

## Knowledge and Attitude of Nurses towards Palliative Care in Government Hospitals of Addis Ababa, Ethiopia

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### Abstract

**Purpose of the study:** To provide clear findings regarding knowledge and attitude towards palliative care with its associated factors which may help to show direction to solve problems based on the result.

**Methods:** An institution based cross-sectional study was conducted among 426 nurses in four randomly selected government hospitals in Addis Ababa. To select the study participants, the total sample size was allocated proportionally to each selected hospitals. Again proportional allocation was done for each work area in each selected hospitals. Finally from each work areas, nurses were selected by using a systematic random sampling method to attain the final individuals. The knowledge and attitude of nurses towards palliative care was measured using questionnaires which are adopted and modified from the Palliative Care Quiz for Nursing and Frommelt Attitude toward Care of the Dying scale, respectively. Epidata 3.1 and SPSS version 23 software were applied for data entry and analysis respectively.

**Result:** The response rate was 92.02% of the total participants. Study results had shown that only 104 (26.5%) of the respondents had good knowledge and 331 (84.4%) had favorable attitude towards palliative care. Level of Education, working department, years of working experiences in nursing, experience in caring chronically ill patient and in-service training of palliative care had significant association with the knowledge of nurses towards palliative care. Level of education, experience in caring chronically ill patient and in-service training were found to be statistically significant with the attitude of nurses towards palliative care.

**Conclusion:** Nurses had poor knowledge but their attitude towards palliative care was favorable. Attention should be given towards palliative care by the policy makers and palliative care to be incorporated in nursing education. On job training for nurses working in hospitals should be provide.

**Keywords:** Knowledge; Attitude; Palliative care; Nurses; Addis Ababa; Government hospitals

**Abbreviations** AIDS: Acquired Immunodeficiency Syndrome; OR: Adjusted Odds Ratio; CI: Confidence Interval; FATCOD: Frommelt attitude toward care of the dying; HIV: Human Immunodeficiency Virus; PC: Palliative Care; PCQN: Palliative Care Quiz for Nurses; SPSS: Statistical Program for Social Sciences; TB: Tuberculosis

### Introduction and Background

Palliative care can be defined as a philosophy and organized care which is provided to patients and their families going through a progressive, chronic, life threatening disease to relieve the symptoms of the disease by incorporating psychosocial and spiritual care [1,2]. Since the early 1980s, the need for PC for cancer patients has been progressively acknowledged worldwide. Recently, there is increased awareness of PC for other chronic diseases such as AIDS, congestive heart failure, cerebrovascular disease, neurodegenerative disorders, chronic respiratory diseases, drug-resistant tuberculosis, diseases of older people and others [3].

Globally, in 2011, over 29 million people died from diseases requiring PC. The estimated number of people in need of PC at the end of life was 20.4 million. The biggest proportion, 94%, corresponds to adults of which 69% were over 60 years old and 25% were 15 to 59 years old. Only 6% of all people in need of PC were children. The great majority of adults in need of PC died from cardiovascular diseases (38.5%), and cancer (34%), followed by chronic respiratory diseases (10.3%), HIV/AIDS (5.7%), diabetes (4.5%) and drug-resistant TB (0.8%) [3]. Due to limited development of PC across Africa many patients have not received formal PC services [4]. Cancer and HIV/AIDS account for 80% of the patients in need of PC in Uganda. The minimum palliative healthcare burden in Uganda is approximately 137,700 patients given that an additional two family or voluntary caregivers per patient may also need support, it is therefore likely that the total number of people requiring help is nearer 413,000. Nearly 90% of patients in Uganda who need PC do not access such services [5]. Ethiopia is attempting to include PC in its policy development. However, most people who are suffering from cancers, HIV/AIDS and other chronic diseases are often diagnosed at the late stage of the disease process. This creates a huge burden of suffering for Ethiopian people with limited access to PC interventions [6].

Different studies have documented that nurses and other health care professionals are inadequately prepared to care for patients in PC. For PC to be developed it must have appropriate policy, drug availability, education and implementation at all levels of a nation's health service through an integrated approach for ensuring effective pain and symptom management of PC [7,8]. Low level of knowledge and poor attitude about PC can be responsible for these inadequacies. Many studies claim that nurses do not appropriately prepared to care for patients in PC. This will help for nurse's educators to give great emphasis on PC nursing education for nursing students that improve PC services in the hospitals [9-12]. There are several studies that assessed nurses' knowledge and attitude about PC in different settings. A study in Palestine had shown that only 20.8% of the nurses had good knowledge and 56.2% of participants had moderate attitude towards PC [13]. 46.7% of nurses had unsatisfactory total knowledge scores about PC in Egypt [14]. In Addis Ababa only 30.5% of nurses had good knowledge and 76% had favorable attitude towards PC [15]. Another study in Addis Ababa revealed that 53.7% of the nurses' have a negative attitude towards cancer pain management [10]. This study was done in Addis Ababa government hospitals where no emphasis was given concerning nurses' knowledge and attitudes towards PC.

## Materials and Methods

### Ethical issues

Ethical clearance was obtained from institutional review board of Addis Ababa University, college of health sciences, department of nursing and midwifery research committee. Written consent was obtained from all study participants after information is provided about purpose of the study, non-invasiveness of the data collection procedure, confidentiality of the information.

### Study design, area and period

Cross sectional quantitative survey study done in Addis Ababa government hospitals, from March 1-10, 2016.

### Subjects

This study was done on nurses working in government hospitals of Addis Ababa. Nurses with work experience of at least 6 months or more in randomly selected governmental hospitals who were available during data collection period were included. Nurses working in central sterilization supply department and those work experience of less than 6 months were excluded in this study.

### Sample size determination

The sample size for this cross sectional study calculated by assuming knowledge prevalence to be 30.5% in previous study with 5% marginal error, 95% confidence interval [15]. Based on this assumption, the sample size for the study was 323. Since the study population is less than 10,000 we used population correction formulas, we get 258. However, as the sample selection passed through multistage sampling, we used a design effect of 1.5 and then by adding 10% for non-response rate a total sample size of 426 nurses were included in this study.

## Sampling technique and sampling procedure

Addis Ababa city has 13 governmental hospitals from which one-third of the hospitals i.e., 4 governmental hospitals selected randomly by lottery method. The hospitals selected randomly were Tirunesh Beijing hospital, Black lion hospital, Menilik II memorial hospital and Zewditu memorial hospital. To select the study participants, the total sample size was allocated proportionally based on the number of nurses from each selected hospitals. Again proportional allocation was done for each work area in each selected hospitals. Finally, from each work area, nurses were selected using a systematic random sampling with replacement method to attain the final individuals by using list of nurses in each work area as a sampling frame. The sampling interval ( $K=1274/426\approx 3$ ) of study participants were every third participants. The first study subject was selected by using lottery method.

## Data collection tools

Self-administered questionnaire was used for data collection. The knowledge questions adopted and modified from PCQN. The reliability coefficient of the tool was 0.56 and the internal consistency of the 20-item quiz was 0.78 [16]. The attitude scale adopted from FATCOD and modified so as to make it fit to the Ethiopia context [15]. Knowledge questions use Yes, No, or don't know answers. One point was awarded for each correct answer; incorrect or I don't know answer took zero. The attitude questionnaire which consists of 24 items with 5 point Likert scale. 1(Strongly Disagree), 2(Disagree), 3(Uncertain), 4(Agree) to 5(Strongly Agree). 12 of the items were written positively and the rest 12 items written negatively. The score of negative items were reversed to calculate the attitude.

## Data collection procedure and quality control

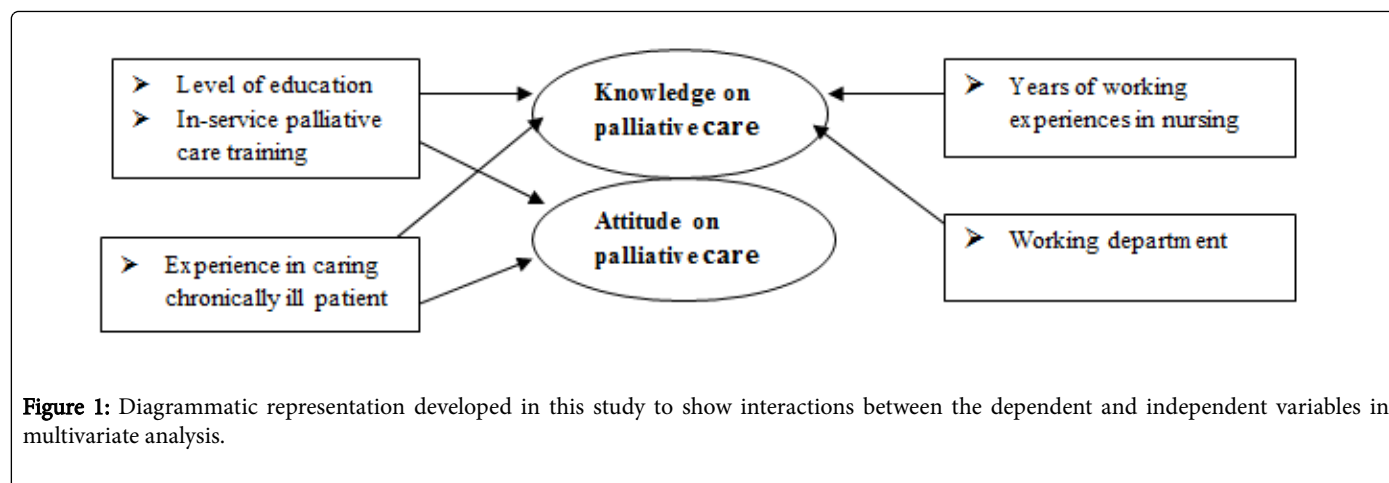
One full day training was given for data collectors and supervisor regarding the study, the questionnaire and data collection procedure by the main investigator. Pre-test in 10% of the sample nurses was done in Yekatite 12 hospital which was not included in the study. The respondents encouraged to respond to all items in the questionnaire within the time they devoted.

## Operational definition

- Good knowledge:  $\geq 75\%$  of total score of the Palliative Care Quiz for Nursing (PCQN) scale.
- Poor knowledge:  $<75\%$  of total score of the PCQN scale.
- Favorable attitude:  $\geq 50\%$  of the total score of Frommelt attitude toward care of the dying (FATCOD) Scale.
- Unfavorable attitude:  $<50\%$  of total score of the FATCOD Scale.

## Statistical analysis

Descriptive statistics was done to describe frequency and percentages. Binary logistic regression was done to see the crude significant relation of each independent variable with dependent variables. Independent variables found p-value less than 0.25 entered to multivariate logistic regressions to control the effect of confounding. Finally significant factors were identified based on AOR with 95% confidence level and P-value less than 0.05 (Figure 1).



**Figure 1:** Diagrammatic representation developed in this study to show interactions between the dependent and independent variables in multivariate analysis.

## Results

### Socio-demographic characteristics and professional related factors of respondents

Out of the total sample size (n=426), 392 participants had completed the questionnaire making a response rate of 92.02%. Among 392 nurses who completed the questionnaires, majority of them 263 (67.1%) were female and 129 (32.9%) were male and the mean age of respondents was 28.83 years ± 6.077 SD.

### Nurses' knowledge and attitude towards palliative care

Around three fourth of the nurses 288(73.5%) had poor and 104(26.5%) good knowledge level of PC. In the PCQN, the minimum and maximum score were 2 and 17 out of 20 respectively with the mean score of 10.46 (SD: 3.722). Out of the total study participants 331 (84.4%) had favorable and 61 (15.6%) unfavorable attitude towards PC. The minimum and maximum score were 43 and 101, respectively out of 120 with the mean score of 78.31 (SD: 12.884) (Table 1).

Variables	Responses	Frequency (n=392)	Percentage (100%)
Institution/hospital	Black lion	198	50.5
	Menilik II memorial	65	16.6
	Zewditu memorial	71	18.1
	Tirunesh Beijing	58	14.8
Age	21-30 years	303	77.3
	31-40 years	71	18.1
	>40 years	18	4.6
Monthly income (ETB)	1500-3000	59	15.1
	>3000	333	84.9
Sex	Male	129	32.9
	Female	263	67.1
Marital status	Single	230	58.7
	Married	162	41.3
Level of Education	Diploma nurse	57	14.5
	B.sc nurse and above	335	85.5
Current working area or ward	Inpatient department	230	58.7
	Emergency department	73	18.6
	Outpatient department	89	22.7

Years of working experiences in nursing	≤ 5 years	251	64
	6-10 years	97	24.7
	>10 years	44	11.2
Experience in caring chronically ill patient	Daily	271	69.1
	Once per week	56	14.3
	Once per month and less	65	16.6
Experience of care for a dying family member within last 6 months	Yes	141	36
	No	251	64
Formal palliative care education in college/university	Yes	250	63.8
	No	142	36.2
At college/university, was it enough to give quality palliative care for patient?	Yes	108	43.2
	No	142	56.8
In-service training about palliative care	Yes	112	28.6
	No	280	71.4

**Table 1:** Socio-demographic characteristics and professional related factors of respondents in Addis Ababa government hospitals.

### Association between selected variables and nurses knowledge towards palliative care

In multivariate analysis level of Education, working department, years of working experiences in nursing, experience in caring chronically ill patient and in-service training of PC had significant association with the PC knowledge of nurses. Respondents with BSc degree and above level of education had more knowledgeable (AOR=5.098, CI=1.801-14.430, P=0.002) than diploma nursing holder. Nurses working in inpatient department (AOR=2.159, CI=1.009-4.621, p=0.047) had better knowledge than outpatient department nurses.

Nurses whose work experience 6-10 years had more knowledgeable (AOR=2.790, CI=1.518-5.128; p=0.001) compared to those whose work experience in nursing ≤ 5 years. On the other hand nurses experience in caring chronically ill patient once per week and once per month or less had less knowledgeable than from those nurses who had experience in caring chronically ill patient daily. Lastly nurses who had in-service training on palliative care had more knowledge (AOR=10.604, CI=5.974-18.819; P=0.000) than those who had no such training (Table 2).

Variables	Frequency (n=392)	Percentage (100%)
<b>Knowledge</b>		
Good knowledge	104	26.5
Poor knowledge	288	73.5
<b>Attitude</b>		
Favorable attitude	331	84.4
Unfavorable attitude	61	15.6

**Table 2:** Nurses' knowledge and attitude toward palliative care in Addis Ababa government hospitals.

### Association between selected variables and nurses attitude towards palliative care

In multivariate analysis only level of education, Experience in caring chronically ill patient and in-service training had a significantly association with level of nurses attitude. Nurses who had a bachelor's degree and above had revealed more favorable attitude (AOR=4.207, CI=2.214-7.993; p=0.000) compared to those who held a diploma. On

the other hand nurses experience in caring chronically ill patient once per month and less (AOR=0.478, CI=0.236-0.970, P=0.041) had less favorable attitude than from those nurses who had experience in caring chronically ill patient daily. Nurses who took in-service training about PC had more favorable attitude towards PC (AOR=2.948 (1.334-6.518;P=0.008) compared to nurses who did not take PC in-service training (Table 3).

Variables	Response	Knowledge		COR(95% CI)	AOR(95% CI)	P-value
		Good N (%)	Poor N (%)			
Level of Education	Diploma nurse	5(8.8)	52(91.2)	1	1	
	B.sc nurse and above	99(29.6)	236(70.4)	4.363(1.675-11.15)	5.098(1.801-14.430)	0.002*
Current working area or ward	Inpatient Department	71(30.9)	159(69.1)	2.392(1.267-4.516)	2.159(1.009-4.621)	0.047*
	Emergency Department	19(26.0)	54(74)	1.885(0.869-4.087)	1.458(0.569-3.734)	0.432
	Outpatient Department	14(15.7)	75(84.3)	1	1	
Years of working experiences in nursing	≤ 5 years	52(20.7)	199(79.3)	1	1	
	6-10 years	39(40.2)	58(59.8)	2.573(1.549-4.276)	2.790(1.518-5.128)	0.001*
	>10 years	13(29.5)	31(70.5)	1.605(0.784-3.284)	1.127(0.472-2.691)	0.788
Experience in caring chronically ill patient	Daily	86(31.7)	185(68.3)	1	1	
	Once per Week	12(21.4)	44(78.6)	0.587(0.295-1.167)	0.443(0.200- 0.983)	0.045*
	Once per Month and less	6(9.2)	59(90.8)	0.219(0.091-0.526)	0.157(0.058-0.422)	0.000*
Experience of care for a dying family member within last 6 months	Yes	30(21.3)	111(78.7)	0.646(0.398-1.051)	0.566 (0.310-1.034)	0.064
	No	74(29.5)	177(70.5)	1	1	
Formal palliative care education in college/university	Yes	59(23.6)	191(76.4)	0.666(0.421-1.053)	0.945(0.535-1.668)	0.844
	No	45(31.7)	97(68.3)	1	1	
In-service training about palliative care	Yes	65(58.0)	47(42.0)	8.546(5.156-14.164)	10.604(5.974-18.819)	0.000*
	No	39(13.9)	241(86.1)	1	1	

\*Statistically significant at p-value <0.05

**Table 3:** Associations between selected variables and nurses' knowledge towards palliative care in Addis Ababa government hospitals.

## Discussion

The result of this study showed that the majority of nurses (73.5%) had poor knowledge towards PC. This showed that presence of big problem in nursing knowledge concerning to PC that needs immediate attention. The possible reason might be only 28.6% nurses took in-service training about PC in this study. In addition 36.2% of the participant reported that they did not take formal PC education in their college/university stay and 56.8% of nurse from those who took PC education in their college/university said that it was not enough to give quality PC for patients. Past researchers also documented the serious deficiencies in undergraduate nursing education curriculum and inadequacy in nursing knowledge related to PC in Guwahati city, Saudi Arabia and Nigeria [9,11,17].

In this study only 26.5% had good knowledge about PC; it is higher than a study done in Palestine (20.8%) [13] and lower than previous study done in Addis Ababa (30.5%). The possible difference might be questionnaires in the present study uses 20 items of PCQN which had

been used widely throughout the world but the previous study used only 11 questions from PCQN and 3 items from others [15,16].

In this study level of education, working department, years of working experiences in nursing, experience in caring chronically ill patient and in-service training of PC had significant association with knowledge of nurses about PC. Holding BSc and above in nursing were more knowledgeable than diploma nurses. This might be due to duration and in-depth training as well as university/college admission criteria for Bachelors and above nursing are different from those of diploma nurses. With regard to more knowledge for experienced nurses, the possible reason might be senior nurse may get more knowledge through experience than junior nurse until certain experience. These two findings agreed with a study in Northern districts Palestine which revealed a highly statistically significant relation between nurses' qualification and nurses' experience with total knowledge of PC [13]. Level of education disagreed with other studies in Addis Ababa which did not show significant relationship between level of education and knowledge of PC [15,18]. The possible reason for this difference may be due to the fact that in the current study

majority of the participants were bachelors and above holder (85.5%) when we compare with the previous one.

Nurses working in inpatient department had significant association with nurses PC knowledge. This finding contradicts with a study done in Palestine [13]. The possible reason for this might be chronic illnesses patients are mostly admitted to the inpatient department and, thus, nurses who worked in this department had daily contact with those patients and may had developed good knowledge towards PC in the

present study. This result agreed with study conducted in previously in Addis Ababa [15]. The reason might be due to the similarities of the study subjects in the current and previous study. Nurses experience in caring chronically ill patient once per month or less and once per week had less knowledgeable than nurses who had experience in caring chronically ill patient daily. This might be due to as nurse contact with the patient less frequently; they might have less knowledge towards PC (Table 4).

Variables	Response	Attitude		COR(95% CI)	AOR(95% CI)	P-value
		Favorable N (%)	Unfavorable N (%)			
Sex	Male	105(81.4)	24(18.6)	0.716(0.408-1.258)	0.583(0.317-1.072)	0.083
	Female	226(85.9)	37(14.1)	1	1	
Level of Education	Diploma nurse	36(63.2)	21(36.8)	1	1	
	Bsc nurse and above	295(88.1)	40(11.9)	4.302(2.288-8.089)	4.207 (2.214-7.993)	0.000*
Years of working experiences in nursing	≤5 years	209(83.3)	42(16.7)	1	1	
	6-10 years	86(88.7)	11(11.3)	1.571(0.773-3.195)	1.389(0.661-2.916)	0.386
	>10 years	36(81.8)	8(18.2)	0.904(0.392- 2.084)	0.687(0.278-1.701)	0.418
Experience in caring chronically ill patient	Daily	235(86.7)	36(13.3)	1	1	
	Once per week	47(83.9)	9(16.1)	0.800(0.361-1.771)	0.682(0.296-1.571)	0.368
	Once per month and less	49(75.4)	16(24.6)	0.469(0.241-0.912)	0.478(0.236-0.970)	0.041*
In-service training about palliative care	Yes	104(92.9)	8(7.1)	3.035(1.393-6.613)	2.948 (1.334- 6.518)	0.008*
	No	227(81.1)	53(18.9)	1	1	

\*Statistically significant at p-value <0.05

**Table 4:** Associations between selected variables and nurses’ attitude towards palliative care in Addis Ababa government hospitals.

In this study nurses who had in-service training on PC revealed an association with nurses’ knowledge. When the nurses had training on PC their knowledge improves when we compare from those nurses who did not take such training. This supported a study done in Palestine [13]. This might be due to the similarity of study design and instrument.

Regarding attitude in this study majority (84.4%) of nurses had favorable attitude towards PC. This study in line with the study done in Taif City, in Saudi Arabia (83%) and it is lower than a study done in Udupi district (92.8%) [11,19]. The possible reason might be inadequacy PC education in Ethiopia than Udupi district. But it is higher than previous study in Addis Ababa (76%) [15]. This difference might be due to the participants’ educational preparation because the first degree and above level educated nurse were 85.5% in the current study but in previous study only 50.1% of the participants were degree holder and the rest were diploma holder. So that holding first degree and above in nursing might be able to understand the FATCOD scale in a better way than diploma holder.

The findings of this study had confirmed the association of education, experience in caring chronically ill patient and in-service

training with attitude towards PC. This finding supported by a study done in Thailand factors related to a nurse’s caring behavior for a dying patient including educational level and training experience [20]. In this study nurses who had a higher education degree had four fold increasing favorable attitude compared to diploma graduate nurses. The reason for this might be degree nurses understand the FATCOD scale more than diploma nurse. This finding consistent with a study in Addis Ababa and south-east Iran [15,21]. This similarity might be due to the same understanding of FATCOD scale in both Addis Ababa and south-east Iran nurses.

### Conclusion

In our study majority of respondents had poor knowledge towards PC. Therefore Federal Ministry of Health should consider basic education and on job training for nurses working in hospitals to provide standardized PC in collaboration with Addis Ababa Health Bureau. Nurses should update their palliative care knowledge through reading or taking short training. Researchers should also do further study using triangulated study design to address the unreached problems in this study.

## Implications for Practice

Improving nurses' knowledge and attitude towards palliative care optimize quality life of the patients throughout disease course. The palliative care nurse must be knowledgeable in care of the patient to raise the level of best practices to meet the needs of the patients and their families.

## Acknowledgements

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