



ORIGINAL RESEARCH ARTICLE

PAIN EXPERIENCE AND NURSING APPROACHES TO PAIN CONTROL AMONG PATIENTS UNDERGONE ABDOMINAL SURGERY AT TERTIARY HOSPITAL

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ABSTRACT

**Background:** Pain is the most common problem found in postoperative patients. Even with improved and advanced surgical techniques, people still feel some pain and discomfort after surgery.

**Methods:** The descriptive study was carried out to assess pain experience and nursing approaches to pain control among 111 post-operative patients at surgical ward of Manipal Teaching Hospital, Pokhara. The data was collected in the month of May to July, 2019. Wong Baker Pain rating scale and structured questionnaire were used to collect data. The collected data was analysed by using descriptive and inferential statistic.

**Results:** Almost all the patients experienced pain after surgery, the most common site of pain was at surgical incision. Majority (90.1%) of them felt more pain while changing position. Conversely, 88.3% of patients reported least pain during rest. While 55% of them had reported moderate level of pain. Mean severity of pain experienced by patients was  $4.8 \pm 2.4$ . Regarding nursing approaches, 82% of patients told that nurse had frequently asked whether they had pain, 80.2% of them reported that the nurse administered pain killer drugs when they required. However, none of them told non-pharmacological methods such as massage, listening music, imagination to distraction of pain were performed. The significant association was seen in level of pain with post-operative day.

**Conclusions:** The findings of study indicate that the majority of patients experienced pain in the first day of surgery, and it is clear that effective pain management is essential in early day of operation.

INTRODUCTION

Post-operative pain is defined as pain, resulting from surgical procedures or trauma. Postoperative pain management is one of the major challenges in the care of surgical patients.<sup>1</sup> Prevalence of moderate or severe pain in the abdominal surgery group was high (30-55%) on post-operative days 0-1.<sup>2</sup>

Assessing post-operative patient's pain experiences and their satisfaction with pain management is crucial to prevent from further complications. Most of the patients experienced moderate to severe pain within the first 24 hours after surgery and majority (60%) of them were satisfied with pain management.<sup>3</sup> In spite of the availability of analgesic drugs and pain-relieving techniques, pain remains a common problem.<sup>4</sup>

Post-operative pain experience is also affected by previous operation. The severity of pain was higher in patients who had previously undergone surgical procedures than patients with no such history. While using different nursing approaches to alleviate pain, 75.7% of patients reported that a calm and silent environment was provided, 78.6% of them were helped by maintaining a suitable position, 47.6% of them reported that

hot/cold applications were administered.<sup>5</sup>

Pain management is crucial in the post-operative recovery. If there is no proper post-operative pain management, patients may have increased risk of various complications such as chest infection, cardiac problems, anxiety. So, effective pain control is best achieved through a combination of both pharmaceutical and non-pharmaceutical therapies. Nurses are in the front line to witness the patient's suffering and pain. They can play important role to promote comfort and alleviate the pain. Thus, the purpose of this study was to assess postsurgical pain experience and nursing approaches to pain control.

METHODS

The descriptive study was carried out to assess pain experience and nursing approaches to pain control among post-operative patients. The consecutive sampling technique was used to select sample. There were 210 patients who had undergone abdominal surgery in the period of 3 months (May to July 2019). Among them 111 patients who met inclusion criteria were selected as sample. Inclusion criteria were patients older than 18 years admitted in surgical ward for at least 24 hours and

undergone abdominal surgery (cholelithiasis, acute appendicitis, nephrolithiasis, non-functioning kidney etc). Patients who were critically ill, difficult in communication and unconscious were excluded from study. Ethical approval was taken from institutional review committee of Manipal College of Medical Science. Prior to data collection verbal permission was obtained from the participants. Data collection was done with a validated Nepali version of Wong Baker Pain rating scale<sup>10</sup> and structured questionnaire developed by researcher based on reviewed literature. The tool was pretested among 10% of sample. These patients were not included in the subsequent study. The data were collected as early as patients agreed to answer questions at least 24 hours after surgery. Data were collected by face-to-face interviews lasting about 20 min on average.

Wong Bakers Face Pain Rating Scale combines pictures and numbers which was used to rate pain experience. The faces include a smiling, a sad and a crying face. A numerical rating scale is assigned to each of the six faces. Faces are rated from 0 to 10. No hurt = 0, hurts little bit=2, hurts little more=4, hurt even more=6, hurt whole lot=8, hurts worst=10. Data analysis was done using SPSS version 16. Descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics such as chi-square were used for data analysis. The total pain score was categorized as mild pain that scored as <Mean-SD, moderate pain that scored between Mean-SD to Mean+SD and severe pain that score >mean + SD.

## RESULTS

**Table 1: Demographic characteristics of patients**

n=111	
Characteristics	Frequency (%)
<b>Age</b>	
18-40yrs	50(45.04%)
41-60yrs	42 (37.8)
More than 60yrs	19(17.11)
<b>Sex</b>	
Male	54(48.6)
Female	57(51.4)
<b>Educational status</b>	
Literate	73(65.8)
Illiterate	38(34.2)
<b>Occupational status</b>	
Service	18(16.2)
Household work	67(60.4)
Agriculture	16(14.4)
Business	10(9)
<b>Type of Surgery</b>	
Cholecystectomy	30(27)
Appendectomy	28(25.2)
Herniorrhaphy	8(7.2)
Nephrectomy	7(6.3)
Percutaneous nephrolithotomy	32(28.8)
Laparotomy	6(5.4)

Out of 111 patients, 57(51.4%) were female. The mean age of patients was 44.5 years, majority of them were illiterate 38(34.2%), house hold worker 67(60.4%). Regarding type of surgery, 32(28.8%) has undergone percutaneous nephrolithotomy surgery.

Table 2 shows that almost all patients experienced pain after surgery, the most common site of pain was at the surgical incision. Majority 100(90.1%) of them felt more pain while changing position. Conversely, 98(88.3%) patients reported least pain during rest. Mean severity of pain experienced by patients was 4.8±2.4 based on Wong Baker Pain rating scale. While 55% of them had reported moderate level of pain.

**Table 2: Characteristics of postoperative pain experienced by patients** n=111

Characteristics	Frequency (%)
Experience of pain after surgery	111(100)
<b>Site of more pain</b>	
At the surgical incision site	91(82)
Location of drain	15(13.5)
In the back	5 (4.5)
<b>Frequency of pain after surgery</b>	
Occasionally	33(29.7)
Frequently	55(49.5)
Continuously	23(20.8)
<b>Pain affect the activity</b>	
No affect	20(18)
Mild affect	42(37.8)
Moderate affect	45(40.5)
Severe affect	4(3.7)
<b>Activity that increased pain</b>	
Position changing	100(90.1)
Time of dressing	5(4.5)
Any other activity	6(5.4)
<b>Activity that decreased pain</b>	
Rest	98(88.3)
Sleep	9(8.1)
Changing position	4(3.6)
<b>Post -operative day you felt more pain</b>	
On the day of surgery	40(36)
First day of surgery	61(55)
Second day of surgery	10(9)
<b>What you have done to relieve pain</b>	
Tell the doctor or sister	55(49.5)
Assume certain position	6(5.4)
Tolerate the pain	50(45)
<b>Did the pain medication relief your pain</b>	
Complete pain relief	62(55.9)
Moderate pain relief	21(18.9)
Mild pain relief	28(25.2)

**Table 3: Patients' Responses Regarding Nursing Approach applied for Pain Control**

n=111

Characteristics	Yes	No
	Frequency (%)	Frequency (%)
1. Did the nurse inform you before surgery that you would experience pain after surgery	46(41.4)	65(58.6)
2. After the surgical procedure did the nurse frequently ask whether you had pain	91(82)	20(18)
3. Were able to easily inform the nurse that you had pain	95(85.6)	16(14.4)
4. Did the nurse examine painful area by touching	26(23.4)	84(75.7)
5. Did the nurse immediately show responses when you reported having pain	94(84.7)	17(15.3)
6. Did the nurse explain reason for pain	46(41.4)	65(58.6)
7. Did the nurse tell you how long the pain would last	57(51.4)	54(48.6)
8. Did the nurse tell you what to do during movement that cause pain	89(80.2)	22(19.8)
9. Did the nurse administer medication on time when you required pain killer drugs	89(80.2)	22(19.8)
10. Did the nurse provide silence and peaceful environment so you could sleep easily	90(81.1)	21(18.9)
11. Did the nurse assist you into a position that would reduce your pain	41(36.9)	70(63.1)
12. Did the nurse perform massage to relieve your pain		111(100)
13. Did the nurse advise to listen music to relieve your pain		111(100)
14. Did the nurse encourage you to use imagination to help relieve your pain		111(100)
15. Did the nurse monitor the level and relief of your pain	54(48.6)	57(51.4)

**Table 4: Level of post-operative pain experienced by patients**

n=111

Level	Frequency (%)	Mean± SD
Mild	28(25.2)	4.8±2.4
Moderate	61(55)	
Severe	22(19.8)	

Table 5 shows that there is no significant association between level of pain and selected variables such as age, sex, educational status. However only significant association was seen in level of pain and post-operative day ( $p < 0.05$ ).

**Table 5: Association between level of pain and selected variables**

n=111

	Level of pain			$\chi^2$	p-value
	Mild	Moderate	Severe		
<b>Age</b>					
<40yrs	14	24	12	1.88	0.39
≥40yrs	14	37	10		
<b>Sex</b>					
Male	15	29	10	0.35	0.83
Female	13	31	12		
<b>Educational status</b>					
Illiterate	9	22	7	0.2	0.9
Literate	19	39	15		
<b>Post-operative day</b>					
First-post operative day	23	40	9	10.9	0.004*
Second and more post- operative day	5	21	13		

\* Significance level of p value at 0.05

## DISCUSSION

This study attempts to understand post-operative patient's pain experience and nursing approach to alleviate their pain. Present study revealed that almost all patients experienced pain after surgery, majority of them experienced moderate level of pain which is similar with other studies conducted by Fatma<sup>5</sup> and Mwashambwa<sup>6</sup> in which 97.1% and 100% of patients experienced

pain after surgery respectively. In this study the mean severity of pain experienced by patients was 4.8±2.4, which is almost consistent with previous findings by Paudyal<sup>7</sup> in Nepal revealed that mean score of pain was 4.13±2.23.

In terms of location of pain, in this study, 82% of patients said that the most common site of pain was surgical incision which is supported by previous study done by Fatma<sup>5</sup> in which 87.4 %

of patients complained pain in incision area. Regarding activity that increased pain, present study shows that 90.1% of them said pain was increased while changing position, which is consistent with study by Chanif<sup>1</sup> which revealed 85% of patients reported more pain when walking and sitting on chair but present result is contrast with previous study<sup>8</sup> in which only 57.3% of patients said pain increased while getting out of the bed. Since pain is most common in the incision site and increase with activities such as walking and sitting on the chair. It is important to reduce incisional pain and tension by supporting wound with hand or pillow when such activities are performed.

Concerning nursing approaches to pain control, present finding shows that 82% of patients told that nurse frequently asked whether they had pain after surgery, 84.7% told that nurse had responded immediately when they reported having pain, 80.2% said that nurse administered pain killer medicine when they required. In present study 81.1 % patients reported that nurse provided silence and peaceful environment so they could sleep easily which is similar with previous study by Fatma<sup>5</sup> found that 75.7% of patients reported that a calm and silent environment was provided. Since nurses are front line health workers and always busy, they are applying most important nursing measures to pain control such as assessing pain, administering pain killer and ensuring silent environment.

However almost all patients said no one used massage, listening music and imagination technique for relieving pain in present study. This result is almost similar with study conducted by Fatma in Turkey<sup>5</sup> which reported that 100% of patients told massage and listening music are not used for pain control. In this study, there is statistically significant relationship between overall pain level and post-operative day. However no significant relationship was seen with others selected variables such as age, sex, type of surgery, educational status whereas association was seen with type of surgery in finding by Poudyal.<sup>7</sup>

This study was limited to only post-operative patients with abdominal surgery in surgical ward of Manipal Teaching Hospital, so further study can be done in many hospitals with more sample.

## CONCLUSION

This study concluded that the pain assessment, management and nursing approaches are crucial in early hour of post-operative period. Postoperative pain must be managed by the surgical nurse. Pain medication only is not enough to relieve acute postoperative pain. The nurses can complementarily apply non-pharmacological interventions in managing patient's pain, for example supporting of incisional part, proper positioning and massaging. This finding also concluded that nurses frequently asked patients about post-operative pain, administering pain killer drugs when they required, maintaining silence environment but no one is using other non-pharmacological method such as imagination, listening music and back massage to distract pain. So, we recommend that nurses should be given in-service training regarding pain management focusing nursing approaches. Standard forms should be used regarding description of pain and nursing approaches to alleviate patient's pain.

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