GSJ: Volume 9, Issue 11, November 2021, Online: ISSN 2320-9186

www.globalscientificjournal.com

KNOWLEDGE AND PRACTICE OF POST-OPERATIVE PAIN MANAGEMENT AND ASSOCIATED FACTORS AMONG NURSES WORKING IN SHEIK HASAN YABARE REFERRAL HOSPITAL, JIGJIGA, ETHIOPIA, 2020.

Ahmed Sharif Abdilahi

1. Abstract:

Aim: To explore the knowledge, practice, and associated factors towards post-operative pain management among nurses.

Design: Institution-based cross-sectional study.

Methods: Convenient sampling was adopted to select 110 nurses from May to July 2020. A structured questionnaire on knowledge and an observational checklist to assess the practice was used. Descriptive statistics were performed to describe demographic characteristics, level of nurses' knowledge, and practice on pain management. Significance of determinant factors was tested using Logistic regression and Odds Ratio & $P < 0.05$ at 95% CI.

Results: According to the study, 51.8% of nurses had poor knowledge about postoperative pain management. Gender, previous training, and present working area were significantly associated with nurses' knowledge. The majority of nurses (60.9 %) had poor practice. Previous training and gender were found to be significantly associated with nursing practice.

Keywords: - post-operative, pain, management, nurses, knowledge, practice.

2. **Introduction**

International association for the study of pain (IASP), is defined pain as an unpleasant sensory and emotional experience associated with actual and potential tissue damage(1). WHO along with the IASP and the European federation of IASP propose, during the global day against pain, a joint declaration that pain management is a fundamental human right(2).

The American society of anesthesiologists (ASA) defined post-operative pain as pain that is present in a surgical patients because of a pre-existing surgical procedure, or a Combination of diseased-related and procedure related resources(3). Post-operative pain is perceived as pain of recent onset and it is claimed that 50% of patients experience pain within 24 hours following surgery and gradually drop within a few days after the surgery duration(4).

Untreated post-operative pain has been shown to increase the rate of postoperative complications (e.g. atelectasis, pneumonia, thrombo embolism, depressed immune function, prolonged hospital stay) and the risk of developing chronic post-operative pain. that the prevalence of pain remains high in post-operative patients, and unrelieved pain from post-surgery has devastating physiological, psychological and socioeconomic effects(5).

In low-income countries, POP management were particularly challenging for many reasons including, low POP management training in nurses, shortage of POP management guideline as well assessment tool and high patient-to-nurse ratio that limits assessment of pain and administration of adequate pain relief medication (6).

In Ethiopia a survey among nurses in 23 health facility in western Ethiopia, showed that there was knowledge gap among nurses and lack of post-operative pain (POP) management guidelines and assessment tool in health facility (7).

The result of this study would be the milestone for future planning and policy making at the local levels of nursing administration and also Somali regional health bureau.

The findings for this study will be used to design the curriculum of nursing education in higher learning institutions and will help to develop specific programs that could improve nurse's knowledge on post-operative pain management.

3. Methods

Study was conducted in Sheik Hasan Yabare (SHY) referral hospital in jigjiga Ethiopia. SHY referral hospital is a first and largest referral and teaching hospital in the region. SHY referral hospital serves for all sides of the region, with approximately 250,000 to 350,000 patient flows per year. The hospital has over 340 beds, with over 32 specialists, 95 non-teaching doctors, 367 nurses and 3 major operating theatre rooms.

3.1. Study Design and period

An Institutional based cross-sectional study design was conducted for this study. The study was conducted from June 1st –July 30th, 2020 in post-operative care units (orthopedic, Operation room (OR), surgical, intensive care unit (ICU), obstetrics and gynecology) in SHY referral hospital, Jigjiga Ethiopia.

3.2. Source and study Population

The source populations were all nurses working in SHY referral hospital and those nurses working in surgical, OR, orthopedic, ICU, Gyn/obs wards were considered as study population.

3.3. Inclusion and exclusion Criteria

Nurses who were working in surgical, OR, orthopedic, ICU, Gyn/obs and willing to participate in the study were included. Those Nurses who were on annual leave, sick leave during data collection and those are not willing to participate the study were excluded.

3.4. Study variable

The dependent variable was Knowledge and practice of post-operative pain management of nurses. Independent variable included Socio-demographic factors (age, gender, level of education, years of working experience and years of unit experience). Organizational factors: (pain management guideline, pain assessment tool, analgesics).

3.5. Sample Size Determination

The sample size was determined using for single population proportion formula and the following assumption was used the proportion of nursing good knowledge and practice of post-operative pain management of study conducted addis ababa public hospital was 10%, 6% respectively (8).was used to calculate the sample for the study, by assuming 5% marginal error and 95% confidence interval

None-response rate were taken by 10% = 100 × 10% =10.

100+10 = 110. Accordingly the sample size was calculated to be 110 nurses**.**

3.6. Sampling technique

All nurses working in orthopedic, OR, surgical, ICU and Gyn/obs wards were identified and a sample of 110 nurses was conveniently selected.

3.7. Sampling procedure

All nurses working in surgical, orthopedic, ICU, OR and Gyn/obs wards were contacted, and proportional sample size was allocated based on number of nurses working postoperative care units during the data collection period.

3.8. Data collection techniques and tools

The tool was adapted from a literature and modified accordingly to fit this study. It is prepared in English. It contain two part, Self-administered questionnaire which have four portion socio-demographic characters, assessment, pharmacological and non-pharmacological postoperative pain management of nurses, developed by Mc Caffery in 1987, and revised by Robin J Sherrill in 2013. And observational checklist was used to assess practice on POP management of nurses adopted (Gold, 1958) and Canadian nursing pain management practice guideline.

3.9. Data collection procedure

Two BSc nurses and two medical students were recruited as data collectors. Training was given one day to make them familiar with the data collection tool. Principal investigator was assisted and coordinated the data collectors during data collection. Two BSc nurses were distributed self-administered questionnaire to evaluate nursing knowledge and socio-demographic character and practice was assessed by using observational checklist, two medical student were observed the practice of nurses, to prevent Hawthrone effect and minimize the effect of the observer's presence on nursing behavior, the data collectors was spent a time on the units building a rapport with the unit staff for one weeks before starting data collection. During data collection, the data collector was observe for signs of habituation and was recorded in checklist.

3.10. Data quality control

To assure the data quality, data collection tool was standard and prepared after intensive reviewed of relevant literatures. Two BSc nurses were assigned from Karamara general hospital and two medical students were in practical attachment at SHY referral hospital was recruited for the reduction of bias. One days training was given for data collectors. The questionere was pre-tested prior to the actual data collection among 5% of actual sample size at Karamara hospital. Reliability test was checked by cronbach's α and found reliability coefficient of 0.780. Based on the result important modification was done. The filled questioners and checklists were checked every day for its completeness, and any Problems were discussed with data collectors overnight. Continuous close supervision was done by principle investigators. Data was kept in the secure place where no one can access it. Uncompleted tool was removed before data entry.

3.11. Data processing and analysis

The collected data was cleaned for completeness and consistencies before data entry. Responses in each question were coded for simplicity of data entry. The coded data was entered in to Epidata 3.02 and SPSS version 23 statistical software was used for data analysis. Then descriptive analysis, such as percentages, frequency distribution, measures of central tendency and measure of dispersion was computed, AOR and 95% confidence interval was calculated. Both bivariate and multivariate logistic regression models were used to see the association

between independent versus out-come variable. And $p < 0.05$ cutoff point were considered as statistical significant for all the independent variables. Then the result was presented with text, graphs, figures and tables.

3.12. Ethical consideration

Before data collection, ethical clearance was obtained from institutional review board of Jigjiga University, college of medicine and health sciences, department of nursing research committee. Official letter was submitted to SHY referral hospital. After getting permission from hospital, informed verbal consent were obtained from study participants, after giving them information about the study. In addition, all the responses were kept confidential and anonymous.

4. Results

4.1. Demographic Characteristics of the Participants

A total of one hundred ten (110) nurses working postoperative care units were participated in the study and the response rate were 100%. From the total number of respondents 63(57.3 %) were male and the remaining 47 (42.7%) were females. The mean age of nurses was 26.0 (SD +7.8 Educational status of nurses revealed that majority of them 92 (83.6 %) were degree holder, followed by 10 (9.1 %) diploma and 8(7.3%) were master nurses.

Table 1 socio-demographic character of nurses working postoperative units of SHY Referral Hospitals, Jigjiga, Ethiopia, 2020 (N = 110).

Variables	Categories	Frequency	Percentage
Gender	Male	63	57.3
	Female	47	42.7
Age	15-24yrs	60	54.5
	25-30 yrs	28	25.5
	31-39 yrs	17	15.5
	>40 yrs	5	4.5
Marital status	married	52	47.3

	single	58	52.7
Educational qualification	diploma	10	9.1
	degree	92	83.6
	masters	8	7.3
years of work experience	<2 yrs	36	32.7
	2-5 years	26	23.6
	6-10 yrs	22	20
	11-15 yrs	18	16.4
	>15 yrs	8	7.3
Experience in the post-operative area	<2 yrs	58	52.7
	2-5 yrs	24	21.8
	6-10 yrs	19	17.3
	11-15 yrs	9	8.2
current area of practice	OR	27	24.5
	ICU	12	10.9
	Surgical	33	30.0
	Orthopedic	10	9.1
	Obstetrics and Gynecology	28	25.5
Have you received training related to postoperative pain management	Yes	68	61.8
	No	42	38.2

4.2. Nurses knowledge regarding postoperative pain management

The respondents were asked to answer 24 yes or no questions in order to assess nurse‘s knowledge on postoperative pain management. the mean score was 19(75%) with a standard deviation of 3.74 with minimum score of 9 and maximum score of 24out of 24 items. those nurses who scored above or equal to the mean 19 (> 75%) of the knowledge questions were

considered as good knowledge and those scored below the mean 19 (< 75%) were considered as poor knowledge.

As represented in figure.1 total respondents 53(48.2%) had good knowledge and 57(51.8%) had poor knowledge of postoperative pain management.

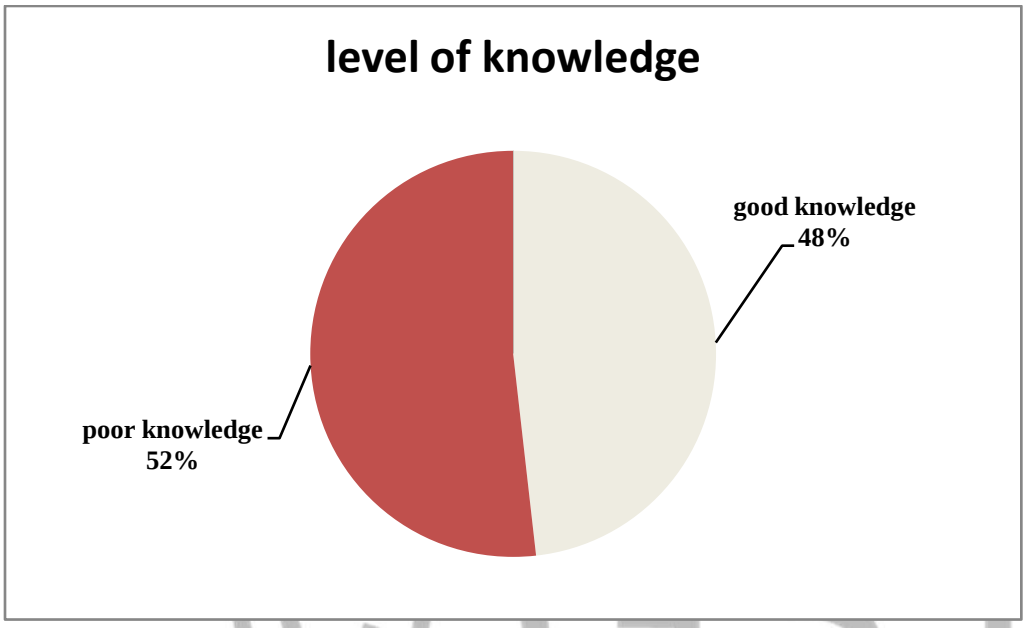

Figure 1 knowledge of respondent working at postoperative units of SHY referral hospitals, Jigjiga, Ethiopia, 2020.

4.3. Knowledge on postoperative pain assessment among nurses

The data represented in the table 2 shows that majority of nurses 80(72.7%) know that if the source of pain does not know during pain assessment analgesic should not be used. Similarly 82(74.5%) known that Lack of pain expression of patient does not mean lack of pain.

Majority of nurses 83(75.5%) knows that numeric rating scale the worst pain score that patient report is 7-10 and 81(73.6%) of nurses knows that Continuous assessment of pain and medication effectiveness is necessary for good pain management.

Table 2 Knowledge on postoperative pain assessment among nurses working at postoperative units of SHY referral hospitals, Jigjiga, Ethiopia, 2020.

Variable	Response	Frequency n=110	Percentage %
If the source of pain does not know during pain assessment analgesic should not be used	Yes	80	72.7
	No	30	27.3
Assessment can be done on the basis of patients' statements about their pain	Yes	85	77.3
	No	25	22.7
Suggesting the patients on difference ways to relive his/her pain can increase patient's ability to manage pain	Yes	80	72.7
	No	30	27.3
The most accurate judge of the severity of patient's pain is patient	Yes	83	75.5
	No	27	24.5
Observation is part of the method used in surgical pain assessment	Yes	86	78.2
	No	24	21.8
In numeric rating scale the worst pain score that patient report is 7-10	Yes	83	75.5
	No	27	24.5
Lack of pain expression does not mean lack of pain	Yes	82	74.5
	No	28	25.5
Continuous assessment of pain and medication effectiveness is necessary for good pain management	Yes	81	73.6
	No	29	26.4

4.4. Knowledge on pharmacological postoperative pain management of nurses

The data of table 3 shows that most of respondent 83(75.5%) knows that if the patients have history of substance abuse should not be given opioid. Majority of nurses 94(85.5%) know that importance of giving patient analgesia during and after pain full procedure (wound care).

All most all of nurses 97(88.2%) knows that if Patient requests increasing analgesics usually indicated addicted for drug and similar number 98(89.1%) of nurses knows that the combining analgesics may result in better pain control with fewer side effects.

Table 3 knowledge on pharmacological postoperative pain management of nurses working postoperative units of SHY referral hospital, Jigjiga Ethiopia, 2020.

Variable	Response	Frequency n=110	Percentage %
Patient requests increasing analgesics usually indicated addicted for drug	Yes	97	88.2
	No	13	11.8
Combining analgesics may result in better pain control with fewer side effects	Yes	98	89.1
	No	12	10.9
Patient should be encouraged to endure as much pain as possible before using an opioid	Yes	83	75.5
	No	27	24.5
After you administer patient to narcotic drug should be observe at least 20 minute for possible side effect	Yes	81	73.6
	No	29	26.4
Patients with history of substance abuse should not be given opioid	Yes	83	75.5
	No	27	24.5
Paracetamol is the only analgesic that used to relief sever postoperative pain	Yes	59	53.6
	No	51	46.4
It is important to give patient analgesia during and after pain full procedure (wound care)	Yes	94	85.5
	No	16	14.5
Initially post-operative analgesics should be given around the clock on a fixed schedule	Yes	87	79.1
	No	23	20.9
Oral is the recommended route of administration of opioid for patient with severe pain of sudden onset.	Yes	75	68.2
	No	35	31.8
The peak effect of morphine will be between 1-2 hours after oral administration	Yes	65	59.1
	No	45	40.9
Following abrupt discontinuation of an opioid, physical dependence is manifested sweating, yawning, diarrhea	Yes	84	76.4
	No	26	23.6

and agitation

4.5. Knowledge on none-pharmacological postoperative pain management of nurses

The data represented in the table 4 shows that majority of respondents 79(71.8%) known providing a suitable room temperature and good air condition can relieve pain. Most of respondents 102(92.7%) knows that trying to focus a patient's thoughts/ attention away from pain can decrease pain.

Table 4 knowledge on non-pharmacological postoperative pain management of nurses working postoperative units of SHY referral hospital, Jigjiga, Ethiopia, 2020.

Variable	Response	Frequency n=110	Percentage %
Provide a suitable room temperature and good air condition can relieve pain	Yes	79	71.8
	No	31	28.2
Trying to focus a patient's thoughts/ attention away from pain can decrease pain	Yes	102	92.7
	No	8	7.3
Provide the patient with a possibility to rest by minimizing noise can relieve pain	Yes	85	77.3
	No	25	22.7
During the caring patients, providing comfort and positioning them may help to reduce muscle tension which, in turn, can reduce pain	Yes	99	90
	No	11	10
Superficial heat/cold is known to be relieved patients pain	Yes	73	66.4
	No	37	33.6

4.6. Nurses practice regarding postoperative pain management

Observational check list was used to assess nurse's practice regarding postoperative pain management. The mean score of nurses practice was 8.9~9 (64%) with a standard deviation of 2.43. those nurses who scored above or equal to the mean 9 (> 64 %) of the practice questions were considered as good practice and those scored below the mean 9 (< 64 %) were considered

as poor practice. The data represented in the fig 3 shows that Out of total respondents 43(39.1%) had good practice and the remaining 67(60.9%) had poor practice (fig 2).

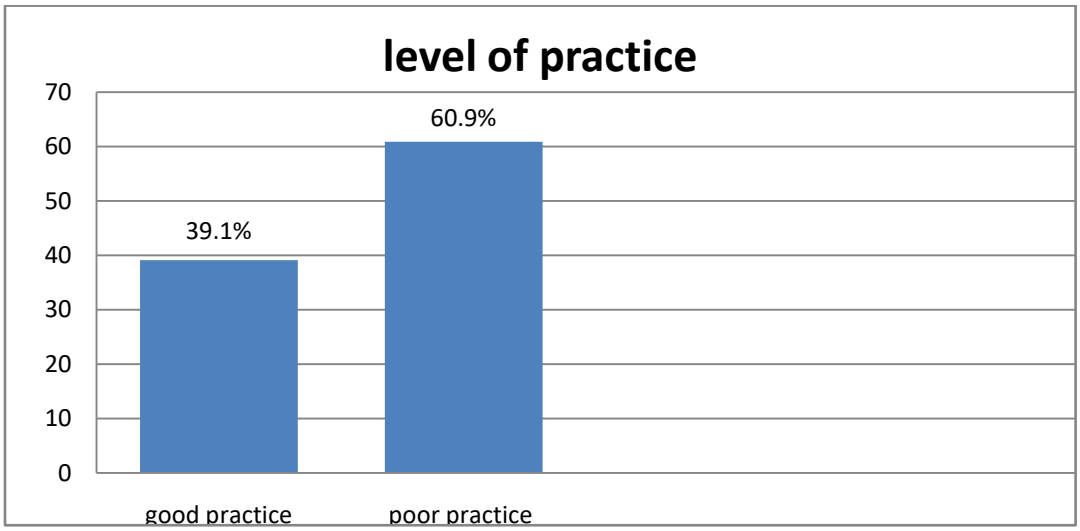

Figure 2 practice of nurses working at postoperative units of SHY referral hospital, Jigjiga, Ethiopia, 2020.

The data on table 5 indicates that 97(88.2%) of nurses working area does not have pain management guideline and assessment tool. Majority of study participant 74(67.3%) had practicing pain assessment as 5th vital sign at the time of recording vital sign and 82 (74.5%) of them had agree and respect with patient‘s statement about their pain. 67(60.9%) of respondents had discussed pain scores and management during nurse-to-nurse report and nursing round.

Table 5 practice about postoperative pain management of nurses working at post-operative units of SHY Referral Hospitals, Jigjiga, Ethiopia, 2020.

Variables	Response	Frequency (n=110)	Percentage (%)
Practicing pain assessment as 5th vital sign at the time of recording vital sign	Yes	74	67.3
	No	36	32.7
Pain management guideline, and assessment tool are available in working area	Yes	13	11.8
	No	97	88.2

Using pain assessment tools	Yes	76	69.1
	No	34	30.9
Assess and record pain and its characteristics	Yes	82	74.5
	No	28	25.5
They asked patient to determine his pain severity	Yes	86	78.2
	No	24	21.8
agree and respect with patient's statements about their pain	Yes	82	74.5
	No	28	25.5
Administers prescribed analgesic as appropriate	Yes	91	82.7
	No	19	17.3
Assess patient' response to analgesic, and recorded it.	Yes	74	67.3
	No	36	32.7
give analgesic for painful procedure (wound care)	Yes	74	67.3
	No	36	32.7
pain scores and management discussed during nurse-to-nurse report and nursing round	Yes	67	60.9
	No	43	39.1
Making application of heat or cold, pressure, to relieve patient pain	Yes	74	67.3
	No	36	32.7
Instruct patient to use deep breath to relief pain	Yes	56	50.9
	No	54	49.1
Early mobilization is practiced	Yes	56	50.9
	No	54	49.1
Instruct patient and family about potential side effects of analgesics and their prevention and management.	Yes	71	64.5
	No	39	35.5

4.7. Factors associated with knowledge of nurses regarding POP management.

In order to determine the association of socio-demographic and personal variables with knowledge of nurses on post-operative pain management, both bivariate and multivariate logistic

regression were performed. The factors that significantly associated in bivariate model with p-value ≤ 0.25 were taken into the multivariable model. In bivariate logistic regression, 6 variables were eligible at P-value <0.25 (sex of respondents, age, years of experience, experience in postoperative area, current area of practice and nursing practice. In contrary, there was no significant association between nursing knowledge of postoperative pain management and their marital status and their education level.

In multivariate logistic regression analysis were identified as having statistically significant association(p value < 0.05, 95% CI) The finding of this study shows in sex of respondent being male increases almost seven times higher knowledge of postoperative pain management compared to female with (AOR 6.8, 95% CI: 1.938-24.420).

Having good practice of post-operative pain management increase 5.1 fold of being good knowledge compared to those have poor practice with (AOR 5.133 95% CI: 1.262-20.874).

Regarding working unit being in ICU increases the odds of the knowledge about post-operative pain management by 9 fold compared to other units with AOR 9.682(CI: 2.272-41.256).

Table 6 logistic regression analysis of factors associated with the knowledge of nurses regarding postoperative pain management of SHY referral hospital, Jigjiga, Ethiopia, 2020.

Variable		Knowledge level		Logistic regression (95% CI)	
		Good	Poor	COR	AOR
Sex	male	37(58.7%)	26(41.3%)	**2.75(1.25-6.04)***	**6.8(1.93-24.4)****
	Female	16(34%)	31(66%)	1.00	1.00
Age in category	15-24	22(36.7%)	38(63.3%)	**6.9(0.72-65.7)***	0.49(0.11-2.25)
	25-30	16(57.1%)	12(42.9%)	3.0(0.29-30.39)	**0.08(0.01-0.66)****
	31-39	11(64.7%)	6(35.3%)	2.18(0.19-24.20)	0.28(0.01-6.61)
	>40	4(80%)	1(20%)	1.00	1.00
Years of experience	<2 years	12(33.3%)	24(66.7%)	**6.0(1.04-34.31)***	0.51(0.11-2.26)
	2-5 years	12(46.2%)	14(53.8%)	**3.50(0.52-20.6)***	1.9(0.18-21.1)
	6-10 years	13(59.1%)	9(40.9%)	2.07(0.33-12.71)	0.67(0.07-5.83)
	11-15 year	10(55.6%)	8(44.4%)	2.4(0.37-15.27)	1.007(0.03-30.81)

	>15years	6(75%)	2(25%)	1.00	1.00
Experience in postoperative area	< 2 years	23(39.7%)	35(60.3%)	**0.5(0.21-1.45)***	1.3(0.21-8.35)
	2-5 years	13(54.2%)	11(45.8%)	**0.38(0.13-1.11)***	1.30(0.14-12.17)
	6-10 years	12(63.2%)	7(36.8%)	0.52(0.12-2.16)	1.09(0.03-32.25)
	11-15 year	5(55.6%)	4(44.4%)	1.00	1.00
Current area of practice	OR	17(63%)	10(37%)	0.56(0.12-2.59)	0.88(0.12-6.07)
	ICU	9(75%)	3(25%)	**6.3(2.01-19.8)***	**9.6(2.2-41.25)****
	Surgical	7(21.2%)	26(78.8%)	2.7(0.0-0.0001)	1.01(0.0-0.0001)
	Orthopedic	0%	10(100%)	0.68(0.21-2.11)	0.42(0.10-1.66)
	Obs/gyne	20(71.4%)	8(28.6%)	1.00	1.00
Level of practice	good	34(79.1%)	9(20.9%)	**9.5(3.85-23.63)***	**5.1(1.26-20.8)****
	Poor	19(28.4%)	48(71.6%)	1.00	1.00

*p.value ≤0.25, COD= crude odds ratio

**p value ≤0.05, AOD= adjusted odds ratio

4.8. **Factors associated with practice of nurses regarding POP management**.

In order to determine the association between socio-demographic variable and nursing practice both bivariate and multivariate logistic regression were performed. Eight socio demographic factors was significantly associated in bivariate logistic regression at P-value <0.25 (sex of respondents, age, marital status, education, years of experience, experience in postoperative area, current area of practice and nursing knowledge of POP management.

In multivariate logistic regression analysis were identified as having statistically significant association(p value < 0.05, 95% CI) The finding of this study shows that sex of respondent being male have 6.7 times higher chance of being good practice then female with (AOR 6.7, 95% CI: 1.074-42.201). study also shows those nurses who had good knowledge have five times higher chance of being good practice for postoperative pain management practices with (AOR 5.252, 95% CI: 1.051-26.239).

Table 7 logistic regression analysis of factors associated with the practice of nurses regarding postoperative pain management of SHY referral hospital, Jigjiga, Ethiopia, 2020.

Variable		Practice level		Logistic regression (95% CI)	
		Good	Poor	COR	AOR
Sex	Male	33(52.4%)	30(47.6%)	**4.07(1.72-9.5)***	**6.73(1.07-42.2)****
	Female	10(21.3%)	37(78.7%)	1.00	1.00
Age category	15-24 years	14(23.3%)	46(76.7%)	**4.92(0.74-32.5)***	3.8(0.38-37.81)
	25-30 years	15(53.6%)	13(46.4%)	1.3(0.18-9.02)	0.57(0.02-12.3)
	31-39 years	11(64.7%)	6(35.3%)	0.81(0.10-6.33)	22.8(0.42-127.83)
	≥ 40 years	3(60%)	2(40%)	1.00	1.00
Marital status	Married	25(48.1%)	27(51.9%)	**2.05(0.94-4.48)***	1.99(0.40-9.75)
	Single	18(31%)	40(69%)	1.00	1.00
Education	Diploma	4(40%)	6(60%)	1.25(0.32-4.75)	2.29(0.27-19.11)
	Degree	32(34.8%)	60(65.2%)	**0.09(0.008-1.1)***	0.06(0.002-2.6)
	masters	7(87.5%)	1(12.5%)	1.00	1.00
Years of experience	< 2 years	6(16.7%)	30(83.3%)	**5.0(0.97-25.77)***	2.29(0.28-18.41)
	2-5 years	7(27%)	19(73%)	**2.7(0.52-13.91)***	1.59(0.05-46.05)
	6-10 years	15(68.2%)	7(31.2%)	0.46(0.09-2.43)	0.29(0.01-4.98)
	11-15 years	11(61.1%)	7(38.9%)	0.63(0.11-3.41)	0.19(0.004-8.54)
	>15 years	4(50%)	4(50%)	1.00	100
Experience in postoperative area	< 2years	13(22.4%)	45(77.6%)	**2.7(0.64-11.8)***	0.31(0.031-3.32)
	2-5 years	10(41.7%)	14(58.3%)	1.12(0.23-5.25)	0.02(0.001-1.06)
	6-10 years	16(84.2%)	3(15.8%)	0.15(0.02-0.91)	0.64(0.02-20.1)
	11-15 years	4(44.4%)	5(55.6%)	1.00	1.00
Current area of practice	OR	12(44.4%)	15(55.6%)	0.0(0.0-0001	0.01(0.0-0.0001)
	ICU	12(100%)	0(0%)	**3.6(1.12-11.54)***	1.56(0.19-12.48)
	Surgical	6(18.2%)	27(81.8%)	1.29(0.0-0.0001)	1.46(0.0-0.0010)

	Orthopedic	0(0%)	10(100%)	0.92(0.319-2.67)	0.34(0.058-2.08)
	Gyne/obs	13(46.4%)	15(53.6%)	1.00	1.00
Level of knowledge	Good	34(64.2%)	19(35.8%)	**9.54(3.8-23.6)***	**5.25(1.05-26.2)****
	Poor	9(15.8%)	48(84.2%)	1.00	1.00

*p.value ≤0.25, COD= crude odds ratio

**p value ≤0.05, AOD= adjusted odds ratio

5. DISCUSSION

5.1. Knowledge regarding postoperative pain management of nurses.

The level of good knowledge of nurses working post-operative care units in SHY referral hospital was 53(48.2 %) This reveals that more than half of the nurses have poor knowledge about post-operative pain management, this finding was low in compared with studies conducted in Uganda, addis ababa governmental hospital and Arsi zone, southeast Ethiopia, The proportion of nurses who had good knowledge of pain management in Uganda, addis ababa, Arsi zone which was 58.2%, 60.4% and 54.8% respectively (9, 10, 11).

This difference might be due to difference in availability of resources, study population, operational definition, and organizational policies.

This study there was significant association between nursing practice and their level of knowledge on post-operative pain management with p-value = 0.022, AOR 5.133 (95% CI: 1.262-20.874) compared other study done in Bangladesh which was report that there was no significance association between nursing practice and their level of knowledge on post-operative pain management with p-value=0.89 (12). This difference might be due to sample size, operational definition and socio demographic variations.

In this study it was observed that sex of respondent (AOR = 6.879, 95% CI: 1.938-24.420) was positively associated with nursing knowledge, male respondent were 6.8 times more likely have good knowledge then female. Result of this study supported other study conducted in Saudi Arabia, which indicated significant differences between male and female scores, male mean scores were 46.43%; female mean scores were 39.81, ($p<0.05$) (13).

In this study it was observed in a working units being ICU nurses(AOR= 9.682, 95% CI: 2.272-41.256) were positively association level of nursing knowledge toward postoperative pain management, ICU nurses 9.6 times more likely having good knowledge on postoperative pain management then those nurses working other units. This is supported by study conducted in public referral hospitals of Amhara region which ICU nurses 2.7 times higher than knowledge then other nurses with (AOR=2.747; 95% CI: 1.200, 6.289) (14).

5.2. Practices regarding postoperative pain management of nurses.

In this study only 43(39.1%) of respondent has good practice of post-operative pain management. This finding was low in compared with studies conducted in Bangladesh, addis ababa public hospital, Arsi zone southeast Ethiopia, public referral hospital in Amara region which was 78.1%, 55.9%, 47.9%, 45.7% respectively (9, 11, 14).

This difference could be due to the difference in study population, socio demographic variations and operational definition of practice level and organizational policies.

This study there was significant association between nursing knowledge and their level of practice on post-operative pain management with p-value 0.043, (AOR 5.252, 95% CI: 1.051-26.239) those respondents have good knowledge were five time higher chance of being good practice compared to those have poor knowledge. This is different in study conducted in Bangladesh revealed that there is not relationship among nurse's knowledge and pain management practice with p. value =0.89 (15).

The difference may be operational definition and socio demographic variations.

In this study it was observed that sex of respondent (AOR 6.733, 95% CI: 1.074-42.201) was positively associated with nursing postoperative pain management practices, male respondent 6.7 times more likely to be good practice compared to female. This similar other study conducted in Addis Ababa public hospitals (8).

In this study there is only 11.8% of nurses have pain management guideline and assessment tool on there working units. This low compared other study conducted in Asella Teaching Referral Hospital South East Ethiopia which 31.2% of nursing have pain management guideline and assessment tool in their working units (16)

5.3. Limitation

The study relied on respondents' self-reports as it is impossible to monitor health care providers' real method of practice. This study was limited to SHY referral hospitals only

The study was a cross-sectional study and can reflect the experience of nurses at the time of assessment only, and therefore, a causal relationship cannot be established between outcome and its predictors.

6. CONCLUSION

The overall results of this study show that the majority of nurses had poor knowledge and poor practice on postoperative pain management.

Male nurses, working area in ICU and having good practice were main independent associated factors for good knowledge among nurses. In practice: male nurses and having good knowledge of postoperative pain management were main independent associated factor. On the other hand, near half of nurses does not take training on POP management and there is not available pain management guideline and assessment tools in working area.

ACKNOWLEDGEMENT

We would like to acknowledge Jigjiga University, College of Medicine and Health Science, Department of Nursing and Midwifery for their financial support, proper review, and approval of this paper. We also would like to thank the administrators of SHY referral hospital which providing permission to conduct this study. Our sincere gratitude to the nurses who were easily operated with us and agreed to participate in the study. Our Special thanks to data collectors, supervisors, and also subjects who volunteered to participate and take their time to fill the questionnaire.

CONFLICT OF INTEREST

There is no conflict of intere

LIST OF ABBREVIATION &ACRONYMS

ASA	American Society of Anesthesiologist
FMOH	Federal Minister of Health
IASP	International Association for Study of Pain
ICU	Intensive Care Units
NRS	Numeric Rating Scale
NSAIDs	Non-Steroidal Anti-Inflammatory Drugs
OR	Operating Rooms
POP	Post-Operative Pain
SPSS	Statistical Package for the Social Sciences
SHY	Sheik Hassen Yabare
USA	United States of America
WHO	World Health Organization

Reference

1. Aydede M. Defending the IASP definition of pain. The Monist. 2017.;100(4): p. 439-464.
2. Brennan F CD, Cousins M. Pain management: as fundamental human right. Anesthanalgy. 2007.
3. Management ASoATFoAP: an updated report by the American Society of Anesthesiologists Task Force on Acute Pain Management. Anesthesiology .Practice guidelines for acute pain management in the perioperative setting. 2004. 100(6): p. 1573.
4. K.Raksamani WW, P.Siriboon,and N.Pantisawat,. “Pain management after cardiac surgery: ”Journal of the Medical Association of Tailand. 2013.; vol.96,no.7,pp.824–828.
5. Moss E, et al.). A survey of postoperative pain management in fourteen hospitals in the UK. Acute Pain. 2005:p. 13-20.
6. Andrew Kintusae, et,al. Postoperative pain after cesarean section: assessment and management in a tertiary hospital in a low-income country. BMC health survices research journal 2019.

7. Wolde Haimanot , Zeleke, at el, Pain knowledge and attitude: a survey among nurses in 23 health institutions in Western Ethiopia. Gaziantep Med J. 2014:20(3):254-60.
8. Emiru m. assessment of adult postoperative pain management practice among nurses working in addis ababa public hospitals, addis ababa, Ethiopia,. 2015.
9. Girma b. Knowledge, Attitudes and Practices of Nurses in Regard to Post-Operative Pain Management at hospitals of Arsi zonal southeast Ethiopia. 2018.
10. Betty KJ, Kohi TW, Chalo R. Nurses' knowledge of the principles of acute pain assessment and managemnt in critically ill adult patients who are able to self-report Irene Int J Africa Nurse Sci. 2017.
11. Ayenew t. knowledge, practice and associated factors of pain assessment in critically ill patients among nurses working at adult intensive care units of federally administered public hospitals in addis ababa, Ethiopia. 2019.
12. Sazzad Md, Orapiriyaku R. Nurses. Knowledge and Attitudes, and Pain Management Practice of Post-Operative Children. Faculty of Liberal Arts, Prince of Songkla University. 2010 (The 2nd International Conference on Humanities and Social Science).
13. Al-Quliti K AM. Assessment of pain. Knowledge, attitudes, and practices of health care providers in Almadinah Almunawwarah, Saudi Arabia. Neurosciences 2015.
14. Remla. M. WT, & Atsde. F. knowledge and factor associated with pain management practice among nurses. 2017.
15. Hossain S, Wiroonpanich, Wantanee,Orapiriyakul, Rachtawon. Nurses' Knowledge and Attitudes, and Pain Management Practice of Post-Operative Children in Bangladesh. 2014.
16. Adem AO. Assessments of health professionals' knowledge towards post-operative pain management in Asella Teaching and Referral Hospital, South East Ethiopia. 2017.