

Knowledge and Attitude of Nurses on Pain Management

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Article received: 10th May, 2022

Article accepted: 22nd November, 2022

ABSTRACT

Introduction: Pain is the most frequent cause for physician visits, work disability and health care cost. Nurses are at the forefront of care of admitted patients with a pivotal role in assessing and managing pain. The study aimed to assess the existing knowledge and attitude on pain management among the nurses working in Pokhara, Nepal.

Materials and Methods: A quantitative descriptive cross-sectional design was used to select nurses from three hospitals of Pokhara. Nurses' Knowledge and Attitude Survey Regarding Pain was used for data collection and analyzed from SPSS version 20 using Student t-test, one-way Analysis of variance and Multiple linear regression.

Results: This study found the mean (SD) pain knowledge score of Nepalese nurses on Nurses. Knowledge and Attitude Survey Regarding Pain (NKASRP) was 19.63(±3.4) out of 39 which equals to 50.34%. Nepalese nurses had average pain knowledge and attitude. This study found that education level and work experience of the nurses are related factors of knowledge and attitude on pain management.

Conclusion: Nepalese nurses had average pain knowledge and attitude. So, the study suggested that continue in-service pain education and training are needed to provide quality pain care in Pokhara, Nepal.

Keywords: Pain, Knowledge, Attitude, Management, Nurses

INTRODUCTION

Pain is an unpleasant sensation that usually signals an injury or illness which can limit a person's capabilities. In an effort to lessen the burden of inadequate assessment and treatment of pain, in 1996 the American Pain Society (APS) launched a "pain as the 5th vital sign" campaign.¹ Pain undermines a person's quality of life and negatively affects their physical, emotional and spiritual wellbeing.² It leads to psychological effects like depression, disturbed social relationships and suicidal tendencies. Pain exerts a significant financial burden on affected individuals, families, employers,

communities, and the nation as a whole.³ The global prevalence of chronic pain is high and affects all population, regardless of age, sex, race/ethnicity, income or geography.⁴ The burden of untreated pain, that millions of people suffer from worldwide, is highest in the developing world.⁵ Untreated pain due to insufficient knowledge of the healthcare professionals is a serious clinical problem leading to improper and inadequate pain management of the patients.⁶ Furthermore, pain relief is a public health issue and fundamental human right⁷ but



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pain can remain untreated in hospitalized patients.⁸

Registered Nurses' Association of Ontario (2013) explained that as primary front line caregiver, nurses have a primary role and ethical responsibility in effectively assessing and managing pain. Nurses have an important role in screening for pain that is essential for effective pain management. Pain can be taken as a nursing diagnosis and each nurse must be able to diagnose his/her patients' pain. Nurses are in the core-center in on-going assessment of pain, implementation of the prescribed pain management plan, evaluation of the reaction of the patient to the intervention and adjusting medication levels, depending on the individual's reaction.⁹ Nurses need to possess competent pain management knowledge and skills, so knowledge of pain management is a prerequisite for nurses.¹⁰ Management of the pain in hospitalized patients starts with a nurse's assessment that demands effective assessment knowledge and skills.¹¹

Many studies found that nurses had inadequate knowledge but a positive attitude to develop a better skill in pain management.¹² To the best knowledge of the researcher, there are limited published articles on pain and pain management in relation to nursing care in Nepal. Database search revealed only one published article on knowledge and attitude of the nurses on pain management which was conducted in 2016 in the Tribhuvan University Teaching Hospital, Kathmandu.⁶ The objective of this study was to find out the existing knowledge and attitude on pain management and its related factors among the nurses working in Pokhara, Nepal.

MATERIALS AND METHODS

A descriptive, cross-sectional design was used in three different hospitals at Pokhara, Nepal. The three hospitals were Government (Western Regional Hospital), Teaching (Gandaki Medical College and Research Hospital) and Private Hospital (Fewa Hospital Private Limited). Data was collected from August – September 2018.

A convenience sampling method was used to select the 264 nurses from all 510 nurses employed in the three hospitals. The sample size was determined by the finite correction formula by Daniel WW¹³ based on Nepalese nurses' pain knowledge study.⁶ The sample from each hospital was determined by the proportionate of the available population of that

hospital.

The 'Nurses Knowledge and Attitude Survey Regarding Pain (NKASRP: Ferrell and McCaffery, 2014) was used for questionnaire.¹⁴ The tool consisted of two parts. Part 1 consisted of Socio-demographic characteristics of the participants including age, education level, working department, job title, work experience, and previous pain training. Gender was not included because nursing education was allowed only to Nepalese female until the period of this study. Part 2 consisted of 39 items of nurses' knowledge and attitude survey regarding pain with 22 true/false questions, 13 multiple choice questions and two case studies with two segments. Each question was weighted marks 1 for correct and 0 for an incorrect response.

The structured self-administered questionnaire of NKASRP was distributed to selected 264 nurses from three selected hospitals. After taking informed consent, the questionnaires were distributed to participants. Voluntary participation was achieved and anonymity was maintained. Only 260 nurses returned the questionnaires. The socio-demographic characteristics were analyzed into descriptive statistics including frequency, percentage, mean and standard deviation. One way ANOVA (F) test and student's test (t) were used to find out the difference in the mean knowledge and attitude on pain management. Multiple linear regressions was used to find out the related factors of pain knowledge and the attitude at the level of < 0.05.

Ethical permission was obtained Nepal Health Research Center (ERB-NHRC 459/2018) and Pokhara Academy of Health Sciences (IRC-PoAHS registration no 1/2018). Permission was obtained from the selected hospitals.

RESULTS

A total of 260 nurses participated in the study. The response rate was 98.48%. The mean age of the participants was 24.67 years, with standard deviation of 6.6 years and age range of 18-52 years. The working experience of the nurses was 4.2 years in average. The majority 79.6% of the nurses fell in 20-30 years age group, almost 90% were staff nurse, almost 80 % had less than five year's work experience and only 6.5% had previous pain training. Table 1 illustrates the frequency and percentage of the socio-demographic characteristics of the participants.

Mean correct response was 19.63 (out of 39), with standard deviation 3.48 which equals 50.34%. Table 2 shows the correct response of each item (highlighted) and it also provides the highest correct response/score and lowest score in different in NKASRP.

The overall correct responses of the participants on the NKASRP were categorized into three groups based on the percentages of the correct responses of the participants on NKASRP. They are (1) Less than 50% correct response as poor knowledge and attitude. (2) 50%-70% correct response as average knowledge and attitude and (3) more than 70% correct response as good knowledge and attitude. This study found that among 260 nurses working in the hospitals of Pokhara, only 1 % of nurses had good pain knowledge and attitude, 53 % nurses had average knowledge and attitude, and 46 % nurses had poor knowledge and attitude regarding pain

management.

Knowledge of nurses with different level of the socio-demographic variables is shown in Table 1. The multivariate analysis is done by using multiple linear regression analysis by stepwise regression method for all the independent variables, education (X1), and experience (X2) which denotes that the fitted multiple linear regression equation has statistical significance. Table 3 illustrates that nurses with a master's degree had (7.038) statistically significant higher pain knowledge and attitude score than the nurses who had proficiency level nursing degrees. Regarding the experience, the nurses who had less than one year's work experience had 1.317 statistically significantly less pain knowledge and attitude score than the nurses who had more work experience. The multiple linear regressions identified that education and experience as the influencing factors.

Table1: Frequency, Percentages and Pain Knowledge of the Participants (n= 260)

Demographic Characteristics	n	(%)	Mean ±SD	Test value	P value
Age in years			24.6 ± 6.6		
< 20 years	25	(9.6)	19.00 ± 3.98	F= 1.954	.121
20-30 years	207	(79.6)	19.56 ± 3.41		
31-40 years	14	(5.4)	21.71 ± 3.66		
> 40 years	14	(5.4)	19.64 ± 3.00		
Education					
Proficiency	182	(70.0)	19.40 ± 3.44	F=5.11	.007*
Bachelor	76	(29.2)	20.19 ± 3.24		
Master	2	(0.76)	27.00 ± 5.65		
Job title					
Staff Nurse	233	(89.6)	19.66 ± 3.5	t=- .351	.726
Nursing Supervisor/ Officer	27	(10.4)	19.41 ± 3.2		
Department / unit					
Surgical unit	54	(20.8)	19.93 ±3.5	F=1.450	.237
Medicine Unit	136	(52.3)	19.82 ±3.5		
Critical Unit	70	(26.9)	19.03 ±3.4		
Work experience in years			4.2 ± 5.3		
Less than 1 year	76	(29.3)	18.64 ±3.5	F= 3.286	.021*
2 years – 5 years	138	(52.7)	19.92 ±3.4		
6 years -10years	22	(8.8)	20.73 ±3.5		
>10 years	24	(9.2)	20.08 ±3.5		
Pain training:					
Yes	17	(6.5)	19.65 ±3.7	t= -.020	.824
No	243	(93.5)	19.63 ± 3.4		

Table2: Correct Response of Participants on NKASRP (n=260)

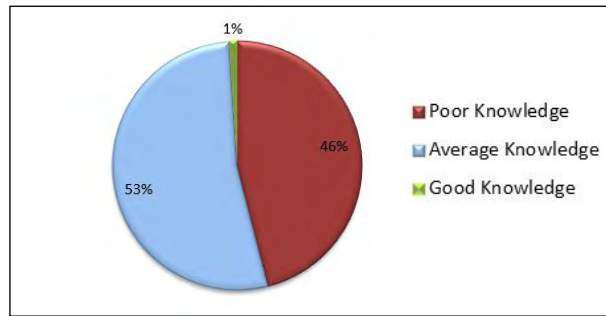
ITEMS	Correct response frequency	(%)
Items with highest Correct Response on NKASRP		
Narcotic/ opioid addiction is defined as chronic neurologic diseases that include impaired control over drugs use, compulsive use, continued use despite harm, and craving. <i>(True)</i>	222	(85.38)
Sedation assessment is recommendation during opioids pain management because of opioid-induced respiratory depression. <i>(True)</i>	221	(85.0)
Combing analgesics work by different mechanisms may better pain control fewer side effects than using a single analgesic agent. <i>(True)</i>	213	(81.92)
Patient's spiritual beliefs may lead them to think pain and suffering are necessary. <i>(True)</i>	212	(81.53)
The term 'eq 'equianalgesia' means approximately equal analgesia and is used various analgesics that provide pain relief. <i>(True)</i>	207	(79.65)
After an initial dose of an opioid analgesic is given, subsequent doses should be adjusted in accordance patient's response. <i>(True)</i>	206	(79.23)
Analgesics for post-operative pain should initially be given <i>around the clock on a fixed schedule.</i>	197	(75.8)
The time to peak effect for morphine given IV is <i>15 min</i>	197	(75.8)
Elderly patients cannot tolerate opioids for pain relief. <i>(True)</i>	181	(69.61)
Respiratory depression rarely occurs in patients who have been receiving stable doses of opioids over a period of months. <i>(True)</i>	178	(68.46)
Items with Lowest Correct Response on NKASRP		
Assessment is made two hours after Andrew received morphine 2 mg IV. Half hourly pain ratings following the injection ranged from 6 to 8. He has identified 2/10 as an acceptable level of pain relief. His physician's order for analgesia is "morphine IV 1-3 mg q1h PRN pain the relief." Check action you will take at this time..... <i>Administer morphine 3 mg IV now.</i>	31	(11.9)
Andrew is 25 years old and this is his first day following abdominal surgery. As you enter his room, he smiles at you and continues talking and joking with his visitor with BP = 120/80; HR = 80; R = 18; on a scale of 0 to 10 (0 = no pain/discomfort, 10 = worst pain/discomfort) he rates his pain as 8. Circle the number that represents your assessment of Andrew's pain. 8	51	(19.6)
Giving patients sterile water by injection (placebo) is a useful test to determine if the pain is real. <i>(False)</i>	51	(19.61)
The likelihood of the patient developing clinically significant respiratory depression in the absence of new comorbidity is ... <i>less than 1%</i>	52	(20.0)
Assessment is made two hours after Robert received morphine 2 mg IV. Half hourly pain ratings following the injection ranged from 6 to 8. He has identified 2/10 as an acceptable level of pain relief. His physician's order for analgesia is "morphine IV 1-3 mg q1h PRN pain relief." Check the action you will take at this time,..... <i>Administer morphine 3 mg IV now</i>	53	(20.4)
The recommended route of administration of opioid analgesics for patients with persistent cancer-related pain is..... <i>Oral</i>	56	(21.2)

Table3: Related Factors of Pain Knowledge and Attitude of the Nurses

Pain knowledge and attitude	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
Constant (Pain knowledge and attitude=Y)	19.962	.251		79.510	.000
X1 (Education)	7.038	2.408	.177	2.923	.004
X2 (Experience)	-1.317	.463	-.172	-2.847	.005

a. Dependent variables: Pain Knowledge and attitude.

Figure 1: Level of Pain Knowledge of the Participants



DISCUSSION

The results found that Nepalese nurses had an average knowledge and attitude regarding pain management. The study conducted in 2016 in teaching hospital, Kathmandu, Nepal using the same tool in the nurses (n=85), found an average score of 49.13%.⁶ Our study found a lower level of knowledge and attitude in comparison to the study conducted in the United States of America in 2014 by using the same tool in 91 nurses. Their study found the knowledge score among the emergency care nurses to be 76%.¹⁵ Similarly, other studies found a higher knowledge score: 77.56% in Australia¹⁶ and 75% in Norway.¹⁷

Current study found that nurses who had a longer working experience, had significantly higher knowledge and a better attitude in contrast with less experienced nurses. The result of this study is consistent with the study conducted in Greece.¹⁸

Nurses who had higher education had significantly higher knowledge scores. Different studies were consistent with this result.^{19,20,21} On the other side, it is not in agreement with the study conducted in Hong Kong,²² which shows that education was not statistically significant (P>0.05).

Regarding the job title, the mean knowledge score is found higher in staff nurses than the nursing supervisor and officer but this finding is not

statistically significant. This finding is supported by a study conducted in Italy that found different mean knowledge score in different job title.²³ Critical care units are highly sensitive units for pain management. This study found the mean knowledge score is less in nurses working in critical care unit in comparison with those working in surgical and medical unit. Critical care nurses should possess adequate pain knowledge for effective pain management. The result of this study is in agreement with the studies conducted in Palestine and Saudi Arabia.^{10,24}

Limitations :

- Study represents only three hospitals in Pokhara city among more than twenty health care facilities.
- The result of this study cannot be nationally generalized.

CONCLUSION

The result of this study suggests that Nepalese nurses have average knowledge and attitude regarding pain management. Education and working experience are related factors of pain knowledge and attitude. This study suggests that nurses need to continue pain education based on standard and up-to-date pain management course to enhance knowledge and attitude for better pain management of patients.

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