

A Survey of Nurses Knowledge and Utilization of Non-Pharmacological Methods of Pain Control at Two Selected Hospitals in Ibadan, Oyo State

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Abstract:

The study assessed a survey of nurses' knowledge and utilization of non-pharmacological methods of pain control at two selected hospitals in Ibadan, Oyo State. A cross sectional descriptive study design was used for this research on Nurses knowledge and utilization of non-pharmacological method of pain control in two selected Hospitals in Ibadan, Oyo state. The target populations for this study were trained clinical nurses working in surgical, medical departments. They were drawn from all cadres of nurses ranging from nursing officer 2 to Chief Nursing Officer at Adeoyo State Hospital, Ring road and Oluyoro Catholic Hospital, Oke Ofa, Ibadan, Oyo State. The sample size for this study was one hundred and sixty-nine (152) nurses. A convenient sampling technique was used for the study. The Questionnaire was used to collect the relevant data and it was scrutinized by the expert in Tests and Measurement for clarification, evaluation of items and assessment of content validity. Based on the findings of this study, it is evident that awareness of non-pharmacological strategies by the nurses does not reflect on the use of non-pharmacological approaches to pain management due to little knowledge about the significance and effectiveness of non-pharmacological strategies for pain management. Also, there is significant relationship between attitude and utilization of non-

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pharmacological methods of pain control in the two selected hospitals in Ibadan. Based on the findings it was recommended that Nurses' should avoid over dependence on pharmacological management of pain and adopt the use of non-pharmacological strategies to pain control in the care of patients. Also, Nurses should read more literatures and journals for relevant information to improve their knowledge on the use of non-pharmacological strategies to pain management.

Keywords: Knowledge, Non-pharmacological, Pain, Practice, Nurse, Utilization, Pain control,

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Introduction

Pain control is an integral part of nursing and nurses have responsibility to effectively manage patient's pain. Effective pain control demands knowledge, commitment, persistence and creativity (Yilmaz, et al, 2016). Untreated and undertreated pain has debilitating effects and significantly interferes with the patient's physical, emotional and spiritual wellbeing thus can alter the patient's quality of life (Ho, et al, 2014). Despite having many researches and scientific advancement in pain control over the years, inadequate knowledge remains a major barrier to achieving effective pain control. Knowledge and attitude of nurses towards pain control have an influence on how pain is managed (McCaffery & Pasero, 2015).

Negativity and knowledge deficit can be a barrier to effective pain control. Pain is a universal human experience which is as aged as the universe itself and the most common reason people seek medical care. World Health Organisation (2018) stated that the greatest proportion of persistent pain conditions is accounted for by musculoskeletal conditions. Musculoskeletal conditions are the second largest contributor to disability worldwide, with low back pain being the single leading cause of disability globally (WHO, 2018). Many patients are admitted with injuries that need long term management and are prone to developing neuropathic chronic pain. The presence of pain is an indicator that there may be structural or functional disorder of the body. Unfortunately, pain cannot be objectively measured in the same way as blood pressure, pulse rate and temperature, thereby making pain a subjective individual phenomenon which only the person experiencing it could tell its severity (McCaffery & Pasero 2015).

Consequently, pain is mostly managed with pharmacological and non-pharmacological agents. Unfortunately, over-dependence on pharmacological agents exposes the patients to the risk of drug side effects (Souza, et al, 2013), which could be immediate or long term, and may not satisfactorily control the psychological aspect of pain. Nature of pain being complex, therefore, medications alone may be insufficient for relief and multiple strategies must be utilized (Nadler, et al, 2014). Although there is an increase of knowledge and developments in technological resources regarding pain, many patients still experience pain (Nash, et al, 2014). Alternative pain relief measures have been advocated by many health professionals to augment the effects of drugs and to reduce the various degrees of side effects caused by the use of medications in pain control in patients (Nadler, et al., 2014).

Nurses' precise knowledge, prompt pharmacological or non-pharmacological intervention, and evaluation of pain relief administered are necessary for positive outcomes in patients and the maintenance of health (Plaisance & Logan. 2016). The non-pharmacological strategies include stimulation methods (e.g. massage, heat or cold packs, transcutaneous nerve stimulation), cognitive-behavioural methods (e.g. meditation, relaxation techniques, hypnotherapy, music therapy, and bio-feedback) and other methods (e.g. acupuncture, acupressure) (Adams, et al, 2014). Many of these alternative approaches are non-invasive, low risk, inexpensive, and easily performed at the clinical settings (Ucuzal & Dogan, 2015). They achieve their effects in numerous ways, not only in reducing the pain but also by managing the emotional components, thus reducing anxiety, facilitating coping skills, providing a sense of control, enhancing comfort, promoting sleep, reducing fatigue and improving quality of life (Pretorius, et al 2015). The goal is to increase the individual's



experience of well-being (Engwall & Dupplis. 2019). Nurses are the closest health personnel to the patients and as such are in very good position to provide non pharmacological pain control, but unfortunately, studies in these parts of the world report that nurses have poor knowledge in the application of these alternative pain relief measures (King, et al 2017).

Pain was pragmatic to be one of the foremost leading symptoms of diseases and the most widespread cause of hospital visitation and hospitalization. Studies have shown that ineffective pain control has a twin effect on the patient and the caregiver principally the nurse. The patient feels disgruntled with service and the caregiver experience burn-out, thus the two parties are left vulnerable (Nash et.al, 2014). Pain can have a pessimistic impact on a person's quality of live and delay recovery from illness or injury. Unrelieved pain can become a syndrome on its own right and cause a downward spiral in a person's health and outlook. Managing pain properly facilitates recovery, prevents additional health complications and improves an individual's quality of life (Kehlet, et al, 2016).

In order for patients to receive the best pain management available and have the best outcomes, nurses need to be able to combine pharmacological and non-pharmacological pain management therapies. Nurses' knowledge and attitudes are two barriers to using non pharmacological pain management techniques. Research assessing these factors has been done in Australia and Finland; however, not much has been done in the United States. A single study done in the United States by (Broome, et al, 2016) found that 50% of nurses surveyed use non pharmacological techniques like relaxation, distraction, imagery, positioning, and massage often' or 'sometimes' with the pediatric population. In Turkey (Emine, et al, 2013) in a qualitative study was done on use of Non-Pharmacological Methods for Postoperative Pain Relief in 6 to 12-Year-old children. Eighty-four percent of the nurses said that they had used non pharmacological therapies on their hospitalized patients. Some of the benefits they identified for their patients included a unique opportunity to develop a therapeutic relationship with the patient, pain relief while waiting for a drug to work, more control over their pain, and distraction during painful procedures. Some barriers to using these therapies included the time needed to implement them, use of these not considered standard of practice and lack of resources and knowledge to implement them.

There are many benefits derived from using non-pharmacological methods in relieving pain, therefore, the barriers keeping patients, nurses, and physicians from using them need to be explored. Nurse's attitudes on non-pharmacological pain control therapies need to be assessed, so that patient will have access to other options to more effectively manage patients in pain. Though study exist that assess the nurses knowledge of pain control, but none or fewer study have been carried out on nurse's utilization of non-pharmacological method of pain control especially in this part of the country. For this reason, this study was conducted to get insight on nurse's knowledge and utilization of non-pharmacological method of pain control in selected hospital in Ibadan. In view of the above, this study specifically:

1. assessed the knowledge regarding non-pharmacological methods of pain control among nurses in selected hospitals in Ibadan;
2. determined the attitude towards the use of non-pharmacological methods of pain control among nurses in selected hospitals in Ibadan;



3. identified the relationship between the knowledge and utilization of non-pharmacological methods of pain control among nurses in selected hospitals in Ibadan;
4. found out the association between knowledge and attitude on non-pharmacological method of pain control among nurses in selected hospitals, Ibadan; and
5. identified the barriers to the use of non-pharmacological pain control approaches as reported by nurses in selected hospitals in Ibadan.

Research Questions

The following research questions were raised for this study:

1. Do nurses in selected hospitals in Ibadan have knowledge about non-pharmacological approaches to pain control?
2. What is the attitude of nurses towards the use of non-pharmacological approaches to pain control in selected hospitals in Ibadan?
3. To what extent do nurses in selected hospitals in Ibadan use non-pharmacological pain control method?

Research Hypotheses

These hypotheses were postulated for this study:

1. There is no significant relationship between knowledge and utilization of non-pharmacological methods of pain control among nurses.
2. There is no significant relationship between attitude and utilization of non-pharmacological method of pain control among nurses.

Methodology

A cross sectional descriptive study design was used for this research on Nurses knowledge and utilization of non-pharmacological method of pain control in two selected Hospitals in Ibadan, Oyo state. The study was conducted in selected hospitals namely: Adeoyo State Hospital, Ring Road and Catholic Hospital, Oluyoro Oke Ofa, Ibadan. They were both chosen because they accommodate many nurses with different cadre and years of experience.

The target populations for this study were trained clinical nurses working in surgical, medical departments. They were drawn from all cadres of nurses ranging from nursing officer 2 to Chief Nursing Officer at Adeoyo State Hospital, Ring road and Oluyoro Catholic Hospital, Oke Ofa, Ibadan, Oyo State. A sample is a selected group of elements from entire population that has the same characteristics. The sample was determined using the Taro Yamane formula. The sample size for this study was one hundred and fifty-two (152) nurses. A convenient sampling technique was used for the study. This is a specific type of non-probability sampling method that relies on data collected from population members who are conveniently available to participate in the study and it involves sample drawn from that part of the population that is close to hand or available.

The questionnaire was divided into five sections:

- **Section A:** Designed to elicit the Social demographic characteristics of respondent. It contained nine (9 items)
- **Section B:** Designed to elicit Awareness about non-pharmacological methods of pain relief. It contained seven (7 items)
- **Section C:** Designed to elicit Knowledge of the various uses of non-pharmacologic methods of pain relief. It contained thirteen (13 items)



- **Section D:** Designed to elicit utilization of non-pharmacological methods of pain relief. It contained nineteen (19 items)
- **Section E:** Designed to elicit Barriers to the use of non-pharmacological pain control. It contained eleven (11 items)

The items in the questionnaire were organized to reflect the purpose of the study, research questions and hypotheses. The questionnaire was constructed from the literature review of various authors who have written articles on knowledge and utilization of non-pharmacological management of pain. The questionnaire was scrutinized by the expert in Tests and Measurement for clarification, evaluation of items and assessment of content validity. A pilot study using 10 questionnaires was pretested on a group of nurses at Alafia hospital, Ibadan. Alafia Hospital is a privately managed medical centre providing sound, reliable health services located at Adamasingba, 72 Adekunle Fajuyi Road, Ibadan. The choice of using Alafia Hospital for the pilot study is because the nurses possess similar characteristics as those used for the main study. The pilot study was aimed at evaluating the simplicity, applicability and clarity of the research tool for any necessary modifications.

An authorized letter was taken to the selected hospital management board where permission was given to conduct the study. The purpose of the study was explained to the respondents, confidentiality of all responses given was assured and questionnaires were distributed to the respondents. Respondents were included from all wards with nurses and they were made to understand that they have the right to refuse to participate in the study. Data collection at the selected hospitals took place over three visits during the day and afternoon shift. A research assistant was employed to enable Nurses on morning and afternoon duty to participate in the study. Questionnaires were collected immediately for data analysis.

Results

Research Question 1: Do nurses in selected hospitals in Ibadan have knowledge about non-pharmacological approaches to pain control?

Table 1: Knowledge of the various non-pharmacological methods of pain relief

Variable		F	%
Massaging involves the use of stroking, kneading, rubbing	Yes	131	77.5
	No	38	22.5
Heat application uses well wrapped heat pads at the site of pain	Yes	169	100.
	No	0	0
Cold application uses well wrapped cold packs around area of swelling to reduce pain	Yes	169	100.
	No	38	22.5
Positioning patients in a comfortable way helps to reduce pain	Yes	169	100.
	No	0	0
TENS helps to control pain by its nerve stimulation ability	Yes	131	77.5
	No	38	22.5
Music is used as an adjunctive therapy in pain relief	Yes	131	77.5
	No	38	22.5
Watching television, playing cards/games, reading	Yes	169	100.



novels/newspaper diverts patients mind from his pain	No	0	0
Guided imagery allows patient to focus his mind on pleasant pictures to remove his attention from pain	Yes	157	92.9
	No	12	7.1
Breathing techniques entails slow breathing in and out and also deep breathing to reduce pain	Yes	155	91.7
	No	14	8.3
Meditation encourages patient to deliberately experience their pain as calmly as possible while engaging in slowed breathing techniques	Yes	157	92.9
	No	12	7.1
Non-pharmacological physical methods of pain relief deals with the physical side of inflammation, stiffness and manipulation	Yes	154	91.1
	No	15	8.9
Non-pharmacological cognitive behavioural methods are used to manage patients thought and feelings to alleviate pain	Yes	155	91.7
	No	14	8.3
Exercises help to improve flexibility and muscle strength and helps to control pain	Yes	169	100.
	No	0	0

As shown in table 1 above, 77.5% of the respondents agreed that Massaging involves the use of stroking, kneading, rubbing. Majority (100%) of the respondents reported that Heat application uses well wrapped heat pads at the site of pain, Cold application uses well wrapped cold packs around area of swelling to reduce pain, Positioning patient in a comfortable way helps to reduce pain, watching television, playing cards/games, reading novels/newspaper diverts patients mind from pain and Exercises help to improve flexibility and muscle strength and helps to control pain. More than 90.0% believes that Non-pharmacological behavioral methods are used to manage patients thought and feelings to alleviate pain, Guided imagery allows patient to focus his mind on pleasant pictures to remove his attention from pain, Breathing techniques entails slow breathing in and out and also deep breathing to reduce pain, Meditation encourages patient to deliberately experience their pain as calmly as possible while engaging in slowed breathing techniques and Non-pharmacological physical methods of pain relief deals with the physical side of inflammation, stiffness and manipulation.

Table 2: Knowledge of non-pharmacological method.

Level of nurses' knowledge of the various non-pharmacological methods of pain relief				Mea n	S.D.	Min .	Ma x.
Results	Range Scores	FREQUENCY	PERCENTAGE	7.8	1.28	0	12
GOOD	6.1 – 12.0	126	74.8				
POOR	0 – 6.0	43	25.2				
Total		169	100.0				

From Table 2, Knowledge of respondents was assessed by scoring every positive (Yes) response 1 and negative (No) response 0. From the knowledge score, the mean value was 7.8,



the maximum and minimum scores were 12 and 0 respectively. Furthermore, the knowledge scores were grouped such that scores from six (6.0 and below) were grouped as 'poor knowledge' while scores between 6.1 and 12.0 were grouped as 'good knowledge'. The results as illustrated in the Table 2 shows that 74.8% of the respondents have good knowledge of the various non-pharmacological methods of pain relief, while 25.2% have poor knowledge of the various non-pharmacological methods of pain relief.

Research Question 2: What is the attitude of nurses towards the use of non-pharmacological approaches to pain control in selected hospitals in Ibadan?

Table 3 Attitude towards the use non-pharmacological methods of pain control in patients

	SA		A		U		D		SD	
	F	%	F	%	F	%	F	%	F	%
Non pharmacological method pain control is better than pharmacological pain control	73	43.2	41	24.3	52	30.8	3	1.2	0	0
Non pharmacological pain method is preferable because is cheaper	88	52.1	81	47.9	0	0	0	0	0	0
Non pharmacological method pain control is not safe	73	43.2	29	17.2	12	7.1	41	24.3	13	7.7
Non pharmacological method pain control needs personal training	74	43.8	57	33.7	38	22.5	0	0	0	0
Non pharmacological method pain control should be rendered with expertise	74	43.8	56	33.1	39	23.1	0	0	0	0
Non pharmacological method pain control should be given to patients experiencing pain	74	43.8	56	33.1	39	23.1	0	0	0	0
Information on issues related to non-pharmacological methods should be provided to sick people	74	43.8	56	33.1	2	1.0	1	.5	8	4.1
Non pharmacological method pain control should be provided to people experiencing pain	126	74.6	43	25.4	0	0	0	0	0	0
Non pharmacological method pain control should be used as an adjunct therapy to pain control	128	75.7	41	24.3	0	0	0	0	0	0

As shown in table 3 above, 75.7% of the respondents strongly agreed that Non pharmacological method of pain control should be used as an adjunct therapy to pain control, 74.6% strongly agreed that Non pharmacological method of pain control should be provided to people experiencing pain, 43.2% strongly agreed that Non pharmacological method of pain



control is better than pharmacological pain control and Non pharmacological method pain control is not safe while 43.8% of the respondent strongly agreed that Non pharmacological method of pain control needs personal training, Non pharmacological methods of pain control should be rendered with expertise, Non pharmacological methods of pain control should be given to patients experiencing pain and Information on issues related to non-pharmacological methods should be provided to sick people. Meanwhile, 52.1% strongly agreed that Non pharmacological pain control method is more preferable because is cheaper.

Table 4: Attitude towards the use of non-pharmacological method

Nurses' attitude towards non-pharmacological methods of pain control				Mean	S.D.	Min	Max.
Results	Range Scores	Frequency	Percentage	31.2	6.78	10	50
POSITIVE	31.3 – 50.0	111	65.7				
NEGATIVE	10.0 – 31.2	58	34.3				
Total		169	100.0				

The responses in table 4 were weighted thus: Strongly agree-5, Agree-4, Undecided-3, Disagree-2, strongly disagreed-1. These weights were applied to compute composite attitude scores. From the attitude score, the mean value was 31.2 ± 6.78 and the maximum and minimum attitude scores were 50 and 10 respectively. Furthermore, the attitude scores were grouped into two levels, such that scores above the mean were grouped as 'positive attitude' while scores below the mean were grouped as negative attitude. Therefore, the results as shown in Table 4 shows that 34.3% of the respondents had negative attitude towards non-pharmacological methods of pain control. while 65.7% had positive attitude towards non-pharmacological methods of pain control.

Research Question 3: To what extent do nurses in selected hospitals in Ibadan use non-pharmacological pain control method?

Table 5: Utilization of non-pharmacological methods of pain control

	Not at all		Very seldom		Sometimes		Nearly always		Always	
	F	%	F	%	F	%	F	%	F	%
Massaging	0	0	14	8.3	75	44.4	1	.6	79	46.7
Heat and cold application	0	0	0	0	87	51.5	15	8.9	67	39.6
Position change	0	0	0	0	73	43.2	14	8.3	82	48.5
Transcutaneous electrical nerve stimulation	164	97.0	1	.6	0	0	2	1.2	2	1.2
Relaxation	2	1.2	81	47.9	0	0	2	1.2	84	49.7
Music	39	23.1	40	23.7	75	44.4	14	8.3	1	.6
Distraction	13	7.7	113	66.9	0	0	42	24.9	1	.6
Guided imagery	72	42.6	0	0	2	1.2	1	.6	1	.6



Breathing techniques	72	42.6	27	16.0	68	40.2	0	0	1	.6
Meditation	14	8.3	13	7.7	67	39.6	74	43.8	1	.6
Exercise	1	.6	1	.6	26	15.4	68	40.2	73	43.2
Imagery	72	42.6	12	7.1	82	48.5	3	1.8	0	0
Positive reinforcement	1	.6			13	7.7	155	91.7	0	0
Thermal regulation	2	1.2	138	81.7	13	7.7	15	8.9	1	.6
Therapeutic touch	2	1.2	28	16.6	2	1.2	137	81.1	0	0
Comforting/reassurance	0	0	0	0	13	7.7	104	61.5	52	30.8
Helping with daily activities	1	.6	0	0	25	14.8	102	60.4	41	24.3
Creating a comfortable environment	1	.6	0	0	12	7.1	102	60.4	54	32.0

Table 5 above shows that massaging, position change, relaxation, exercise, positive reinforcement, therapeutic touch, comforting/reassurance, helping with daily activities and creating a comfortable environment are the non-pharmacological methods of pain control that are mostly utilized.

Table 6: Utilization of non-pharmacological methods

Level of utilization of non-pharmacological methods of pain control				Mean	S.D.	Min	Max
Results	Range Scores	Frequency	Percentage	1.92	1.25	9	27
Utilized	19.3 - 27	110	65.2				
Not Utilized	9.0 - 19.2	59	34.8				
Total		169	100.0				

The responses in table 6 were weighted thus: Strongly agree-5, Agree-4, Undecided-3, Disagree-2, strongly disagreed-1. These weights were applied to compute composite utilization scores. From the utilization score, the mean value was 1.92 and the maximum and minimum utilization scores were 27 and 9 respectively. Furthermore, the utilization scores were grouped such that scores from the mean value upward were grouped as 'utilized' while the scores below the mean values were grouped as 'not utilized'. The results as illustrated in the Table 6 show that 65.2% of the respondents utilize non-pharmacological methods of pain control, while 34.8% do not utilize non-pharmacological methods of pain control on patients.

Test of Hypotheses

Hypothesis 1: There is no significant relationship between knowledge and utilization of non-pharmacological methods of pain control among nurses.

Table 7: Relationship between knowledge and utilization of non-pharmacological methods of pain control

VARIABLE	N	MEAN	SD	DF	r	p	Remark
Knowledge	169	3.31	0.641	167	0.35	0.000	significant
Utilization	169	3.26	0.51				

Correlation significant at 0.05 level $r = 0.213$; $p < 0.05$ Decision: Significant



Result in table 7 reveals that there is significant relationship between knowledge and utilization of non-pharmacological methods of pain control among nurses in the two selected hospitals in Ibadan, it reveals that $r = 0.35$; $p < 0.05$. The null hypothesis is hereby rejected

Hypothesis 2: There is no significant relationship between attitude and utilization of non-pharmacological methods of pain control among nurses.

Table 8: Relationship between attitude and utilization of non-pharmacological methods of pain control

VARIABLE	N	MEAN	SD	DF	r	p	remark
Attitude	169	4.62	0.532	167	0.62	0.0000	significant
Utilization	169	3.26	0.51				

Correlation significant at 0.05 level $r = 0.13$; $p < 0.05$ Decision: Significant

Result in table 8 reveals that there is significant relationship between attitude and utilization of non-pharmacological methods of pain control in the two selected hospitals in Ibadan, it reveals that $r = 0.62$; $p < 0.05$. The null hypothesis is hereby rejected

Discussion

Knowledge and awareness of non-pharmacological methods of pain control

As shown in this study, 77.5% of respondents opined that they were aware of forms of non-pharmacological approaches to pain management, among which 74.6% of them knew and identified physical forms of non-pharmacological approaches to pain management while 25.4% knew and identified psychological forms of non-pharmacological approaches to pain management. The findings also indicated that nurses believe they have enough confidence and knowledge to utilize these non-pharmacological methods. This assertion of their confidence and knowledge must have impacted on their ability to teach patients the use of most of the non-pharmacological pain relief methods. It is quite understandable that the nurses have adequate knowledge of these non-pharmacological methods and expressed the confidence to utilize them since majority of them have training and most of them acquired the knowledge through their course of education.

What was surprising, however, is that simple techniques such as guided imagery, meditation and breathing techniques were not among the techniques majority of the nurses claimed to have enough confidence and knowledge to implement. This implies that more teaching and guidance is needed to update and direct these nurses. The findings of this study is however not in line to the findings by King, et al (2016) and Clarke, et al (2016), which stated that nurses do not have knowledge about these alternative therapies and a greater percentage of nurses do not know the benefits of these alternative measures.

On the effectiveness of non-pharmacological approaches to pain control, almost half of the respondents indicated positive effect. A study by Cole and Brunk (2014) supports the findings of this study that relaxation and music are one of the most effective means of relieving pain in a patient. A large number of respondents claimed that their clients react positively to non-pharmacological approach to pain management. This finding also corroborate with the findings of (Wells, et al, 2013). Summarily, 74.8% of the respondents have good knowledge while 25.2% have poor knowledge. This finding is in line with Ho et al,



(2013), who revealed that nurses possessed good knowledge of non-pharmacological methods of pain management.

Utilization of non-pharmacological methods of pain control

This study found statistically significant associations between some of the background factors and the utilization of methods, the background factors that proved to be influential in the utilization of non-pharmacological methods in all of these international studies were age, job title and nursing experience. This agrees with the findings by (He et al., 2011), which also correlate with the research done by Olmstead et al. (2014) and Stanley and Pollard (2013) into influencing factors on utilization and knowledge of pain management techniques. Olmstead et al. (2014) recognized how nursing experience is influential in the management of pain in children, and that older nurses were more likely to use non-pharmacological techniques than younger nurses. Stanley and Pollard (2013) identified a statistically significant correlation between nursing experience and knowledge of pain management techniques. Nurses with greater years of nursing experience were found to have a higher level of knowledge into pain management compared with those with less years of nursing experience (Stanley & Pollard, 2013). This shows that nurses' use of non-pharmacological methods depends to a large extent on their number of years of practice which means that the higher the number of years of experience, the greater the use of these alternative pain relief measures. It means that the number of years of experience determines the use of these measures, as the nurse must have acquired adequate knowledge, skills, experience and competence to manage patients' pain effectively using alternative pain relief measures alone or in conjunction with drugs to relieve patients' pain.

Barriers to the use of non-pharmacological methods of pain control

Barriers to the use of non-pharmacological method of pain control included: Excess workload 100% and lack of time 76.9%, and this finding was in agreement with Morgan, (2012) who reported that time has been identified by nurses as one of the enabling factors. The time needed to implement non-pharmacological therapies is long, therefore, discouraging most nurses from its use. Although the nurse may be supportive of the use of non-pharmacological therapies their use of these therapies is counterbalanced by perceived restrictions of lack of time. 99.4% of the respondents also reported shortage of nursing staff, patients not cooperating when using the methods 98.8%, When pain is too severe 92.9%, Lack of equipment and critical thinking required 91.7% as additional barriers to implementation of non-pharmacological methods which was supported by Kizza, (2016) study who revealed that the majority of the participants reported the following as barriers to the use of non-pharmacological pain management methods : lack of availability of pain assessment tools and patients' inability to communicate.

Conclusion

Based on the findings of this study, it is evident that awareness of non-pharmacological strategies by the nurses does not reflect on the use of non-pharmacological approaches to pain management due to little knowledge about the significance and effectiveness of non-pharmacological strategies for pain management.

Nurses' inability to adopt non-pharmacological strategies due to time and the fact that it is energy consuming are some of the difficulties attributed to the negligence of the



application of non-pharmacological methods of pain control in the care of patients. The patients stand to gain more from the use of non-pharmacological strategies as it is cost effective and addiction free. Hence, both nurses and the management of hospital need to encourage the use of non-pharmacological strategies in our various health institutions.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Nurses' should avoid over dependence on pharmacological management of pain and adopt the use of non-pharmacological strategies to pain control in the care of patients.
2. Nurses should read more literatures and journals for relevant information to improve their knowledge on the use of non-pharmacological strategies to pain management.
3. The ministry of health and hospital management should as a matter of policy institute a mechanism to include the use of non-pharmacological strategies to pain management either separately or in combination with pharmacological approaches.
4. Non-pharmacological pain management should not be overlooked when trying to correct the under-treatment of pain; even though the adoption of non-pharmacological methods is in its infant stage in Nigeria.
5. To make nurses more aware of pain management techniques, research that examines pain relief approaches needs to be conducted by nurses and other health care providers.
6. Non-pharmacological method of pain control should be incorporated into nursing intervention strategies for pain.
7. It is also recommended that the government should organize programs to increase the knowledge and importance of the use of non-pharmacological management of pain in the care of patients.

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