitals.

It is expected that good PC practice will be higher in tertiary facilities, such as teaching hospitals and referral centers, but one possible reason for poor practice in tertiary facilities could be operations based on professional specialty restrictions in tertiary health facilities, unlike in secondary and primary hospitals, where each staff member is involved in almost every aspect of the patient's care in Nigeria (Ajisegiri *et al.*,2019) and Canada(Hawley, 2017). The other possible reason was that workload among tertiary health facility staff could result in reduced attention on subject matters. *The qualitative findings support this: Nurses face increased workloads due to patients from nearby regions, district hospitals, and health centers, leading to less attention to palliative care practice*, which is supported by quantitative data done inAddis Ababa (Getachew Mullu, 2014),Carolinain the USA (Haines *et al.*, 2018),andIndia (Walia *et al.*, 2020).

This study, contrary to the study conducted in Nigeria, found that there was no significant association between the type of hospital facility nurses work in and their practice of palliative care (Anyanwu & Agbedia, 2020). The discrepancy may be due to this study being conducted in selected public hospitals, whereas in Nigeria, it was conducted in both public and private hospitals. There was no research analyzing the association between the type of hospital nurses work in and their practice of palliative care in the study area, even in Ethiopia.

The premise of the need to examine this relationship is that good palliative care practices will abound in hospitals that have the necessary human and material resources and infrastructure.

In this study, there was a significant association between age and the practice of palliative care.

In the current study, nurses aged 20–30 and 31–40 years were 4.4 and 3.6 times more likely to have poor PC practice than those aged 41–50 years. This finding is in line with the study conducted in Jimma (Tesfaye, Anbessie, and Gizaw, 2018), New Delhi, India (Walia *et al.*, 2020), and Bihar, India (Nair *et al.*, 2021). This showed that, at the lower age of nurses, the chance of exposure to different patients who need such care might decrease, and the experience of applying palliative care practice might be reduced. But this finding contradicts studies done in Addis Ababa (Mandesh, 2014). This might be in certain hospitals, where there is a separate room for chronic critical care; in others, there is not, and as a result, they may have less exposure.

This study found that level of education had a significant association with the practice of nurses towards palliative care. Diploma nurses were 4.6 times more likely to have poor PC practice when compared to those who were MSc nurses. This is consistent with studies done in Gonder (Aytenuw *et al.*, 2022) and Iran (Hosein *et al.*, 2019). The reason for this might be that palliative care education was not incorporated into diploma curricula (Ayed *et al.*, 2015). Similarly, previous studies in Ethiopia indicated that theoretical and practical palliative care education in nursing is limited or not integrated into the nursing curricula (Reid *et al.*, 2018). *The qualitative data indicates the biggest barrier to palliative care practice is a lack of professional knowledge, with a nurse's academic background and awareness directly influencing their practice.*

Those nurses with less than five years of experience were 4.5 times more likely to have poor PC practice than those with eleven to fifty years of experience. This is consistent with Egypt and Gonder (Abd El-Aziz Basal, 2017; Aytenuw *et al.*, 2022). However, this finding was contradicted by studies done in Addis Ababa (Mandesh, 2014). The possible justification for this is that nurses with fewer years of experience have less competence, are novices, lack

confidence, and are less familiar with caring for terminally ill patients. *The qualitative findings suggest that new nurses should be assigned with experienced nurses due to their lower readiness levels and experience in caring for terminally ill patients.*

In this study, those nurses who had no training in palliative care services were 4.6 times more likely to have poor PC practice than those who had received training in palliative care. This study is inconsistent with the study conducted in Nigeria (Ajisegiri *et al.*, 2019). The possible reason could be that nurses who had additional training were statistically higher than those who had no additional training in palliative care practice (Walia *et al.*, 2020). *The most critical issue raised by those interviewed respondents, which primarily affects nursing palliative care practice, was a lack of in-service training on palliative care, supported by quantitative data done in Egypt (Abd El-Aziz Basal, 2017) and Ghana (Boatema *et al.*, 2022), where inadequate clinical training may render nurses incapable of applying the basic principles of PC to practice.*

Furthermore, in this study, there was no significant association between knowledge, attitude, and the practice of palliative care. This finding is consistent with studies done in Egypt (Hassan *et al.*, 2016). This may be attributed to the fact that nurses didn't receive adequate education and training regarding palliative care provision (Abd El-Aziz Basal, 2017). This finding contradicts research from Jimma, Rwanda, and Gonder (Tesfaye, Anbessie, and Gizaw, 2018; Christine Murebwayire, 2022; and Ayteneu *et al.*, 2022). This may be due to nurses' inadequate knowledge and unfavorable attitudes towards palliative care, which lowers their level of palliative care practice.

Strengths and limitations of the study

6.1. Strengths of the Study

The study involved both quantitative and qualitative methods of data collection, and it was triangulated to increase the reliability of the findings. The study attempted to identify the gap in practice toward PC, barriers, and related factors that play a considerable role in PC. The study provides potentially important background information and data for nurse researchers and educators.

6.2. Limitation of the Study

The lack of mixed-methods studies undertaken in Ethiopia makes comparison and discussion difficult. The study did not include private clinics. As a result, there was no comparison of public and private facilities, and the findings may not be generalizable to private facilities. The lack of a standard checklist tool, as well as the absence of a PC unit in some of the hospitals that participated in the study, made it difficult for this study to observe the practice of nurses in palliative care.

The questionnaire was subject to social desirability bias; thus, it was assessed by self-reporting, and there might be over-reporting of a behavior. The questionnaire was also prone to recall bias. The nurses selected for the interview were unavailable at the specified time, so hiring an extra day was required, and the interview did not end on time.

CHAPTER SEVEN

7. Conclusion and recommendation

7.1. Conclusion

Palliative care is relevant to the field of public health because it focuses on care quality, impacts healthcare spending, and improves patient and family outcomes and quality of life. A key finding of this study is more than three fourth of study participants had poor palliative care practice. It could be related to the fact that respondents had poor knowledge and an unfavorable attitude towards palliative care, and in Ethiopia, palliative care services are not well integrated with routine health care services. Type of hospital, age, level of education, work experience, and training were strongly associated with the practice of palliative care among nurses. Lack of a multidisciplinary team, patient, and family negative attitude, drug inaccessibility, inadequate palliative care education and training, a heavy workload and shortage of staff, and a lack of recognition, motivation, and praise for nurses were discovered as barriers to providing palliative care practice.

7.2. Recommendation

The study's findings revealed poor palliative care practice and explored different barriers to providing palliative care. This will have a negative impact on palliative care services for critically ill patients. Based on the findings of the study, the following recommendations are made to various concerned bodies:

To the Federal Ministry of Health

The level of understanding and practices of nurses will be improved if nursing departments modify the curriculum, incorporate formal palliative care content into nursing courses, and establish graduate programs emphasizing palliative care. The Federal Ministry of Health has to develop standard practice guidelines for palliative care and make anti-pain medication available in all hospitals.

Hawassa City Health Bureau

It would be better if each hospital prioritized the construction of a palliative care unit and provided holistic palliative care treatment to terminally ill patients who require palliative care services. Additionally, Hospitals will have sufficient equipment and medication for palliative care services, along with essential facilities for nurses to practice appropriately. In order to bridge the gap of inadequate practice, emphasis should be placed on basic education and ongoing on-the-job training for nurses to deliver standardized care. Advocate for expanded palliative care education in academic programs and workplace contexts.

Hospital management bodies

Hospital administrators should encourage the participation of the entire medical staff, patients, their families, and their religious leaders to enhance the practice of palliative care. Due to the fact that this study revealed a gap in palliative care practice and a lack of multidisciplinary collaboration, each hospital's administration should develop a variety of palliative care training programs for nurses.

To Nurse Leaders (Head Nurses)

For the practice of palliative care to be improved, nursing leaders should create conducive environments.

To nurses

Nurses should make an effort to update themselves in order to improve their palliative care practice by reading a variety of practical manuals and literature and participating in short-term training. Nurses should work as a team with other healthcare providers to deliver palliative care services. Nurses should actively exercise palliative care practice as their other key duty in ordinary nursing care.

To researchers

In order to assess nurses' palliative care practices, it would be desirable to design a standard checklist instrument. This would allow researchers to undertake more research to address issues and/or related aspects that were not covered in the current study. Additional study is required to investigate barriers emerging directly from patient perspectives that are not addressed by this research.

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ANNEX I. Questionnaire

Information sheet and consent form

Annexes I. Participant Information Sheet and Informed Consent Form and Questionnaire in English Version

Hello, my name is _____. I am working in the research team as a data collector for the study being conducted in this health facility on palliative care practice, perceived barriers, and associated factors among nurses working in selected public hospitals in Hawassa City, Sidama Ethiopia, 2023 by Beyene Feleke, who is studying for my second degree at Hawassa University College of Medicine and Health Science. I respectfully request you to lend me your attention to explain to you about the study and being selected as the study participant.

The study title: Palliative Care Practice, Perceived Barriers, and Associated Factors among Nurses Working in Selected Public Hospitals in Hawassa, Sidama Ethiopia

The purpose of the study: The finding of this study is very important to identify barriers and improve the palliative care service. Moreover, this study aims to write a thesis as a partial fulfillment of the requirement for Degree of Master of Science in Emergency and Critical Care Nurse at Hawassa University.

Procedure and duration: You are selected by chance among health workers to be one of the study participants. As a result, you are kindly asked to provide genuine responses to the questions. The information you provide is strictly confidential and will only be used for the purposes of this study. If you have any questions, please contact the data collector. Your cooperation and participation until the completion of the questionnaire are very necessary to the assessment's success. Therefore I ask your genuine willingness. Each question to answer you and it will take about 20-30 minutes.

Risks and Benefits: The risk of being involved in this study is very minimal, but only takes a few minutes from your time. It does not affect the care you will be receiving in the future or any other benefits to which you would be entitled. There would be no direct payment for taking part in this study. However, the findings of this research reveal important information for the local health planners.

Confidentiality: The information that you provide me will be kept strictly confidential. There will be no information that will identify you in particular. The findings of this study will be general for the study community and will not reflect anything particular about individual persons. No reference will be made in oral or written reports that could link participants to the research.

Rights: Participation in this study is fully voluntary. You have the right to declare whether to participate or not in this study. If you are still discomfort with the questionnaire, you have the right to withdraw from the study at any time and your refusal will not affect any aspects of your healthcare services to which you otherwise are entitled. Besides this, if you want to ask

any unclear idea, I am happy to give you further elaboration and you are not obliged to answer any question you do not wish to answer. Therefore, you have the right to turn down if you are not willing to participate. Hence, tick yes if you are a volunteer and No if you are not.

Yes No

Contact Address

If there are any questions or inquiries at any time about the study or the procedure please contact me through the address mentioned below.

Phone no 0905488099

Email; beyenefeleke25@gmail.com

Thank you in advance for your cooperation.

Data collectors Name _____ sign: _____

I. Socio-demographic characteristics of nurses.

I would appreciate it if you answered all the questions and answered them as honestly as possible. Please circle the number that best answers the question.

Ser.no	Socio-demographic (parameter)	Response	Remark
1.	Name of Work institution/hospital	_____	
2.	Age	_____	
3.	Gender	1. Male 2. Female	
4.	Religion	1. Orthodox 2. Muslim 3. Protestant 4. Other(specify)_____	
5.	Nursing qualification	1. diploma in Nurse 2. BSC Nurse 3. MSC Nurse	
6.	Department of work	1. Medical ward 2. Surgical Ward 3. Intensive Care Unit 4. Emergency Department 5. Oncology ward 6. Pediatrics ward 7. Others(specify)_____	
7.	Marital status	1. Married 2. Single 3. Divorced 4. Widowed	
8.	Working experience	_____	
9.	Monthly income	_____	
10.	Training towards PC	1. Yes 2. No	

II. Care Quiz for nursing knowledge.

Instructions – These are multiple-choice questions to evaluate your knowledge of palliative care. Read all the sentences carefully and encircle the correct option.

No	Characteristics	Multiple responses
1	Palliative care is appropriate only in situations where there is evidence of a downhill trajectory or deterioration.	1. True 2. False
2	Morphine is the standard used to compare the analgesic effect of other opioids.	1. True 2. False
3	Adjuvant therapies are important in managing pain.	1. True 2. False
4	It is crucial for family members to remain at the bedside until death occurs.	1. True 2. False
5	During the terminal stages of an illness, drugs that can cause respiratory depression are appropriate for the treatment of severe dyspnea.	1. True 2. False
6	The philosophy of palliative care is compatible with that of aggressive treatment.	1. True 2. False
7	Suffering and physical pain are synonymous.	1. True 2. False
8	The accumulation of losses renders burnout inevitable for those who seek work in Palliative care	1. True 2. False

III. Nurses' attitude questioner toward items of FATCOD

Instructions: Please select the level of agreement following each statement that corresponds to your own personal feelings about the attitude or situation presented. Please respond to all statements on the scale.

Statements		SD	D	U	A	SA
1.	Giving care to the dying person is a worthwhile experience					
2.	I would be uncomfortable talking about impending death with a dying person					
3.	Nursing caring for the patient's family should continue throughout the period of grief and bereavement					
4.	I wouldn't want to care for a dying person					
5.	I would be upset when the dying person I was caring for gave up hope of getting better					
6.	When a patient asks, "Am I dying?" I think it is best to change the subject to something cheerful					
7.	The family involved in the physical care of the dying person					
8.	I am afraid to become friends with the dying person					
9.	I would feel like running away when the person actually died					
10.	Families need emotional support to accept the behavior changes of the dying person					
11.	Families should be concerned about helping their dying member make the best of his/her remaining life					

Key:SD: Strongly disagree, D: Disagree, U: Uncertain, A: Agree &SA: Strongly agree

IV. Self-reported practice of nurses towards palliative care

Instructions: Below are the items related to palliative care practices. Read the items carefully and mark write under the yes/no column as per your practice (multiple answers are possible).

No	Characteristics	Multiple responses	Yes	No
1	When do you initiate palliative care discussion?	During diagnosis		
		When the disease progress		
		At the end of life		
2	What are the factors considered when dealing with terminally ill patients?	Spiritual/ religious		
		Medical condition		
		Cultural		
		Psychological condition		
3	What do you consider before addressing the spiritual issue?	Connect with a spiritual counselor		
		Listen with empathy		
		Impose your own view		
		Understand patient reaction		
		Truth-telling and decision-making		
		Preference regarding disclosure of information		
4	During patient care, cultural assessments should include:	Dietary preference		
		Language, family communication		
		Perspective on death, suffering & grieving		
5	Do you consider or address the psychological aspect of the patient while giving palliative care?	Yes		
		No		
6	In your current practice, whom do you involve in the decision-making process?	Family		
		My own		
		Other health professional		

7	How do you perceive terminally ill patient concerns or questions?	Doubting your professionalism		
		Attention seeking behavior		
		Family's ability to assimilate		
8	What are commonly used medications in your practice for severe pain?	Paracetamol/ibuprofen		
		Pethidine		
		Morphine		
9	Do you deliver Palliative care as a team?	Yes		
		No		
10	How do you assess patient pain?	Grade with face		
		Intensity		
		Location		

ANNEX II. In-Depth Interview Guide and Consent Form

VERBAL CONSENT FORM

I want to thank you for giving the time to meet with me today. My name is _____ and I would like to talk to you about Palliative Care Practice, Perceived Barriers, and Associated Factors among Nurses Working in Selected Public Hospitals in Hawassa, Sidama Ethiopia. The interview will take less than an hour. I will be taping the session because I don't want to miss any of your ideas. Despite the fact that I will be taking notes throughout the session. Because we're on tape, please be sure to speak up so that we don't miss your ideas. All responses will be kept confidential. Remember, you don't have to talk about anything you don't want to and you may stop the interview at any time. Are there any questions about what I just explained? Are you willing to take part in this interview?
Date_____

WRITTEN CONSENT FORM

In signing this document, I am giving my consent to participate in the study titled "The Palliative Care Practice, Perceived Barriers, and Associated Factors among Nurses Working in Selected Public Hospitals in Hawassa City, Sidama, Ethiopia." I have been informed that the objective of this study is to explore Palliative Care Practice, Perceived Barriers, and Associated Factors among Nurses Working in Selected Governmental Hospitals in Hawassa City, Sidama, Ethiopia 2023. I have understood that participation in this study is entirely voluntary & my voice will be recorded. I have been told that my answers to the Questions will not be given to anyone else and no reports from this study ever identify me in any way.

I understood that participation in this study does not involve risks except the time spent completing the interview. I understood that Mr. Beyene Feleke is the contact person if I have questions about the study or my rights as a study participant. The following is his contact address.

Address of PI: Beyene Feleke. ስልክ +251905488099, E-mail, beyenefeleke25@gmail.com

Interviewee signature_____ Date_____

Interviewee code: _____ place interviewer _____

ANNEX III - INTERVIEWGUIDE

In-depth interview guide developed for nurses working in healthcare settings of Hawassa City.

General Information

Q 001 Position (responsibility) _____

Q 002: Work experience in the area_____

Q 003: Educational status _____

Q 004: Sex _____

Q 005.Age_____

Part one- Question about perceived barriers to palliative care practice

Q 006: How do understand palliative care.? Probe why, When do you provide it? What does it look like of caring patients with critical conditions.? Can you tell me about your experience....? Do you give attention to patients' feeling.?

Q 007: What sort of things do you think the difficulty in providing palliative care.? Probe-What else.?Do you try to avoid such barriers and How.?, Which barrier do you think needs urgent solution.? Why.?

Part two; - Feature recommendation

Q 008: What do you recommend for the feature? What else? , How can a responsible body handle such an issue? , What about you? Is there anything else you'd like to add?

I'll be analyzing the information you and others gave me and submitting a final result to your organization. I'll be happy to send you a copy at that time if you are interested.

Thank you for your time. Data Collector name _____ Signature_____

Amharic Version of the Tool

የጥልቅ መጠይቅ መመሪያ እና የስምምነት ውል

በቅድሚያ ጊዜዎን ሰጥተው ሊያገኙኝ ስለፈቀዱ እያመሰገንኩ_____ እባላለሁ። በሀዋሳ ከተማ በሚገኙ የጤና ተቋማት የሚሰሩ የጤና አገልግሎት ሰጪዎች ጋር ሁለንተናዊ የህመም ክብካቤ ና የማስታገስ አገልግሎት የትግበራ ሁኔታን በተመለከተ ጥልቅ የሆነ ቃለ መጠይቅ ለማድረግ እፈልጋለሁ።

ቃለ መጠይቁ ቢያንስ 30-40 ደቂቃ ይፈጃል። የትኛውም ምላሽዎ እንዳያመልጠኝ ድምፃትን እቀዳለሁ። ማስታወሻም እወስዳለሁኝ። የሚሰጡት መልስ ሚስጢራዊነቱ የተጠበቀ ነው። የማይፈልጉትን ነገር ያለመናገር ና በየትኛውም ሰዓት ቃለመጠይቁን የማቋረጥ መብትዎ የተጠበቀ ነው። ማብራሪያ በሰጠኋቸው ጉዳዮች ላይ ግልፅ ያልሆነ ነገር አለ? በቃለ መጠይቁ ላይ ለመሳተፍ ፈቃደኛ ነዎት?

ቀን _____

የፀሐፍ የስምምነት ውል

በሀዋሳ ከተማ በሚገኙ የጤና ተቋማት የሚሰሩ የጤና አገልግሎት ሰጪዎች ጋር ሁለንተናዊ የህመም ክብካቤና የማስታገስ አገልግሎት የትግበራ ሁኔታ በሚል ርዕስ በሚደረገው ጥናት አላማውን ተረድቼ፣ ተሳትፎዬ በሙሉ ፈቃደኝነቴ ላይ የተመሠረተ እንደ ሆነ አውቄ፣ ድምፄ የሚቀዳ መሆኑን፣ በዚህ ጥናት ውስጥ የምሰጠው መልስ ከጥናት ቡድኑ በስተቀር ለማንም እንደ ማይሰጥ፣ በዘገባው ማንነቴን የሚገልፅ ነገር እንደ ማይኖር፣ መሳተፌ ጊዜዬን ከመውሰዱ ውጪ ምንም አይነት ጉዳት እንደ ማይደርስብኝ እና እንደ ጥናቱ ተሳታፊነቴ ስለጥናት ዕላማም ሆነ ስለመብቴ የጥናቱ ባለቤት የሆነውን ሚ/ር በየነ ፈለቀን መጠየቅ የምችል መሆኑን ተረድቼ መሳተፌን በፊርማዬ አረጋግጣለሁ።

ፊርማ _____

ስልክ +251905488099, email, beyenefeleke25@gmail.com

ቀን _____

ቃለ መጠይቁ የተደረገበት ቦታ _____

በሀዋሳ ከተማ በሚገኙ የጤና ተቋማት ለሚሰሩ የጤና አገልግሎት ሰጪዎች የተዘጋጀ ጥልቅ መጠይቅ

አጠቃላይ መረጃ

Q 001.አሁን ያለዎት የስራ ሀላፊነት _____

Q 002.የሥራ ልምድ _____

Q 003.የትምህርት ደረጃ _____

Q 004.ፆታ _____

Q 005.ዕድሜ _____

ክፍል አንድ -ሁለንተናዊ የህመም ክብካቤና የማስታገስ አገልግሎት ሁኔታ ጋር የተያያዙ ጥያቄዎች

Q 006.ሁለንተናዊ የህመም ክብካቤና የማስታገስ አገልግሎትን እንዴት ይረዱታል? መቼ ነው አገልግሎቱን የሚሰጡት? በፅኑ ሁኔታ ያሉህ ሙማንን መንከባከብ ምን ይመስላል? የእርስዎን ልምድ ሊነግሩኝ ይችላሉ? ለህሙማን ስሜት አፅንኦት/ ትኩረት/ ይሰጣሉ?

Q 007.ሁለንተናዊ የህመም ክብካቤና የማስታገስ አገልግሎት እንዳይሰጡ ያገደት ነገር ምንድን ነው ብለው ያስባሉ? ሌላስ? ምክንያቱስ? እነዚህን እንቅፋቶች ለማሰወገድ ሞክረዋል? እንዴት? አስቸኳይ መፍትሔ የሚፈልገው እንቅፋት የቱነው? ለምን?

ክፍል ሁለት- ለወደፊት የሚያሳስቡት

Q 008.ለወደፊቱ ምን ያሳስባሉ? ሌላስ? የሚመለከተው አካል እነዚህን ጉዳዮች እንዴት መወጣት አለበት ይላሉ? እርሶዎስ? መጨመር የሚፈልጉት ነገር አለ?

እርስዎና ሌሎች የሠጡኝን መረጃ አጠናቅቆ ለመስሪያ ቤትዎ የማቀርብ ይሆናል ፍላጎትዎ ከሆነ ግልባጬን እልክሎታለሁ።

ጊዜዎን ስለሰጡኝ አመሠግናለሁ።

መረጃ ሰብሳቢ _____ ፊርማ _____