Novelty Journals

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
Vol. 6, Issue 2, pp: (637-647), Month: May - August 2019, Available at: www.noveltyjournals.com

Knowledge and Attitude towards Palliative Care among Nurses at King Fahd Hospital

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Abstract: **Life expectancy is increasing all over the world due to the improvement of health care services at all levels. With this expectation, there are noticeable increase in cases diagnosed with cancer and the burden of cancer will expand five to ten folds in 2030. Palliative care is an approach that improves the quality of life of patients and their families facing life-threatening illness. The aim of this study was to investigate nurses' knowledge and attitude towards palliative care.**

Methods: A descriptive cross-sectional designs was used with a convenience sample of 124 nurses who are working in palliative care wards at King Abdulaziz Medical City, Riyadh, KSA.

Tools of the study: A self-report questionnaire that include sociodemographic, Palliative Care Quiz for Nurses and Formelt Attitude toward care of Dying. The questionnaire takes 20 to 30 minutes to complete. Ethical consideration was followed after obtaining approval from King Abdullah International Medical Research Center and Nursing Services at King Abdulaziz Medical City.

Results: Sixty three percent of the nurses showed good and 17% fair knowledge of palliative care. 46% reported positive attitude toward palliative care and 24% were neutral. Education and working unit presented significant association with knowledge and working unit showed association with attitude toward palliative care.

Conclusion and Recommendation: As the need for this special area of nursing increase, nurses' knowledge and attitude toward palliative care needs more investigation. Integration of comprehensive explanation of palliative care in nursing curriculum is needed. Ongoing in-services training for improvement nurses' knowledge and attitude is also crucial to provide optimal care to patients and their families in this critical period of their life.

Keywords: **Knowledge, Attitude, Palliative Care.**

1. INTRODUCTION

Palliative care (PC) is defined by World Health organization (WHO) as " an approach that provide physical, psychological and spiritual care to improve the quality of life of the patients and their families who are facing life-threatening illness" (Baxter, et al. 2014). PC is provided by a multidisciplinary team for all patients in need at any age at late stage of illness and can be provided together with curative treatment (Ferrell& Coyle, 2006).

Life expectancy in Saudi Arabia is increased to reach 74.34 due to the improvement of health care services at all levels with expectation of increasing the need for PC (World bank org, 2017). The Saudi Cancer Registry in 2013 reported 15,653 cases diagnosed with cancer and is assumed that the burden of cancer will expand five to ten folds in 2030. (Saudi Health Council, Saudi Cancer Registry, Cancer Incidence Report, Saudi Arabia, 2013). Those patients deserve to live the rest of their lives with best quality of care.

PC is considered a special field of nursing with a specific feature that reflects a whole-person philosophy of care. This philosophy is applied across all age groups by paying attention to all the different domains of life including physical, psychological, social and spiritual health along with legal and ethical decisions. PC is not only limited to patient with serious illness, to promote quality of life, it is extended to the family during patient life as unit of care by supporting the patient's family even after dying during bereavement period. It is not intended to postpone death, but it deals with death as a normal process (Ferrell et al, 2006).

It is critical for nurses dealing with such cases to possess knowledge of PC to provide optimal care. Along with knowledge, attitude toward PC is also crucial. Availability of nurses who are apprehended and capable to provide a personalized support is significant (Lugton & Mcintyre, 2005). Research showed low level of nurses' awareness and uncertain attitude regarding PC (Razban, Iranmanesh, Rafiei, 2013). Lack of awareness was also reported even with positive attitude toward PC (Nguyen, Yates, Osborne, 2014). Limited research regarding nurses' knowledge and attitude toward palliative care in Saudi Arabia indicated shortfall knowledge and uncertain attitude of PC (Abudari, et al 2014). Eventually, deficiency in knowledge and attitude affect the practice and the quality of care for this specific type of patients. The aim of the present study was to investigate nurses' knowledge and attitude towards palliative care at King Fahad Hospital, King Abdulaziz Medical City, Riyadh.

Research questions:

1. To what extend to nurse have' knowledge regarding PC?
2. What is the nurses' attitude toward PC?
3. Does nurses' knowledge of PC differ by their demographic characteristics?
4. Does nurses' attitude toward PC differ by their demographic characteristics?
5. Is there a relationship between nurses' knowledge and attitude regarding PC?

2. METHODOLOGY

Research design: A descriptive cross-sectional designs was employed to answer the research questions.

Setting: This study was conducted at King Fahd Hospital, King Abdulaziz Medical City (KAMC), and King Abdullah Specialized Children Hospital (KASCH), Ministry of National Guard Health affairs, Riyadh, KSA. Data were collected from different palliative care wards spring 2017.

Sample: A convenient sample of 124 nurses from different palliative wards including hematology, adult oncology, palliative wards, gyn-oncology, intensive care unit for palliative, adult medical wards and gynecology. The gynecology, adult medical are not specified for PC but they do have support care for no code cases. The inclusion criteria were all nurses who speaks English and agree to participate in the study.

Tool of the study: the questionnaire in this study consists of 3 parts as follow:

Part 1: Socio demographic characteristics and experiences with palliative care: this part include age, gender, qualification, ward, whether they choose to work in PC unit, previous education on palliative care, previous experience in dealing with terminally ill persons, previous and present experience with loss of significant person.

Part II: Palliative Care Quiz for Nursing (PCQN): it was designed by (Ross, McDonald & Mcgumness, 1996) to assesses nurses' knowledge regarding PC. It contains 20 questions with possible answers of true (1mark), false and do not know (0 mark). The questionnaire items assess the level of understanding of palliative care philosophy (2 items), principles of pain assessment (6 items), symptom management (4 items), psychosocial care (4 items), and gastrointestinal problems (4 items). The total scores of the quiz range from 0 to 20 where total score from 1-6 indicates poor knowledge, 7-13 indicate fair knowledge and 14-20 is considered as good knowledge. The PCQN was used widely in studies that share same

purposes and has an acceptable reliability. Radiality of the PCQN in this study was tested and reported a Cronbach's Alpha of .83.

Part III: Frommelt Attitudes toward Care of the Dying (FATCOD): this part is used to assess nurses' attitude towards the care of dying patients and their families which designed by Frommelt, 2003. It contains 30 items with 5-points Likert scale from 5 (strongly agree) to 1 (strongly disagree). Scoring system ranging from 30 to 150 where the high score indicates a positive attitude and the lower score denotes the negative attitude toward PC. Positive attitude was considered if the score ranged from 111-150, neutral attitude if the score ranges from 71 to 110 and scores from 30-70 indicates negative attitude. The FATCOD was used before in similar studies by Abudari, et al, (2014) and reported reliability of .83. In addition, previous research reported Cronbach's Alpha of .90 for FATCOD and .78 for the PCQ (Abu hasheesh et al, 2013; Ross et al, 1996). In the current study FATCOD reported Cronbach's Alpha of .85.

Statistical analysis:

Data were analyzed using Statistical Package for Social Sciences (SPSS) version 16. Descriptive statistics and Chi Square analysis were used to answer the research questions.

Ethical consideration:

Approval to conduct the study was obtained from the Institutional Review Board at King Abdullah International Medical Research Center (KAIMRC) and Nursing Education Services at King Abdulaziz Medical City. Eligible subjects were approached at their wards and the purposes of the study, freedom to participate and withdraw from the study at any time were explained. Nurses who agree to participate were asked to provide a consent. Anonymity of participants was maintained and there was no risk or harm from participation in this study. Potential for risk of harm to subjects was minimal and could result from anxiety related to remembering a previous experience of loss of significant person.

Data collection:

After obtaining the approval, the researchers met the manager of each ward and explained the study purposes to gain cooperation and to arrange for data collection without interruption of nurse's work. A total of 200 questionnaire were left to the managers for each ward for nurses to fill at their convenience and the researchers collected back the questionnaires from the managers. A total of 115 questionnaires were received. The questionnaire was also conducted online for nurses who are working in the ICU due to their busy work schedule, so they can fill it at their free time. The Uniform Resource Locator (URL) of the survey was sent to the nurses and a total of 9 responses were received to reach a total of 124 questionnaire.

3. RESULTS

Table 1 showed that 45.2% of the nurses were between 20 to 30 years old, 27.4% were aged 31-40, 22.6% were in the age group 41-50 years old and 4.8% aged above 51 year. Majority (90.3%) of the nurses were females and 9.7% were males. More than tow third of the nurses (68.5%) hold BSN degree and 30.6% reported having nursing diploma.

A pit more than half (55.7%) of the nurses were from different palliative care wards including; (22.6%) from hematology, (12.1%) were from adult oncology, (9.7%) were from palliative ward, (6.5%) from ICU palliative, and (4.8%) were from gyn-oncology wards. In addition, 17.7% were from gynecology wards, 16.9% from emergency department and 9.7% were from adult medical wards. Ninety three percent did not choose to work at palliative care units, 80.6% not attended any courses or workshops on palliative care.

More than 3 quarters of the nurses (77.4%) had previous experience in dealing with terminally ill patients and their family. 43.5% reported no experience with loss of significant others, 25.8% reported experience of losing a primary family member, 20.2% reported losing a significant other person and 10.5% reported an experience of losing a child. Further, 75% reported that they do not have present experience of loss of loved ones.

Novelty Journals

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
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Table 1 Socio-demographic data of the studied nurses

Socio-demographic data		No	%
Age	Mean was 35.177 (SD:8.551)	> 20-30 (56) 31-40 (34) 41-50 (20) >51 (6)	45.2% 27.4% 22.6% 4.8%
Gender	Male	12	9.7%
	Female	112	90.3%
Qualification	Diploma	38	30.6%
	Bachelor's degree	85	68.6%
	Master	1	0.8%
Working unit	Gynecology	22	17.7%
	Emergency department	21	16.9%
	Intensive Care Unit (palliative)	8	6.5%
	Adult medical ward	12	9.7%
	Hematology	28	22.6%
	Adult oncology	15	12.1%
	Palliative ward	12	9.7%
	Gyn-oncology	6	4.8%
Choose to work palliative care wards	Yes	8	6.5%
	No	116	93.5%
Previous PC course or workshops	Yes	24	19.4%
	No	100	80.6%
Previous experience in dealing with terminally ill patients	I have cared for terminally ill person and their family members previously	95	77.4%
	I have had no experience caring for terminally ill person and their family members previously	28	22.6%
Previous experience with loss of significant person	Primary family (husband, wife, mother, father, sister and brother)	32	25.8%
	Significant other	25	20.2%
	Child	13	10.5%
	I have no previous experience with the loss of someone close to me	54	43.5%
Present experience	I am presently anticipating the loss of a loved one	31	25%
	I have no present experience of loss of loved one	93	75%

Research question 1: To what extend do women have knowledge regarding PC?

Regarding nurses' knowledge of PC, it was found that majority (80.6% - 81.5%) of the nurses responded correctly regarding some items; the extent of the disease determines the method of pain treatment, drug addiction is a major problem when morphine is used on a long term basis for the management of pain, individuals who are taking opioids

should also follow a bowel regime and the accumulation of losses renders burnout inevitable for those who seek work in palliative care.

More than 3 quarters of the nurses responded correctly to the 2 items "It is crucial for family members to remain at the bed side until death occurs" and "The loss of a distant or contentious relationship is easier to resolve than the loss of one is close or intimate". Further, 71% to 74% responded correctly to the items; During the last days of life, the drowsiness associated with electrolyte imbalance may decrease the need for sedation, the provision of palliative care requires emotional detachment, suffering and physical pain are synonymous, during the last days of life, the drowsiness associated with electrolyte imbalance may decrease the need for sedation, manifestations of chronic pain are different from those of acute pain and adjuvant therapies are important in managing pain.

On the other hand, 71% reported don't know to the item" The philosophy of palliative care is compatible with that of aggressive treatment". 65% responded incorrectly to the item "Demerol is not an effective analgesic in the control of chronic pain. 57% responded incorrectly regarding the item "In high doses, codeine causes more nausea and vomiting than morphine". 54% responded incorrectly regarding, the pain threshold is lowered by anxiety or fatigue and 50% to the item; during terminal stages of an illness, drugs that can cause respiratory depression are appropriate for the treatment of sever dyspnea less than half of nurses (46%) responded incorrectly regarding; morphine is the standard used to compare the analgesic effect of other opioids and the use of placebo is appropriate in the treatment of some types of pain. Nurses knowledge regarding palliative care are presented in table 2.

Table 2: Number and percentage of correct answer of nurses' knowledge of palliative care

	Knowledge Items	Correct answer		Wrong/Don't know	
		No.	%	No.	%
1	Palliative care is appropriate only in situation where there is evidence of downhill trajectory or deterioration.	70	56.5%	54	43.5%
2	Morphine is the standard used to compare the analgesic effect of other opioids.	67	54%	57	46%
3	The extent of the disease determines the method of pain treatment.	100	80.6%	24	19.4%
4	Adjuvant therapies are important in managing pain.	92	74.2%	32	25.8%
5	During the last days of life, the drowsiness associated with electrolyte imbalance may decrease the need for sedation.	88	71%	36	29%
6	It is crucial for family members to remain at the bed side until death occurs.	95	76.6%	29	23.4%
7	Drug addiction is a major problem when morphine is used on a long term basis for the management of pain.	100	80.6%	24	19.4%
8	Individuals who are taking opioids should also follow a bowel regime.	101	81.5%	23	18.5%
9	The provision of palliative care requires emotional detachment.	88	71%	36	29%
10	During terminal stages of an illness, drugs that can cause respiratory depression are appropriate for the treatment of sever dyspnea.	62	50%	62	50%
11	Men generally reconcile their grief more quickly than women.	71	57.3%	53	42.7%
12	The philosophy of palliative care is compatible with that of aggressive treatment.	36	29 %	88	71.0%
13	The use of placebo is appropriate in the treatment of some types of pain.	67	54%	57	46.0%
14	In high doses, codeine causes more nausea and vomiting than morphine.	53	42.7%	71	57.3%
15	Suffering and physical pain are synonymous.	87	70.2%	37	29.8%
16	Demerol is not an effective analgesic in the control of chronic pain.	43	34.7%	81	65.3%
17	The accumulation of losses renders burnout inevitable for those who	101	81.5%	23	18.5%

	seek work in palliative care.				
18	Manifestations of chronic pain are different from those of acute pain.	90	72.6%	34	27.4%
19	The loss of a distant or contentious relationship is easier to resolve than the loss of one is close or intimate.	98	79%	26	21%
20	The pain threshold is lowered by anxiety or fatigue.	57	46%	67	54%

As illustrated in table 3, level of knowledge was calculated in terms of good, fair and poor to provide a clear and understandable interpretation. It was showed that 63.1% reported good knowledge, while almost similar percentage reported fair (19.2%) and poor (17.7%) knowledge of PC.

Table 3: Total Nurses' knowledge level regarding palliative care

Level of knowledge	%
Good	63.1%
Fair	19.2%
Poor	17.7%

Research question 2: What is the nurses' attitude toward PC?

Table 4 portrayed that 41.9% strongly agree and 45.2% agree that the family should be involved in the physical care of the dying person, 38.7% strongly agree and 29% agree that the dying person should not be allowed to make decisions about his/her physical care, 37.9% strongly agree and 41.9% agree that caring for the patient's family should continue throughout the period of grief and bereavement and 36.3% strongly agree and 45.2% agree that giving care to the dying person is a worthwhile experience.

A considerable percentage that ranged from 25% to 31.5% were uncertain regarding many items including "I would be uncomfortable talking about impending death with the dying person", "The health provider should not be the one to talk about death with the dying person", "It is difficult to form a close relationship with the dying person", "When a patient asks, "Am I dying?" I think it is best to change the subject to something cheerful", "I would feel like running away when the person actually died", " I would hope the person I'm caring for dies when I am not present", " Family members who stay close to a dying person often interfere with the professional's job with the patient", " Addiction to pain relieving medication should not be a concern when dealing with a dying person", and "The length of time required giving care to a dying person would frustrate me".

In addition, more than half of the nurses (54.9% and 55.7%) disagree and (26.6% and 16.6%) strongly disagree that families should maintain as normal an environment as possible for their dying member and that it is possible for a healthcare provider to help patients prepare for death respectively. 48.5% disagree and 27.4% strongly disagree that caregivers should permit dying persons to have flexible visiting schedules.41.9% disagree and 22.6% strongly disagree that the dying person and his/her family should be the in-charge decision-makers. 41.1% disagree and 42.8% strongly disagree that families need emotional support to accept the behavior changes of the dying person. 41.2% disagree and 36.3% strongly disagree that families should be concerned about helping their dying member make the best of his/her remaining life. 36.4% disagree and 41.9% strongly disagree that care should extend to the family of the dying person. 45.2% disagree and 14.5% strongly disagree that family members who stay close to a dying person often interfere with the professional's job with the patient. 37.% disagree and 32.3% strongly disagree that dying persons should be given honest answers about his condition. Further, adding together disagree and strongly disagree, more than half percent of nurses were 39.5% disagree and 23.4% strongly disagree regarding "I would not want to care for a dying person", and 32.3% disagree and 29% strongly disagree that "I would feel like running away when the person actually died".

Moreover, strongly disagree was reported among 51% for the item; it is beneficial for the dying person to verbalize his/her feelings, among 42.8% for the item; families need emotional support to accept the behavior changes of the dying person and among 41.9% regarding the item; care should extend to the family of the dying person. Results of nurses' attitude toward PC are presented in table 4.

Novelty Journals

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
Vol. 6, Issue 2, pp: (637-647), Month: May - August 2019, Available at: www.noveltyjournals.com

Table 4: Distribution of studied nurses' according to items of attitude regarding to palliative care

#	Statement	Strongly Disagree		Disagree		Uncertain		Agree		Strongly Agree	
		No	%	No	%	No	%	No	%	No	%
1	Giving care to the dying person is a worthwhile experience.	2	1.6	4	3.2	17	13.7	56	45.2	45	36.3
2	Death is not the worst thing that can happen to a person.	25	20.2	32	25.8	21	16.9	26	21.0	20	16.1
3	I would be uncomfortable talking about impending death with the dying person.	10	8.1	19	15.3	31	25	53	42.7	11	8.9
4	Caring for the patient's family should continue throughout the period of grief and bereavement.	3	2.4	5	4	17	13.8	52	41.9	47	37.9
5	I would not want to care for a dying person.	29	23.4	49	39.5	12	9.6	25	20.2	9	7.3
6	The health provider should not be the one to talk about death with the dying person.	19	15.4	36	29	32	25.9	25	20.0	12	9.7
7	The length of time required giving care to a dying person would frustrate me.	18	14.5	36	29	39	31.5	20	16.1	11	8.9
8	I would be upset when the dying person I was caring for gave up hope of getting better.	10	8.1	26	21	26	21	44	35.4	18	14.5
9	It is difficult to form a close relationship with the dying person.	13	10.5	39	31.5	32	25.8	35	28.2	5	4.0
10	There are times when the dying person welcomes death.	3	2.4	5	4	26	21	66	53.2	24	19.4
11	When a patient asks, "Am I dying?" I think it is best to change the subject to something cheerful.	12	9.7	29	23.4	36	29	33	26.6	14	11.3
12	The family should be involved in the physical care of the dying person.	2	1.6	5	4.0	9	7.3	56	45.2	52	41.9
13	I would hope the person I'm caring for dies when I am not present.	11	8.9	28	22.6	35	28.2	38	30.6	12	9.7
14	I am afraid to become friends with a dying person.	22	17.6	37	30	30	24.2	31	25	4	3.2
15	I would feel like running away when the person actually died.	36	29	40	32.3	31	25.0	14	11	3	2.7
16	Families need emotional support to accept the behavior changes of the dying person.	53	42.8	51	41.1	11	8.9	6	4.8	3	2.4
17	As a patient nears death, the health provider should withdraw from his/her involvement with the patient.	7	5.6	23	18.5	29	23.5	36	29.0	29	23.4
18	Families should be concerned about helping their dying member make the best of his/her remaining life.	45	36.3	51	41.2	15	12.1	7	5.6	6	4.8
19	The dying person should not be allowed to make decisions about his/her physical care.	5	4.5	14	11.2	21	16.6	36	29	48	38.7
20	Families should maintain as normal an environment as possible for their dying member.	33	26.6	68	54.9	15	12.1	5	4.0	3	2.4
21	It is beneficial for the dying person to verbalize his/her feelings.	63	51	44	35.3	14	11.3	2	1.6	1	0.8
22	Care should extend to the family of the dying person.	52	41.9	45	36.4	21	16.9	3	2.4	3	2.4
23	Caregivers should permit dying persons to have flexible visiting schedules.	34	27.4	60	48.5	22	17.7	7	5.6	1	0.8
24	The dying person and his/her family should be the in-charge decision-makers.	28	22.6	52	41.9	31	25	11	8.9	2	1.6
25	Addiction to pain relieving medication should not be a concern when dealing with a dying person.	19	15.3	38	30.6	38	30.7	22	17.8	7	5.6
26	I would be uncomfortable if I entered the room of a terminally ill person and found him/her crying.	8	6.5	42	33.9	27	21.8	38	30.5	9	7.3
27	Dying persons should be given honest answers about his condition.	40	32.3	46	37.1	30	24.2	7	5.6	1	0.8
28	Educating families about death and dying is not a healthcare provider responsibility.	12	9.7	30	24.2	18	14. 5	36	29.0	28	22.6
29	Family members who stay close to a dying person often interfere with the professional's job with the patient.	18	14.5	56	45.2	33	26.6	15	12.1	2	1.6
30	It is possible for a healthcare provider to help patients prepare for death.	21	16.9	69	55.7	26	21.0	5	4.0	3	2.4

Novelty Journals

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
Vol. 6, Issue 2, pp: (637-647), Month: May - August 2019, Available at: www.noveltyjournals.com

A total score for nurses' attitude toward PC was calculated and results showed in table 5 that 46.2% of the nurses reported positive attitude, 24.8% were neutral and 29% showed negative attitude toward PC regarding PC.

Table 5: Total Nurses' attitude toward palliative care

Attitude	Percent
Positive	46.2%
Neutral	24.8%
Negative	29%

Research questions 3: Does nurses' knowledge of PC differ by their demographic characteristics?

As shown in table 6, Chi square test was performed to test the association between sociodemographic variables (age, gender, marital status, education, working unit, choose to work in PC unit, previous course/workshops on PC, previous experience in dealing with terminally ill patients, previous experience with loss of significant person and present experience of loss of significant person) and knowledge. Results indicated that education reported significance association with knowledge (chi = .24.1, p = .04) meaning that the higher the education, the more the knowledge of PC. Working unit reported significance association with knowledge (chi = 19.8, p = .02) indicating that nurses who were working in wards specified for palliative care, had better knowledge.

Table 6: Association between nurses' sociodemographic variables and knowledge of PC

variables	Chi	p-value
Age	1.01	.15
Gender	1.2	.46
Marital Status	1.23	.35
Education	2.1	**.04**
Working Unit	8.8	**.02**
Choose to work in PC unit	1.1	.51
Previous courses/workshops on PC	1.5	.93
Previous experience dealing with terminally ill patients	1.9	.64
Previous experience with loss of significant person	2.2	.50
Present experience with loss of significant person	1.2	.31

Research question 4: Does nurses' attitude toward PC differ by their demographic characteristics?

Chi square test results showed that among all the selected sociodemographic variables, only working unit showed significance association with attitude toward PC meaning tat nurses who were working in palliative care units had positive attitude toward PC than those who were working in wards with support care for no code cases wards. Results of association between sociodemographic characteristics of the study sample and their attitude toward PC are presented in table 7.

Table 7: Association between nurses' sociodemographic variables and attitude toward PC

variables	Chi	p-value
Age	1.9	.71
Gender	2.7	.44
Marital Status	1.23	.35
Education	2.4	.51

Working Unit	7.8	**.03**
Choose to work in PC unit	2.1	.51
Previous courses/workshops on PC	3.07	.38
Previous experience dealing with terminally ill patients	.55	.65
Previous experience with loss of significant person	.83	.93
Present experience with loss of significant person	2.7	.27

Research question 5: Is there a relationship between nurses' knowledge and attitude regarding PC?

Chi square test reported no significance association between knowledge and attitude in the present study (Chi = 1.2, p = .61).

4. DISCUSSION

The objective of this study was to assess nurses' knowledge and attitude toward palliative care. Results from the study indicated that majority of sample in this study were young females. This piece of result is supported by Abudari et al, (2014) who stated that 90% of their sample were female below the age of 40-years old.

Result indicates that 63% of the nurses had good knowledge of PC. Few previous researches showed similar results such as Budkaew and Chumworathayi, (2013) who reported that 56% of nurses in their study had good knowledge of PC. Although, 63% is not that admirable percentage, reasons could be due to many factors. First, 68.7% of the nurses in this study had bachelor's degree in nursing. Research evidence supported that education has shown positive association with knowledge. Second, majority were working in different palliative care words and 77.4% reported having experience dealing with terminally ill patients. This would have contributed to gaining knowledge and confidence in caring for terminally ill patients.

On the other hand, Ayed, 2015 reported that only 21% of nurses showed good knowledge of PC, Kassa et al. (2014) reported 31% with good knowledge. Moderate level of knowledge was reported by a study done in Iran (Wilson, Avalos & Dowling, 2016) and Korea (Choi et al, 2012). Poor level of PC knowledge was reported in Saudi Arabia (Abudari et al, 2014), South- West Nigeria (Fadare et al, 2014) and India (Prem et al, 2012).

Results from the present study showed that 46.1% of the nurses had positive attitude toward PC while 29.1% reported negative attitude and 24.8% were neutral.

This was supported by Ayed (2015) reported that 56.2% reported moderate attitude and Abudari et al, (2014) presented moderate attitude among majority of nurses in their study while moderate attitude was defined as neutral.

On the other hand, Nguyen et al, (2014) and Wilson et al. (2016) who reported that majority of nurses in their study showed a positive attitude using the FATCOD. In addition, Kassa et al., (2014) reported that 76% in their study had favorable attitude towards PC and Karkada, et al., (2011) indicated 92.8% of nursing students had favorable attitude towards palliative care.

Results from the present study illustrated that there was a significant association between knowledge and education. Nurses who had higher educational level reported having higher level of knowledge of PC. Previous research reported that education has positive association with knowledge in PC and any other nursing specialty (Huijer et al., 2009; Abudari et al, 2014).

Knowledge of PC in this study showed association with working unit, nurses who were working in wards specified for palliative care reported better knowledge of PC than those who were working in wards who provide support care for no code cases. This was not consistence with Huijer et al. (2007) and Ayed (2015) who conveyed no association between working unit and knowledge of PC. In their studies, there were no special department for terminally ill patients and patient were receiving their care in any department based on the diagnosis, while in the setting of the present study, there were specific palliative care unit for terminally ill patients. This would have been contributed to gaining specific PC knowledge for nurses working in such units.

Attitude in this study reported significance association with working unit. Nurses who were working in palliative care wards had positive attitude toward PC. Previous research reported similar results as Razban, et al., (2013) who reported that the type of the ward associated with positive attitude toward PC.

Knowledge reported no significance association with attitude in the present study. Although, researches have postulated that knowledge drive attitude, but the reason of no association in this study was unclear. It could be due to the special demands and special characteristics of palliative care wards that burden nurses and reflected such result.

Limitation:

The present study is limited to small sample size, self-administered questionnaire and descriptive research design. Including more sample with longitudinal and qualitative design would have enhanced generalization of results.

5. CONCLUSION

Although, results from the present study showed that a substantial percentage of nurses had a good level of knowledge of PC; however, this percentage is not admired. 46% reported a positive attitude toward PC while more than half of the nurses were either neutral or have negative attitude toward PC. Factors such as education and working unit reported significance association with knowledge. In addition, working unit reported significance association with positive attitude toward PC. The study would provide a baseline information to build on and develop a culturally competent intervention to enhance nurses' knowledge and attitude and enhance the quality of end of life care.

6. RECOMMENDATION

More comprehensive integration of palliative care in nursing curriculum is required. Ongoing in-services training and workshops for nurses working in palliative care units to keep them up-to-date. This is critical to improve nurses' attitude and prepare them for psychologically and emotionally challenging type of work. Further, including families in the care, sharing families in decisions and end of life care for their loved ones is of great support.

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