Assessment of Knowledge and Approaches of Nurses Towards Cancer Pain Management in Elderly Patients in Ahmadu Bello University Teaching Hospital, Zaria Kaduna State

*Ibrahim Attahir,[1] Tukur Babayo[2] Tijani Adelani [3]

[1] School of Midwifery Malumfashi, Katsina State;
[2] Department of Nursing Sciences, Ahmadu Bello University Zaria
[3] Department of Nursing Sciences, Edo State University
Corresponding Author: Ibrahim Attahir
Corresponding Email: drhaqqun@gmail.com

Abstract

In Nigeria about 60-70% of cancer cases are presented in an advanced stage; at least 30% of such cases experienced one or more types of pain, which is almost pathognomic of the disease state. As a result, the study aimed at assessing nurses' knowledge and interventions rendered to the elderly patients with pain from cancer in Ahmadu Bello University Teaching Hospital, Zaria. A cross-sectional descriptive research design was used.Both questionnaire and observations were used to obtain information from 73 nurses. The results obtained were analysed using data analysis software Statistical Package for Social Science version 22.0 to compute the mean, t-test and percentages. Findings on level of knowledge revealed that only 24 (32.8%) of the nurses have knowledge of cancer pain in elderly which is below average. The interventions nurses rendered include reassuring patient (that pain is real and will be assisted in dealing with it); administering balanced analgesic agents as prescribed to promote optimal pain relief; and documenting the severity of patient's pain on a chart.Therefore, it can be concluded that nurses' knowledge of cancer pain is below optimal. There is limited utilization of non-pharmacological approach towards pain management by nurses in the wards other than the main oncology unit. It is therefore recommended that there should be frequent formal training of nurses on the management of cancer pain. This could be at the local level such as in both wards and hospital levels.The hospital management should make an effort in providing non-pharmacological facilities that can serve and be used by nurses in decreasing cancer pain such as geriatric centres within the hospital and should be able to provide all forms of divertional therapy facilities in all wards such as television, mini library section where elderly patients with mild cancer pain can relax.

Keywords: *Approaches, Cancer, Elderly, Knowledge, Nurses, Pain*

Introduction

Ageing is a fundamental factor for the development of cancer because the incidence of cancer rises dramatically with age, most likely due to a build-up of risks for specific cancers that increase with age (World Health Organisation, 2017) . Research suggests that 70-90% of people with advanced cancer experience persistent pain (Kapoor, Kalwar, Singhal, Nirban, & Kumar, 2015). While pain management has advanced significantly in recent decades, older people remain less likely than younger people to receive good pain management, as the effect of unrelieved pain in elderly have a range of significant functional, cognitive, emotional, and societal consequences. This can further diminish the quality of life by isolating individuals from

important social stimulation, amplifying the functional and emotional losses already experienced from under-treated pain (Hanks-Bell, Halvey, & Paice, 2004) . Older women are more at risk of under-treatment than older men (McLachlan, Bath, Naganathan, & Hilmer, 2011).

The treatment options available for cancer pain management are Pharmacologic and non-pharmacological approaches. According to Delgado and Bruera (2008), pain in older cancer patients should be managed in a multidisciplinary environment, combining pharmacologic with non-pharmacologic measures. The interdisciplinary team allows practitioners to better understand and respond to patients' and family members' experience of the illness. In the interdisciplinary team setting, groups of professionals are joined with the mutual goal of relieving patients' and family members' suffering. They provide different management skills and perspectives to improve patients' quality of life (Delgado & Bruera, 2008) . Therefore, the study focused on the management of cancer pain in elderly patients from the nurses' perspectives.

Nurses being part of the interdisciplinary team play a vital role in the management of cancer pain, in that, they activneely intervene to totally control and relief pain by means of using non-pharmacological interventions and they possess the knowledge of pharmacological treatments, as well as indications, contraindications and adverse effects of cancer drugs (Oliveira, Sobrinho, & Cunha, 2016). According to (Craig & Smyth, 2012) the nurses' "knowledge provides them with the ability to make decisions regarding clinical issues in dispatching the best care possible". Apart from personal knowledge, nurses are required to possess knowledge regarding pain itself. This will be of great benefit for the nurses to effectively plan nursing activities so as to ensure that pain is fully managed according to its subjective occurrence (Henry, 2010; Kipkorir, 2011). On the basis of this, according to Elumelu,

Adenipekun, Eriba, & Akinlade, (2014); 2 (2%) out of the 119 nurses could give a good account on the management of cancer pain in a study to assess the level of knowledge of cancer pain management among trained nurses at the University College Hospital (UCH), Ibadan, Nigeria.

In another literature, Nurses' knowledge of pain management is weak with incorrect answers being highest on pharmacology and assessment of pain (Manwere, Chipfuwa, & Chironda, 2015) . Nurses' opioid phobia is an example of a barrier to effective pain management (Henry, 2010).

Effective assessment of pain in the elderly can be challenging (Stewart, 2014). In assessing a patient with pain, the nurse reviews the patient's description of the pain and other factors that may influence pain, as well as the patient's response to pain relief strategies. Documentation of the pain level as rated on a pain scale becomes part of the patient's medical record, as does the record of the pain relief obtained from interventions (Smeltzer, Bare, Hinkle, & Cheever, 2010) .In order to ensure a comprehensive assessment of a patient's priorities and monitoring of the effectiveness of a management plan for cancer pain, the nurses should, therefore, be able to select the right pain measurement tools in order to meet the needs of such patients. The elderly should be provided with adequate time to respond to the pain assessment tools used, the tools should also be sufficiently visible to allow them to respond in a manner that best describes their pain level (Lilley, Collins, Harrington, & Snyder, 2011)

Methodology

The research design employed in this study was a cross-sectional descriptive research. The study area was Ahmadu Bello Teaching Hospital Shika, Zaria being the tertiary Oncology based hospital in Kaduna state, one out of the four hospitals in the northern region of Nigeria with an oncology centre and being a hospital that serves as a focal point of

referral for cancer patients covering Northern Nigeria, Southern part of Niger, Chad and Northern Cameroon. The population of the study constitutes nurses working in the oncology ward, oncology section of gynaecological ward, female surgical ward (for Breast cancer and other cases), male surgical ward(for urologic cancers and other male-related cancers), and palliative care unit (for cancer cases). There were a total of 86 nurses in the oncology sections (wards inclusive) in general. The sample size constitutes the whole 86 nurses (census sample size) working in the oncology units of the hospital. Data were collected over a period of 3 months (June 2017-August 2017)

Instrument

Two instruments were used in this study for data collection:

1. The first was an adapted revised Nurses Knowledge and Attitudes Survey Regarding Pain (NKASRP) developed by Ferrell and McCaffery to measure knowledge toward pain management (Ferrell & McCaffery, 2014) . The NKASRP has 22 true/false, fourteen (14) multiple-choice and two case studies with two questions each making a total of 38 questions. But this instrument was modified by the researcher in order to fit the study in accordance with (Nega, Tachbele, & Kassa, 2014); who uses the same approach. Eleven True/False questions and four multiple-choice questions were adapted for assessing nurses' knowledge of cancer pain.

2. The second instrument used was an adapted observational check-list on nursing care for a patient with pain developed by Smeltzer, Bare, Hinkle, & Cheever, (2010). This was used to determine the approaches (interventions) nurses render to elderly patients with cancer pain. The check-list comprises of ten approaches to be implemented on a patient with cancer pain.

Validity and Reliability

❖ The two instruments were presented to 5 jurors in the field of nursing and quality of life for their valuable vetting and input

❖ Meanwhile, the reliability index (Cronbach's coefficient) of the questionnaire was computed using SPSS version 22.0 and the alpha value was found to be 0.701; this indicates that the instrument is reliable for the study.After the data have been collected, Statistical Package for the Social Sciences (SPSS) version 22.0 software was used for data analysis. Out of the 86 copies of the questionnaire distributed to the respondents, a total of 73 (85%) copies were returned duly completed. The percentage of respondents observed was 74 (86%)

Ethical Consideration

The copy of the proposed dissertation, introductory letter from the department and the copy of the questionnaire were submitted to the ethical research committee of Ahmadu Bello University Teaching Hospital Shika Zaria, for approval which was obtained. The **ABUTH Ethics Committee assigned Number for the research was:** ABUTHZ/HREC/M05/2017.

In order to protect the human rights of the participating nurses, no names were required on the questionnaire and there were no negative consequences associated with participation or non-participation. No risks were identified with this study. Informed consent was obtained from the study participants after explaining the objectives and procedure of the study. The study was voluntary and the confidentiality of the study participants was maintained.

Results

Table 1: In respect to their qualifications, most of the nurses 47 (64.4%) are Registered Nurse (RN) and Registered Midwives (RM). About 20 (27.4%) of the nurses had a working experience of 11-20 years; but only 22 (30.1%) of the nurses have additional cancer/pain

related training. Most of the training being General pain Management 13 (17.8%). 17 (23.3%) nurses have attended educational class on pain management in the elderly. Majority of the nurses 52 (71.2%) have managed cancer pain in elderly most of which 49 (67.1%) being chronic pain.

Table 2: shows the correct response score on knowledge of nurses on cancer pain. The highest correct response by nurses is on the item number 13 on the questionnaire which is on "the best choice of treatment of prolong, moderate to severe cancer pain" which morphine is the correct answer has 58 (79.5%)

while the item with the least percentage of correct response on knowledge of nurses on cancer pain in elderly was the statement "Patient may sleep in spite of severe pain 7 (9.6%).

Table 3 shows the overall level of knowledge of nurses based on their knowledge of cancer pain in an elderly patient. Majority of the nurses (67.1%) have poor knowledge of cancer pain. 30.1% of the nurses have a fair knowledge and only 2.7% of the nurses have good knowledge. In other words, only 32.8% of the nurses have knowledge on cancer pain in elderly pain that is above average.

Table 1: Socio-Demographic and Professional Characteristics of the Nurses

Variables		Frequency	Percent
Respondents Age	21-25 years	7	9.6
	26-30 years	7	9.6
	31-35 years	12	16.4
	36-40 years	15	20.5
	41-45 years	17	23.3
	> 46 years	15	20.5
Gender Status	Male	15	20.5
	Female	58	79.5
Marital Status	Single	16	21.9
	Married	57	78.1
Religion	Islam	30	41.1
	Christianity	43	58.9
Highest Qualification/Cadre	Registered Nurse (RN)	11	15.1
	RN/RM	47	64.4
	BSc Nursing	9	12.3
	MSc Nursing	1	1.4
	Others*	5	6.8
Ward working	Oncology	7	9.6
	Palliative	3	4.1
	Female Surgical	21	28.8
	Male Surgical	23	31.5
	Obstetric and Gynaecological	19	26.0
Years of Working Experience	< 2 years	9	12.3
	3-10 years	25	34.2
	11-20 years	20	27.4

	21-30 years	15	20.5
	> 30 years	4	5.5
Additional cancer/pain related training	Yes	22	30.1
	No	51	69.9
Kind of training	General Pain Management	13	17.8
	Palliative	6	8.2
	Oncology	3	4.1
	General pain Management and palliative	1	1.4
	General pain Management and Oncology	1	1.4
	No Training	49	67.1
Attended Educational class on pain Management on elderly	Yes	17	23.3
	No	56	76.7
Managed cancer pain in elderly	Yes	52	71.2
	No	21	28.8
Type of cancer pain managed	Acute	3	4.1
	Chronic	49	67.1
	None	21	28.8

* Represents other qualifications such as Paediatric Nurse, ADPA, Public Health, RPN, Reproductive Health

Table 2: Item Analysis on Correct Responses and Score of Nurses Regarding Knowledge of Cancer Pain in Elderly   N=73

Rank	Item No	Item content (correct answer)	Frequency	percent
		Correct responses		
		Items receiving more than 70% correct response rate		
1	13	Best choice for treatment of prolong moderate to severe cancer pain. Morphine (correct answer)	58	79.5
		Items receiving between 50%-70% correct response rate		
2	6	Combining analgesics with different mechanism result in better pain control. (True= Agree)	51	69.9
2	9	Patients' spiritual belief makes them think that pain is a necessary experience in life.(True= Agree)	51	69.9
2	11	Pain is part of ageing process. (False= Disagree)	51	69.9
5	14	Useful for treatment of cancer pain. Ibuprofen (Motrin), Phenytoin (Dilantin), Gabapentin (Neurontin), All of the above (correct answer)	46	63.0
6	15	Most accurate judge of patients' pain. The patient (correct answer)	44	60.3
7	5	Respiratory depression rarely occurs in patients receiving opioids. (True= Agree)	39	53.4
		Items receiving less than 50% correct response rate		
8	8	Elderly patients cannot tolerate opioids for pain relief. (False= Disagree)	29	39.7
8	12	Route of administration of opioid in a patient with persistent cancer pain. Oral (correct answer)	29	39.7
10	2	Patient who can be distracted has no severe pain. (False= Disagree)	16	21.9
11	1	Vital signs are indicators of the intensity of pain. (False= Disagree)	14	19.2
11	4	Aspirin and NSAID are not effective for painful bone metastases. (False= Disagree)	14	19.2
11	7	Duration of Morphine 1-2mg IV is 4-5 hours. (False= Disagree)	14	19.2
11	10	If patients' pain is unknown, opioids shouldn't be given as it affects diagnosis of pain. (False= Disagree)	14	19.2
15	3	Patient may sleep in spite of severe pain. (True= Agree)	7	9.6

Table 3: Respondents Grading on the Level of Knowledge on Cancer Pain

Grade on knowledge	Frequency	Percent
[a] Poor knowledge	49	67.1
[b] Fair knowledge	22	30.1
[c] Good knowledge	2	2.7
Total	73	100.0

a - less than 50% (the participant score < 15)b - 50 - < 70% (the participant score 15 – < 21)
c - 70% or more (the participant score ≥ 21)

Table 4: Respondents Grading on the Level of Knowledge on Cancer Pain Based on Wards
N=73

		knowledge			Total
		Good	Fair	Poor	
Ward	Female Surgical (N=21)	2	10	9	21
	Male Surgical (N=23)	0	2	21	23
	Obstetric (N=19)	0	3	16	19
	Oncology (N=7)	0	4	3	7
	Palliative (N=3)	0	3	0	3
Total		2	22	49	73

The Table above revealed the level of knowledge of nurses based on the ward in which they work. The female surgical ward was the only ward with nurse with Good level of knowledge 2. Basically, the palliative, oncology and the female surgical ward have the highest number of nurses that have a fair knowledge on cancer pain. While the majority of the nurses in the male surgical and gynaecological ward have the highest number of nurses that have poor knowledge of cancer pain in the elderly.

Table 5: Interventions Nurses Render to Elderly Patients with Cancer Pain

		Frequency	Percent	Mean (SD)	t-test Value & P-value
Reassuring Patient that pain is real	Not Done	1	1.4	2.95 (0.281)	t= 44.190 p= 0.000
	Done not Satisfactorily	2	2.7		
	Done Satisfactorily	71	95.9		
Use pain assessment scale	Not Done	70	94.6	1.11 (0.455)	t=-7.404 p= 0.000
	Done Satisfactorily	4	5.4		
Assess and record pain characteristics	Not Done	4	5.4	2.05 (0.402)	t= 11.863 p= 0.000
	Done not Satisfactorily	62	83.8		
	Done Satisfactorily	8	10.8		
Administer balanced analgesic agent as prescribed	Done Satisfactorily	74	100.0	3.00 (0.00)	t=0.000 p=0.000
Re-administer pain scale	Not Done	74	100.0	1.00 (0.00)	t=0.000 p=0.000
Document severity of patient's pain on chart	Not Done	22	29.7	2.14 (0.99)	t= 6.434 p=0.001
	Done not Satisfactorily	20	27.0		
	Done Satisfactorily	32	43.2		
Obtain additional prescriptions as needed	Not Done	58	78.4	1.27 (0.065)	t= -3.552 p=0.001
	Done not Satisfactorily	12	16.2		
	Done Satisfactorily	4	5.4		
Identify and encourage patient to use strategies that have been successful	Not Done	33	44.6	1.68 (0.080)	t= 2.207 p= 0.030
	Done not Satisfactorily	32	43.2		
	Done Satisfactorily	9	12.2		
Teach patient additional strategies to relieve pain and discomfort	Not Done	22	29.7	1.82 (0.073)	t= 4.448 p= 0.740
	Done not Satisfactorily	43	58.1		
	Done Satisfactorily	9	12.2		
Instruct patient and family about potential side effect of analgesic	Not Done	49	66.2	1.36 (0.063)	t= -2.160 p= 0.034
	Done not Satisfactorily	23	31.1		
	Done Satisfactorily	2	2.7		

Grand mean= 1.8 Level of significance (p-value) for t-test under a test value of 1.5 was consider to be valued less than 0.05

Table 5 shows the overall mean of the approaches nurses render to cancer patients which is 1.8 indicating that approaches nurses offer are within the borderline. Reassuring

Patients that pain is real (95.9%), administering balanced analgesic agent as prescribed (100%) and documenting the severity of patient's pain on the chart (43.2%) were the approaches nurses render to patients with cancer pain satisfactorily.

Discussion

In respect to their qualifications, most of the nurses 47 (64.4%) have both Registered Nurse (RN) and Registered Midwives (RM) as qualification and the major duration of working experience of the nurses is 11-20 years. This indicates that the majority of the nurses have been caring for patients with cancer pain for long. But with respect to nurses having additional cancer/pain related training only 22 (30.1%) of the nurses have undergone such training. Most of the training being General pain Management 13 (17.8%) while merely 3 (4.1%) have had training on oncology care and 6 (8.2%) have had training on palliative care. About 17 (23.3%) nurses have attended educational class on pain management in the elderly. Majority of the nurses 52 (71.2%) have managed cancer pain in elderly most of which 49 (67.1%) being chronic pain. This finding also reflects what was obtained by Adewuyi, *et al.*, (2012) in their study in A.B.U.T.H, the age range of patients with cancer was 18-82 with a median age of 49 and by Marosi & Köller, (2016) who assumed that the number of elderly patients with cancer will considerably increase in the coming years

The results from the study indicate that the level of knowledge of nurses is below average (24 (32.8%)). Though in this study, there was a great improvement in the level of knowledge on cancer pain management when compared with the result obtained by Elumelu, Adenipekun, Eriba, & Akinlade, (2014) of 2%.On a more specific note, Table 4 revealed that nurses in oncology, palliative, and female surgical wards have more knowledge of cancer pain compared to any other nurse from the other wards. This might be to the fact that most of them had had

training on cancer pain and general pain management.

Moreover, based on the item analysis of Table 2 there was an excellent response from nurses on questions regarding pharmacological aspect. These findings justified the statement by Maryland Board of Nursing, (2016) that states "nurses need to have the knowledge on the use of pharmacological means and it justified what was observed during the process of the research; that the nurses were acquainted with administering analgesic agents as prescribed to promote optimal pain relief.

Though many of the nurses were acquainted with certain interventions that are aimed at relieving pain such as reassuring patients on the pain experienced, administering analgesic agents as prescribed to promote optimal pain relief and documenting the severity of patient's pain on patients' record sheet, but little attention was paid to the use of pain assessment scale, this might be due to the non availability of such instrument in the ward except in the female medical ward as observed by the researcher. A non-pharmacological approach especially teaching and encouraging the patient to use strategies that have been successful in relieving pain was not done in subsections of the oncology wards (Surgical and O&G).

Conclusion

This study indicates through its results that the level of knowledge of nurses is below average (poor). This call for concern since nurses play a pivotal role in pain management. Though out of the ten components that were observed, most of the nurses are acquainted with just three approaches that are aimed at relieving pain such as reassuring patients on the pain being experienced, administering balanced analgesic agents as prescribed to promote optimal pain relief and documenting the severity of patient's pain on patients' record sheet.

Recommendations

❖ There should be frequent formal training of nurses on cancer pain management either at the local level such as in both pre-service and in-service training.

❖ Nurses should be given the opportunity for special training in the field of oncology nursing as a specialisation so as to improve the quality of cancer pain management.

❖ Continuing education organised by hospitals and the act of preparing a current pain management guidelines most

especially pharmacological and non-pharmacological approaches that increase the effectiveness of nurses in clinical aspects will have a significant impact on nurses' knowledge towards pain management.

❖ In order to improve more on the intervention, pain assessment tools should be available to nurses and it should be integrated into nursing practice if possible, it should form part of the nursing process form.

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