Journal of Health Sciences and Innovative Research 2024;5(1):41-54
DOI: https://doi.org/10.31357/jhsir.v5i01.7729

Research Article

Knowledge, attitudes, practices of cancer palliative care and their associated factors among nursing officers in Apeksha Hospital, Maharagama

Madushan P.A.T.[1*], Gunasekera P.A.N.C.P.[1], Munasinghe M.A.R.N.[1], Uthpala A.A.S.[1], Karunanayaka N.S.[1], Goonewardena C.S.E.[1,2], Meegoda M.K.D.L.[1,3]

[1]*Faculty of Medical Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka.*

[2]*Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka.*

[3]*Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Gangodawila, Sri Lanka.*

Abstract

Introduction: Nursing officers, having a good knowledge, favourable attitudes, and correct practices in cancer palliative care uplift patient's quality of life. Objectives: To describe the level of knowledge, attitudes, practices of cancer palliative care and associated factors among the nursing officers in Apeksha Hospital, Maharagama. Methods: A descriptive cross-sectional study was carried out among 252 participants with more than one year of work experience at Apeksha Hospital, Maharagama. Stratified sampling technique was adopted to select the nursing officers from different wards. Data were collected using a validated self-administered questionnaire. Sum of points of each participant and the percentage was calculated. Depending on the mean score they were categorized into groups accordingly. Data were analysed initially by a descriptive analysis and then by Chi square test using SPSS software version 26. $P<0.05$ was the significance level. Results: Response rate was 70.2%. The mean age of the study participants was 32.9 (SD=6.55) years. The majority (59.5%) had good knowledge, 53.2% had favourable attitudes and 54% engaged in correct practices. Mean knowledge score was 26.4 (SD=3.44). Nurses above 30 years of age, married and having more than 10 years' experience had significant association with knowledge ($p<0.05$). Most of the participants who had good knowledge had correct practices ($p<0.001$). Most of the participants those who had favourable attitude had correct practices ($p<0.001$). Association of level of knowledge and attitude was not found to be statistically significant ($p=0.109$). Conclusion: The majority of the nurses had a good knowledge, favourable attitudes and were engaged in correct practices in palliative care. There is a significant association between the year of experience and the nurses' knowledge on palliative care. Having a good knowledge and favourable attitude on palliative care were positive factors for correct practices.

Keywords: Knowledge, Attitude, Practices, Cancer palliative care, Nurses

Introduction

Palliative care is a specialized interdisciplinary healthcare service provided to people at any age who are experiencing severe, or complex symptoms due to a life limiting or terminal condition. Despite the modern medical interventions, death is inevitable and therefore, optimizing the quality of life and mitigating

*Corresponding author: thamindumadushan@gmail.com
Received: 30 April 2024; Accepted: 24 August 2024

How to cite this article:
Madushan, P.A.T., Gunasekera, P.A.N.C.P., Munasinghe, M.A.R.N., Uthpala, A.A.S., Karunanayaka, N.S., Goonewardena, C.S.E. and Meegoda, M.K.D.L. Knowledge, attitudes, practices of cancer palliative care and their associated factors among nursing officers in Apeksha Hospital, Maharagama, Journal of Health Sciences and Innovative Research, 2024;5(1):41-54

suffering of those with a terminal illness, if of crucial importance for the patient, his/her family and healthcare provider as well.

Cancer palliative care is crucial because cancer can be a terminal illness with both short-term and long-term trajectories. As the global incidence of cancer and cancer-related deaths continues to rise, the need for effective palliative care becomes increasingly important. According to WHO statistics more than 70% of all cancer deaths occur in low and middle-income countries, which includes Sri Lanka as a low-income country(2). In 2018, 5,789 hospital cancer deaths have been reported in Sri Lanka (7).

Nurses play a crucial role in palliative care, yet deficiencies in cancer pain management knowledge persist due to inadequate education, resource scarcity, heavy workloads, and staffing shortages, particularly in Sri Lanka (6,7). However, there were very limited literature on nurses' knowledge, attitudes and practices on palliative care in the Sri Lankan context. Empowering nurses with palliative care education and fostering positive attitudes toward end-of-life care are essential (8,9,10). According to the findings of this study recommendations can be given to relevant authorities to be used at the policy making level. Despite challenges, integrating palliative care principles into nursing practice enhances patient care and outcomes (11).

Addressing sociodemographic factors such as marital status, ward type, education level, and personal experience can influence nurses' attitudes toward palliative care (13). Positive attitudes and enhanced knowledge can mitigate barriers to effective palliative care delivery, ultimately improving patient outcomes and experiences.

Although it is believed that the palliative care knowledge and skills can be derived from working with cancer afflicted people, there is a need for further improvements of knowledge and skills of nurses providing care for adult cancer patients. Most of the Sri Lankan nurses (96%) had not attended any educational program on palliative care, and 94% of Domiciliary Care Providers expressed the need to improve their knowledge and skills on palliative care (12). Therefore, palliative care education is necessary to provide quality care as knowledge and skills on palliative care they gained from the basic nursing education was not updated. Nurses believed that the experience they gained through working was more important to provide care for adult cancer patients (12). Though there is a big demand for palliative care services, opportunities for Sri Lankan nurses to improve their knowledge and develop attitudes and skills are scarce (12). It is important to assess the degree of practice of palliative care.

Measuring the practice of cancer palliative care among nursing officers reveals opportunities for improvement, especially in early identification, pain and symptom management, support provision, and care coordination (12). The COVID-19 pandemic has further underscored the importance of palliative care, emphasizing early symptom identification and holistic management. Early identification of patients who may benefit from a palliative approach to care has led to improved clinical outcomes, symptom control, quality of life and more efficient target use of health system resources across different populations of cancer patients. It is useful to practice palliative care in early identification of cancer. Nurses are involved in the management of cancer pain as secondary process. Pain management is the primary responsibility of medical staff, who are responsible for ordering drugs and referring patients to the pain clinic. For nurses, pain management consists primarily of drug administration, thus psychological pain is not addressed by the nurses. Oppression by doctors, lack of control, knowledge deficits, and poor professional nursing attitudes affect the nurse's

behaviour and lead to poor cancer pain management for patients (6).

Apeksha Hospital, Maharagama is the only hospital in Sri Lanka dedicated for cancer patients and their treatments. The nursing staff at Apeksha hospital have the highest exposure to and highest involvement in care for cancer patients, of all the nursing sector members of the country. The aim of this study was to describe the knowledge, attitudes and practices of cancer palliative care and their associated factors among the nursing officers in Apeksha Hospital, Maharagama.

Methods

A descriptive cross-sectional study was conducted at Apeksha Hospital located in Maharagama, Sri Lanka which is the central hospital for patients with cancer in Sri Lanka. Male and female nursing officers who had work experience for over one year at the Apeksha Hospital, Maharagama were included and those nursing officers who were pregnant at the time of data collection and who were on maternity leave were excluded. Data were collected from October 2020 to June 2021. Sample size was calculated based on the Lwanga and Lemeshaw equation and 30.5% proportion of good knowledge on palliative care (14). With a 10% non-response rate the final sample size was 359. Stratified sampling technique was adopted to select the nursing officers from different wards. Thereafter from each ward nursing officers were randomly selected until sample size was achieved through providing a unique serial number for each response.

A self-administered close ended questionnaire was prepared by the researchers using the literature to cover the objective. A modified version of the validated tool named palliative care quiz for nursing (PCQN) which has been developed to quantitatively assess the knowledge of nurses regarding palliative care (15) was used to collect data. Ethical approval was obtained from the ERC of the Faculty of Medical Sciences, University of Sri Jayewardenepura (CM/46/20). Informed written consent was obtained prior to the commencement of the study and each participant was given a serial number with their responses and thereafter identified through that to maintain confidentiality and privacy.

Analysis

Data were analysed using SPSS software version 26. Descriptive analysis was conducted to analyse knowledge, practices and attitudes of the participants. Quantitative data were described using frequency distribution and mean values. Associations were assessed using Chi square test. Statistical significance was taken as $p<0.05$. Odds ratio also used to assess association, and the Confidence interval was 95%. Each correct knowledge and practice question was given one mark and incorrect or don't know was given zero marks. Depending on the mean score it was categorized into good and poor knowledge and correct and incorrect practices. YNDK Scale (Yes/No/Don't Know Scale) was used to assess knowledge.

In these questions the correct answer carried 1-point, incorrect answer and 'don't know' answers carried 0 points. Mean knowledge score was 26.4 (SD=s 3.444). ≥ 26.4 was considered to have Good knowledge and <26.4 was considered to have Poor knowledge. The 12 item attitude questions were marked on the Likert scale and were recategorized into favourable and unfavourable attitudes depending on the mean score.

Results

Response rate was 70.2%. Table 1 depicts the socio-demographics and working experience among participants. Most were females (92.1%). The age range of participants was from 25 to 57 years. The mean age was 32.48 (SD= 6.551) years. All study participants were Sinhalese

Table 1: Frequency distribution of Socio-demographics and working experience among participants (n= 252)

Characteristics	Number	Percentage (%)
***Age (in years)**		
18-30	112	47.5
31-50	114	48.3
Over 51	10	4.2
Gender		
Male	20	7.9
Female	232	92.1
***Ethnicity**		
Sinhalese	251	100
Tamil	0	0
Muslim	0	0
Burghers	0	0
Other	0	0
*** Religion**		
Buddhism	248	100
Hinduism	0	0
Islam	0	0
Roman Catholic/ Christianity	0	0
Other	0	0
Marital status		
Unmarried	101	40.1
Married	151	59.9
Separated	0	0
Widowed	0	0
Divorced	0	0
***Level of education**		
Diploma	233	93.2
Bachelor degree	15	6
Post graduate degree	2	0.8
Other	0	0
***Experience in caring chronically ill patient**		
Daily	166	72.5
Once per week	16	7
Once per month	17	7.4
Few times per year	23	10
Never	7	3.1
***Experience of care for a dying family member**		
Yes	151	60.2
No	100	39.8
***In service training about palliative care followed**		
Yes	99	39.4
No	152	60.6

*Missing data

(100%) while most were married (59.9%) and had completed the Diploma in Nursing (93.2%). The majority of the study participants belonged to the Nursing officer grade III category in the distribution of designation (66%) while most of the study participants had working experience below 10 years (72.4%). The mean experience was 6.59 (SD = 6.770) years.

The majority of the study participants had experience in caring chronically ill patients daily (72.5%) and, in caring for a dying family member (60.2%). However, most have not had in service training in cancer palliative care (60.6%).

Table 2 shows the knowledge on different aspects of palliative care. Most of the participants had a good knowledge regarding the goals of palliative care and had correctly identified the patients who needed palliative care. Most of the study population had a clear understanding about the multi-disciplinary approach that is essential in palliative care.

The majority of the study population had an understanding about the different aspects of palliative care. Most (94.4%) had identified palliative care as not only relieving the physical pain of the patient and were familiar with the drugs used in pain management. The majority (98.4%) was aware that palliative care should also be extended to the family of the patient. Only 44.8% were aware of the different palliative care services in the country.

Frequency distribution regarding statements used to assess attitudes towards cancer palliative care is

Table 2: Knowledge on different aspects of palliative care

Aspects of palliative care	Yes		No		Don't know		Total	
	n	%	n	%	n	%	n	%
1. Palliative care is only relieving the physical pain	13	5.2	238	94.4	1	0.4	252	100
2. The number of patients who need palliative care is rising	229	90.9	4	1.6	19	7.5	252	100
3.Introduction of a Palliative Care Unit to all general hospitals will improve patient care	238	96	6	2.4	4	1.6	248	100
4.The dying person should not be allowed to make his/her medical care decisions	26	10.5	208	84.2	13	5.3	247	100
5.Familiar with pain management and drugs	240	95.6	6	2.4	5	2	251	100
6.Palliative care should extend to the family too	247	98.4	3	1.2	1	0.4	251	100
7.Educating the family about dying is nurse's responsibility	179	71.3	61	24.3	11	4.4	251	100
8.Nursing care for family should extend to the period of grief	174	69	46	18.3	32	12.7	252	100
9.Patients living alone require special care	234	93.2	5	2	10	4.8	251	100
10.Awareness about different palliative care services	112	44.8	110	44	28	11.2	250	100

described in Table 3. The majority of participants strongly agreed/agreed that it is beneficial to allow for the chronically sick person to verbalize his/her feelings, family should maintain as normal an environment as possible for their member who was ill, the nurses can give the patient hopes of getting better, nursing care should extend to the family of the ill person, the family and friends of the patient should be permitted to visit the patient at possible time the patient prefers, the family should be involved in the physical care of the patient.

Table 4 demonstrates the mean knowledge score which was 26.4 (SD=s 3.444). The majority of the participants (n=134) had good knowledge (59.5%) and favourable attitude (53.2%) on palliative care. The majority of participants (54%) reported correct practices/good practices on palliative care treatment. Mean score for practices was 37.2 (SD= 5.511).

Scores as described in the methodology section, were given. The mean of total score was 36.7 (SD = 4.25). Favourable attitude = ≥ 36.71, unfavourable attitude = < 36.71.

The majority of nurses 53.2% (n=134) had a favourable attitude on palliative care while 46.8% (n=118) had unfavourable attitude.

Table 5 shows the association of sociodemographic factors and working experience with the level of knowledge. Nurses who were more than 30 years of age had better knowledge when compared to those less than 30 years of age (69.8% vs 50.9%). This observed difference was statistically significant (p= 0.003). Similarly, the majority of the married nurses had a better knowledge regarding palliative care than unmarried nurses (p=0.008). Proportion of nurses with more than 10 years of working as a nurse had better knowledge than those with lesser number of years of experience (p=0.045). Nurses who had experience in taking care of chronically ill patients daily had a good knowledge regarding palliative care (p=0.02).

Table 6 shows the association of experience in caring and service training with practices in cancer palliative care among participants. Most of the participants who had experience of care for a dying family member had correct practices in cancer palliative care compared to those who did not have the experience (p<0.001). Surprisingly, there was no statistically significant association between having in service training about palliative care and practices in cancer palliative care (p=0.109).

Discussion

In this study, the majority of the nursing officers of Apeksha Hospital, Maharagama, Sri Lanka had good knowledge, favourable attitudes and correct practices in cancer palliative care. In the study conducted in the Jordan, (29) mean palliative care score was low as 8.3 (SD=2.8) out of total score 15 and in Southy Arabian study, PCQN has been used as the study instrument where the showed mean score as 9.06 out of 20. The classification good and poor knowledge of our study might be different with quantitative analysis in the literature. However, this could be due to the fact that most of the above studies have used standard ‘Palliative care quiz for nursing’ (PCQN) questionnaire whereas we have used a modified version of PCQN with more subjective approach. According to this study 46% of nursing officers had incorrect practices. Having education programs during their training period could be the reason for slightly reduced percentage of incorrect practices. A study done in Philippines had revealed that more than three fourth (76.8%) of study participants had incorrect practices toward palliative care (25). A study done in Egypt showed that more than half (56.7%) of study participants had incorrect practices (26). The reduced

Table 3: Attitudes regarding the provision of cancer palliative care

Attitude	Strongly agree		Agree		Neither agree/disagree		Disagree		Strongly disagree		Total
	n.	%	n.	%	n.	%	n.	%	n.	%	
1. Palliative care is given only to severely ill patients.	1	0.4	33	13.2	38	15.2	153	61.2	25	10	250
2. It is beneficial to allow for the chronically sick person to verbalize his/her feelings.	136	54.2	112	44.6	1	0.4	1	0.4	1	0.4	251
3. When a patient's condition worsens; the nurse should withdraw from his/her involvement with the patient.	1	0.4	5	2	0	0	47	18.7	199	79	252
4. Addiction to pain relieving medication should not be a nursing concern.	2	0.8	7	2.8	3	1.2	110	43.7	130	51.2	252
5. The length of time required to give nursing care to a severely ill person would frustrate me.	8	3.2	23	9.2	25	10	94	37.8	99	39.8	249
6. Family should maintain as normal an environment as possible for their member who was ill.	171	68.1	76	30.3	3	1.2	0	0	1	0.4	251
7. I am afraid to become friendly with chronically sick patients.	5	2	4	1.6	6	2.4	83	33.1	153	61	251
8. The nurses can give the patient hopes of getting better.	75	29.5	119	47.4	43	17.1	12	48	2	0.8	251
9. Nursing care should extend to the family of the ill person.	79	31.7	106	42.6	46	18.5	15	6	3	1.2	249
10. The family and friends of the patient should be permitted to visit the patient at possible time the patient prefers.	20	8	52	20.8	81	32.4	79	31.6	18	7.1	250
11. The family should be involved in the physical care of the patient.	45	17.9	157	62.3	33	13.1	13	5.2	4	1.6	252
12. It is difficult to be sensitive about patient's religious values, beliefs, culture during treatments.	11	4.4	27	10.8	57	22.8	115	46	40	16	250

incorrect practices in the study population may be due to awareness about palliative care being higher among nursing officers of Apeksha Hospital Maharagama.

According to this study 40.8% of nursing officers identified the patients who need palliative care very often. This was contrast with study findings from a German study where only 2% of patients with palliative care needs were identified and received palliative care treatment (20). In this study 47.2% of nursing officers manage the physical pain and symptoms of patients very often. According to another study carried on quality of cancer pain management found that approximately one third of patients still do not receive pain medication appropriately (21). This difference could be, due to countries medium or low economic level based on Inequality-adjusted Human Development Index (IHDI), despite rapid development has low opioid usage. This seems to indicate some causal relation between socioeconomic status and the analgesic usage. This could be due to morphine and other analgesics are not freely available and physicians are reluctant to prescribe these drugs due to high cost and known adverse effects (21).

The majority (54.4%) of nursing officers in the current study revealed that patients were very often satisfied with the results of pharmacological pain and symptom management which they provided. In contrast, a study done in Korea, had found that over 39% of patients were not received any drugs for pain management and only around 61% patients received enough pain management (22).

In this study 51.4% of participants mentioned that there was a change in practicing palliative care due to COVID-19 and 52.5% of them mentioned it as a reduction in palliative care practice. Similarly, in a study done using health care professionals working across 17 different countries, 45% institutions had to implement changes in treatment (69%) including reduction in treatments (27). The reduction could be due to revised risk benefit balance due to COVID 19, lack of staff and insufficient resources against COVID-19.

Table 4: Level of knowledge, attitudes, and practices on cancer palliative care among nurses

Characteristics	Number	Percentage %
Level of knowledge		
Good knowledge	150	59.5
Poor knowledge	102	40.5
Level of Attitude		
Favourable attitude	134	53.2
Unfavourable attitude	118	46.8
Level of Practices		
Correct practices	136	54
Incorrect practices	116	46

The majority of nurses 53.2% (n=134) had favourable attitudes on palliative care while 46.8% (n=118) had unfavourable attitude. In this study 71.2% of participants disagreed that palliative care is given only to severely ill patients. In contrast, a study conducted in Ethiopia found that nearly half

Table 5: Association of sociodemographic factors and working experience with level of knowledge

Sociodemographic feature	**Knowledge**				**Total No (%)**		**Statistical significance (χ^2, df, p value)**
	Good		**Poor**				
	n.	**(%)**	**n.**	**(%)**			
Age [in years]							χ^2=8.850
<30 years	56	(50.9)	54	49.1%	110	100.0%	df=1
≥30 years	88	(69.8)	38	30.2%	126	100.0%	**p= 0.003**
Gender							χ^2=0.270
Male	13	65%	7	35%	20	100.0%	df=1
Female	137	59.1%	95	40.9%	232	100.0%	p= 0.603
Marital status							χ^2=7.022
Unmarried	50	49.5%	51	50.5%	101	100.0%	df=1
Married	100	66.2%	51	33.8%	151	100.0%	**p=0.008**
Level of education							χ^2= 0.979
Diploma	136	58.4%	97	41.6%	233	100.0%	df= 1
Degree and above	12	70.6%	5	29.4%	17	100.0%	p= 0.322
Category of designation							
grade II	40	64.5%	22	35.5%	62	100.0%	**χ2=1.092**
grade III	94	57%	71	43%	165	100.0%	**df=2**
others	14	60.95	9	39.1%	23	100.0%	**p=0.579**
Years of working							
<10years	94	56%	74	44%	168	100.0%	**χ2=3.979**
≥10 years	45	70.3%	19	29.7%	64	100.0%	**df=1**
							p=0.045
Experience in caring chronically ill patients							
Daily	112	67.5%	54	32.5%	166	100.0%	**χ2= 5.441**
Rarely	32	50.8%	31	49.2%	63	100.0%	**df=1**
							p=0.02
Experience of care for a dying family member							
Yes	93	61.6%	58	38.4%	151	100.0%	**χ2= 0.527**
No	57	57%	43	43%	100	100.0%	**df=1**
							p=0.468
In service training about palliative care							
Yes	66	66.7%	33	33.3%	99	100.0%	**χ2= 3.242**
No	84	55.3%	68	44.7%	152	100.0%	**df=1**
							p=0.072

of the nurses strongly agreed that Palliative Care was given only for dying patients. Fourteen of the nurses in current study (97.7%0 disagreed that when a patient's condition worsens; the nurse should withdraw from his/her involvement with the patient. This fact was supported by other studies conducted internationally (13). They may think that this moment the patient needs physical, psychological, and spiritual support more intensely.

In this study 98.4% of nurses agreed that family should maintain as normal an environment as possible for their member who was ill. This has been supported by other studies as well. The nurses may think that the family support is needed for these patients. In this study 94.1% of participants disagreed that they were afraid to become friends with chronically sick patients. This has been supported by a study conducted in Ethiopia regarding Assessment of knowledge, attitude and practice and associated factors towards palliative care among nurses working in selected hospitals, Addis Ababa, Ethiopia (14). Majority of participants (74.3%) in this study agreed that nursing care should extend to the family of the ill person. Further, the majority of nursing officers (47.4%) believe that they should give hopes of their lives. In contrast, to those results, studies conducted in Denmark and Norway asserted that the majority of nursing officers withhold information from patients. Nursing officers from Apeksha Hospital has identified spiritual and psychological concerns of patients are also important factors in caring. The Sri Lankan community exhibits a heightened sensitivity towards the spiritual concerns of dying patients, which may contribute to this phenomenon.

In the current study, years of working experience had a significant association with nursing officers' knowledge, where 70.3% of those who have had more than 10 years' experience had good knowledge. This observation was supported by a research done on assessment of nurses' knowledge

Table 6: Association of experience in caring and service training with practices

Variable	**Practices**		**Total n. (%)**	**Statistical significance**
	Correct	**Incorrect**		
	n. (%)	**n. (%)**		**χ^2, df, p value**
Experience in Caring				
Daily	95(57.2%)	71(42.8%)	166(100%)	χ^2=3.002
Rarely	28(44.4%)	35(55.6%)	63(100%)	df=1
				p=0.083
Experience of care for a dying family member				
Yes	95(62.9%)	56(37.1%)	151(100%)	χ^2=12.707
No	40(40.0%)	60(60.0%)	100(100%)	df=1
				p=0.0000
In service training about palliative care				
Yes	57(57.6%)	42(42.4%)	99(100%)	χ^2=0.945
No	78(51.3%)	74(48.7%)	152(100%)	df=1
				p=0.331

on palliative care in Southeast Iran (13). However, contrasting results were seen in a similar study regarding attitude and knowledge of nurses towards end-of-life care in a palliative care setting done in public hospitals in Wollega zones, as they failed to establish a significant connection between years of experience with knowledge (16).

In the current study 39.4% of participants had undergone in service palliative care training and 72.5% have had daily experience in taking care of terminally ill while only 21.7% of the study done in Ethiopia (14) have had a training of any sort and only 54.5% have had daily experiences.

This evidence is strongly supported by the research aimed to assess nurses' knowledge, attitude and practice of palliative care provided to chronically sick patients where it was found to have a statistically significant association in having palliative care training and having good knowledge in palliative care (14).

In this study, age was also considered to be a significant factor for knowledge as the nurses who were more than 30 years of age had better knowledge when compared to those less than 30 years of age. However, the contrast results were seen in several studies stating that there was no significant correlation between above sociodemographic feature (16,13).

The majority of the married nurses had a better knowledge regarding palliative care than unmarried nurses. This observed association was also taken as statistically significant in this study. This could be due to majority of the married population having more than 10 years of working experience, more than 30 years of age and might be having more experience in taking care of ill family members.

According to this study 80.8% of nursing officers aware about availability of support for spiritual problems within hospital and offer them. According to a study done to assess perceptions of spirituality and spiritual care found that 64.8% of nursing officers were able to meet the patient's spiritual needs (23). The difference could be due to since our study was conducted in Apeksha Hospital Maharagama, which was conducted more in-service training on palliative care and being well equipped with support systems. Home care support system is available within Apeksha hospital which is supported by other studies (24).

Nurses who were educated with more than a degree and above (82.4%) had higher favourable attitudes compared to nurses who had a Diploma (51.5%). This observed difference was statistically significant ($p = 0.014$). The finding is consistent with Ethiopian study where nurses who had a BSc. Degree had two-fold increasing favourable attitude compared to diploma graduate nurses (14). The reason for this observation might be bachelorette nurses are able to understand the questionnaire in a better way than that of diploma graduates. A study conducted in Ethiopia revealed the similar finding. However, the nurses' designation, years of working, experience and service training had no statistical significance with their attitudes. None of the socio demographic factors, socioeconomic factors or designation, years of working, experience and service training had a statistical significance co-relation with level of practice of nurses. Among the study population, most of the participants who had experience of care for a dying family member had correct practices in cancer palliative care 95 (62.9%) ($p<0.001$) shows a statistical significance. As expected, the engagement in active care for a close family member who's terminally ill undoubtedly results in correct practices of the nurses. There was a significant association between good knowledge and correct practices in cancer palliative care. Study participants those who had good knowledge more than twice chance of having correct practices in the current study (OR=2.57, $p<0.001$). This

finding is in agreement with that of a study done in Lebanon (28) which was a study on knowledge, attitudes and practices of palliative care among nurses. In contrast, a study conducted at the National Cancer Institute, Cairo University, Egypt, showed that there was no significant association (p=0.679) between knowledge and practices (26). However, the authors of both studies had suggested that increase knowledge in palliative care could enhance the competency of the nurses in providing holistic care to the terminally ill patients. Association of attitude and practices in cancer palliative care among participants was found to be statistically significant in this study.

Most of the participants those who had favourable attitude had correct practices (65%). Those who had favourable attitudes had more than twice the chance of having correct practices (OR=2.607; CI: =1.565 - 4.340; p<0.001). In the literature there were no studies conducted to observe this association. However, the Ethiopian study revealed that more than three-quarter of the respondent (76%) had favourable attitude towards palliative care and two thirds (76.2%) of the respondents had poor knowledge in practices (14). This implies that although participants had favourable attitudes, they didn't have correct practices which are different to findings of this study. The reason for this contradiction may be nurses in Ethiopia not having enough opportunity and scarcity of programs or workshops to improve their practices, whereas in Sri Lanka there are enough patients and well-educated senior staff in the health care system to improve the practices in novice nursing officers.

In this study those who had good knowledge had favourable attitudes. However, this difference was not significant (p=0.109). A study conducted in Palestine showed 6.2% of participants had favourable attitude towards palliative care (9). Even though they haven't considered the association between knowledge and attitude, they seem to be less developed compared to nurses in Apeksha Hospital, Maharagama.

There were a few limitations when conducting this study. The data collection took place during a critical period of COVID 19 in the country; therefore, we were unable to achieve the calculated sample size. We only asked the nurses for their self-reported practices, which may affect with accurate results on practices.

Conclusion

The majority of the nurses had good knowledge, favourable attitudes and correct practices. They had experience in caring chronically ill patients daily, and in caring for a dying family member although they had not received adequate formal in-service training in cancer palliative care.

This study showed that persons with good knowledge has a more than twice of a chance of having correct practices and there was a significant association in those who had experience caring for a dying family member having correct practices. Those who had favourable attitudes had more than twice of chance having correct practices. So, provision of opportunities for nursing officers to participate in training programs, workshops, formal and informal education programs will assist them to update their knowledge and performance mainly on pain management and how to face challenges or emerging situations. Future studies should be conducted in other major hospitals in order to encourage health care workers to practice palliative care.

References

1. Meegoda, MKDL, Fernando, DMS, Atulomah, N, Sivayogam, S, , Marasinghe R. Domiciliary Care Providers Views on Provision of Palliative Care for their Cancer Patients. 2018 Vol. 4, No. 1, pp. 1-7 ISSN(e): 2408-9273 ISSN(p): 2409-2053 DOI:

10.18488/journal.95.2018.41.1.7
2. *Palliative care* (2020). Available at: https://www.who.int/health-topics/palliative-care(Accessed: 7 November 2020).
3. Ferrell BR, Twaddle ML, Melnick A, Meier DE. National Consensus Project Clinical Practice Guidelines for Quality Palliative Care Guidelines, 4th Edition. Vol. 21, Journal of Palliative Medicine. Mary Ann Liebert Inc.; 2018. p. 1684–9. doi: 10.1089/jpm.2018.0431. Epub 2018 Sep 4. PMID: 30179523.
4. Council C. A guide for people with cancer, their families and friends Understanding Palliative Care Understanding Palliative Care A guide for people with cancer, their families and friends. 2019.
5. National Strategic Plan on Prevention & Control of Cancer in Sri Lanka (2020-2025) & Activity Plan National Cancer Control Programme Ministry of Health and Indigenous Medical Services. 2020; ISBN: 978-955-3666-98-7, p 5-13.
6. De Silva BSS, Rolls C. Attitudes, beliefs, and practices of Sri Lankan nurses toward cancer pain management: An ethnographic study. Nurs Health Sci. 2011 Dec;13(4):419-24. doi: 10.1111/j.1442-2018.2011.00635.x. Epub 2011 Sep 8. PMID: 21902777.
7. Ministry Of Health -*Hon. Minister* . Available at:http://www.health.gov.lk/moh_final/english/others.php?pid=110 (Accessed 7, November 2020)
8. Abudari G, Zahreddine H, Hazeim H, Al Assi M, Emara S. Knowledge of and attitudes towards palliative care among multinational nurses in Saudi Arabia. Int J Palliat Nurs. 2014;20(9):435–41,doi: 10.12968/ijpn.2014.20.9.435. PMID: 25250548.
9. Ayed A, Sayej S, Harazneh L, Fashafsheh I, Eqtait F. The Nurses' Knowledge and Attitudes towards the Palliative Care. J Educ Paratice [Internet]. 2015;6(4):91–100. Available from: www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.6, No.4, 2015
10. Parveen A, Sultana K, Waqas A, Tasneem S, Jabeen R, Faiz A, et al. Knowledge and Attitude of Nurses About Palliative Care. J Bioresour Manag. 2020;7(1). DOI: https://doi.org/10.35691/JBM.0202.0122
11. Law K. Oxford Textbook of Palliative Medicine. Cancer Nurs Pract. 2019;18(2). doi: 10.7748/cnp.18.2.13.s12
12. Meegoda L, Fernando S, Sivayogon S, Atulamah NO, Iovosiri J. Perceived palliative care needs of cancer patients, nurses and domiciliary core providers at a notional cancer referral facility, Sri Lanka. J Pioneer Med Sci 2015; 5(2):46-50.
13. Razban F, Iranmanesh S, Rafei H. Nurses' attitudes toward palliative care in south-east Iran. Int J Palliat Nurs. 2013 Aug;19(8):403–10. doi: 10.12968/ijpn.2013.19.8.403. PMID: 23970297.
14. 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 Palliat Care. 2014;13(1):1–11. doi: 10.1186/1472-684X-13-6. PMID: 24593779; PMCID: PMC3975866.
15. Ross MM, McDonald B, McGuinness J. The palliative care quiz for nursing (PCQN): The development of an instrument to measure nurses' knowledge of palliative care. J Adv Nurs. 1996;23(1). doi: 10.1111/j.1365-2648.1996.tb03106.x. PMID: 8708208.
16. Etafa W, Wakuma B, Fetensa G, Tsegaye R, Abdisa E, Oluma A, et al. Nurses' knowledge about palliative care and attitude towards end-of-life care in public hospitals in Wollega zones: A multicenter cross-sectional study. PLoS One [Internet]. 2020;15(10 October):1–14. Available from: http://dx.doi.org/10.1371/journal.pone.023835

7, doi: 10.1371/journal.pone.0238357. PMID: 33027265; PMCID: PMC7540839.

17. Sun J, Id K, Id JK, Gelegjamts D. Knowledge , attitude and self-efficacy towards palliative care among nurses in Mongolia : A cross-sectional descriptive study. 2020;1–15. Available from: http://dx.doi.org/10.1371/journal.pone.0236390. doi: 10.1371/journal.pone.0236390. PMID: 32702007; PMCID: PMC7377484.
18. De Silva BSS, Rolls C. Attitudes, beliefs, and practices of Sri Lankan nurses toward cancer pain management: An ethnographic study. Nurs Heal Sci. 2011;13(4):419–24. doi: 10.1111/j.1442-2018.2011.00635.x. Epub 2011 Sep 8. PMID: 21902777.
19. Bilal M. The Knowledge of Palliative Care and the Attitude Toward it among the Nurses at Sabia General Hospital 2018. Sudan J Med Sci. 2018;13(4):301. DOI: 10.18502/sjms.v13i4.3606
20. Meffert C, Rücker G, Hatami I, Becker G. Identification of hospital patients in need of palliative care - A predictive score Palliative care. BMC Palliat Care. 2016 Feb;15(1). https://doi.org/10.1186/s12904-016-0094-7
21. Greco MT, Roberto A, Corli O, Deandrea S, Bandieri E, Cavuto S, et al. Quality of cancer pain management: An update of a systematic review of undertreatment of patients with cancer. J Clin Oncol. 2014;32(36):4149–54. doi: 10.1200/JCO.2014.56.0383. Epub 2014 Nov 17. PMID: 25403222.
22. Yun YH, Heo DS, Lee IG, Jeong HS, Kim HJ, Kim SY, et al. Multicenter study of pain and its management in patients with advanced cancer in Korea. J Pain Symptom Manage. 2003;25(5):430–7. doi: 10.1016/s0885-3924(03)00103-9. PMID: 12727040.
23. Lukovsky J, McGrath E, Sun C, Frankl D, Beauchesne MA. A Survey of Hospice and Palliative Care Nurses' and Holistic Nurses' Perceptions of Spirituality and Spiritual Care. J Hosp Palliat Nurs. 2021 Feb;23(1):28–37. doi:10.1097/NJH.0000000000000711. PMID: 33208639.
24. Maetens A, Beernaert K, De Schreye R, Faes K, Annemans L, Pardon K, et al. Impact of palliative home care support on the quality and costs of care at the end of life: A population-level matched cohort study. BMJ Open. 2019;9(1):1–9. https://doi.org/10.1136/bmjopen-2018-025180
25. Pasaol JC. Assessment of knowledge, attitude and practice and associated factors towards palliative care among health care providers to the pediatric oncology patients in southern Philippines. J Clin Oncol. 2019;37(15_suppl):e21536–e21536. DOI: 10.1200/JCO.2019.37.15_suppl.e21536
26. Youssef W, Morsy M, Ali H, Shimaa E, Mohammed E. Nurses ' Knowledge and Practices about Palliative Care among Cancer Patient in a University Hospital - Egypt. Adv Life Sci Technol. 2014;24:100–14. ISSN 2225-062X (Online) Vol.24, 2014
27. Chow M-C, Chambers P, Singleton G, Patel J, Cooper S, Mythen C, et al. Global changes to the chemotherapy service during the covid-19 pandemic. J Oncol Pharm Pract. 2021;107815522110157. doi: 10.1177/10781552211015767. Epub 2021 May 13. PMID: 33983080; PMCID: PMC8367193
28. Huijer HA, Abboud S, Dimassi H. Palliative care in Lebanon : Knowledge , attitudes and practices of nurses. 2009;15(7). doi: 10.12968/ijpn.2009.15.7.43425. PMID: 19648850.
29. Al Qadire, M. (2014) 'Nurses' knowledge about palliative care: A cross-sectional survey', *Journal of Hospice and Palliative Nursing*, 16(1). doi: 10.1097/NJH.0000000000000017.