Article

PAMJ One Health

Research

# Quality of palliative care practice and it´s associated factors among nurses working in South Gondar Zone Public Hospitals, Northwest Ethiopia: facility-based cross-sectional study

**Tigabu Munye Aytenew, Yeshiambaw Eshetie, Demeke Mesfin Belay, Biniam Minuye, Wubet Alebachew, Ermias Sisay Chanie, Worku Necho, Solomon Demis, Gedefaye Nibret, Abenezer Melkie, Getasew Legas, Sintayehu Asnakew, Getachew Yideg, Fitalew Tadele, Aragaw Tesfaw, Abraham Tsedalu Amare**

**Corresponding author:** Tigabu Munye Aytenew, Department of Comprehensive Nursing, College of Health Science, Debre Tabor University, Debre Tabor, Ethiopia. tigabumunye21@gmail.com

**Received:** 20 Feb 2022 - **Accepted:** 01 Nov 2022 - **Published:** 04 Nov 2022

**Keywords:** Palliative care practice, nurses, and South Gondar Zone



**Cite this article:** Tigabu Munye Aytenew et al. Quality of palliative care practice and it´s associated factors among nurses working in South Gondar Zone Public Hospitals, Northwest Ethiopia: facility based cross-sectional study. PAMJ - One Health. 2022;9(17). 10.11604/pamj-oh.2022.9.17.33900

**Available online at:** https://www.one-health.panafrican-med-journal.com/content/article/9/17/full

**Quality of palliative care practice and it´s associated factors among nurses working in South Gondar Zone Public Hospitals, Northwest Ethiopia: facility based cross-sectional study**

Tigabu Munye Aytenew[1,&], Yeshiambaw Eshetie[1], Demeke Mesfin Belay[2], Biniam Minuye[2], Wubet Alebachew[2], Ermias Sisay Chanie[2], Worku Necho[2], Solomon Demis[2], Gedefaye Nibret[3], Abenezer Melkie[3], Getasew Legas[4], Sintayehu Asnakew[4], Getachew Yideg[5], Fitalew Tadele[5], Aragaw Tesfaw[8], Abraham Tsedalu Amare[1]

[1]Department of Comprehensive Nursing, College of Health Science, Debre Tabor University, Debre Tabor, Ethiopia, [2]Department of Pediatrics and Neonatal Nursing, College of Health Science, Debre Tabor University, Debre Tabor, Ethiopia, [3]Department of Midwifery, College of Health Science, Debre Tabor University, Debre Tabor, Ethiopia, [4]Department of Psychiatry, College of

Health Science, Debre Tabor University, Debre Tabor, Ethiopia, [5]Department of Biomedical Sciences, College of Health Science, Debre Tabor University, Debre Tabor, Ethiopia, [6]Department of Public Health, College of Health Science, Debre Tabor University, Debre Tabor, Ethiopia

**[&]Corresponding author**

Tigabu Munye Aytenew, Department of Comprehensive Nursing, College of Health Science, Debre Tabor University, Debre Tabor, Ethiopia

## Abstract

***Introduction:*** *World Health Organization (WHO) defined palliative care as "an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment, and treatment of pain and other sufferings like physical, psychosocial and spiritual". Due to limited improvement of palliative care practice in Africa, numerous patients have not received formal palliative care services. But, there are very limited researches regarding palliative care in the study area and the nation at large. The objective of this study aimed to assess the quality of palliative care practice, and it´s associated factors, among nurses working in South Gondar Zone Public hospitals, Northwest Ethiopia.* ***Methods:*** *an institution-based cross-sectional study design was carried out. A total of 402 nurses working in all South Gondar Zone public hospitals were included in the study. The data were collected by using pre-tested English version questionnaire with self-administered interviews. The data were checked for completeness, cleaned, coded, and entered into epi data version 4.2; then, exported to SPSS version 22 for analysis. Binary logistic regression was applied to analyze the outcome variable.* ***Results:*** *this study revealed that most of the study participants, 341 (88.11%) had poor practice towards palliative care. Moreover, this study also showed that knowledge of PC, attitude towards PC, educational level, and years of work experience were statistically significant with nurses´ quality of palliative care practice.*

***Conclusion:*** *this study indicated that most of the nurses working in South Gondar zone public hospitals have poor quality of palliative care practice. Therefore, all the concerned bodies should work together to enhance nurses´ quality of palliative care practice by giving sustainable training and involving palliative care philosophy in nursing education, in order to expand the limited service in the area and the nation at large.*

## Introduction

The World Health Organization (WHO) defines palliative care (PC) as "an approach that improves the quality of life (QOL) of patients and their families confronting the problems related with life-threatening illness, through the prevention and relief of suffering by means of early identification and immaculate assessment and treatment of pain and other problems like physical, psychological and spiritual" [1]. The principle of palliative care is based on a holistic approach to patients aiming to relief and control pain and other symptoms and to improve the quality of care for both patients and their families addressing physical, phychological, social and spiritual dimensions of both patients and their families [2]. In 2020, WHO estimated that non-communicable diseases (NCDs) would be as predominant as communicable illnesses, which have been the most common causes of high morbidity and mortality in sub-Saharan Africa. In spite of the significance of PC in managing NCDs, it´s constrained improvement over Africa shows that numerous patients have not received formal PC services [3]. Recently, there's a huge development in PC as an integral part of healthcare around the world; but, shockingly, not all nations have well-established PC services, or recognize the significance of PC [1]. The inclusion of palliative care specialists has been appeared to be related with better outcomes for patients with

progressive diseases, in order to improve patients´ quality of life [4]. Nurses are the key members of the health care group who typically have the greatest time of contact with patients and take part in related decision-making processes. This prolonged contact gives the nurse a unique opportunity to know the patients and their caregivers in order to assess in depth what is happening and what is of importance to the patients, and to assist them to cope with the effects of advancing disease [5]. Palliative care incorporates the time range beginning from the onset and advance of the chronic sickness, through the terminal stages of the disease and until the end of life [6]. The final goal of palliative care is to improve the quality of life for both the patients and the families, regardless of diagnosis [7]. Palliative care can be carried out in a variety of settings, including institutions, such as, hospitals, inpatient hospices, and home care for older individuals with advanced diseases [8].

The importance of PC for cancer patients has been progressively recognized worldwide since the early 1980s. Nowadays, there is an expanded awareness of PC for other chronic diseases; such as, HIV/AIDS, congestive heart failure, cerebrovascular disease, neurodegenerative disorders, chronic respiratory diseases, drug resistant tuberculosis, diseases of older individuals and others [9]. Palliative care has become an area of special skill within medicine, nursing, social work, pharmacy, chaplaincy, and other disciplines. However, advances in palliative care have not yet been integrated into standard clinical practice in a good manner [1]. Ethiopia is endeavoring to move forward in its policy improvement process of setting up PC. Nevertheless, most of the people who are suffering from cancers, HIV/AIDS, and other chronic illnesses are often diagnosed at late stage. This makes a tremendous burden of suffering for the people with extremely constrained access to pain medications, and other PC interventions [3]. However, there are very limited researche in the study area and the nation at large. Hence, this study aimed to assess palliative care practice, and its associated factors among nurses working in South Gondar Zone public hospitals, Northwest Ethiopia, 2020.

**General objective:** to assess the quality of palliative care practice, and its associated factors among nurses working in South Gondar Zone public hospitals, Northwest Ethiopia, 2020.

**Specific objectives:** to determine the quality of palliative care practice among nurses working in South Gondar Zone public hospitals, Northwest Ethiopia, 2020; to distinguish factors affecting the quality of palliative care practice among nurses working in South Gondar Zone Public Hospitals, Northwest Ethiopia, 2020

## Methods

**Study design, area, and period:** an institution-based cross-sectional study design was carried out among nurses working in South Gondar Zone public hospitals, Northwest Ethiopia from December 01-21/2020.

**Study population:** nurses working in South Gondar Zone public hospitals.

**Inclusion and exclusion criteria:** all nurses who were working in South Gondar Zone public hospitals at the time of data collection were included in the study. Whereas, those nurses who were on sick leave, maternity leave, annual leave and training at the time of the data collection period were excluded from the study.

**Sample size determination:** for this study, the sample size was calculated by using double population proportion formula at a 95% confidence interval, with a 5% margin of error, and by assuming the level of attitude (56.3%) [6]. Based on this assumption, the actual sample size (n) for the study was determined using the level of attitude (56.3%) to be 378+10%=416. But, since the source population (402) was less than the calculated sample size (416), we have taken the all source population (402) as a sample size for this

study. A total of 402 nurses who were working in all South Gondar Zone public hospitals were included in this study.

**Dependent variable:** quality of palliative care practice.

**Independent variables:** sociodemographic factors: age, sex, marital status, level of education and work experience in years and environmental factors: working department/unit, training, and support by the facility. Knowledge of PC and attitude towards PC.

**Operational definitions**

**Practice:** nurses who have scored ≥ 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 also have poor palliative care practice [8].

**Knowledge:** nurses who have scored ≥ 75% of the overall score of the Palliative Care Quiz for Nursing (PCQN) scale have adequate knowledge about PC; while those nurses who have scored < 75% of PCQN scale also have inadequate knowledge [9].

**Attitude:** nurses who have scored ≥ 50% of the overall score of Frommelt´s attitude toward care of dying (FATCOD) scale have favorable attitude; while those nurses who have scored < 50% of the whole score of FATCOD scale have unfavorable attitude [9].

**Data collection tool and procedures:** a pre-tested and structured self-administered questionnaire was used to collect the data. The tool was adapted using Palliative Care Quiz for Nursing (PCQN) for knowledge and Frommelt´s attitude towards care of dying (FATCOD) scale for attitude and modified to make it fit to the circumstance of Ethiopia; and by reviewing different literatures [3,6,8-14]. The tool was prepared in English; it contains nurses´ socio-demographic, environmental factors, quality of PC practice, knowledge of PC and attitude towards PC related questions. The reliability of the tool was also established using reliability coefficient. Before giving the questionnaire, the nurses have been informed about the aims/purposes, risks and possible benefits of the study, the right and refusal to participate in this study and that collected information would be kept confidential. After all, those nurses who were willing were requested to fill the questionnaire.

**Data quality control, processing and analysis:** five percent of the questionnaire was pre-tested at Addisalem district hospital to appreciate the reliability, clarity, sequence, consistency, understandability, and the full time that it would take to wrap-up the questionnaire before the actual data collection. Then, the necessary comments and feedbacks were included in the final tool to improve its quality. Trained diploma nurses were involved in data collection process and the investigators were closely involved in supervision. Training was given for data collectors regarding the objective of the study, data collection tool, ways of information collection, checking the completeness of the tool, and how to preserve confidentiality. Proper checking, cleaning, editing, and coding of data was maintained for its quality and entered into Epi data version 4.2 in order to minimize logical errors and design skipping patterns. Then after, the data have been exported to SPSS window version 22 for analysis. To maintain the validity of the data, double data entry was done and compared to the original data. Frequencies and cross tabulation were done for missing values and variables. Descriptive analysis has been done by computing proportions and summary statistics. Then, the information has also been presented using simple frequencies, tables, and figures. Binary logistic regression was used to analyze the outcome variable. Bivariate and multivariable analyses were done to see the relation between each independent variable and the outcome variable. The assumptions of binary logistic regression model were checked. The goodness of fit was tested by using Hosmer-Lemeshow statistics and

Omnibus tests. Variables with p<0.25 in the bivariate analysis were included in the final multivariable analysis model in order to control all the possible confounding variables, and the variables had been selected using enter method. The directions and strengths of the statistical association were measured using odds ratio with 95% CI. Adjusted odds ratios along with 95% CI were also estimated to identify factors associated with the quality of palliative care practice using multivariable analysis. In this study, variables with p-value <0.05 were considered as statistically significant.

**Ethical considerations:** the ethical clearance was obtained from Debre Tabor University, College of Health Sciences, institutional review board. The respondents were informed about the purpose of the study, their right to refuse, and voluntary consent was obtained from all respondents prior to the data collection. The respondents were also told that the information obtained from them would be treated with complete confidentiality and wouldn´t cause any harm to them.

## Results

Of the total 402 respondents, 387 of them have been included in the final analysis, giving a response rate of 96.27%.

**Socio-demographic characteristics:** of the entire respondents, 216 (55.81%) were females and 321 (82.95%) were between the age of 20-30, with the mean ± SD of age 28.50 ± 3.59 years ranging from 24 to 46 years. Two hundred twenty-five (58.14%) were single and 242 (62.53%) were also B.Sc. nurses. On the other hand, 220 (56.85%) have worked for less than 5 years with the mean ± SD working experience of 5.25 ± 3.28 years (Table 1).

**Working environment related characteristics:** of the total respondents,151 (39.01%) were from Debre Tabor referral hospital and 116 (29.97%) were working in medical wards. On the other hand, none of the respondents got palliative care training at all (Table 2).

**The quality of palliative care practice:** of the total respondents, only 46 (11.89%) of them had good quality of palliative care practice. Likewise, of the respondents with the age of 41-50 years, 3 (37.50%) of them had good palliative care practice. Additionally, among nurses having adequate knowledge of PC, 24 (28.92%) of them also had good quality of palliative care practice. On the other hand, of the nurses having favorable attitude, 30 (26.32%) of them had good quality of palliative care practice (Table 3).

**Quality of palliative care practice-related characteristics:** of the total respondents who practiced PC, only 11 (23.91%) of the respondents initiated PC discussion with patients during diagnosis,12(26.09%) gave PC as the disease progresses, and 76 (19.64%) of the respondents also had informed terminally ill patients about their diagnosis (Table 4).

**Knowledge and attitude related characteristics:** of the total respondents, only 83 (21.45%) had good knowledge of PC and 114 (29.46%) also had favorable attitude towards palliative care practice (Table 5).

**The association of independent variables and quality of palliative care practice:** those nurses who had adequate knowledge of PC were 2.9 times more likely to practice it than those nurses with inadequate knowledge of PC (AOR=2.91,95%CI: 1.38,6.13). Additionally, those nurses who were B.Sc. degree holders were 2.7 times more likely to practice PC than nurses who were diploma holders (AOR=2.70,95%CI: 1.092,6.69). Likewise, nurses having 11-15 years of working experience were 50% more likely to practice PC than those nurses having less than 5 years of work experience (AOR=0.05,95%CI: 0.01,0.26) (Table 6).

## Discussion

This study indicated that only 46 (11.89%) of the respondents had good PC practice and knowledge, attitude, educational level and years of working

experience were significantly associated with nurses´ practice towards PC. Of the total respondents, 11 (23.91%) initiated PC discussion with patients during diagnosis, 12 (26.09%) gave PC as the disease progresses, 76 (19.64%) had informed terminally ill patients about their diagnosis, 332 (85.79%) hiden the truth from the patents and 148 (38.24%) also gave counseling to the patients with life-threatening diseases. This finding is lower in comparison with a study done in government health facilities of Shire Endesilasie, Tigray, Ethiopia (2020) which showed that only 27.2% of the respondents initiated PC discussion with patients at the time of diagnosis, 75 (27.0%) gave PC as the disease progressed; and 58 (20.9%) of them had informed those terminally ill patients about their diagnosis [5]. This finding is also lower in comparison with a study conducted in selected hospitals of Addis Ababa, Ethiopia which reported that 83.6% of the respondents hid the truth from the patients and 46.6% of them also provided counselling to the patients [3]. This variation might be due to in the current study, none of the nurses got palliative care training that could help them to practice PC easily because of lack of institutional support to practice palliative care. It also might be due to the fact that almost more than one-third of the respondents (37.47%) were diploma holders and around 57% of the respondents had work experience of < 5 years which might influence to practice PC easily as compared with those respondents who were B.Sc. degree holders and having work experience of above 5 years.

**Limitation of the study:** since there were limited studies on palliative care, it makes the comparison and discussion more difficult. On the other hand, this study also might be subjected to recall and social desirability biases. Additionally, we couldn't see the cause and effect relationship between the variables in the study since the design is a cross-sectional study.

## Conclusion

This study revealed that the quality of palliative care practice among nurses working in South Gondar zone public hospitals was poor. Moreover, knowledge of PC, attitude towards PC, educational level, and years of working experience were independent predictors of the quality of palliative care practice among nurses.

**Recommendations:** the Ethiopian Ministry of health, regional health bureau, South Gondar zone health department, different NGOs, policymakers, stakeholders and health facility administrators should work together to enhance the practice of nurses towards PC by giving sustainable training and involving the philosophy of PC in nursing education to expand the limited PC service in the area and the nation at large. Nurses also should update their knowledge of PC by reading manuals/guidelines, change their attitude and practice palliative care for patients in need of PC in their day-to-day activities. Other researchers also should conduct further studies using triangulated study designs to identify additional problems with it.

***What is known about this topic***

- *Knowledge of PC, attitude towards PC, and educational level affect the quality of palliative care practice;*
- *Poor palliative care practice is a major problem in the health care delivery system.*

***What this study adds***

- *In this study which was conducted among nurses working in South Gondar zone public hospitals, the quality of palliative care practice was poor;*
- *Knowledge of PC, attitude towards PC, educational level, and years of working experience were independent predictors of the quality of palliative care practice among nurses working in South Gondar zone public hospitals.*

## Competing interests

The authors declare no competing interests.

## Authors' contributions

Tigabu Munye, Demeke Mesfin, Biniam Minuye, Wubet Alebachew and Yeshiambaw Eshetie: wrote the research proposal, conducted the study and did data entry and the analysis. Aragaw Tesfaw, Ermias Sisay, Gedefaye Nibret, Getachew Yideg, Sintayehu Asnakew,Worku Necho, Abraham Tsedalu Amare, Abenezer Melkie, Getasew Legas, Fitalew Tadele, and Solomon Demis: involved in proposal development, data entry, analysis and wrote the manuscript. All the authors have read and agreed to the final manuscript.

## Acknowledgments

We would like to forward our deepest gratitude and appreciation to Debre Tabor University, College of Health Science for giving us this opportunity to conduct the study. Secondly, our heartfelt thanks goes to Zonal health department workers who gave us a baseline data about the study area. Thirdly, we would like to thank hospital administrators for their permission and unlimited support. Lastly, we also give our heartfelt thanks for all nurses who have participated in this study.

## Tables

**Table 1**: socio-demographic characteristics of the respondents in South Gondar Zone public hospitals, Northwest Ethiopia, 2020 (n=387)

**Table 2**: working environment related characteristics of the respondents in South Gondar Zone public hospitals, Northwest Ethiopia, 2020 (n=387)

**Table 3**: distributions of nurses´ quality of palliative care practice in South Gondar Zone public hospitals, Northwest Ethiopia, 2020 (n=387)

**Table 4**: quality of palliative care practice related characteristics of the respondents in South Gondar Zone public hospitals, Northwest Ethiopia, 2020 (n=387)

**Table 5**: knowledge and attitude related characteristics of the respondents in South Gondar Zone public hospitals, Northwest Ethiopia, 2020 (n=387)

**Table 6**: the association of independent variables and nurses' quality of palliative care practice in South Gondar Zone public hospitals, Northwest Ethiopia, 2020 (n=387)

## References

1. Youssef HA, Mansour M, Al-Zahrani S, Ayasreh I, Abd El-Karim R. Prioritizing palliative care: assess undergraduate nursing curriculum, knowledge and attitude among nurses caring end-of-life patients. European Journal of Academic Essays. 2015;2(2): 90-102. **Google Scholar**
2. Glasdam S, Ekstrand F, Rosberg M, van der Schaaf AM. A gap between the philosophy and the practice of palliative healthcare: sociological perspectives on the practice of nurses in specialised palliative homecare. Med Health Care Philos. 2020 Mar;23(1): 141-152. **PubMed**| **Google Scholar**
3. Kassa H, Murugan R, Zewdu F, Hailu M, Woldeyohannes D. Assessment of knowledge, attitude and practice and associated factors towards palliative care among nurses working in selected hospitals, Addis Ababa, Ethiopia. BMC palliative care. 2014 Dec;13(1): 1-1.4. **PubMed**| **Google Scholar**

4. Brinkman-Stoppelenburg A, Witkamp FE, van Zuylen L, van der Rijt CC, van der Heide A. Palliative care team consultation and quality of death and dying in a university hospital: a secondary analysis of a prospective study. PLoS One. 2018 Aug 23;13(8): e0201191. **PubMed**| **Google Scholar**
5. Sorifa B, Mosphea K. Knowledge and practice of staff nurses on palliative care. IJHRMLP. 2015;1(2): 41-6. **Google Scholar**
6. Zeru T, Berihu H, Gerensea H, Teklay G, Teklu T, Gebrehiwot H *et al*. Assessment of knowledge and attitude towards palliative care and associated factors among nurses working in selected Tigray hospitals, northern Ethiopia: a cross-sectional study. Pan Afr Med J. 2020 Apr 15;35: 121. **PubMed**| **Google Scholar**
7. Rome RB, Luminais HH, Bourgeois DA, Blais CM. The role of palliative care at the end of life. Ochsner Journal. 2011 Dec 21;11(4): 348-52.8. **PubMed**| **Google Scholar**
8. Zeru T, Gerensea H, Berihu H, Zeru M, Wubayehu T. Nurses practice towards palliative care in Shire Endasilasie health facilities, Northern Ethiopia: a cross-sectional study. Pan Afr Med J. 2020 Apr 8;35: 110. **PubMed**| **Google Scholar**
9. Gedamu S. Knowledge and Attitude of Nurses towards Palliative Care in Government Health Hospitals of Addis Ababa, Ethiopia, 2016. JHI. 2016. **Google Scholar**
10. Nega R, Tachbele E, Kassa GM. Cancer pain and its management: Knowledge of nurses at selected health institutions, offering cancer treatment in Addis Ababa, Ethiopia, 2013. J Pain Relief. 2014;3(137): 2167-0846.11.
11. Lakew S, Musema H, Shimeles T, Challinor J. Assessment of knowledge, accessibility and utilization of palliative care services among adult cancer patients at Tikur Anbesa Specialized Hospital, Addis Ababa, Ethiopia, 2014: a cross-sectional institution based study. BMC Res Notes. 2015 Nov 7;8: 657. **PubMed**| **Google Scholar**
12. Kassa RN, Kassa GM. Nurses´ attitude, practice and barriers toward cancer pain management, Addis Ababa, Ethiopia. J Cancer Sci Ther. 2014;6(12): 483-7.13. **Google Scholar**
13. Ayed A, Sayej S, Harazneh L, Fashafsheh I, Eqtait F. The Nurses' Knowledge and Attitudes towards the Palliative Care. Journal of Education and Practice. 2015;6(4): 91-9.14. **Google Scholar**
14. Abate AT, Amdie FZ, Bayu NH, Gebeyehu D. Knowledge, attitude and associated factors towards end of life care among nurses´ working in Amhara Referral Hospitals, Northwest Ethiopia: a cross-sectional study. BMC research notes. 2019 Dec;12(1): 1-8. **PubMed**| **Google Scholar**

| **Table 1**: socio-demographic characteristics of the respondents in South Gondar Zone public hospitals, Northwest Ethiopia, 2020 (n=387) | | | |
|---|---|---|---|
| **Variables** | **Category** | **Frequency** | **Percentage (%)** |
| Sex | Male | 171 | 44.19 |
| | Female | 216 | 55.81 |
| Age | 20-30 | 321 | 82.95 |
| | 31-40 | 58 | 14.98 |
| | 41-50 | 8 | 2.07 |
| Marital status | Single | 143 | 36.95 |
| | Married | 225 | 58.14 |
| | Divorced | 12 | 3.10 |
| | Widowed | 7 | 1.81 |
| Educational level | Diploma | 145 | 37.47 |
| | BSc | 242 | 62.53 |
| Year of work experience | <5 | 220 | 56.85 |
| | 5-10 | 130 | 33.59 |
| | 11-15 | 26 | 6.72 |
| | 16-20 | 11 | 2.84 |

| **Table 2**: working environment related characteristics of the respondents in South Gondar Zone public hospitals, Northwest Ethiopia, 2020(n=387) | | | |
|---|---|---|---|
| **Variables** | **Category** | **Frequency** | **Percentage (%)** |
| Working facility | DTRH | 151 | 39.01 |
| | Addis Zemen PH | 39 | 10.08 |
| | Ebnat PH | 32 | 8.27 |
| | Mekane-Eyesus PH | 35 | 9.04 |
| | Andabet PH | 34 | 8.79 |
| | Wogeda PH | 31 | 8.01 |
| | Nefas Mewcha PH | 35 | 9.04 |
| | Dr. Ambachew Mekonnen PH | 30 | 7.76 |
| Working unit | Medical ward | 116 | 29.97 |
| | Surgical ward | 92 | 23.77 |
| | Pediatric ward | 53 | 13.70 |
| | Emergency ODD | 45 | 11.63 |
| | Cold OPD | 34 | 8.79 |
| | ICU | 32 | 8.27 |
| | Others | 15 | 3.87 |
| Did you get palliative care training? | Yes | 0 | 0 |
| | No | 387 | 100 |

| **Table 4**: quality of palliative care practice related characteristics of the respondents in South Gondar Zone public hospitals, Northwest Ethiopia, 2020 (n=387) | | | |
|---|---|---|---|
| **Variables** | **Category** | **Frequency** | **Percentage (%)** |
| Initiated PC discussion with patients during diagnosis | Yes | 11 | 23.91 |
| | No | 35 | 76.09 |
| Gave PC as the disease progresses | Yes | 12 | 26.09 |
| | No | 34 | 73.91 |
| Had informed terminally ill patients about their diagnosis | Yes | 76 | 19.64 |
| | No | 311 | 80.36 |
| Hidden the truth from the patients | Yes | 332 | 85.79 |
| | No | 55 | 14.21 |
| Gave counseling to patients | Yes | 148 | 38.24 |
| | No | 239 | 61.76 |

| **Table 5**: knowledge and attitude related characteristics of the respondents in South Gondar Zone public hospitals, Northwest Ethiopia, 2020 (n=387) | | | |
|---|---|---|---|
| **Variables** | **Category** | **Frequency** | **Percentage (%)** |
| Nurses' knowledge of PC | Adequate knowledge | 83 | 21.45 |
| | Inadequate knowledge | 304 | 78.55 |
| Nurses' attitude towards PC | Favorable attitude | 114 | 29.46 |
| | Unfavorable attitude | 273 | 70.54 |

**Table 6**: the association of independent variables and nurses' quality of palliative care practice in South Gondar Zone public hospitals, Northwest Ethiopia, 2020 (n=387)

| Variables | Categories | Nurses' practice | | COR(95%CI) | AOR(95%CI) | P-value |
|---|---|---|---|---|---|---|
| | | Good practice | Poor practice | | | |
| Nurses' knowledge of PC | Adequate knowledge | 24(52.17) | 59(17.30) | 5.21(2.74, 9.92) | 2.91(1.38,6.13) | 0.005* |
| | Inadequate knowledge | 22(47.83) | 282(82.70) | 1.00 | 1.00 | |
| Nurses' attitude towards PC | Favorable attitude | 30(65.22) | 84(24.63) | 5.74(2.98, 11.04) | 2.45(1.15,5.21) | 0.020* |
| | Unfavorable attitude | 16(34.78) | 257(75.37) | 1.00 | 1.00 | |
| Educational level | Diploma | 9(19.57) | 136(39.88) | 1.00 | 1.00 | |
| | BSc | 37(80.43) | 205(60.12) | 2.73(1.28, 5.83) | 2.70(1.092,6.69) | 0.031* |
| Year of work experience | <5 | 8(17.39) | 212(62.17) | 1.00 | 1.00 | |
| | 5-10 | 21(45.65) | 109(31.96) | 5.11(2.19, 11.90) | 0.05(0.01, 0.26) | 0.001* |
| | 11-15 | 11(23.91) | 15(4.40) | 19.43(6.80, 55.56) | 0.21(0.05, 1.00) | 0.050 |
| | 16-20 | 6 (13.05) | 5(1.47) | 31.80(7.99,126.51) | 0.70(0.13, 3.69) | 0.671 |

Note: *Significant association, PC= palliative care