

Original Article

## Factors Associated with Utilization of Pain Assessment Tools in Pain Management among Nurses in Selected Hospitals in Ekiti State

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### Abstract

**Background:** Pain assessment is the first step in proper pain relief, an important goal in patients' care. Worldwide, unrelieved or poorly managed pain is a burden on the patient, the health-care system and society.

**Aim:** The study assessed the utilization of pain assessment tools and identified factors influencing utilization of pain assessment tools among the nurses.

**Methodology:** The study employed a descriptive research design using multistage sampling technique to select ninety (90) nurses from the three tiers of health institutions. Data were obtained using a pretested questionnaire and analyzed using SPSS version 20. Descriptive and inferential statistics (ANOVA) were utilized to interpret the data.

**Result:** The study revealed that only few (32%) affirmed to have used one type of pain assessment tool or the other. Unavailability of the pain assessment tools (90%) and nursing workload (83%) were the most prevalent factors influencing utilization of the tools.

**Conclusion:** Policy makers should therefore make the tools available and increase the number of nurses as to reduce the heavy workload in the hospitals.

**Keywords:** Ekiti-State, Pain Assessment Tools, Pain management, Utilization.

### Introduction

Maintaining an optimal level of comfort for Patients of whatsoever category is a universal goal for nurses because pain is one of the major experiences that can minimize Patients' comfort .

Patients experience pain from pre-existing diseases, invasive procedures, or trauma. Pain assessment which is an important goal in patient care is the first step in proper pain relief (Kizza 2012, Kafkia et al 2014). Worldwide, unrelieved or poorly managed pain is a burden on the person, the health-care system and society, and pain is a concern throughout life (Kizza, 2012). Effective

pain management is a person's right and the Registered Nurses Association Ontario RNAO (2012) observed that assessing pain; intervening to ease it; monitoring, preventing and minimizing it should be top priorities of a person's care, regardless of their diagnosis or type of pain

A pain assessment tool can be invaluable in aiding patient to communicate their own subjective experience of pain. To provide optimal patient care, nurses require appropriate knowledge, skills and attitudes towards pain, pain assessment and its management (Wood, 2008). It has been demonstrated that patients' self-reporting of their

pain is the 'gold standard' of pain assessment measurement as it provides the most valid measurement of pain (Wood, 2008). Without the use of accurate pain measurement, patients' pain can be misinterpreted or underestimated by health professionals, which often leads to the inadequate management of pain. The systematic use of formal pain measurement tools and documentation has been shown to improve the assessment and management of patients' pain (Wood, 2008). The scores or information obtained from pain measurement should be documented as the fifth vital sign in the nursing records, in pain management care plans and/or documents and/or with routine observations (Wood, 2008).

Pain should be measured using an assessment tool that identifies the quantity and/or quality of one or more of the dimensions of the patients' experience of pain. The range of pain measurement tools is vast, and it includes uni-dimensional or multidimensional. There are several types of Pain Assessment Tools used for acute pain management such as numerical rating scale, verbal rating scales, graphic rating scales, visual analogue scale and picture graphic scales. There is paucity of information about the knowledge, acceptance and utilization of these tools among nurses in Nigeria. This study could therefore aid urgent review of the nursing care policy on pain management of patients and also served as a data base for future studies in the area of pain assessment and management.

### Research Questions and Hypotheses

The following questions were generated for this study:

- What is the level of utilization of Pain Assessment Tools among nurses?
- What are the factors influencing the use of pain assessment tool(s) among nurses?

The following hypothesis was also tested

- There is no significant difference in the utilization of pain assessment tools among nurses in the different level of healthcare facilities

### Background

International Association for the Study of Pain (IASP, 2012) stated that pain is an unpleasant sensory and emotional experience associated with

actual or potential damage or described in terms of such damage. Pain assessment is the first step in proper pain relief, an important goal in Patients 'care. Worldwide, unrelieved or poorly managed pain is a burden on the person, the health-care system and society, and pain is a concern throughout life (RNAO, 2012).

Despite the advancement of pain management modalities, many patients continue to suffer unnecessarily. In developing countries, patients rarely get the required analgesia due to the lack of pain assessment and the large disproportion in Patients to nurse ratio (Kizza, 2012). Most nurses reported assessing their patients' pain but very few of them (4%) do so with the use of pain assessment tools in Uganda. Poorly managed pain induces physiological and psychological harmful effects on the patients. These effects include impaired wound recovery, increased metabolic rate and cardiac output, increased production of cortisol, increased retention of fluids, and the risk of developing chronic pain. Additionally, unrelieved pain may cause unnecessary suffering, anxiety, fear, anger and depression to the Patients (Abdalrahim, 2009). In the context of pain assessment and effective pain management nurses are professionally responsible but a great number of nurses still don't make use of pain assessment tool due to some factors yet to be elucidated. Hence this study aim to explore the factors associated with utilization of pain assessment tools among nurses in some Nigerian's health facilities

### Methodology

#### Study Design

The study utilized a descriptive research design to assess the utilization of pain assessment tools among nurses in selected hospitals in Ekiti State Southwest Nigeria.

#### Sample and Sampling Technique

A multi- stage sampling techniques was adopted. The health facilities were first stratified into tertiary, secondary and primary health facility and three hospitals were selected from each stratum. Ekiti-State University Teaching Hospital Ado-Ekiti, State Specialist Hospital Ikere-Ekiti and Comprehensive Health Centre Okeyinmi were selected from each stratum respectively. Three units were purposively selected from each of the

hospitals. Male Medical Ward (MMW), Female Surgical Ward (FSW) and Children Ward (CW) were selected. The medical ward represented medical cases; surgical ward represented surgical cases while the children ward represented the paediatric cases within each health facility. Proportional sampling techniques was used to pick our respondents in the ratio 11:6:1 respectively based on the population of nurses working in each health care facility. The last stage of the sampling was with the use of accidental sampling techniques, nurses that were met on duty were chosen for the study.

### **Data Collection**

A pre-tested structured questionnaire was used to obtain information from the respondents. Face and content validity was used to test the trustworthiness of the instrument.

### **Ethical Consideration**

The managements of the selected hospitals were duly informed and the Ethics and Research committee of the Ekiti State University Teaching Hospital granted the ethical approval for the study. The consent of the respondents was gained before administering the questionnaire after explaining the reason for study to them. The questionnaires for data collection were given to the respondents on a one on one basis and same were collected immediately to prevent misplacement of the instrument.

### **Analysis**

Data was analyzed using Statistical Package for Social Sciences (SPSS) v20. The correct answers were pre-coded into the package; the correct responses were assigned 1 mark while the incorrect responses were assigned 0. Descriptive statistics were used to present the continuous variable and the categorical variables. The research hypothesis was tested with inferential statistics (ANOVA). The test was 2 tailed and significant P value was set at < 0.05.

### **Results**

Demographic variables of the respondents revealed that more than half of the respondents (51%) were within 31-40 years and majority (92%) were

female. 96% were Christians and most (70%) of our respondents were Registered Nurse/Registered Midwife only. The ranking of the professionals showed that 21% of the Nurses were Nursing Officer II while 46% were Nursing Officer I. Additionally, it was shown that 40% have 1-5 years working experience, 24% have 6-10 years 14% have 11-15 years while the remaining 7% have above 15 years of working experience.

Regarding the utilization of pain assessment tools, we found that 100% of the Nurses assessed pain in patients. However, only 32% used a Pain Assessment Tools for pain assessments while the remaining 68% do not use; only 29% documented the result gotten from Pain Assessment Tools. The Table revealed that 62% affirmed that pain scores and management were discussed during handling & taking over and Ward rounds while 38% did not. Lastly 76% of the Nurses always agree with their Patient statement about pain while the remaining 24% did not always agree.

Figure 1 presents the frequency of Pain Assessment Tools use by the respondents. 41% of the Nurses rarely used a Pain assessment Tool, 31% used it occasionally, 17% used it often while only 10% used always. The findings from this study additionally revealed the types of Pain Assessment Tools as used by the Nurses. 48% used NRS, 38% used VAS and only 14% used Verbal Rating Scale.

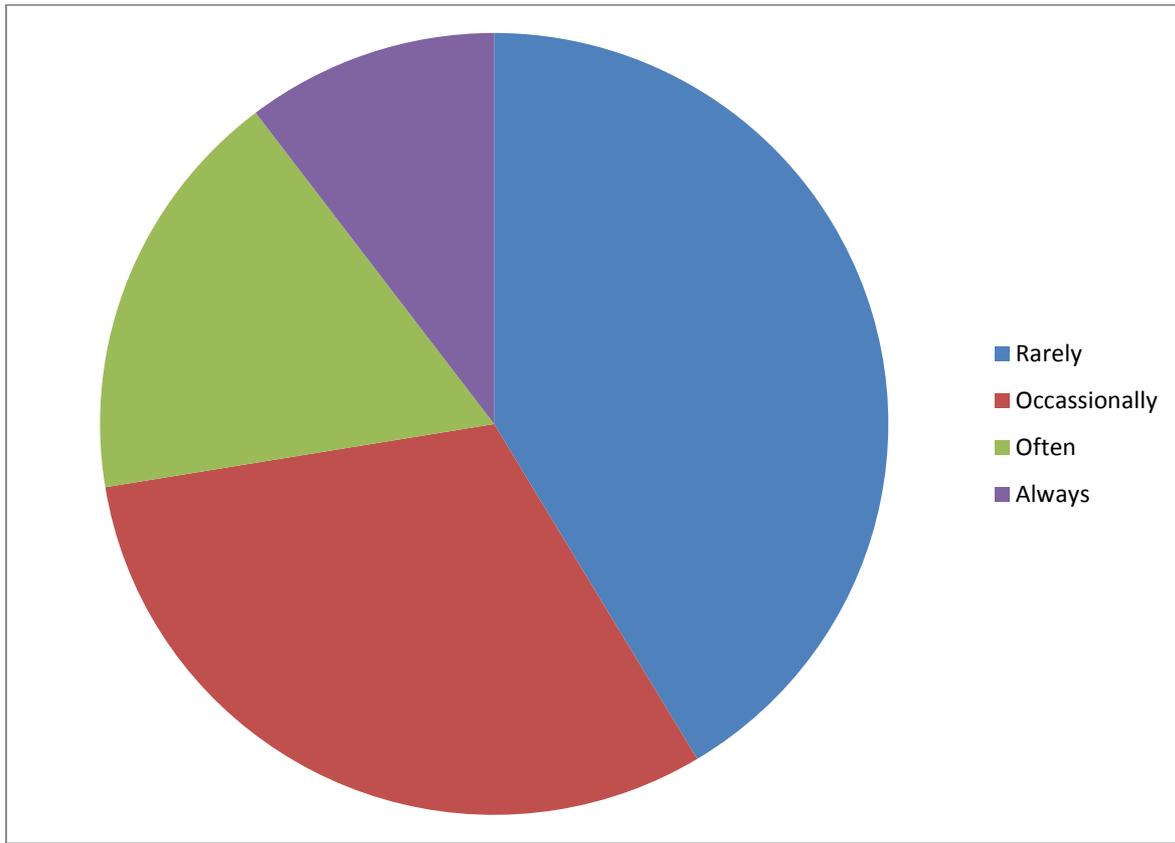
Table 4 presents the factors influencing the utilization of Pain Assessment Tools among the Nurses. 90% of the Nurses identified none availability of Pain Assessment Tool as a factor, nursing workload was identified as a factor by 83% of the Nurses while sedation interfering with pain was identified by 76% of the Nurses. Unconducive environment was reported by 68% while poor documentation of pain assessment and management was identified by 67% of the nurses. Patient instability, inability to communicate and lack of protocol for pain assessment was identified by 66%, 63% and 63% of the nurses respectively. 60% reported lack of designated area for charting pain while 53% reported lack of familiarity with Pain Assessment Tools as a factor militating against its usage.

**Table 1: Demographic Data of the Respondents (n=90)**

<b>VARIABLES</b>	<b>FREQUENCY</b>	<b>PERCENTAGE(%)</b>
<b>AGE:</b>		
20-30	24	27
31-40	46	51
41-50	18	20
51-60	2	2
<b>SEX:</b>		
Male	7	8
Female	83	92
<b>RELIGION:</b>		
Christian	86	96
Muslim	4	4
Others	0	0
<b>QUALIFICATIONS:</b>		
RN/RM	63	70
BSc/BNSc	21	23
MSc	0	0
OTHERS	6	7
<b>RANKS</b>		
NO1	41	46
NO11	19	21
SNO	11	12
PNO	12	13
OTHERS	7	8
<b>YEARS OF WORKING EXPERIENCE</b>		
1-5	36	40
6-10	35	39
11-15	13	14
ABOVE 15 YEARS	6	7

**Table 2: Utilization of Pain Assessment Tools (PATs) among the Nurses (n=90)**

S/N	VARIABLES	FREQUENCY	PERCENTAGE (%)
1	<b>Do you assess Patients for pain</b>		
	YES	90	100
	NO	0	0
2	<b>Do you use a Pain Assessment Tool for pain assessment</b>		
	YES	29	32
	NO	61	68
3	<b>Do you document the findings after using the Pain Assessment Tools</b>		
	YES	26	29
	NO	63	71
4	<b>Are pain scores and management discussed during handling and taking over/ward rounds</b>		
	YES	56	62
	NO	34	38
5	<b>Do you always agree with Pain Assessment Tools' statement about their pain</b>		
	YES	68	76
	NO	22	24



**Figure 1: Frequency of Pain Assessment Tools Use**

**Table 3. ANOVA result of the hypothesis**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.418	3	.139	.287	.834
Within Groups	12.133	25	.485		
Total	12.552	28			

**(P>0.05)**

**Table 4: Factors Influencing the Acceptance and the Use of Pain Assessment Tools**

<b>FACTORS</b>	<b>YES</b>	<b>(%)</b>
Unavailability of pain assessment tools	81	90
Nursing workload	75	83
Sedation interfering with pain assessment	68	76
Unconducive working environment	61	68
Poor documentation of pain assessment and management	60	67
Patient instability e.g. unstable hemodynamics	59	66
Patient inability to communicate	57	63
Lack of protocols for pain assessment	57	63
No designated area for charting pain	54	60
Lack of familiarity with assessment tools	48	53
<b>PAT(s)</b> is difficult to use and complex to interpret	39	43
The use of <b>PAT(s)</b> is time consuming and not practicable	39	43
Lack of education	38	42

### Discussion

The overall findings of this study revealed that almost all the nurses (92%) were females. The high percentage of female nurses in the study was due to the dominance of females in the Nursing profession in Nigeria (Animasahaun, 2014). Majority (51%) were within the age range of 31-40yrs and almost all (70%) respondents had attained only diploma level (RN/RM) of education in Nursing. Furthermore, of all the nurses that were assessed on the utilization of Pain Assessment Tools, none was recorded not to have assessed pain in Patients. However of all (100%) reported to have assessed pain, only a few (32%) have used a type of Pain Assessment Tools before. Similar findings have been observed in other studies (Lui, So & Fong, 2008; Maysoon, 2009; Kituyi et al, 2011 and Kizza, 2012). On the contrary, findings of a study conducted in Canada by Rose et al, (2011) reported that almost all nurses (98 %) caring for critically ill Patients used a tool to assess for pain in patients able to self –

report pain. This change in percentage of use of Pain assessment Tools in Canada may be attributed to the level of technological advancement in the developed countries which is better when compare to developing countries like Nigeria.

Also reported by this study is the frequency of use of pain assessment tools among the few users, we observed that most (41.0%) of those reported to be using the tools rarely do so while 31.0% occasionally use a Pain Assessment Tool. Findings of a study conducted by Kizza (2012) also show minimal and inconsistent use of the tools. However majority (62%) stated that pain scores and management were discussed during handling & taking over and ward rounds. We found that there was no significant difference in the utilization of pain assessment tools among nurses in the different level of healthcare facilities ( $p=0.834$ ). this shows that the nurses in the different tiers of health facilities are not different in their utilization of the Pain Assessment Tools.

Looking at the factors associated with utilization of Pain Assessment Tools among the nurses, 90% and 83% of the nurses identify lack of availability of the tool and Nursing workload as responsible factors respectively. Similar finding was also reported by Kizza (2012), where none availability (74%) and nursing workload (84%) were identified by the nurses respectively. Excessive workload reduces the duration and opportunity that nurses can give for interaction between her and her patients. Furthermore majority (63%) of the Nurses said patient inability to communicate influence the use of Pain Assessment Tools. This supported the findings of Rose et al (2011). It was also discovered from the study that more than a third (42%) of the Nurses identified lack of education on pain assessment tool as a factor. This may be attributed to lack of formal teaching, seminars and workshops about pain assessment and management. Majority (68%) of the Nurses identified uncondusive working environment as an influencing factor. In summary, lack of availability of the tools, Nursing workload, and uncondusive working environment may have constituted the core barriers to the utilization of pain assessment tools by Nurses as these factors were cited as reasons among those who did not assess or document findings on assessment.

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