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Research Article

A Quasi-Experimental Study on Patient Satisfaction with Nurse-Led Pain Management Interventions and its Compliance in each Shift

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Abstract

Aim: The aim of this study was to reduce the unpleasant and uncomfortable sensations experienced by patients and to monitor the pain management satisfaction level of the patient. This study aims to have a dedicated pain nurse to provide continuous training to the staffs and recognize all patients suffering due to the unsatisfactory pain management and need to use more evidence-based approaches in post-operative pain assessment supported by validated pain assessment tools.

Methods: This was a quasi-experimental, one-group post-intervention-only design. The total study was done in three phases with phase 1 for assessing pain management satisfaction score, phase 2 for early identification and training, and last phase 3 for daily corrective action on pain management with enhancing the use of pain pamphlet in educating patient and family. Discharge patient, post OP patients, and patient admitted with pain their data were gathered using the checklist and through the Bitly link for the satisfaction score.

Results: It was found that the patient satisfaction score had increased beyond the benchmark. The percentage of pain management satisfaction score improved from 77.5% to 90% and above. From the data collected in post-intervention phase majority of the samples, 96.6% stated that the pain management done by the nurses was excellent. About 95.5% of compliance was found toward pain management in each shift by nurses and doctors.

Conclusion: The patients' rating of their satisfaction and the compliance toward pain assessment has increased significantly following the nurse-led pain management program as compared to the levels before the intervention. Furthermore, the program will improve nurses' knowledge and attitude toward the pain perception and the delivery of the pain management through meaningful patient-nurse interactions.

Keywords: Bitly link, compliance, efficacy, implementation, nursing, pain management

Introduction

The most crucial determinant of quality care in the healthcare field is patient satisfaction. When it comes to nursing care, unrelieved pain limits a patient's mobility and can lead to a number of consequences, including deep vein thrombosis, pulmonary embolism, and even pneumonia.

The International Association for the Study of Pain estimates that one in five persons worldwide suffers pain, and one in ten adults receive a chronic pain diagnosis each year.[1,2] and uncontrolled and mismanaged pain affects around two-thirds of hospitalized patients.[3]

Since the health-care environment has been improved since 2001, there has been a greater focus on understanding and measuring patient satisfaction with regard to pain globally.[4]

Post-operative-surgical complication related to insufficient pain control can negatively affect the affected person's welfare

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and even the hospital's performance due to extended common length of stay and re-admissions, both of which increase the price of care.

According to Hutchings,[5] the practice of rounding can facilitate proactive assessment of patient preferences by nurses during their shifts, ensuring accountability, purposeful presence, and therapeutic engagement. The individual prioritized the regular interactions between patients and the nurses responsible for their care, fostering a sense of empowerment among patients to voice their needs, and reducing feelings of helplessness. In addition, the presence of nurse leaders actively seeking daily feedback from patients or delivering timely, constructive feedback to the workforce was emphasized.

At the same time, developed countries are greater concerned with organizing a balance among a powerful remedy for pain management and preventing opiate addiction whereas the lower- and middle-income countries are concerned with inadequacies in pain management.[6-8] Significantly, improper management of pain not only causes unavoidable patient distress but also diminishes patient satisfaction ratings[9-11] which will increase hospital stays, impaired physical feature, delayed healing, and accordingly in the end results in terrible quality of life.[12,13]

Earlier the pain satisfaction score was obtained through a commonplace patient feedback which was submitted at the time of discharge regardless of the pain treatment being presented, this brought about skewed data. Monitoring of pain assessment, reassessment, and its compliance was not giving the suitable picture during the common feedback. Furthermore, no targeted tracking was happening to display specific and applicable cases. No mechanism was present to track patients on pain control as there was no dedicated or trained resource that caused the feedbacks and comments to become generalized as it became part of IP feedback form.

Pain evaluation scores were checked by doctors carrying out open clinical audit. The report of which was being presented in the Medical Record Review Committee at the end of each quarter. This led to loss of opportunity to correct the incorrect assessments.

This led to responses being accumulated from all patients whether or not they were on any pain control remedy. Subsequently, there was a need to solely track patients who had an authentic need of pain assessment and management. Hence, there was a need for actual time monitoring through a specialized person to perceive the non-compliances and accurate the awareness of medical doctors and nurses involved in pain assessment.

Objectives

The objectives of this study were as follows:

- To assess patient ratings of pain management before and after introducing a nurse-led management program
- To assign a pain management nurse
- To devise a module for data collection
- To find the satisfaction percentage post-pain management intervention
- To train all nurses and junior doctors
- To assess the compliance of the pain assessment and management done by doctors and nurses in each shift.

Assumptions

Patient ratings of pain management before and after introducing a nurse-led management program will be improved.

Research question

Does a nurse-led pain management program improve patient's satisfaction with pain treatment information, pain management care provided by nurses, and its medication regimen?

Materials and Methods

Quantitative research approach with a quasi-experimental design with three three-phase cross-sectional survey was adopted. The study was conducted by collecting the data from 1516 patients who met the inclusion criteria from the duration of August 2021 to December 2022 also who were admitted to the inpatient unit of the hospital.

Sample selection criteria

Inclusion criteria

The following criteria were included in the study:

- All post-operative and post-procedure patients who presented the complain of pain
- Patients who were 18 years or older and stayed in the ward or intensive care units (ICU'S) for at least 24 h.

Exclusion criteria

The following criteria were excluded from the study:

- Excluded the neonatal ICU, Ped. ICU, and outpatient department patients
- Patients who were critically ill and unable to respond to questionnaires.

Detailed procedure of data collection

Phase 1 pre-intervention data collection

First, the pain score relevance satisfaction was collected for a specific period of May–July 21 with total samples of 133.

Phase 2 interventional phase

It was assumed that patients would experience better pain management if nurses had adequate knowledge and a positive attitude toward pain management, and if the care was organized, nurse's approach toward patients might be more systematic and proactive.

Thus, the nurse-led pain management program mainly focused on two main components as:

- Development and provision of an in-service education
- Organizing a caring around-the-clock model.
    1. Identifying and training pain management nurses from the ward and ICU'S for specific details and to capture feedback of patients on pain managed by them.

2. All staffs and supervisors participated in an in-service and induction education program headed by nursing leaders, quality heads, anesthetists, and others in this field of expertise. Intensive in-person sessions were followed by facilitated self-learning (distributing, reading materials in soft copies, and that contained the training manual, presentation materials, selected research articles, and reference manuals).
3. Focusing and enhancing non-pharmacological measures for pain management was done.

Phase 3 Post-intervention phase

1. Daily identification and screening of post-OP patients admitted with complain of pain
2. The step also involved the nurse's self-introduction, role in pain management, rounding schedule, personnel involved in rounding, information about the purpose of pain management, and communication.
3. Daily corrective action for pain management was emphasized
4. Enhancing the use of pain pamphlet in educating patient and family.
5. Discharge patient's feedback of post-OP patients and patient admitted with pain.

Nurse rounding was designed based on the principles of 5P's for overall shifts and pain score ratings where done on Wong–Baker Scale for Adults, Behavioral Pain Scale for Critical patients, and FLACC scale for Pediatrics. Rounding was used to structure a nursing pain care system at a fixed time interval to assess and manage patients' pain care needs.

In addition, the principal investigator was accessible to nurses by phone to clarify pain management issues as required during the implementation of the program.

The patient's feedback on pain scoring was collected through a Bitly link and the compliance toward it was enlisted.

Pre-intervention data

(Phase 1)

Ref. Table 1.

Post-intervention data

(Phase 3)

Ref. Table 2.

Post-intervention data

Ref. Table 3.

Results

The data obtained were organized for tabulation and analyzed using descriptive statistics. The findings were tabulated in the following ways:

Table 1 shows the frequency and percentage distribution of patient satisfaction toward pain management pre-intervention. From the data collected from 133 samples in the pre-intervention phase, only 8 (6%) had a review that pain management done was excellent, whereas 75 (56.3%) stated that pain management in patients was only good.

Table 2 depicts the frequency and percentage distribution of patient satisfaction toward pain management post-intervention. From the data collected from 1514 samples in post-intervention phase, the majority of the samples 1464 (96.6%) stated that the pain management was excellent and hardly 49 (3.2%) gave the review as very good.

Table 3 revealed that among a total of 8035 files and patients audited between the months of October 21 and December 22, 95.5% (7598) compliance was found towards pain management in each shift.

This indicates that there is a significant difference in the pain management and its compliance in each shift toward the patient. The patient satisfaction score for pain management increased from 66% to 96.6% proves that the patients were highly satisfied with pain management done by the nurses.

Discussion

The pain management nurse program is a widely used, empirically supported nursing staff development program created to improve the management of pain in hospitals. Although the program has shown encouraging findings, it has not been put to the test using a rigorous exploration design. Health-care practitioners frequently lack knowledge regarding pain counseling and management.

As per the studies,[14,15] it is estimated that knowledge of health-care providers reported lacking in relation to pain assessment and controlling. Study[16] assessed Sri Lankan nurses' attitudes, beliefs, and expertise about cancer pain management and verified that negative conduct toward pain control was associated with knowledge insufficiency and absence of authority. A exploration on Chinese nurses[17] verified that poor knowledge regarding pain resolution is related with negative attitude toward cases concerning pain to be managed. It changed into emphasizing a training program for the nurses that bettered information position and better attitude toward pain control. The practice setting impacts nurse's degree of pain management. An identical look of the study at proved that nurses who were posted in a tertiary setting have enough or more knowledge as compared with their counterparts who were posted in quarter hospitals. The findings of this study can be corelated with the study of[18] that displays the conditions for affected person satisfaction with pain handling specially multiplied throughout the checks following the nurses-led pain management program. In addition to the modifications related to the introduction of the in-service teaching program, similar modifications were observed in relation to patients' satisfaction with pain management, highlighting the importance of nurse interventions. Other exploratory studies have observed that if patients are supported when they need help, they are more likely to be happy as per the study[19] Furthermore, the

Table 1: Frequency and percentage distribution of patient satisfaction toward pain management pre-intervention

Period of data collection	Total samples	Very bad (1)		Bad (2)		Good (3)		Very good (4)		Excellent (5)	
		(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)
May 21	42	0	0	0	0	28	66.6	12	28.5	2	4.7
June 21	35	0	0	3	8.5	16	45.7	12	34	4	11.4
July 21	56	0	0	6	10.5	31	55	17	30.3	2	3.5
Total	133	0	0	9	6.7	75	56.3	41	30.82	8	6

Table 2: Frequency and percentage distribution of patient satisfaction toward pain management post-intervention

Month	Total audit	Very bad (1)		Bad (2)		Good (3)		Very good (4)		Excellent (5)	
		(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)
October 21	62	0	0	0	0	0	0	1	1.6	61	98.3
November 21	58	0	0	0	0	0	0	6	10.3	52	89.6
December 21	36	0	0	0	0	0	0	1	2.7	35	97.2
January 22	56	0	0	0	0	0	0	2	3.5	54	96.4
February 22	56	0	0	0	0	0	0	2	3.1	54	96.4
March 22	63	0	0	0	0	0	0	9	14.2	54	85.7
April 22	54	0	0	0	0	0	0	1	1.8	53	98.1
May 22	60	0	0	0	0	1	1.6	1	1.6	58	96.6
June 22	57	0	0	0	0	0	0	0	0	57	100
July 22	72	0	0	0	0	0	0	0	0	72	100
August 22	64	0	0	0	0	0	0	0	0	64	100
September 22	194	0	0	0	0	0	0	21	10.8	173	89.1
October 22	231	0	0	0	0	0	0	5	2.1	226	97.8
November 22	311	0	0	0	0	1	0	0	0	311	100
December 22	140	0	0	0	0	0	0	0	0	140	100
Total	1514	0	0	0	0	1	0.6	49	3.2	1464	96.6

Table 3: Frequency and percentage distribution of pain score compliance in each shift

Month	Total audit	Total compliance	Percentage of compliance	Percentage of patient satisfaction on pain management study
October 21	601	584	97.17	98.2
November 21	562	539	95.90	98
December 21	396	387	97.72	97
January 22	487	452	92.20	96
February 22	491	468	95.30	99
March 22	577	544	94.20	98
April 22	548	510	93.00	95
May 22	522	514	98.60	92
June 22	629	620	98.50	98.4
July 22	681	624	91.60	98.1
August 22	685	619	90.30	98
September 22	488	460	94.20	96.8
October 22	425	395	92.00	97.7
November 22	527	488	92.50	98.1
December 22	416	394	94.70	98.2
Total	8035	7598	95.5	98.4

present study's findings are supported[20] that patients have higher levels of satisfaction when they receive comfort and proactive responsiveness from nurses. The implicit factors contributing to an increased average satisfaction rating include the responsiveness of staff, the level of care given to pain management, and the assurance provided to patients that their pain and inquiries will be attended to by the nurse.

According to a study,[21] when nurses successfully communicate with them, adequately manage their pain, and give them treatment information that satisfies their needs, patients may be more satisfied. Numerous other studies have discovered a connection between staff-patient interaction and patient involvement in their care, staff response, and patient satisfaction, as stated by researchers.[22]

According to Brennan *et al*.,[23] a human right to effective pain management is growing in popularity. Despite advancements in pain management techniques, the most effective pharmacological and non-pharmacological treatments are rarely employed. The nurse-led team approach to pain treatment has important practical implications since it takes into account the nurses' competency and their ability to anticipate patients' requirements through accurate evaluation.

According to the present study, patients benefit from rounds because they want frequent visits and need to be cared over.

The study involved people with a range of medical conditions and socioeconomic backgrounds. Their experiences with pain and chances for pain treatment may vary depending on the medical opinions used. As a result, their opinions on and satisfaction with pain management vary. It is crucial to do more research that takes such variability into account. Nevertheless, in spite of these drawbacks, the observed changes in patients' satisfaction scores regarding their pain care and compliance show the value of nurse-led pain management programs, which may be implemented in settings where case-centered care is crucial through trained pain managing nurses.

Hence, the result to improper pain care does not depend a lot in developing new anesthetics or strategies, but in establishing a new pain care system to enhance the use of current procedures. This study made a way to analyze the role of nurses in pain control and a vision to have a nurse-led pain clinic in the near future. Furthermore, different researches can be carried out on the epidural lines. These gaps linked could be due to the nursing class which partly covers pain control during academic training. The difficulties raised by this study as a whole highlighted the requirement for additional training in pain management. It is advised that pain counseling be included in nursing undergraduate courses and ongoing training. Similarly, research is needed to break down barriers to pain management among our nurses and evaluate the success of pain resolution programs that have been running.

Furthermore, we can further conduct study to co-relate the duration of hospitalization or types of procedures that the patients had experienced during their hospital stays which might have influenced the pain severity.

Conclusion

In comparison to the circumstances before the intervention, the patient's conditions of satisfaction and compliance toward pain assessment and resolution have greatly improved as a result of the nurse-led pain operation program. The program also improved nurses' attitudes and understanding about how to communicate effectively with patients to reduce pain. The tools employed in this investigation could be applied to periodic reviews of pain management procedures to ensure that the modifications are long-lasting.

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Conflicts of Interest

Nil.

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