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Research Article

Pain Assessment And Management Strategies Utilized By Nurses In University Of Port Harcourt Teaching Hospital, Rivers State, Nigeria.

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Abstract: Background: Pain is as old as man affecting people of all ages and its presence is often one of the major reasons people seek health care services, yet they are often dissatisfied with the amount of pain relief they receive from various nursing and medication care. This study evaluated pain assessment and management strategies utilized by practicing nurses. **Materials and methods:** This study is a descriptive cross sectional study carried out on 146 nurses involved in direct patient care, not on any kind of leave, accessible during the period of data collection and consented to participate in the study using the convenience sampling technique. Data was collected using a pretested self-structured questionnaire with reliability coefficient of 0.9. Data were sorted, coded, entered and analyzed using the SPSS version 23.0 software package at 5% level of significance. **Results:** Majority of the respondents 136 (93.1%) were females while just 10(6.9%) were males, 48(23.9%) were SNOs, 86(58.9%) of the respondents had years of experience of 6 – 10 years, 120(82.2%) were married and 140(95.9%) were Christians. Regarding the level of respondents' knowledge about pain assessment tools, 28(19.2%) had poor knowledge, 44(30.1%) had fair knowledge while 74(50.7%) had good knowledge. Furthermore, 26(17.8%) correctly utilized the pain assessment tools while majority 120(82.2%) did not use the tools correctly. Self-reported strategies used in the management of pain included appropriate positioning and movement of patients, massage, breathing exercises, diversional therapy, use of warm or hot compress, encouraging rest as well as relaxation, use of both weak and strong opioids, administration of non-opioid analgesics. Statistical analysis using chi-square showed that there is no statistical significant association between nurses' knowledge and utilization of pain assessment tools (p-value =0.15). **Conclusion:** Although majority of the nurses were knowledgeable about pain assessment tools, they do not utilize it in pain management. Hence, nurses should be trained and retrained in all issues bordering around pain and its management in order to ensure quality health care service delivery and an improved quality of life for all patients.
Keywords: Pain, Pain Assessment, Pain Management Strategies, Pain Assessment Tools.

INTRODUCTION

Pain is as old as man affecting people of all ages, it could be psychological or pathological, acute or chronic. Pain experience is often one of the major reasons people seek health care services, yet they are often dissatisfied with the amount of pain relief they receive from various nursing and medication care (Workin, 2006). According to the International Association for the Study of Pain (IASP) (2011), pain is the unpleasant sensory and emotional experience associated with actual or potential tissue damage. It is a state in which the individual experiences and reports the presence of severe discomfort or uncomfortable sensations (Carpentio, 2007). McCaffery (2008) further expanded that pain is whatever the person experiencing

it says it is and existing wherever he says it does; as such pain experience is highly subjective (Eccleston, 2011). Unrelieved pain can significantly interfere with a person's general functioning and quality of life contributing to higher patient morbidity with longer recovery time, suffering, disability, impaired sleep pattern, delayed wound healing including psychosocial problems (Ereck and Poc, 2004; Accardi, 2009). Efficient and effective pain management advocated and recognized as a fundamental human right (IASP, 2011) begins with an accurate pain assessment. In practice, pain has been recognized as the fifth vital signs in the care of all patients. Therefore, the need for pain assessment is crucial to achieving this goal. Nurses are usually involved in the care of patients without various

degrees of pain on a daily basis. Giant strides has been made in the area of pain and its management and despite the establishment of clinical management guidelines, little progress appears to have been made in this regards as observed by the researcher in course of practice and clinical experience. This may not be unconnected with the fact that nurses may have incomplete or inaccurate information about advances made so far. This claim is substantiated by the findings of some researches that few nurses were knowledgeable about pain management while majority of them do not utilize the pain management tools for nursing their patients (Carr and Thomas, 2006; Mek and Oliver, 2006; Patrick, 2007; Wilson, 2008). It is against this background that the researcher sought to evaluate the pain assessment and management strategies utilized by nurses in University of Port Harcourt Teaching Hospital, Rivers State, Nigeria.

MATERIAL AND METHODS

This is a descriptive cross sectional study carried out in the University of Port Harcourt Teaching Hospital, Choba, Rivers State, Nigeria. The hospital is located in Port Harcourt, Rivers which is one of the major cities in the Niger Delta region with diversified industrial activities related to oil and gas exploration attracting agglomeration of emigrants. It provides health care services to majority of the populace in the state. As a tertiary institution, it has a wide range of qualified health personnel as well as nurses and provides research and training platforms for medical and nursing students. The target population for the study consisted of all nurses registered with the Nursing and Midwifery Council of Nigeria, working in the University of Port Harcourt Teaching Hospital involved in direct care of patients. From the available record in the administrative office, there was a total of two hundred and thirty nurses (230). The sample size for the study was calculated using the Taro Yemene formulae (Araoye, 2004).

$$N = \frac{n}{1 + n(e)^2}$$

Where ,
N = Target population
n = Sample size
e = level of significance (0.05)

$$230 = \frac{n}{1 + n(0.05)^2} = 146$$

Therefore the required minimum sample size is one hundred and forty six (146). All nurses involved in direct patient care, not on any kind of leave, accessible during the period of data collection and consented to participate in the study. The convenience purposive sampling technique was used to recruit participants, the questionnaires were administered to all nurses who met the inclusion criteria.

A self-structured questionnaire consisting of four sections was used after thorough literature search was done. Section A elicited information on sociodemographic data; section B contained 7-items on Nurses' knowledge of pain assessment tool presented on a 4-point likert scale; section C was on self-reported utilization of pain assessment tools during patients' care while section D contained 9-items that elicited information on self-reported pain management strategies utilized by nurses while caring for the patient presented on a 4-point likert scale. Face and content validity was ensured by presenting the instrument to professionals and experts in the field of pain and palliative care. The test-retest method was used to ascertain the reliability of the instrument. A reliability coefficient of 0.9 was obtained using the Pearson Product Moment Correlation making it very reliable for use (Polit, 2012). Hence the final draft of the questionnaire was done effecting all the suggestions and corrections. Data collection lasted for a period of four weeks. After obtaining approval to conduct the research, the investigator introduced herself to the respondents, explained the research process in detail and obtained their consent to participate in the study. Thereafter, the questionnaires were administered, clarifications were made as required and all duly completed questionnaires were retrieved from the respondents.

Data collected were sorted, coded and entered using the SPSS version 23.0. Data on sociodemographic characteristics of respondents was summarized using frequency and simple percentage and presented on a table. Research questions 1 and 3 was answered using items in section B and D on the questionnaire respectively. The 4-point likert scale was rated as follows: strongly agreed = 4, Agreed = 3, Disagreed = 2 and Strongly disagreed =1 for positively skewed statements while the negatively skewed statements were scored in the reverse order. To determine the knowledge of respondents about pain assessment, a total score of 28 was expected, a score of 1 – 13 indicated poor knowledge, 15 – 19 reflected fair knowledge while 20 – 28 indicated good knowledge. To ascertain the pain management strategies utilized by the nurses, the mean scores on each of the items were calculated and any score greater than the criterion mean of 2.50 reflected acceptance of the item. The research questions were further analyzed using frequency, simple percentages, mean and standard deviation while the hypothesis was tested using chi-square test at 5% level of significance and presented on tables and charts. Prior to commencement of the study, standard description of goals, data uses, protection and rights of respondents were provided both in written and verbal form to all predesignated respondents before obtaining informed consent for participating in the study. Respondents were free to decline from participation, not respond to any question or opt out completely at any given time during the data collection period without reprimands. Consents

were sought from the institution and approved by the Assistant Director of Nursing Services of the hospital on presentation of letter of introduction from the Department of Nursing Science, University of Port Harcourt, Rivers State.

RESULTS

Table 1 shows the respondents' sociodemographic data of which majority 136 (93.1%)

were females while just 10(6.9%) were males. For professional rank, 48(23.9%) were SNOs followed by 38(21.9%) who were NO 1s. In addition, more 86(58.9%) of the respondents had years of experience of 6 – 10 years, 120(82.2%) were married and 140(95.9%) were Christians.

Table 1: Respondents' sociodemographic data		n = 146
Variables	Frequency	Percentage
Gender		
Male	10	6.9
Female	136	93.1
Professional Rank		
ACNO	12	8.2
PNO	16	11.0
SNO	48	23.9
NO I	38	21.9
NO II	32	35.0
Years of experience		
1 – 5	32	21.9
6 – 10	86	58.9
11 and above	28	19.2
Marital status		
Single	26	17.8
Married	120	82.2
Religion		
Christianity	140	95.9
Islam	6	4.1

Figure 1 shows the level of knowledge of respondents regarding pain assessment tools. Out of the 146 respondents, 28(19.2%) had poor knowledge, 44(30.1%) had fair knowledge while 74(50.7%) had good knowledge of pain assessment tools.
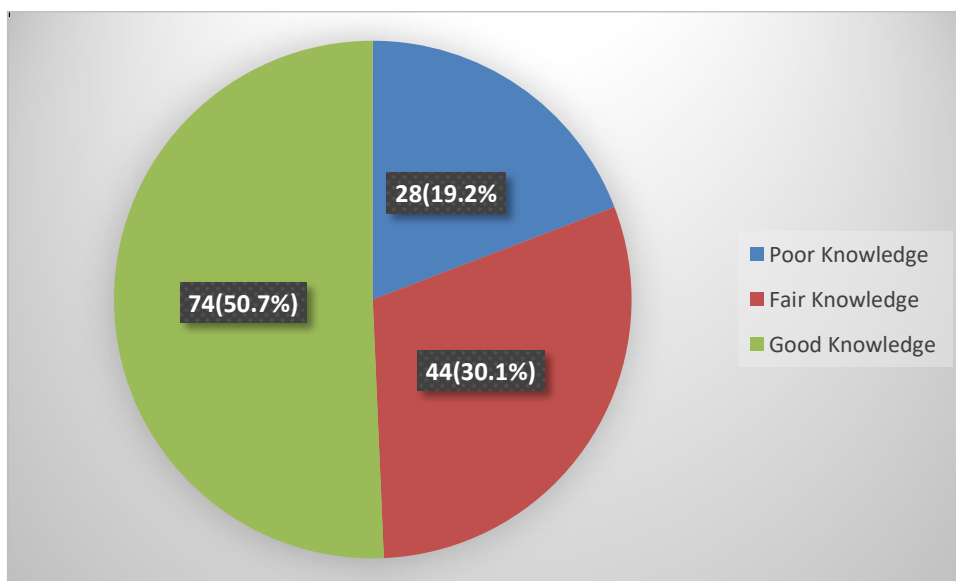
Figure 1: Respondents' level of knowledge of pain assessment tools

Figure 2 shows that 26(17.8%) correctly utilized the pain assessment tools while majority 120(82.2%) do not correctly use the tools.
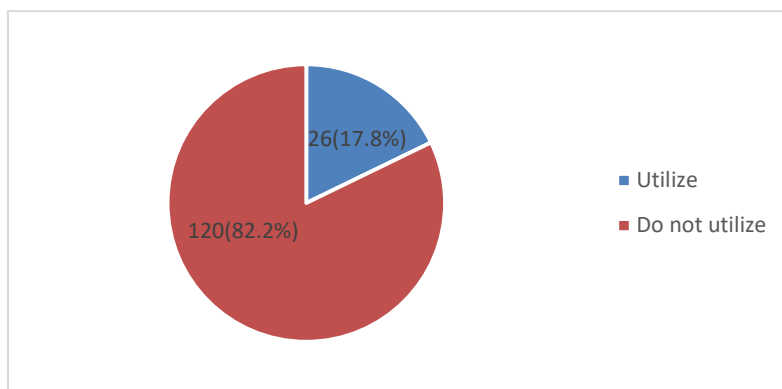
Figure 2: Respondents' level of utilization of pain assessment tools

Table 2 shows the self-reported strategies used by respondents in management of pain. From analysis, the mean of all the 9-items were greater than the criterion mean of 2.50. Hence, the strategies respondents claimed to use in pain management include appropriate positioning and movement of patients, massage, breathing exercises, diversional therapy, use of warm or hot compress, encouraging rest as well as relaxation, use of both weak and strong opioids, administration of non-opioid analgesics.

Table 2: Mean and standard deviation on the strategies respondents use in managing pain

Items	Nurses (n = 146)		Responses
	Mean	**Standard deviation**	
Use of strong opioids	2.67	0.62	Agreed
Administration of weak opioids	2.68	0.50	Agreed
Use of non-opioid analgesics	2.57	0.74	Agreed
Appropriate positioning and movement of patients	2.67	0.30	Agreed
Massage	2.52	0.43	Agreed
Breathing exercises	2.62	0.68	Agreed
Diversional therapy	2.53	0.61	Agreed
Use of warm or hot compress	2.73	0.58	Agreed
Encouraging rest and relaxation	2.53	0.76	Agreed
Criterion mean = 2.50			

Table 3 shows the chi-square analysis for the association between nurses' knowledge and utilization of pain assessment tools. The null hypothesis was not rejected as the chi-square (0.79) yielded a p-value (0.15) that was greater than 0.05. This implies that there is no statistical significant association between nurses' knowledge and utilization of pain assessment tools.

Table 4: Association between Respondents' Knowledge and Utilization of Pain Assessment Tools

Variables	Level of Utilization (%)			Statistics	Remarks
Level of Knowledge	**Utilize**	**Do not utilize**	**Total**		
Poor	4(2.7)	22(15.1)	26(17.8)	$X^2 = 0.79$	
Fair	6(4.1)	38(26.0)	44(30.1)	**Df = 2**	**Not**
Good	16(11.0)	60(41.1)	76(51.1)	**p-value =**	**significant**
Total	26(17.8)	120(82.2)	146(100)	**0.15**	

X^2 = chi-square   DF= degree of freedom

DISCUSSION

Findings of the study (figure 1) revealed that more than half (50.7%) of the respondents had good knowledge of pain assessment tools followed by one third (30.1%) with fair knowledge while it was striking to know that a little below one-fifth (19.2%) of the nurses still had poor knowledge of pain assessment tools even in this era of care where pain has been recognized as the fifth vital signs. Although, good number of the nurses had good and fair knowledge about the assessment tools, it was disappointing to know that just 17.8% of them claimed that they correctly utilized the pain assessment tools while managing pain while a vast majority (82.2%) owned up that they do not use the tools correctly (figure 2). This implies that although the knowledge of the tool was fair, the application of the tool in managing pain was quite challenging. Reports from previous researches supports the findings that majority of the nurses had good knowledge of pain assessment tools (Carr and Thomas, 2006; Mer and Oliver, 2006; Patrick, 2007) and that majority do not correctly utilize the tool

(Patrick, 2007; Wilson, 2008). In the contrary, Wilson (2008) submitted that there was paucity of information on pain assessment and use of appropriate pain assessment tools among the nurses.

Efforts should be made to x-ray the factors or issues surrounding the non-utilization of the assessment tool in patient management. This will go a long way to assist the administrative heads to curb the problem and fill in the gap to promote quality patient care delivery services. Nurses should be properly trained and retrained on the use of all pain assessment tools using the platforms of workshops, seminars and Mandatory Continuing Professional Development Programme (MCPDP).

Furthermore, despite the poor utilization of pain assessment tools, the result showed that majority of the nurses used a wide range of strategies to manage pain while caring for their patients. The strategies used ranged from appropriate positioning and movement of patient, massage, breathing exercises, diversional therapy, application of warm or hot compress, rest and relaxation to use of weak, strong opioids and non-opioid analgesics as prescribed. Our findings is in line with the reports of Carr and Thomas (2006), Mek and Oliver (2006) and Wilson (2008).

Findings implies that nurses had the ability to recognize the presence of pain and will immediately use the management strategies to relief pain irrespective of the severity of patients' pain experience. Proper assessment is the bed rock of an effective management strategy and should never be overlooked in order to achieve quality patient care. The management should introduce tools, charts, protocols and supportive environment adapted to this environment to enable nurses adequately use the tools in patient management. Likewise the need to foster capacity building can never be overemphasized.

In this current study, statistical analysis showed that there was no significant association between nurses' knowledge and utilization of pain assessment tools. This means that the level of knowledge of the nurses had no impact on their utilization of the tools. This is quite surprising because it is generally believed that knowledge should transcend into and inform practice. Findings is in congruence with the report of Mek and Oliver (2006) that a significantly large proportion of nurses with good knowledge of pain assessment tool did not utilize. In addition, the submission of Wilson (2008) that there is no significant association between knowledge and use of pain assessment tool further substantiates the result of this study. Notwithstanding, it is imperative that other factors affecting utilization should be x-rayed in order to achieve change in attitude in the nurses.

CONCLUSION

Inadequately managed pain has major physiological, psychological, economic and social impact on the patients, families and society at large (Accardi, 2009). The result of this study showed that although majority of the nurses were knowledgeable about pain assessment tools, they do not utilize it in the management of pain for their patients. Hence, nurses should be trained and retrained on all issues bordering around pain and its management in order to ensure quality health care service delivery and an improved quality of life for all patients.

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