College of health sciences

Department of obstetrics and gynecology

Assessing palliative care needs and associated factors among females with gynecologic malignancies visiting TASH: facility based prospective study, 2023-2024.

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A thesis to be submitted to department of Obstetrics & Gynecology, college of health sciences, AAU as part of the requirements for my specialization in Obstetrics & Gynecology.

October, 2024

Addis Ababa, Ethiopia

AAU

College of Health Sciences, Department of Obstetrics &Gynecology

Research report attesting page

Students' declaration

I declare that this thesis titled "Assessing palliative care needs and associated factors among females with gynecologic malignancies visiting TASH" was fully undertaken by me under the guidance of my advisor and that I have, to the best of my knowledge and effort, cited all various sources of information used in this thesis, and declaring that this thesis has not been submitted to any other institution for the award of any degree, certificate, masters or diploma.

Name of student: Dr. Rediet Mekuria

Signature:

Date: October / 15/2024

Supervisors' Declaration

I hereby certify that I have read and evaluated this research thesis relating to "Assessing palliative care needs and associated factors among females with gynecologic malignancies visiting TASH" under my guidance from its inception up to its current format and that it can be submitted for final approval in partial fulfillment to the Degree of Specialty in Obstetrics and Gynecology.

Advisor: Dr. Sisay Teklu (MD, Associate Professor of Obstetrics and Gynecology, School of Medicine, College of Health Sciences, AAU)

Signature:

Date: October/15/2024

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Name of investigator	Dr. Rediet Mekuria
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Acronym and abbreviation

AAU	Addis Ababa University
TASH	Tikur Anbessa specialized hospital
AOR	Adjusted odds ratio
CI	Confidence interval
COR	Crude odd ratio
WHO	World health organization
DALY	Disability adjusted life years
EOL	End of life
LMICs	Low and middle income countries
NCDs	Non communicable disease
QoL	Quality of life
SPSS	Statistical package of social science
WPCA	Worldwide palliative care alliance
SPICT-LIS	Supportive and palliative care indicators tool low income countries
HUCSH	Hawassa university comprehensive specialized hospital
EIPC	Early integrated palliative care

Abstract

Background: - Palliative care offers comprehensive support to patients and their families coping with life-limiting illnesses, addressing physical, psychosocial, and spiritual dimensions of suffering. In Ethiopia, palliative care is a relatively new concept and faces numerous challenges, including underutilization and an increasing burden due to a growing population affected by chronic and life-limiting illnesses such as cancer, HIV/AIDS, and cardiovascular diseases. Despite the high need, access to palliative care services remains limited due to insufficient healthcare infrastructure, a lack of trained professionals, and cultural barriers related to EOL care. Additionally, public awareness of palliative care is low, leading to a gap between need and utilization. These factors contribute to a heavy burden on families and the healthcare system, making it a critical area for improvement in public Health Care system of Ethiopia.

Objective: To identify gynecologic cancer patients in TASH with progressive illness that benefit from palliative services in low income settings to offer best available appropriate treatment.

Method: Over the course of six months, a facility-based cross-sectional study including 379 carefully chosen female cancer patients was carried out in the gynecology oncology unit of the TASH, Addis Ababa. Following ethical clearance, data was gathered using a pretested structured interviewer administered questionnaire and entered into SPSS. A multivariate binary logistic regression model is used to find the independent factors associated with palliative care service need and to account for any co-founders. Graphs, tables, and text were used to explain the descriptive statistics once the data has been cleared. Results are expressed with AOR and 95% C/I and P-value < 0.05 taken as statistically significant.

Result: Comparison between different levels of number of symptoms yields the following results: AOD: 11.9, 95% CI: [5, 28]. This indicates a statistically significant effect, with a strong association between an increase in the number of symptoms and palliative care needs.

- Those who are widowed had AOD: 0.037 - 95% CI: [0.002, 0.641] - This is statistically significant and indicates a substantial relationship with palliative care needs.
- Those who are in private work show, AOD: 9.733 - 95% CI [2.684, 35.299] - This result is highly significant, indicating that occupation plays a crucial role in predicting palliative care needs, with certain occupations dramatically increasing the need for such care.

- Multiparous and GMP women had AOD: 9.635 - 95% CI: [1.828, 50.768] - This is statistically significant; highlighting that higher parity is associated with an increased need for palliative care.
- Those who are not sexually active had AOR: 7.136- 95% CI (3.48, 14.6).
- Stage 3 Cancer: p-value .026 - AOD 1.141 - 95% CI: [0.025, 0.795] - this suggest that advanced stages of cancer significantly increase the need for palliative care compared to later stages

Conclusion: The regression analysis indicates that factors such as the number of symptoms, marital status, occupation, sexual activity, and stage of cancer significantly influence the need for palliative care. Income, time since diagnosis and treatment modalities, on the other hand, seems to have less pronounced or non-significant effects. The wide confidence intervals in some categories suggest variability in how these factors influence palliative care needs, which could be explored further in future studies.

Key words: - palliative care, end of life care, hospice care, quality of life, gynecologic cancer,

Introduction

Background

The accessibility and availability of cancer treatment choices along with patient survival rates exhibit significant global disparities. The cancer burden in sub-Saharan Africa is frequently underestimated as a result of poor diagnostic tools, restricted access to care, and a lack of infrastructure and skilled medical professionals. In 2020, there were about 520,158 cancer-related fatalities and 801,392 new cancer cases reported; the most common cancer kinds in these nations were cervical and breast cancer (Amare et al., 2023).

Cancer is a significant contributor to poverty, primarily due to the financial strain it places on patients, which exacerbates psychological distress and economic hardship.

When started early, palliative care is a multidisciplinary strategy that can positively impact the illness's progression without hastening or delaying death. Early palliative care lowers the need for medical services and avoidable hospital stays while also improving the QoL for patients. The aging of the population and the increasing incidence of modifiable cancer risk are driving up the demand for palliative care among cancer patients worldwide.

According to the WHO, “Palliative care is an approach that improves the quality of life of patients and their families facing the problem associated with life threatening illness, through the prevention and relief of suffering by means of early identification and treatment of physical, psycho-social and spiritual problems.” Additionally, palliative care is necessary from the early stages of the disease, can be provided alongside potentially curative treatments, and continues to encompass EOL care (WHO, 2020).

Ethiopia is among the Sub-Saharan nations where there is a significant burden of suffering and limited access to palliative care services. Ethiopian has developed various guidelines and training modules for palliative care; however, these services are not fully integrated into primary healthcare, and there are obstacles to the continuity of palliative care for cancer patients (Amare et al., 2023).

Statement of the problem

Globally, it is estimated that over 56.8 million individuals require palliative care each year, including 31.1 million who need it prior to death and 25.7 million who require it near the EOL. A significant majority (76%) of adults in need of palliative care reside in low-income Countries.

Despite the substantial burden of severe illness and health-related suffering, particularly at TASH, the assessment and provision of palliative care for these patients remain inadequate. The quality of life among gynecological cancer patients, which reflects a range of socio-demographic and clinical characteristics of those receiving care at this facility, is not well understood. Given that palliative care emphasizes the assessment of physical, social, psychological, and spiritual well-being, the provision of such care will yield a comprehensive understanding of patients' well-being across these dimensions. It will also demonstrate the degree to which patients' requirements are being met.

Modern cancer treatments are known to improve survival rates, yet they are also associated with adverse effects for patients. Gynecological cancer patients receiving care at TASH are experiencing these negative effects from their treatments. Therefore, assessing the need for palliative care and providing it is essential to establish the psychosocial and physical impacts of treatments on these patients. Palliative care remains relatively new within the national healthcare system. Moreover, there is a lack of research specifically addressing the palliative care needs of this patient group. This research aims to investigate the current state of palliative care need and the factors associated among patients with gynecological cancers which is necessary to promote the development of palliative care services and to address existing barriers to their advancement at TASH.

Significance of the study

There is a significant unmet need for palliative care among individuals with chronic, life-limiting health conditions, with considerable variation in cancer palliative care availability in many regions, particularly in sub-Saharan African countries. There is a lack of information regarding palliative care among cancer patients in the literature, as limited research has been conducted in this area within Africa.

Additionally, no specific studies have assessed the impact of socio-demographic and clinical factors on cancer patients' needs within the Ethiopian context. This highlights a deficiency in robust and persuasive evidence that could drive changes in clinical practice and improve prevention, early diagnosis, and management that would modify the types of palliative care needs.

Precise evaluations of regional palliative care requirements are essential for the successful integration of palliative care functions into health systems. Current estimates enable healthcare planners, organizers, and administrators to allocate resources and training effectively to meet evolving demands. This study, utilizing validated instruments, will evaluate and provide a comprehensive understanding of the physical, psychosocial, and spiritual needs of these patients. It open doors for better patient care and the integration of performance measures into clinical practice. In spite of this, the majority of patients in today's sophisticated healthcare systems do not have access to sufficient and easily accessible palliative care; just 14.0% of patients benefit from palliative care, according to the WHO.

Recently, the Supportive and Palliative Care Indicators Tool-Low Income Setting was created to assist in identifying patients with cancer and life-limiting conditions, thereby strengthening a palliative care approach to deliver appropriate care based on patient's needs and coordinate care (Amare et al., 2023). This study is essential for promoting the evolution of palliative care services and addressing barriers to palliative care advancement at TASH. Significant obstacles including the absence of clear actions & organized programs to establish palliative care, a lack of educational programs to teach PC, insufficient research in the field, a shortage of essential medications required for service exists.

2. Literature review

2.1 Quality of life

QoL as stated by the WHO is an individual's assessment of their life state within the cultural and value frameworks they inhabit, as well as in relation to their aspirations, expectations, standards, and worries (WHO, 2020).

In developed nations, there has been a swift increase in QoL research focused on recognizing patient experiences, requirements and assessing the efficacy of treatments and services. Conversely, there has been a notable lack of research in Africa regarding this topic, despite acknowledging the significance of measuring outcomes and the necessity to pinpoint areas where patients may require targeted assistance (Selman et al., 2011).

Cross-sectional study was done to assess QoL in women diagnosed with gynecological cancers at Tehran University, Iran, from 2014 to 2019. The findings indicated that type of cancer significantly affected health outcomes. Women with ovarian or endometrial cancer reported better health status, role functioning, and social well-being compared to those with cervical cancer, who experienced a lower quality of life (Shirali et al., 2020). The QoL and psychosocial status were most adversely impacted around time of diagnosis and treatment. A correlation was identified between long-term risks of depression and anxiety post-cancer, particularly pronounced in cervical cancer patients. Significant differences were observed among groups concerning emotional functioning (P = 0.033), cognitive functioning (P = 0.012), &overall QoL (P = 0.042).

Cross-sectional survey in South Africa and Uganda revealed: lowest QoL was reported in functional domain, followed by psycho-spiritual well-being and physical symptoms. Despite the discomfort and symptoms linked to incurable, progressive diseases, participants in this study deemed physical comfort and activity as less critical to QoL than close relationships, a sense of peace & meaning in life. This may stem from an acceptance of discomfort and physical limitations, alongside a reevaluation of goals. Evidence suggests that cancer patients often adjust their expectations to align with their current health and functional status, with those in palliative care shifting their values accordingly. These findings may reflect coping mechanisms in response to the uncertainties of living with an incurable, progressive illness (Selman et al., 2011).

A descriptive cross-sectional study among 120 palliative care cancer patients in Kenya in 2021 analyzed the relationship between socio-demographic characteristics and QoL. Age significantly

influenced the health-related QoL of cancer patients, with those aged 65 and older reporting higher physical, psychological, and overall QoL scores than younger cohorts. Educational attainment also affected cancer patients' physical, social, psychological, spiritual, and total QoL. Patients who completed secondary and tertiary education levels had higher total QoL scores compared to those with lower educational backgrounds. Higher education correlates with increased knowledge, understanding, and awareness, ultimately enhancing overall QoL. Cancer patients with higher education levels are more likely to comprehend their illness and its potential outcomes, leading to improved emotional and physical health-related QoL. Conversely, lower educational levels are linked to decreased disease awareness, often resulting in late-stage presentations at healthcare facilities, which adversely affects prognosis and QoL scores (Ondimu, 2021).

Occupation significantly impacts QoL of cancer patients. Formally employed individuals reported higher social, psychological, spiritual, and overall QoL scores compared to farmers and laborers. Employment is associated with adequate social support and financial resources to manage the disease. Patients from higher-income brackets exhibit better coping mechanisms, resulting in improved physical and emotional health-related QoL. High income is linked to sufficient social support, while low income correlates with poverty and low socioeconomic status, which are risk factors for cancer development. Marital status also significantly influences QoL, with married patients reporting higher social, psychological, spiritual, and total QoL scores compared to those with other marital statuses (Ondimu, 2021).

2.2 Prevalence of palliative care.

Over 56.8 million people worldwide are thought to need palliative care each year. A significant majority (67.1%) are adults over 50 years old. The burden of severe illness and health-related misery, along with the corresponding need for palliative care, is substantial. However, access to palliative care remains limited for many, particularly in low- and middle-income countries as adults requiring palliative care make up about 76% of the population. In adulthood, non-communicable diseases like lung diseases, cancer, HIV/AIDS, cerebrovascular illnesses, dementias, and other illnesses provide roughly 69% of the needs. Across all regions, the percentage of adults with cancer who require palliative care is noticeably high, ranging from 6.1% in the African Region to 41.3% in the European Region and 40.8% in the Other (Connor et al., 2014).

A study in sub-Saharan Africa pointed that gynecological cancers represent about one-third of all female cancers (32.67%), with cervical cancer being the most prevalent (81.6%). A retrospective cross-sectional review aimed at determining the prevalence of gynecological cancer among patients cared for at HUCSH from 2013 to 2019 identified 522 (17.4%) cases of gynecological cancers out of 3002 cancer cases over seven years. Cervical cancer constituted 385 (73.8%) of gynecological cancers, followed by ovarian cancer (55 or 10.5%) and endometrial cancer (51 or 9.8%) with continuous increase in caseload every year (Gebretsadik et al., 2022).

A cross-sectional study involving cancer patients admitted to oncology wards at St. Paul Hospital, Ethiopia, included 301 patients with a mean age of 42 years. The prevalence of palliative care needs among these patients was found to be 10.6% (n=32). The study indicated that the need for palliative care escalates with patient age, suggesting that those over 61 years were twice as likely (AOR=2.39, 95% CI=0.34–16.55) to require palliative care compared to younger patients. Male patients exhibited a significantly higher demand for palliative care than female patients (AOR=5.31, 95% CI=1.68–11.79) (Amare et al., 2023).

Currently, the majority of decisions regarding the provision of early integrated palliative care (EIPC) rely on individual professionals initiating palliative care consultations. This often results in delayed and inadequate palliative care provision. A retrospective systematic chart analysis over two years was conducted following the initiation and communication of the EIPC approach. Post-implementation, patients reported reductions in frailty, fatigue, appetite loss, anxiety, depression and constipation and the overall prevalence of symptoms per patient (Gartner et al., 2012).

2.2.1 Physical wellbeing

Patients frequently experience multiple types of pain, some of which may not be directly related to primary illness. The notion of pain encompasses the comprehensive nature of pain perception, recognizing it not solely as a physical issue but also as one with psychological, spiritual, and social ramifications (Connor et al., 2014). Cancer pain can manifest alongside various other symptoms, including depression, anxiety, and mood fluctuations. Identifying the cause of pain & assessing its severity as objectively as possible is crucial and treatment should be directed whenever feasible (FMOH, 2016).

A descriptive cross-sectional study conducted across five cancer treatment centers in Nepal revealed that concerns for loved ones (94%), thoughts of death(92.2%), fears regarding disease

progression (91.7%), &anxiety (91.7%) were commonly reported in psychological domain. Within the physical and daily living domain, fatigue or lack of energy (88.5%) was the most reported need, while prompt attention from hospital staff to physical needs (73.9%) was also commonly noted. In the sexuality domain, changes in sexual relationships (61.6%) were the most commonly reported concern. Nearly all respondents (99.08%) indicated a need for some sort of supportive care (low, moderate, or high), with 61.01% seeking assistance in the sexuality domain. In summary, Nepali cancer patients recognize and experience numerous unmet supportive care needs, with psychological needs being the top priority (Dhakal et al., 2023).

In Addis Ababa and Yirgalem, Ethiopia, three home-based palliative care programs participated in a qualitative study. The programs' primary focus was on treating symptoms. Interviews were conducted to learn more about patient preferences, requirements, and service delivery in relation to palliative care. Anorexia (50.0%), sleeplessness, nausea & vomiting (41.2%) were the most common physical complaints, followed by moderate to severe pain (70.6%). Social connections and everyday tasks were impeded by the conditions of the patients. Stakeholder participation and availability of comprehensive home-based palliative care were hampered by lack of organizational structures and policy guidelines.

2.2.2 Psychosocial well being

Psychological support encompasses assistance aimed at maintaining personality, strengths, behavior, and motivation, as well as preventing and treating depression, anxiety, despair, and solitude, fears like rejection, and death, and pride, guilt, coping mechanisms and self-esteem.

Social support involves maintaining cultural belief& values, and practices, as well as fostering relationships and roles within family, friends, and the community to prevent feelings of desertion. This support also includes creating a safe and comforting environment, ensuring intimacy, and facilitating participation in custom & recreation.

Evaluating and addressing the needs and concerns of cancer patients is a crucial responsibility of healthcare professionals. Research show that cancer patients often have high level of unmet needs, especially regarding information provision and psychological support(Rainbird et al., 2009). The most commonly reported need was for assistance in managing fatigue or lack of energy, with 41% of patients indicating a moderate to high requirement for support. This lack of energy can hinder patients from socializing outside their homes, and the loss of control over their activities has been linked to increased frustration, anxiety, and depression. Several factors may

contribute to patients feeling that their informational and psychological support needs are unmet. Healthcare personnel may not recognize that patients have requirements in these areas. Additionally, limitations in healthcare providers' training and education, time constraints, economic issues, or competing priorities may also play a role (Rainbird et al., 2009).

2.2.3 Spiritual well being

Spiritual support refers to assistance related to meaning, values, beliefs, affiliations, rituals and symbols. Spiritual well-being is fundamental domain in assessing QoL in the discourse of grave sickness. The provision of spiritual care in palliative care remains inconsistent, often due to insufficient understanding and training among staff. Numerous reports have underscored the significance of spiritual well-being for individuals living with cancer. The inherent nature of these relations remains unclear & a definitive cause & effect is yet to be established. Further study is necessary from diverse aspects and employing various methods (Best, M. C. et al., 2023).

A good spiritual well-being has been connected with protection against depression and anxiety, facilitates adjusting to a cancer diagnosis and fostering personal growth related to cancer. Religion can serve as a vital resource for coping with stress and is known to mitigate stress for patients confronting death, pain, agitation, and feelings of hopelessness.

2.3 Determinant of palliative care service

Significant impediment to the provision of palliative care includes a shortage of medicine, high turnover rates, &a lack of healthcare personnel. Insufficient diagnostic resources, the high cost of medications, inadequate governmental support, and limited enrollment capacity at home-based centers hindered accessibility. Cultural obstacles in providing suitable EOL care &patients' preference for traditional medicine further complicated acceptability. Additionally, the absence system to connect patients with services, and geographical limitations restricted utilization. (Abate et al., 2023).

2.3.1 Policies

The absence of supportive policies makes it challenging for any palliative care service to evolve. National policies are essential as they establish legal frameworks that recognize and define palliative care as an important part of the healthcare system (Connor et al., 2014).

There are effective and affordable protocols and models for integrating palliative care into the public healthcare system to guarantee that care is reachable to the majority of those in need. Key principles such as task shifting, service decentralization, standardization, and simplification are vital for ensuring broader access to palliative care by incorporating these services into Primary Health Care &utilizing existing community and home-based care systems (FMOH, 2016).

The FMOH acknowledges the crucial role of palliative care in enhancing QoL for individuals with life-limiting diseases. With this understanding, the national palliative care guidelines were developed in 2016 to serve as a foundational document for scaling up palliative care services in Ethiopia.

2.3.2 Education

A significant proportion of healthcare professionals globally possess minimal to no understanding of the principles and ideas of palliative care. There is a pressing need for basic palliative care education for all healthcare personnel's, including doctors, nurses, psychiatrist & volunteers. However, there is no consensus on the extent of training required. Additionally, community education and awareness building about palliative care are essential. Patients and families also require comprehensive education on care giving, expected symptoms, management strategies, and signs of impending death (Connor et al., 2014).

To address the needs of over 56 million individuals requiring palliative care worldwide, a significant increase in the workforce of trained healthcare and paraprofessional personnel is necessary. Currently, there are about 400,000 healthcare personnel providing palliative care globally. Volunteers also play a crucial role in hospice and palliative care; contributing to community based care with over 1.2 million individuals volunteering in palliative care worldwide (Connor et al., 2014).

Cross-sectional study was conducted involving 402 nurses from public hospitals in the South Gondar Zone. The findings revealed that only 46 (11.89%) of the respondents demonstrated proficient palliative care practices and knowledge. Factors such as attitude, educational background, and years of experience significantly influenced nurses' practices regarding palliative care. Among the respondents, 11 (23.91%) initiated discussions about palliative care with patients at the time of diagnosis, 12 (26.09%) provided palliative care as the disease progressed, 76 (19.64%) informed patients about their disease, while 332 (85.79%) didn’t , and 148 (38.24%) offered counseling to patients with serious illness. These results are lower

compared to report from a government hospital in Shire Endesilasie, Tigray, Ethiopia (2020), that indicated only 27.2% of participants initiated discussions about palliative care at diagnosis, 75 (27.0%) provided palliative care as the illness advanced, and 58 (20.9%) informed ill patients of their diagnosis. The discrepancy may be attributed to a lack of organizational support for practicing palliative care and the fact that approximately 57% of respondents had less than five years of work experience, which may affect their palliative care practices as opposed to those with a B.Sc. degree and over five years of experience (Aytenew et al., 2022).

Systematic review and meta-analysis of 11 studies involving 3,330 participants indicated that the overall prevalence of knowledge regarding palliative care of nurses in Ethiopia was 42.31%. Factors such as educational status (AOR = 2.69, 95% CI = [1.11, 4.25]), experience in caring for dying patients (AOR = 3.15, 95% CI = [1.17, 5.13]), and training in palliative care (AOR = 2.53, 95% CI = [1.42, 3.64]) were highly related with nurses' knowledge of palliative care. The report highlighted the overall knowledge of palliative care among nurses in Ethiopia is low, with educational status, experience in caring for terminal patients, and training in palliative care being significant factors influencing this knowledge (Fentie et al., 2023).

2.3.3 Medication Availability

Morphine is the most commonly used opioid analgesic for managing severe pain and is included in the essential medicines list for palliative care by the WHO (Fentie et al., 2023).

In LMIC, patients requiring palliative care frequently lack access to effective pain medications like morphine, with only 17% of the world's morphine consumption occurring in these regions, which house nearly 83% of the global population. There is significant variability in consumption worldwide, and numerous barriers exists that hinder the availability and use of opioid. These barriers include overly stringent regulations, restrictions on available medication forms, inadequate supply and distribution systems, limitations on prescribing authority, and fears of legal repercussions regarding medical use (Connor et al., 2014

2.3.4 Psychological, social, cultural, and financial barriers

Psychologically, the majority of people shuns and avoids anything that has to do with death. A common misconception is that it is detrimental to even acknowledge the idea of impending death. Data suggests that palliative care may actually increase survival. However, there hasn't been much progress in getting the public and policymakers to realize the importance of palliative care. In many cultures, it is specifically forbidden to tell patients their diagnosis and prognosis

when it poses a threat to their lives. Only those who are financially capable to pay for care have access to effective medical treatment in many nations. Numerous studies have demonstrated hospice and palliative care to be cost-effective; however these are primarily conducted in industrialized nations.

Primary or palliative care doctors or nurses cannot be the only ones responsible for palliative care. All healthcare professionals, including oncologists and other experts, must actively embrace it and incorporate it into all facets of patient treatment.

2.3 Conceptual frame work

Independent variable

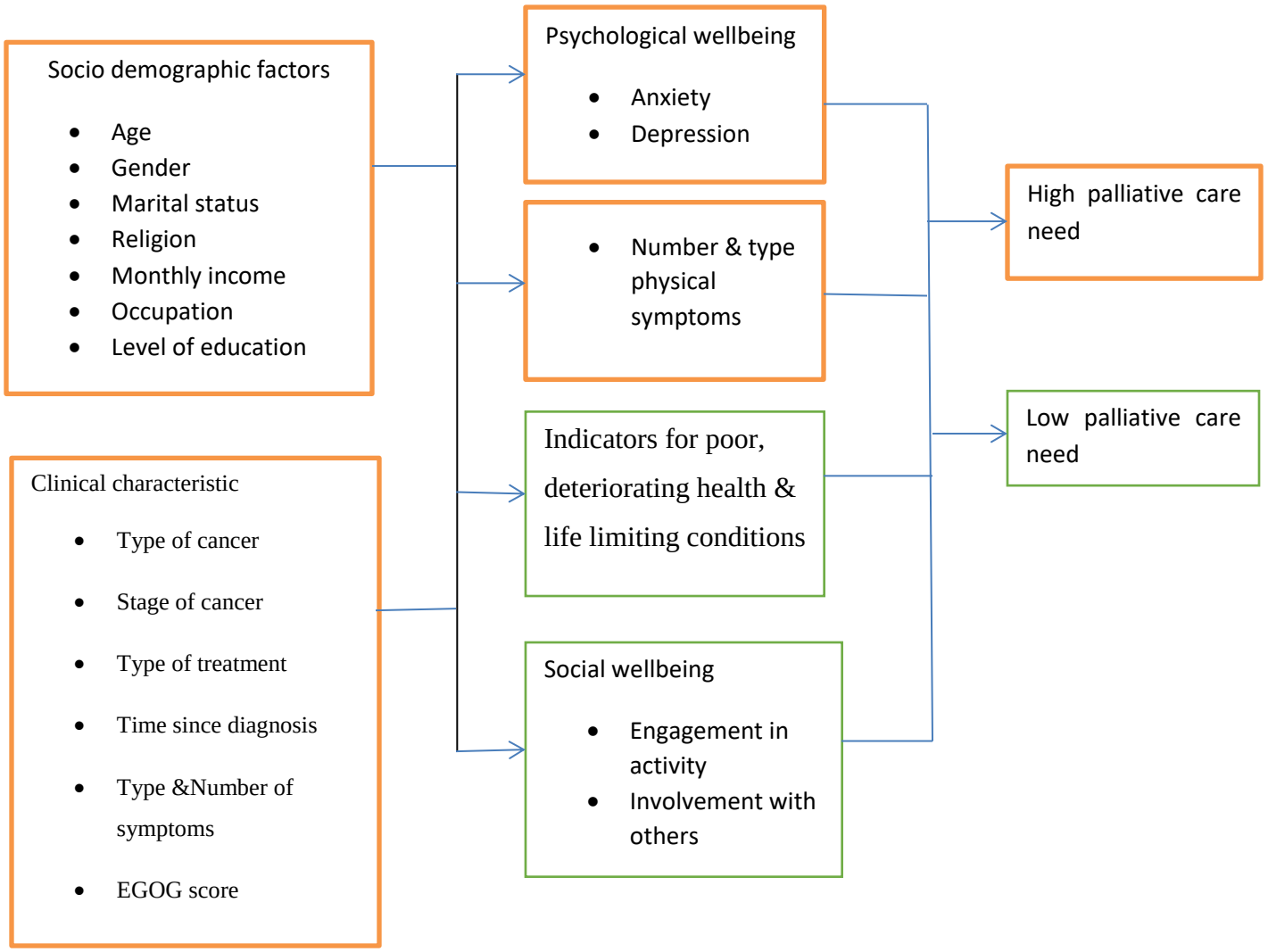


Figure 1.The conceptual frame work adopted from the literature by the author

Research Question

- How to identifying patients with life limiting gynecologic cancers that could benefit from strengthen palliative care approach?
- How to provide an individualized and appropriate care as the needs of each patients and coordinating care?

3. Objective

3.1 General objective

To determine palliative care need of gynecological cancer patients at TASH, Addis Ababa, Ethiopia.

3.2 Specific objective

1. To identify patients with life limiting gynecologic cancers that benefit from palliative care in low income settings.
2. To assess individual palliative care need of patients with gynecological malignancies to offer best available appropriate treatment.

4. Method

4.1. Study area

The study is done at TASH which is found in the capital Addis Ababa: a higher oncology specialty center in Addis Ababa. TASH is a prominent tertiary referral hospital in the nation with curative and supportive care services. In addition to providing chemotherapy, radiotherapy and other supportive care services, the hospital's gynecology oncology unit offers definitive and palliative surgery. It is one of the primary facilities in Ethiopia for the registration of cancer cases, early detection, prevention, conventional treatment, and palliative care.

4.2. Study design and period

Facility based cross-sectional study design was employed from January1, 2024 until getting complete sample size for six month period in TASH, Addis Ababa, Ethiopia.

4.3. Source population

All female cancer patients (aged ≥ 18 years) diagnosed & have follow up at TASH were considered as the source population.

4.4. Study population

Systematically selected females with biopsy proven gynecologic malignancy admitted to gynecology ward and those visiting gynecology regular OPD at TASH were considered as study population.

4.5 Eligibility criteria

4.5.1. Inclusion criteria

All Females aged 18 years or older diagnosed with gynecologic malignancy before the data collection period admitted to gynecology ward and those visiting gynecology regular OPD at TASH who are & were willing to give their informed consent to participate in the study were included in the study.

4.5.2. Exclusion criteria

- Female cancer patients with no biopsy proven malignancy at time of data collection.
- Patients who are critically ill and unable to communicate at the time of data Collection.
- ECOG score of 4
- Those with hearing impairment and cognitively impaired to give consent.

4.6. Sample size determination

The sample size required for this study is calculated based on a single population proportion formula as follows.

$$n = \frac{(Z\ \alpha/2)2\ P\ (1-P)}{d2}$$

Where: n is sample size; Z α/2 is standard normal distribution corresponding to significance level at α = 0.05, which is 1.96; d is margin of error assumed to be 5%,

Accordingly, sample size was determined for specific objective: palliative care need among adult cancer patients was (34%).

Therefore, n= $(1.96)^2$ x 0.34(1-0.34)/ $(0.05)^2$= 344.8

Therefore, after adding 10% non-response rate the final sample size is 377.

4.7 Sampling Procedure

Simple random sampling technique is used to meet 377 cancer patients who fulfilled the inclusion criteria during the study period.

4.8 Study Variables and measurement

4.8.1 Dependent variable

- Palliative care

4.8.2 Independent variable

- Socio-demographic factor
    - Age
    - Religion
    - Region
    - Marital status
    - Education level
    - Occupation
    - Income
    - Parity
    - Sexual activity
- Clinical characteristic
    - Type of cancer
    - Stage of cancer
    - Type of treatment
    - Time since diagnosis

- Type &Number of symptoms
- EGOG score

- SPICT-LIS: general indicators for poor and deteriorating health
- SPICT-LIS: clinical indicator for life limiting conditions

4.9 Operational definitions

Caregiver: An individual who she/he is a spouse, relatives or friends who is involved in the patients' care.

Palliative care need- A patient is considered in need of palliative care when they have at least two general indicators and at least one clinical indicator of SPICT.

4.10 Method of data collection

A pretested structured questionnaire is utilized to collect data through face-to-face interviews. Initially, the questionnaire was drafted in English &subsequently translated into Amharic by language experts. A third party then translated it back into English to ensure consistency in the translation. The questionnaire encompasses key variables that are organized in alignment with the study's objectives.

Each patient's palliative care needs are evaluated using the SPICTLIS measuring criteria, which were created especially to help medical professionals find patients in lowIncome settings who mi ght gain from palliative care. This framework is based on the SPICT's initial, validated draft that was modified for usage in Nepal. The SPICT comprises two primary categories: six general indicators and 28 clinical indicators of w/c indicator for cancer is taken. A patient is deemed to require palliative care if they exhibit at least two general indicators and at least one clinical indicator for cancer.

Data was collected when women attend follow-up appointments at the TASH gynecology OPD in a private and confidential setting, following the receipt of their respective services. The data is collected by healthcare professionals who are independent of the usual care team at TASH. Prior to data collection period, data collectors were trained on the questionnaire content, proper data collection techniques to minimize errors, and how to engage with respondents. During the study

period, data collectors identified patients who meet the inclusion criteria by reviewing registration records, and a simple random consecutive sampling method was used to select respondents. I the principal investigator reviewed all completed questionnaires on-site, ensuring the integrity and coherence of the collected data. All participants were requested to provide verbal informed consent, which is documented by the data collector on the consent form in the presence of an independent witness before data collection begins. Participants are informed about the study's purpose and briefed on the confidentiality of their responses and the significance of giving accurate data to help achieve the report's objectives.

4.11 Data quality control

To ensure the integrity of data, a well-structured instrument was developed prior to the commencement of the actual data collection phase. A pretest was conducted one week prior to data collection period, involving 5% of a similar study population at TASH, to verify the clarity, phrasing, logical flow, and skip patterns of the questions. Questions that cause confusion or affect data consistency were modified. During the data collection process, interviewers received supervision and regular meetings were organized to address any issues that arise during interviews and to rectify errors identified during data editing.

4.12 Data analysis and interpretation

The gathered data is verified for accuracy, and any missing or incorrectly submitted questions are fixed through follow-up interviews and chart reviews. Next, the SPSS version 25.0 software was used to enter the complete and clean data and perform the analysis. Tables and figures were used to present descriptive statistics. Initially, the relationship between each independent variable and the outcome variable was examined using the chi square test and bi-variate logistic regression. Association b/n independent variables & palliative care need were assessed using the multivariate binary logistic regression model. A P-value of less than 0.05 and a 95% confidence level were employed to ensure statistical significance in the multivariate analysis, and all independent variables with a p-value less than 0.25 were moved to multivariate logistic regression. Odds ratio with 95% confidence interval reported as a measure of association.

4.13 Ethical consideration

In order to acquire permission and cooperation for the data collection process, the ethical clearance and support letter are first obtained from the AAU, College of Health Science, Department of Gynecology and Obstetrics. They are then taken to the responsible unit and hospital administrative office.

Before any data was collected, all participants were asked to verbally give their informed consent in front of an impartial witness.

The respondent's privacy was protected and the information was kept confidential; the hard copy of the data was stored in a locked cabinet, and the soft copy was password-protected.

4.14 Dissemination of result

The result of the study is presented and will be submitted to AAU department of gynecology and obstetrics, FMOH and other stake holders.

5. Management of the Research Project

Monitoring the whole project is done according to the work plan below.

Table 1: work plan by chart

TOPIC SELECTION	May-June	July		August	September	October	January 1-june 30, 2024	July	August-September
1.Topic selection									
2. proposal development									
4.Proposal defense									
1. Recruitment &training of data collectors									
7. Data collection									
8. Data entry & clearance									
9. Analysis of data									
10. Report writing									

11. Thesis defence									

Table 2: Budget plan

	Category	Item total
I	Personnel	
	For data collectors (80birr/ Questionnaire)	30,080
	Transportation	1000
	Sub total	31,080
II	Material and Supplies	
	Pen, pencil, eraser, notebooks, sharpener	500
	Flash disc	1000
	Sub total	1500
IV	Communication	
	Telephone (50 birr /week)	1000
	Translation and google form	4000
	Internet	2000
	Sub total	7000
Total		39,580
10% contingency		3958
Grand Total		43,538

6. Results

6.1 Socio-demographic characteristics of the study participants

The demographic profile of respondents presents key insights into the population affected by various forms of gynecological cancers. The most represented age group was between 41-50 years, comprising 34.2% of the sample, while the youngest group, aged 20-30, represented only 7.7% & women over the age of 60 accounted for 15.4%. This distribution indicates that middle-aged women are more likely to be affected by gynecological cancers, possibly due to the cumulative exposure to risk factors such as HPV infections and hormonal imbalances. Women over the age of 60 accounted for 15.4%, suggesting that while older women remain vulnerable, the prevalence of gynecological cancers peaks during middle adulthood.

Regarding marital status, the vast majority (76.4%) of the respondents were married, which aligns with the expected demographic for women in the age groups most affected by cancer. Only 3.2% were single, which may suggest that marriage and family dynamics could play a role

in early detection and treatment. Considerable portions (20.4%) of the respondents were divorced & widowed, which might have implications for access to healthcare, as marital dissolution can impact healthcare-seeking behavior and support systems.

Urban residents formed the majority of the sample (71.4%), highlighting the potential for better access to healthcare facilities in urban settings. This disparity between urban and rural respondents underscores the possibility of healthcare accessibility issues in rural areas, which might contribute to delayed diagnosis or treatment. Additionally, a significant proportion of respondents (40.3%) had no formal education, and only 5.3% had received a college-level education or higher. This low level of educational attainment could be linked to poor awareness of preventive measures and early cancer detection strategies.

The economic status of the respondents also reflects vulnerability, with nearly 60% earning below 5000 birr income and only 21.7% of women were employed with their own source of income while 71.9 % were housewives and 6.4% students. Socioeconomic challenges can significantly influence healthcare-seeking behavior and the affordability of treatments, which are critical for long-term cancer management. The data indicate that those with lower incomes may face greater barriers to accessing timely care, increasing their risk of more advanced disease stages at diagnosis.

More than 2/3rd of patients were multiparous and grand multiparous, only small proportion of respondents were prim parous (14.6%) and nulliparous (6.6%). 60.2 %(261) respondents were not sexually active at time of study.

Table 1- Socio-demographic characteristics of the study participants among gynecologic cancer patients visiting gynecology oncology unit in black lion hospital

	Frequency	Percentage
Age		
20-30	29	7.7
31-40	99	26.3
41-50	129	34.2
51-60	62	16.4
>60	58	15.4

Marital status		
Single	12	3.2
Married	288	76.4
Divorced	42	11.1
Widowed	35	9.3
Residence		
Urban	269	71.4
Rural	108	28.6
Education		
No formal education	152	40.3
Primary school	121	32.1
Secondary school	84	22.3
Collage and above	20	5.3
Occupation		
Housewife	271	71.9
Student	24	6.4
Private employee	69	18.3
Governmental employee	13	3.4
Income		
<5000	225	59.7
5001-10000	115	30.5
>10000	37	9.8
Parity		
NP	25	6.6
PP	55	14.6
MP	139	36.9
GMP	158	41.9
Sexually active		
Yes	119	31.6

NO	258	68.4

6.2 Disease related characteristics of study participants

The results show that cervical cancer was the most common type, affecting 54.9% of the sample, followed by ovarian cancer at 35.5%. This finding is consistent with global trends, as cervical cancer remains the leading type of gynecological cancer, particularly in low- and middle-income countries where HPV vaccination and screening programs may not be fully implemented. The distribution of cancer stages also reveals a worrying trend, with 31% of patients being diagnosed at Stage 2 and 30.8% at Stage 3. These figures suggest late diagnosis, which could reduce the effectiveness of treatment and impact overall survival rates. The significant number of respondents had been receiving treatment for more than 2 years (27.9%), indicating a chronic trajectory of illness and long-term therapeutic management. Among the treatment modalities, surgery combined with chemotherapy and radiotherapy (33.4%) was the most common, followed by surgery and chemotherapy alone (28.6%). These figures point to the aggressive nature of gynecological cancers and the need for multi-modal approaches to treatment.

Symptomatology was analyzed, showing that significant proportions of respondents reported symptoms such as pain (32.6%), vaginal bleeding (34.2%), weakness or lack of energy (39%), poor appetite (43.4%) and nausea & vomiting (36.1%). over 1/3rd of patients had urinary complain and constipation. These symptoms are consistent with the progression of gynecological cancers and the side effects of treatment modalities such as chemotherapy and radiotherapy. Notably, 61.3% of the respondents experienced anxiety, and 40.6% reported depression. This highlights the psychological toll of living with a chronic and potentially life-threatening illness, indicating the need for integrated mental health support as part of cancer care.

37.1% of patients had heavy symptom burden that is more than 5 symptoms at a time and because of advanced stages of disease, 30.2% of respondents were identified as needing palliative care. This suggests a potential gap in recognizing or providing appropriate supportive care for symptom management and quality of life improvement. It is worth noting that palliative care is not solely for EOL scenarios but can be beneficial at any stage of cancer, particularly in managing chronic pain, anxiety, and other distressing symptoms as 31 respondents (27.1) were in stage 1 or 2 of disease.

Table 2- Disease related characteristics of the study participants among gynecologic cancer patients visiting gynecology oncology unit in black lion hospital

	Frequency	Percentage
Pain		
Yes	123	32.6
No	254	67.4
Vaginal bleeding		
Yes	129	34.2
No	248	65.8
Weakness or lack of energy		
Yes	147	39
No	230	61
Poor mobility		
Yes	37	18.8
No	160	81.2
Nausea		
Yes	136	36.1
No	241	63.9
Constipation		
Yes	120	31.8
No	257	68.2
Diarrhea		
Yes	42	11.1

No	335	88.9
Poor appetite		
Yes	164	43.5
No	213	56.5
Sore or dry mouth		
Yes	93	24.7
No	284	75.3
Cough or SOB		
Yes	105	27.9
No	272	72.1
Urine complaint		
Yes	123	32.6
No	254	67.4
Drowsiness		
Yes	107	28.4
No	270	71.6
Vomiting		
Yes	121	32.1
No	256	67.8
Anxious		
Yes	231	61.3
No	146	38.7
Depressed		
Yes	153	40.6
No	224	59.4
Itching		
Yes	36	9.9
No	341	90.1

Cervical cancer was the most common type, affecting 54.9% of the sample, followed by ovarian cancer at 35.5%. Endometrial cancer and Vulvar & vaginal cancer were 6.4 and 3.2 %

respectively. With 31% of patients being diagnosed at Stage 2 and 30.8% at Stage 3. 27.9% respondents had been receiving treatment for more than 2 years, the rest 72% were at diagnosis and less than 2 year of treatment. Among the treatment modalities, surgery combined with chemotherapy or radiotherapy (33.4%) was the most common, followed by chemotherapy alone (28.6%). Despite the advanced stage and heavy symptom burden most patients had good performance status as 83.5% had ECOG score of 0 to 2. From those that required palliation only 43(37%) were ECOG 3, the rest 74(63 %) had ECOG 0 to 2.

Type of cancer		
Cervical cancer	207	54.9
Ovarian cancer	134	35.5
Endometrial cancer	24	6.4
Vulvar and vaginal cancer	12	3.2
Stage of cancer		
Stage 1	80	21.2
Stage 2	117	31
Stage 3	116	30.8
Stage 4	64	17
Therapeutic status		
< 2 yrs treatment	96	25.5
> 2 yrs treatment	281	74.5
Treatment modality		
Surgery	98	26
chemotherapy	108	28.6
radiotherapy	28	7.4
Chemotherapy and radiotherapy	17	4.5
Surgery with Chemotherapy or radiotherapy	126	33.4
Number of symptoms		
<5	237	62.9

5-10	39	10.3
>10	101	26.8
ECOG		
0	33	8.8
1	255	67.6
2	48	12.7
3	39	10.3

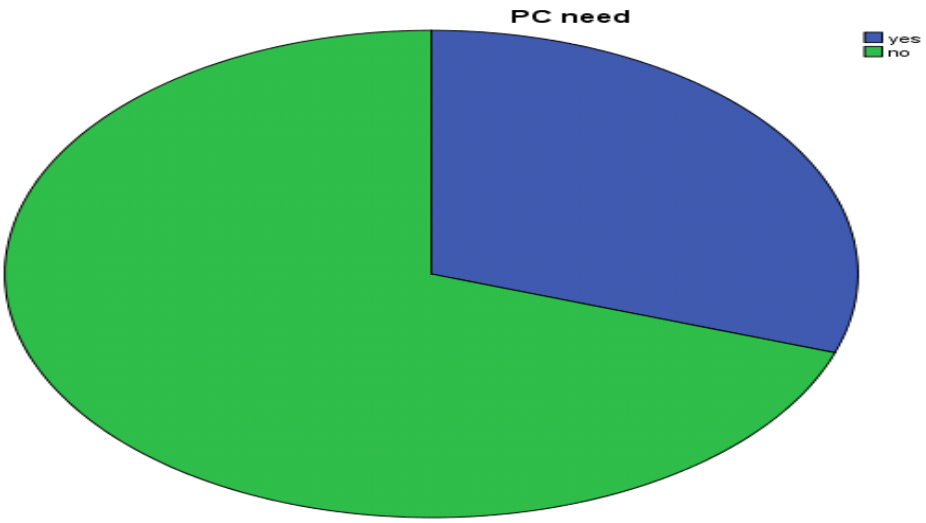
24.4% report staying in bed or a chair for more than half of the day, whereas 75.6% remain mobile or active for more than half of the day. 37.4% of participants require additional help from caregivers for daily activities, like moving, eating, or walking, while 62.6% can manage independently.

38.2% of patients report having persistent symptoms despite receiving treatment, while 61.8% do not. 31% of respondents (117 patients) reported having unplanned hospital visits or admissions, while 69% (260 patients) did not. 14.7% of respondents indicate that available treatments have limited effects on their well-being, while 85.3% feel that the treatments are effective. Only 25.2% of participants have requested palliative care, while 74.8% have not. 32.4% (122 patients) have progressive cancer with symptoms and functional decline, while 67.6% (255 patients) do not. 20.4% (77 patients) are considered too frail for cancer treatment, while 79.6% (300 patients) are not.

Do you stay in bed or a chair for more than half the day?		
Yes	92	24.4
No	285	75.6
Does available treatments have limited effect on how you feel?		
Yes	29	14.7
No	168	85.3
Do you need more help and support from caregivers e.g. to move, eat, walk?		
Yes	141	37.4
No	236	62.6
Do you have significant weight loss over the last few months or remains underweight?		
Yes	164	43.5

No	213	56.5
Do you have Persistent symptoms despite treatment of underlying condition?		
Yes	144	38.2
No	233	61.8
Have you ever asked for palliative care?		
Yes	95	25.2
No	282	74.8
Do you have Unplanned hospital visits or admissions for progressive illness or complication?		
Yes	117	31
No	260	69
Does patient have progressive cancer with symptoms and functional decline?		
Yes	122	32.4
No	255	67.6
Is patient too frail for cancer treatment?		
Yes	77	20.4
No	300	79.4
Is cancer treatment for symptom control only?		
Yes	97	25.7
No	280	74.3

Palliative care need		
Yes	114	30.2
No	263	69.8
General indicator		
Yes	213	56.5
No	164	43.5
Clinical indicator		
Yes	161	42.7
No	216	57.3



6.3 The determinants of palliative care needs

6.3.1 Chi square test of association of palliative care need with the independent variables.

There is a weak association b/n marital status, age, educational level, ECOG, treatment modality with palliative care need with chi square= 17, 24, 22, 18, 42 respectively: df=4 and p<0.001. There is a weak association b/n occupation, income, type of cancer, stage of cancer and palliative care need with chi square= 42, 17, 15, 58 respectively: df=3 and p<0.001. There is a weak association b/n region sexual activity, time since diagnosis and palliative care need with chi square= 14, 8, 19 respectively: df=1 and p<0.001.

There is a strong association b/n number of symptoms and palliative care need with chi square= 89, df=1 and p<0.001. There is a strong association b/n pain, vaginal bleeding, weakness, constipation, drowsiness, vomiting, anxiety and depression with palliative care need with chi square=81, 85, 75,100, 107, 60, 80 respectively df=1 and p<0.001.

Requirement of help and support from care givers has a strong association with palliative care need with chi square 80; df=1 and p<0.001. Having significant weight loss, Persistent symptoms despite treatment, Unplanned hospital visits or admissions for progressive illness or complication had strong association with palliative care need with chi square 83, 119, 122 respectively df=1 and p<0.001.

6.3.2 Bivariate regression of palliative care need among women with gynecologic malignancy visiting gynecology oncology unit in black lion hospital

Given the lack of statistical significance, age and type of cancer didn't appear to be a critical variable in determining palliative care need.

Marital status, residence, occupation, income, sexual activity, stage of cancer, treatment modality, ECOG score and number of symptoms were a significant predictor of palliative care need.

Table 5- Bivariate regression of palliative care need among women with gynecologic malignancy visiting gynecology oncology unit in black lion hospital

Variables	P value	COR	CI (Lower)	CI (Upper)
Age	0.73	0.96	0.469	1.94
Marital status	0.04	9.92	0.386	0.732
Residence	<0.01	7.568	0.254	0.650
Education	<0.01	1.854	1.406	2.444
Occupation	<0.01	3.558	2.185	5.793
Income	0.02	2.304	1.544	3.437
Parity	0.036	0.757	0.585	0.982
Sexual activity	<0.01	1.34	0.671	0.89
ECOG	0.045	0.78	1.421	1.709
Time since diagnosis	0.048	2.882	1.775	4.679
Type of cancer	0.104	1.296	0.948	1.774
Stage of Cancer	0.043	0.387	0.297	0.504
Treatment modality	0.03	0.645	0.560	0.744
Number of symptoms	<0.01	0.270	0.204	0.357

Table 6: the multivariate regression of palliative care need among women with gynecologic malignancy visiting gynecology oncology unit in BLH

To analyze the hypothesis, multiple linear regression analysis with 95% confidence interval was employed. The analysis showed a good model fit $F(13,363) = 15.767$. $P<0.01$, Adj $R^2=0.338$ and $R^2=0.361$.

Comparison between different levels of number of symptoms yields the following results: AOD: 0.147, 95% CI: [0.054, 0.400] and AOD: 0.063 - 95% CI: [0.025, 0.159] - This indicates a

statistically significant effect, with a strong association between an increase in the number of symptoms and palliative care needs.

Those who are single and widowed had AOD: 0.037 - 95% CI: [0.002, 0.641] - This is statistically significant and indicates a substantial relationship between certain marital statuses and palliative care needs.

Those who are in private work show, AOD: 9.733 - 95% CI [2.684, 35.299] - This result is highly significant, indicating that occupation plays a crucial role in predicting palliative care needs, with certain occupations dramatically increasing the need for such care.

Multiparous and GMP women had AOD: 9.635 - 95% CI: [1.828, 50.768] - This is statistically significant highlighting that higher parity is associated with an increased need for palliative care.

Those who are not sexually active had AOR: 7.136- 95% CI (3.48, 14.6).

Stage 3 Cancer: p-value .026 - AOD 1.141- 95% CI: [0.025, 0.795] - this suggest that advanced stages of cancer significantly increased the need for palliative care compared to later stages.

	Yes	No	P value	AOD	CI(upper)	CI(lower)
Number of symptoms						
<5	31	206	1			
>5	83	57	.001	11.90	5.02	28.14
Marital status						
Single	1	11	1			
Married	76	212	.068	.090	.007	1.192
Divorced	19	23	.350	.267	.017	4.265
Widowed	18	17	.023	.037	.002	.641
Sexual activity						
Yes	26	93	1	0.14	0.068	0.287
No	88	170	.002	7.136	3.48	14.6

Occupation						
House wife	108	163	1			
Student	1	23	.112	6.565	.645	66.865
Private employee	5	64	.001	9.733	2.684	35.299
Government employee	0	13	.998	7.2	.100	0.5
Income						
<5000	85	140	1			
5000-10000	26	39	.799	1.115	.483	2.573
>10000	3	34	.379	1.967	.435	8.890
Parity						
NP	4	21	1			
PP	16	39	.116	4.055	.708	23.209
MP	37	102	.002	13.144	2.613	66.106
GMP	57	101	.008	9.635	1.828	50.768
Time since diagnosis						
< 2 years	46	50	1			
>2 years	68	213	.419	1.445	.592	3.526
Stage of cancer						
Stage 1	4	73	1			
Stage 2	23	94	.415	.602	.177	2.041
Stage 3	44	72	.026	1.141	.025	.795
Stage 4	40	24	.060	.152	.021	1.084
Treatment modality						
Surgery	14	84	1			
Chemotherapy	21	87	.868	1.098	.366	3.289
Radiotherapy	9	19	.369	2.268	.380	13.538
Chemotherapy	10	7	.531	.482	.049	4.727

and radiotherapy						
Surgery with chemo or radiotherapy	60	66	.993	.993	.196	5.041

Discussion

The results provide significant insights into the demographic, clinical, and psychological aspects of women diagnosed with gynecological cancers. The findings reflect a pattern often seen in resource-limited settings, where late-stage diagnosis, low socioeconomic status, and limited educational attainment intersect to create barriers to optimal cancer care. Cervical cancer remains the most prevalent gynecological malignancy in this cohort, suggesting that prevention strategies like HPV vaccination and routine Pap smears might not be fully realized. Public health campaigns should focus on educating women about gynecological cancers, their symptoms, and the importance of regular screenings. HPV vaccination programs need to be expanded and made accessible, particularly to younger women, to prevent cervical cancer.

The fact that over 60% of respondents were from urban areas further emphasizes the likelihood of healthcare access issues in rural areas. Rural women may face barriers such as distance to healthcare facilities, lack of transportation, or lack of awareness about cancer symptoms and screening programs. The high percentage of individuals with low education levels suggests the importance of educational programs that promote cancer awareness, prevention, and early detection. Tailored interventions that focus on educating women about the risks of HPV, the benefits of vaccination, and the need for regular screenings could significantly reduce the burden of cervical cancer in this population. Additionally, income disparity plays a pivotal role, as those in the lowest income brackets may delay seeking care due to cost concerns, which increases the likelihood of more advanced disease stages at the time of diagnosis. The disparity between urban and rural healthcare access must be addressed. Mobile clinics, telemedicine services, and subsidized transportation to healthcare facilities should be explored to bridge the gap. Community health workers can play a key role in educating rural populations and facilitating referrals to specialized cancer care services.

The psychological impact, as evidenced by the high rates of anxiety and depression, highlights an area of care that may be neglected. Cancer diagnosis and treatment are emotionally taxing, and mental health services should be integrated into oncology care to address these psychological needs. Women who are emotionally supported are more likely to adhere to treatment and engage with healthcare providers effectively, leading to better outcomes. Palliative care need was identified as a need in 30.2% of respondents. Given that many patients were in Stage 3 or 4, more could benefit from palliative care interventions that focus on symptom control and improving quality of life, even if they are not in the terminal phase of their illness.

Sexual health is an important aspect of overall well-being, and lack of sex can affect both physical and mental health. Lack of sexual intimacy can lead to emotional strain, feelings of loneliness, reduced social support, increased depressive symptoms and increased stress, which could heighten the need for palliative care as those who were not sexually active had 7 times more need. Physical intimacy can have positive health effects, including reduced stress levels and better sleep. The absence of these benefits might lead to worsening symptoms and an increased need for palliative care. A supportive marital relationship can be a source of strength and resilience, reducing the need for external palliative care services. Lack of sexual intercourse could be associated with underlying health issues that might also necessitate palliative care.

The majority of patients perceive treatments as beneficial, but the minority that doesn't experience relief highlights a gap in care or individualized treatment. Addressing high symptom burden in palliative care requires a comprehensive and compassionate approach as those that have multiple symptoms more than 5 had 11.9 times more requirement. By focusing on thorough assessment, personalized care plans, ongoing support, Utilizing combination of pharmacological and non-pharmacological interventions that are tailored to specific symptoms and provide resources, education to family members and caregivers healthcare providers can significantly improve the quality of life for patients.

Weight loss could be a sign of disease progression, poor nutritional intake, or inadequate palliative care. Patients experiencing significant weight loss might require nutritional interventions, such as dietary modifications or supplemental feeding.

38.2% of patients report having persistent symptoms despite receiving treatment this figure is concerning because persistent symptoms despite treatment suggest that current medical

approaches may be inadequate for a substantial proportion of patients. An interdisciplinary approach, perhaps including palliative care specialists, physiotherapists, and mental health professionals, could be beneficial in addressing persistent symptoms. Non-pharmacological interventions such as acupuncture, massage, or meditation could also be explored.

1/3rd the population relies heavily on caregiver support. This suggests that many patients are dealing with advanced diseases or disabilities that impair their self-sufficiency. This reliance on caregivers may also contribute to caregiver burnout, which should be considered when planning care.

The SPICT-LIS serves as a valuable tool for care providers to identify patients with life-limiting diseases requiring palliative care, ensuring consistent responses and agreement among healthcare professionals. The implementation of the SPICT-LIS will facilitate the identification of patients who could benefit from palliative care, particularly when used alongside national guidelines and enhancing communication among healthcare professionals, patients, and their families.

The prevalence of patients identified as needing palliative care through the SPICT aligns closely with findings reported in existing literature. This information will support educational programs aimed at physicians regarding the use of palliative care. In addition to enhancing the utilization of effective tools for identifying individuals with palliative care needs, there should be a focus on developing and disseminating these tools to assist clinicians in evaluating the nature and complexity of palliative care requirements and delivering the most suitable care for this population.

The regression analysis indicates that factors such as the number of symptoms, marital status, occupation, parity, and stage of cancer significantly influence the need for palliative care. Income and certain treatment modalities, on the other hand, seem to have less pronounced or non-significant effects. The wide confidence intervals in some categories suggest variability in how these factors influence palliative care needs, which could be explored further in future studies.

Limitations of the study and Strength of the study

As this study focuses particularly on women who came for visit at gynecology oncology unit only, it might not represent all gynecologic cancer patients.

The finding of this study is expected to contribute a lot to addressing areas the healthcare system can better meet the needs of women with gynecological cancers, improving their chances of better management of symptoms and overall quality of life.

Conclusion

The regression analysis indicates that factors such as the number of symptoms, marital status, occupation, sexual activity, and stage of cancer significantly influence the need for palliative care.

Income, time since diagnosis and treatment modalities, on the other hand, seems to have less pronounced or non-significant effects. The wide confidence intervals in some categories suggest variability in how these factors influence palliative care needs, which could be explored further in future studies.

Recommendations

1. Expansion of Palliative Care Services: There is a need to expand PC services to all patients with cancer. TASH should address these areas, as the healthcare system can better meet the needs of women with gynecological cancers, improving their chances of early detection, better management of symptoms. Educating healthcare providers and patients about the benefits of PC could help improve the management of symptom
2. Integrated Mental Health Services: The high prevalence of anxiety and depression in cancer patients suggests that mental health services should be integrated into oncology care. Psycho-social support services, including counseling and peer support groups, should be made available to help patients cope with the emotional challenges of living with cancer.
3. Economic Support for Cancer Treatment: Financial assistance programs should be implemented to help women from lower-income groups afford cancer care. Reducing the financial burden could encourage earlier healthcare-seeking behavior, which in turn would lead to earlier diagnoses and potentially better outcomes.

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Annex II: English Version Information Sheet
Questionnaire Identification Number _____

Dear sir/madam:

My name is _____. I am working as data collector in the research Conducted by Dr. Rediet who is conducting this research for the partial fulfillment of her specialty in Obstetrics and Gynecology in AAU. I kindly request you to give me your attention to explain about the study and about you being selected as one of the study participant.

Study title: Assessing palliative care needs and its associated factors among patients with gynecological cancer visiting TASH.

Benefits: your participation is likely to help us in the assessment of palliative care needs and its associated factors among patients with gynecological cancer. I am hopeful that this research will benefit all who will use it. I will provide research results to concerned body for intervention.

Risk: the interview and clinical review is for research only and it's not part of your ongoing medical care. Not participating in the research doesn't affect your care in anyway.

Procedure: I will be interviewing you using questionnaires; there are about 34 questions to be answered. It will not take more than 40 minute of your time. I might use medical chart for completeness of information for some of the questions if you would consent. We hope you will participate in the study for the sake of the Benefit of the research result.

Confidentiality: information collected from this research project will be kept confidential and stored in a file, without your name, but a code number assigned to it. In addition, it will not be revealed to anyone except the principal investigator and will be kept locked with key.

Right to refuse or withdraw: You have full right to refuse from participating in this research. You can choose not to respond to some or all questions if you do not want to give your response. If you have additional questions about the study, please contact

DR Rediet, principal investigator

Tel: +251-924595559

EMAIL: redietmekuria20@gmail.com

Annex III: English Version Consent Form

I understand all conditions stated above. I have understood that Participation in this study is entirely voluntarily. I have been told that my answers to the questions will not be given to anyone else and no reports of this study ever identify me in any way Therefore, I am Ready and willing to participate in this study.

If respondent does not agree to be interviewed thanks them and go to the next respondent

If respondent say YES continue

Checked by:

Supervisor Name _____ signature_____

Date_____/_____/____E.C.

Time Interview Started: Hour: _____ Minute: _____

Questionnaire No_____

Time Interview Ended: Hour: _____ Minute: _____

Date _____/_____/____ ____E.C. signature_____

Questionnaire

Part I. Socio-demographic characteristics

- Age in years of the study participants
    - 20-30
    - 31-40
    - 41-50
    - 51-60
    - >61
- Religion of the study participants
    - Orthodox
    - Muslim
    - Protestant
    - Catholic
    - Others, specify_____
- Marital status
    - Single
    - Married
    - Divorced
    - Widowed
- Residence
    - Urban
    - Rural

- Educational level of the study participants
    - No formal education
    - Primary school
    - Secondary school
    - Collage and above
- Occupation of the study participants
    - Housewife
    - Student
    - Private employee
    - Government employee
    - Others, specify_____
- Average Monthly income in Birr___

Part 2: clinical characteristics

- Therapeutic status
    - <2 years in treatment
    - > 2 years in treatment
- Type of cancer
    - Cervical cancer
    - Ovarian cancer
    - Endometrial cancer
    - Vulvar and vaginal cancer
- Cancer stage

- Stage 1
- Stage 2
- Stage 3
- Stage 4

- Treatment modality
  - Surgery
  - Chemotherapy
  - Radiotherapy
  - chemo therapy & Radiotherapy
  - surgery with chemotherapy or radiotherapy

- Number troublesome symptoms
    - < 5
    - > 6

- Type of symptoms

Symptoms	Yes	No
Pain		
Vaginal bleeding		
Weakness or lack of energy		
Nausea and vomiting		
Poor appetite		
Constipation		
Diarrhea		
Drowsiness		

Poor mobility		
Sore or dry mouth		
SOB or cough		
Urinary compliant		
Insomnia		
Itching		

- Psychosocial problems

Problems	Yes	No
Have you been feeling anxious or worried about your illness or treatment?		
Have you been feeling depressed?		

Part 3: SPICT-LIS, general indicators

	Indicators	Yes	No
1	Do you stays in bed or a chair for more than half the day?		
2	Does best available treatment have limited effect?		
3	Do you or caregiver needs more help and support e.g. to move, eat, walk?		
4	Do you have significant weight loss over the last few months or remains underweight?		
5	Do you have Persistent symptoms despite best available treatment of underlying condition?		
6	Were you unable to access treatment (eg due to distance, cost or inability to travel)?		
7	Have you (or family) ever asked for palliative care?		

	Ever chooses to reduce, stop or not have treatment; or wishes to focus on quality of life?		
8	Do you have Unplanned hospital visits or admissions for progressive illness or complication?		

Part 4: SPICT-LIS, clinical indicators for cancer patients.

	Indicators	Yes	No
A	Does patient have Progressive or metastatic cancer with symptoms and functional decline?		
B	Is patient Too frail for cancer treatment?		
C	Is Cancer treatment for symptom control only?		