

Pain Evaluation and Treatment Techniques Designed Specially for Hospital Nurses in Order to Provide High-Quality Health Care Services

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Abstract

The purpose of this research was to examine the pain evaluation and treatment procedures used by practicing nurses. The research is a descriptive cross-sectional research that was conducted on 146 nurses who were directly engaged in patient care, were not on leave throughout the data collecting period, and volunteered to participate in the research using the convenience sample methodology. The data collection instrument was a pretested self-structured questionnaire with a 0.9 reliability value. Sorting, coding, entering, and analyzing data were performed using the SPSS version 23.0 software program at a 5% level of significance. The majority of respondents, 136 (93.1 percent), were female, while just 10 (6.9 percent) were male. 48 (23.9 percent) of respondents were SNOs, 86 (58.9 percent) of respondents had 6–10 years of experience, 120 (82.2 percent) were married, and 140 (95.9 percent) were Christians. Concerning respondents' degree of knowledge regarding pain assessment techniques, 28 (19.2 percent) had inadequate knowledge, 44 (30.1 percent) had acceptable knowledge, and 74 (50.7 percent) had enough information. Self-reported pain management strategies included patient positioning and movement, massage, breathing exercises, diversional therapy, the use of warm or hot compresses, encouraging rest and relaxation, the use of both weak and strong opioid analgesics, and the administration of non-opioid analgesics. Using chi-square analysis, it was shown that there is no statistically significant relationship between nurses' knowledge and use of pain assessment instruments (p-value =0.15).

Keywords: Pain, Pain Assessment, Pain Management Strategies, Pain Assessment Tools

Introduction

Pain has been since the dawn of man and affects individuals of all ages; it may be psychological or pathological, acute or chronic. While pain is often a primary motivation for seeking health care services, patients often express dissatisfaction with the amount of pain relief they obtain from varied nursing and prescription treatments (Workin, 2006). The International Association for the Study of Pain (IASP) (2011) defines pain as an unpleasant sensory and emotional experience caused by real or prospective tissue damage. It is a condition in which the person feels and reports significant pain or unpleasant feelings (Carpentio, 2007). McCaffery (2008) built on the notion that pain is whatever the one experiencing it declares it to be and exists wherever he declares it to exist; as such, pain experience is extremely subjective (Eccleston, 2011). Unresolved pain may greatly impact a person's general performance and quality of life, resulting in increased patient morbidity due to prolonged recovery times, suffering, impairment, disrupted sleep patterns, and delayed wound healing, as well as psychosocial complications (Ereck & Poc, 2004; Accardi, 2009).

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Pain treatment that is both efficient and effective, as advocated for and recognized as a basic human right (IASP, 2011), starts with an accurate pain assessment. Pain has been acknowledged in practice as the fifth vital sign in all patients' treatment. As a result, pain assessment is critical to reaching this aim. On a daily basis, nurses are often engaged in the treatment of patients who experience varying degrees of pain.

While significant progress has been achieved in the domain of pain and its treatment, and despite the formation of clinical treatment standards, little progress seems to have been achieved in this area, as noticed by the researcher in her clinical practice and experience. This might be related to the fact that nurses may have insufficient or misleading knowledge on technological advancements to date. This claim is supported by the findings of several studies, which indicate that only a minority of nurses are knowledgeable about pain management and that the majority do not use pain management tools when nursing their patients (Carr & Thomas, 2006; Mek & Oliver, 2006; Patrick, 2007; Wilson, 2008). The researcher set out to study the pain assessment and treatment procedures used by nurses at the University of Port Harcourt Teaching Hospital in Rivers State, Nigeria.

Methods

This is a descriptive cross-sectional research conducted in Choba, Rivers State, Nigeria, at the University of Port Harcourt Teaching Hospital. The hospital is situated in Port Harcourt, Rivers, which is one of the largest towns in the Niger Delta area due to its diverse industrial activity connected to oil and gas development, which attracts a large number of immigrants. It serves the bulk of the state's population with health care services. As a tertiary institution, it employs a diverse spectrum of skilled health professionals, including nurses, and offers research and educational opportunities for medical and nursing students. The study's target group was all nurses registered with the Nigerian Nursing and Midwifery Council who worked in direct patient care at the University of Port Harcourt Teaching Hospital. According to the administrative office's records, there were a total of 230 nurses (230). The Taro Yemene formulas were used to determine the sample size for the investigation (Araoye, 2004).

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

Where,

N = Target population n = Sample size

e = level of significance (0.05)

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

As a result, the needed minimum sample size is 156. (146). All nurses engaging in direct patient care who were not on leave throughout the data collection period and volunteered to participate in the research were included. To recruit participants, a convenient purposive sample strategy was utilized; questionnaires were sent to all nurses who satisfied the inclusion criteria. After doing a comprehensive literature search, a self-structured questionnaire with four components was employed. Section A elicited sociodemographic data; section B contained seven items assessing nurses' knowledge of pain assessment tools on a four-point likert scale; section C centered on self-reported use of pain assessment tools during patient care; and section D contained nine items assessing nurses' self-reported pain management strategies used while caring for patients. The instrument's face and content validity were established by administering it to professionals and specialists in the fields of

pain and palliative care. The test-retest approach was used to determine the instrument's dependability. Pearson Product Moment Correlation had a reliability rating of 0.9, indicating that it is quite dependable for application (Polit, 2012). As a result, the final draft of the questionnaire was completed, taking into account all of the recommendations and revisions. Four weeks were spent collecting data. The investigator presented herself to the respondents, described the research method in detail, and received their agreement to participate in the study after getting authorisation to perform the research. Following that, surveys were distributed, explanations were provided as necessary, and all properly completed surveys were collected from respondents.

SPSS version 23.0 was used to sort, code, and input the data gathered. The sociodemographic data of respondents were summarized and displayed in a table using frequency and simple percentages. The research topics 1 and 3 were addressed utilizing items from the questionnaire's section B and D, respectively. For positively skewed items, the 4-point likert scale was scored as follows: strongly agreed = 4, agreed = 3, disagreed = 2, and severely disagreed = 1, whereas negatively skewed words were assessed in reverse order. To ascertain respondents' knowledge of pain assessment, a total score of 28 was predicted; a score of 1–13 indicated inadequate knowledge, 15–19 showed reasonable understanding, and 20–28 suggested adequate knowledge. To assess the nurses' pain management practices, mean scores on each item were computed, and any score more than the criteria mean of 2.50 indicated item acceptance. Further analysis of the research questions was conducted using frequency, simple percentages, mean, and standard deviation, while the hypothesis was assessed using the chi-square test at a 5% level of significance and reported in tables and charts. Prior to the research's initiation, a standard explanation of the research's objectives, data uses, protection, and respondents' rights was delivered to all predesignated respondents in both written and spoken form prior to gaining informed permission for participation in the research. Respondents were not penalized for declining to participate, for failing to reply to any question, or for opting out altogether at any point throughout the data collecting period. On presentation of a letter of introduction from the Department of Nursing Science, University of Port Harcourt, Rivers State, permission was sought from the institution and accepted by the hospital's Assistant Director of Nursing Services. The sociodemographic statistics in Table 1 indicate that the bulk of respondents (136, or 93.1 percent) were female, while just 10 (6.9 percent) were male. 48 (23.9 percent) were SNOs, followed by 38 (21.9 percent) who were NO 1s. Additionally, more than 86 (58.9 percent) of respondents had between six and ten years of experience, 120 (82.2 percent) were married, and 140 (95.9 percent) were Christians.

Results and Discussion

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

The amount of knowledge of respondents on pain assessment techniques is shown in Figure 1. Among the 146 responders, 28 (19.2 percent) had little understanding of pain assessment methods, 44 (30.1 percent) had medium knowledge, and 74 (50.7 percent) had extensive knowledge.

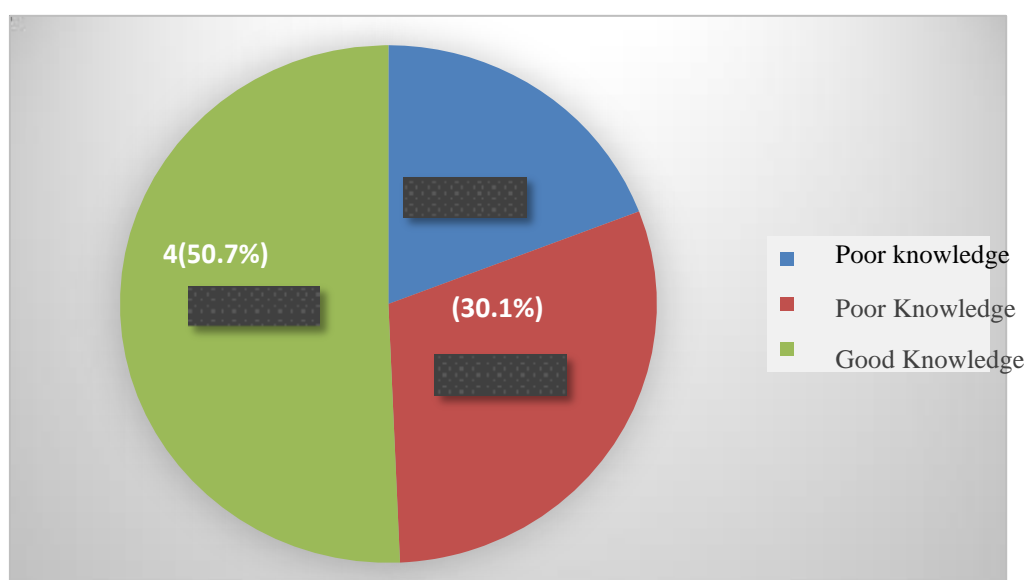


Figure 1. The amount of knowledge of respondents on pain assessment techniques

As seen in Figure 2, 26 (17.8%) properly used the pain assessment instruments, whereas the majority of 120 (82.2%) incorrectly used the instruments.

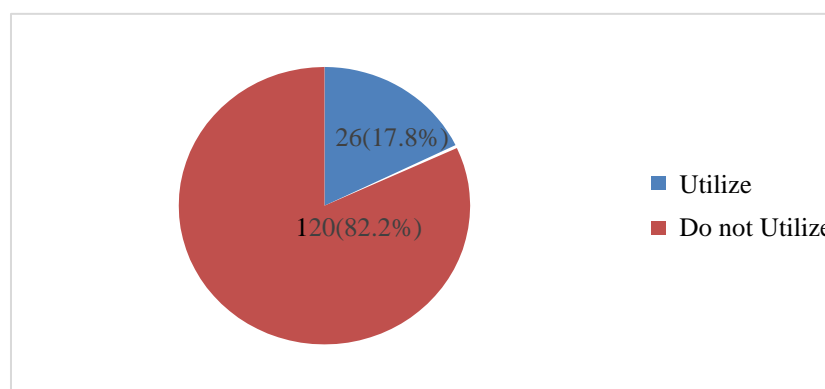


Figure 2. Respondents' Level of Utilization of Pain Assessment Tools

Table 2 summarizes respondents' self-reported pain management practices. The research revealed that the mean of all nine items exceeded the threshold mean of 2.50. Thus, respondents claimed to use a variety of strategies for pain management, including proper positioning and movement of patients, massage, breathing exercises, diversional therapy, the use of warm or hot compresses, encouraging both rest and relaxation, the use of both weak and strong opioids, and the 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		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			

The chi-square analysis in Table 3 demonstrates the relationship between nurses' knowledge and use of pain assessment techniques. The null hypothesis was not rejected since the chi-square (0.79) resulted in a p-value larger than 0.05 (0.15). This finding indicates that there is no statistically significant relationship between nurses' knowledge of and use of pain assessment instruments.

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	$\chi^2 = 0.79$ $Df = 2$ $p\text{-value} = 0.15$	Not significant
Poor	4(2.7)	22(15.1)	26(17.8)		
Fair	6(4.1)	38(26.0)	44(30.1)		
Good	16(11.0)	60(41.1)	76(51.1)		
Total	26(17.8)	120(82.2)	146(100)		

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

The study's findings (figure 1) revealed that more than half (50.7 percent) of respondents had adequate knowledge of pain assessment tools, while a third (30.1 percent) had fair knowledge. It was striking to learn that a little less than one-fifth (19.2 percent) of nurses continued to have inadequate knowledge of pain assessment tools, despite the fact that pain has been recognized. Although a majority of nurses had enough understanding of the assessment tools, it was discouraging to discover that the great majority (82.2 percent) do not use the instruments effectively while treating pain (figure 2). This indicates that, although understanding of the instrument was adequate, its implementation in controlling pain was rather difficult Previous study has shown that the majority of nurses have a working grasp of pain assessment methods (Carr & Thomas, 2006; Mer and Oliver, 2006; Patrick, 2007) but do

not use them appropriately (Patrick, 2007; Wilson, 2008). On the contrary, Wilson (2008) said that nurses lacked knowledge about pain assessment and the use of suitable pain assessment methods. Attempts should be made to elucidate the elements or concerns behind the evaluation tool's non-use in patient treatment. This will go a long way toward assisting administrative leaders in containing the issue and filling in the gaps necessary to encourage the delivery of high-quality patient care services. Nurses should be adequately taught and retrained in the use of all pain assessment instruments via workshops, seminars, and a Mandatory Continuing Professional Development Program (MCPDP).

Additionally, despite the low usage of pain assessment instruments, the results indicated that the majority of nurses used a variety of pain management measures when caring for their patients. The tactics utilized varied from proper posture and movement of the patient, massage, breathing exercises, diversional treatment, application of a warm or hot compress, rest, and relaxation, to the prescription of mild, powerful opioids and non-opioid analgesics. Our results corroborate those of Carr & Thomas (2006), Mek & Oliver (2006), and Wilson (2006). (2008).

The findings indicate that nurses are capable of recognizing the existence of pain and implementing pain management measures instantly, regardless of the degree of the patient's pain experience. Appropriate evaluation is the cornerstone of a successful management plan and should never be disregarded in order to provide the highest possible level of patient care. The management should offer tools, charts, procedures, and a supportive atmosphere that are appropriate for this context in order to allow nurses to use the tools effectively in patient care. Similarly, the importance of capacity development cannot be overstated.

The present study's statistical analysis revealed no significant correlation between nurses' knowledge and use of pain assessment techniques. This suggests that the nurses' degree of expertise had no effect on how they used the instruments. This is very unexpected, given the widespread belief that information should permeate and inform practice. The findings corroborate Mek & Oliver's (2006) observation that a significant number of nurses with adequate understanding of a pain assessment measure did not use it. Additionally, Wilson's (2008) assertion that there is no significant correlation between understanding and usage of a pain assessment instrument corroborates the findings of this research. Nonetheless, it is critical to examine other variables impacting use in order to influence nurses' attitudes.

Conclusion

Inadequate pain management has significant physiological, psychological, economic, and social consequences for individuals, families, and society as a whole (Accardi, 2009). Although the majority of nurses were educated of pain assessment tools, they did not use them to treat pain for their patients. Thus, nurses should be taught and retrained on all topics related to pain and its treatment in order to assure the delivery of high-quality health care and an enhanced quality of life for all patients

References

- Accardi, G. (2009). The effect of chronic pain on health related quality of life among intensive care survivors
- Carpentio, D. (2007). Postoperative pain management for the aging patient. Retrieved May 2016 from <http://www.medscape.com>
- Carr, L. & Thomas D. (2006). Pain management modalities utilized by nurses in emergency departments. *Journal of Pain Management*, 67(21):178-80

- Eccleston, D. (2011). The nature of pain experience. *Nursing Standard* 43(2):100-105
- Ereck, P. & Poc, G. (2004). Understanding pain. *Nursing Times* 40(2):100-110
- International Association for the Study of Pain (2011). Pain assessment and management. Retrieved 12th October, 2016 from www.iasp.org
- McCaffery, B. (2008). Pain management in labour. *Canadian Anaesth* 51(9):866-891
- Mek, L. & Oliver, P. (2006). Pain assessment and management strategies utilized by nurses. *Journal of Palliative Care* 49(4): 122-127
- Patrick, O. (2007). Nurses knowledge and practice of pain management. Retrieved 20th September 2016 from www.researchgate.net
- Wilson, M. (2008). Postoperative pain management modalities utilized by nurses in healthcare facilities. *Pain* 899(13):144-47
- Workin, C. (2006). Undermanaged pain in surgical patients: The role of the nurse. *Nursing Times*, 40(3): 120-125.