

# Nurses' Approach to Pain Assessment and Management in relation to patient Satisfaction at Asella Hospital, Arsi Zone, Eastern Ethiopia

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## Abstract

**Background:** Pain is a personal and subjective experience with few or no objective measurements. Pain has been defined in many different ways by health professionals. Some of the definitions enhance the nurses' ability to assess the patient who is in pain by helping the nurse to focus on specific aspects of pain experience. The nurse may define pain control difficult problem faced in providing total care for individual patients. It is however, one of the most important areas of care because people can't function fully when they are in pain. Thus, the aim of this study was to assess nurses' approach to pain assessment in relation to patient satisfaction at Asella hospital.

**Methods:** A cross-sectional study was conducted in Asella hospital. Convenience sampling technique was applied to select the study subjects. Data was collected by using pretested structured questionnaires from staff nurses of surgical ward and patients admitted in surgical ward.

**Result:** Regarding pain assessment tool practice nearly half of them 28(46.67%) had good practice and 20(33.33%) fairly practiced and the rest poorly practiced 12(20%). 46(38.33%) of patients have moderate pain, 40(33.34%) of patients have no pain and mild pain by each 16.67% and the rest 34 have severe pain. Concerning satisfaction of patients on nursing care majority 48 (40%) of patients were unsatisfied while only 34(28%) were completely satisfied.

**Conclusion:** There was no well-established and need based communication between the nurses and patients. It was suggested that the failure in the special areas; such as pre-information, pain assessment approach to patients and exchange of reports were mainly related to inadequate training in pain assessment and management.

**Keywords:** Assessment, Management, Pain, Satisfaction.

## INTRODUCTION

Pain is a personal and subjective experience with few or no objective measurements. Pain has been defined in many different ways by health care professionals. Some of the definition enhances the nurses' ability to assess the client who is in pain by helping the nurse to focus on specific aspects of the pain experience. The nurse may define pain control difficult problem faced in providing total care for individual clients. It is, however, one of the most important areas of care because people can't function fully when they are in pain (1).

At some point in life, virtually every one experiences some type of pain. Pain is often classified as acute or chronic. Acute pain, such as postoperative pain, subsides as healing takes place. Chronic pain is persistent and is subdivided into cancer related pain and nonmalignant pain, such as arthritis, LBP, and peripheral neuropathy. These authors will draw from the body of knowledge related to chronic pain (2).

Assessment of pain within the context of the nursing process demands the collection of information from and about the patient. Appropriate nursing assessment should be enabling the identification of the problems, the setting of goals, and the implementation of care. The nurse requires intellectual, intellectual and technical skilled combined with knowledge of the wide range of factors that can influence different individuals. Assessing can be described as continuous activity involving observing, interviewing, examining, measuring, testing, and care is planned following assessment and should have goals that are measurable whenever possible, so that the effectiveness of the nursing intervention can be adequately evaluated (3).

Pain is one of the most common and debilitating patient complaints, affecting individual patients, their friends and family, the work force and society in general. Approximately 76.2 million Americans suffer chronic pain and roughly 63% of pain sufferers seek help from their primary care clinicians (4). Pain accounts for 20% of outpatient visits and 12% of all prescriptions (5). Patients with symptoms of chronic pain are seen by clinicians in multiple clinical settings. Most patients who present with pain complaints rate their symptoms as moderate to severe (6).

Persistent pain often causes functional impairment and disability, psychological distress, sleep deprivation (7). Almost 80% of chronic patients report that pain disrupts their activities of daily living and two third indicate that pain has negatively impacted personal relationships (8).

Pain is the most cause of long term disability, with lost work days in the USA. The annual cost of

untreated or undertreated pain to tax payers and employees have been calculated at over \$100 billion per year, in direct and indirect expenses(9).

Research efforts in understanding pain range from the molecular biology of nociceptive pathways to the psychosocial aspects that influence the experience of pain. Although such studies have resulted in significant strides in pain management and quality of life for patients with persistent pain, the evaluation and treatment of pain remains sub-optimal (10).

Pain assessment is a vital component of the nurses' role. The impact of pain on the individual can be overwhelming, can mentally and physically debilitating. Disruption to daily living activities can be severe. For example reduced mobility, loss of sleep and appetite, depression and anxiety. Actions to manage these activities and promote quality of life should be incorporated at the pain assessment stage, as this will give strong indication of how the patient is coping physically and mentally (11). Accurate assessment and documentation can help to chart the multidimensional nature of pain aiding decision making and care planning (12).

A survey done in Missoula country (USA) in Western Montana near Idaho revealed that 86% of population are moderately or extremely fear full of dying painfully. In response to erroneous statements about pain control,36% agreed that pain medication should only be taken when pain is severe, 32% thought that most people taking medication will become addicted over time;42% agreed that it is important to take the lowest amount of medication possible, taking larger doses when pain worsens ,and 42%agreed that people often receive too much pain medication ,These responses revealed that many in Missoula believed common myths about pain management and that some patients in pain were likely to endure pain than to report it ,which contributes to inadequate treatment(12).

According to the study done in JUSH (Jimma University Specialized Hospital) in 2003 A.C. from total of 41 admitted patients none of them reported that they had been given pre information about the possible occurrence of pain and to whom to report during their study in their stay in hospital. None of the study population was assessed by the nurse to identify the incidence and severity of pain .Only 43.9% of them reported to the nurse that they were suffering of pain while 56.1% did not report (13).According to this study patients and nurses perceive pain differently and there is no established relationship between them to manage the subjective, but real occurrence of pain (13).

All too often, nurses do not believe patients self-rating of symptoms and tend to underestimate the amount of pain a patient experiencing. Both nurses and doctors recorded significantly lowered scored for pain than patients did when using the Edmonton Symptom Assessment System .However nurses are in the perfect position to perform pain assessment and to intervene with and evaluate, pain control. Furthermore patients believe that pain relief is one of the most important aspects of nursing care. Nurses relying on their own judgment are un-statistical method of pain assessment as their perception of how much pain the patient is experiencing may different from that of the patient (14).

What is immeasurable is the consequences, neglected pain erodes a patients trust in health care system and it can lead to further health setbacks and increased costs in treatment. Conversely, appropriate pain management can brought about quicker recovery, shorter hospital stays, fever readmission and improved quality of life (15).

One study done at John at Well Children's day surgery ward in Southampton on 228 children who underwent or chidopexy, circumcision and hernia operations and had their pain managed by nurses showed almost 94% were ready for discharge within four hours of return to ward .Among these 47% went home pain free,44% with minimal discomfort(pain score 1) and 10% with moderate discomfort(pain score 2).Thus nurses have an important role in initiating treatment and providing ongoing pain management and support for patients to improve their quality of life(16).But the nurses of JUSH are not using a pain assessment tool and this leads to inappropriate pain management which can lead to immobility, disturbed sleep, impaired immunity, delayed healing, increased sensitivity to pain stimuli and increased health care costs. Therefore it is time to bring the subject of pain, often a taboo topic out in to the open. During the postsurgical period pain assessment must be brief and simple to complete (16). Because choice of intervention, including type of analgesics and dosing, is made based upon intensity, every pain assessment should include this type of measure. Numerous pain intensity measures have been developed and validated. Several tools provide a numeric rating of pain intensity leg.

Visual analogue scale, numeric rating scale (NRS), Simpler tools such as the verbal rating scale, which classifies pain as mild, moderate or severe, also is commonly used. For patients with limited cognitive ability, scales with drawings or pictures are available. The Wong Baker FACES Scale). Patients with advanced dementia require behavioral observation to determine the presences of pain tools such as the PAIN-AD are available for this patient population (16).

A fundamental part of satisfactory pain management is the regular and objective assessment of the patients' pain. The responsibility for this ongoing assessment were generally incorporated to the nursing role therefore this study is significant because the possible outcome include giving direction for nurse in pain assessment management and implementation of a patients pain assessment to the daily care.

The large scale computer assisted telephone survey was done to explore the prevalence, severity, treatment and impact of chronic pain in 15 European countries and Israel. Screening interviews identified respondents aged  $\geq 18$  years with chronic pain for in depth interviewer, 19% of 46,394 respondents willing to participate, refused 46% had pain for  $\geq 6$  months, had experienced pain in the last month and several times during the last week (17).

In-depth interviews with 4839 respondents with chronic pain (about 300 per country showed 66% had moderate pain, 34% had severe pain, 46% had constant pain, 54% had intermittent pain 59% had suffered with pain for 2 to 15 years, 21% had been diagnosed with depression because of pain. 61% were less able or unable to work outside the home, 19% had lost their job and 13% had changed jobs because of pain. 60% visited their doctors about their pain 2-9 times in the last 6 months. Only 2% were treated by pain management specialists. One third of the chronic pain sufferers were not being treated. Two third used non medication treatments like massage (30%), physical therapy (21%), and acupuncture (13%) (17).

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Many Americans report chronic pain and disabling pain, even in the absence of identifiable clinical disorders. They first examine the prevalence of pain in the order US Population using the health and retirement study (HRS). Among 50-59 year females, for example pain rates ranged from 26% for college graduates to 55% for those without high school degree. Occupation, industry and marital status attended but did not erase these educational gradients. Second, they used a study of patients with lower back pain and sciatica arising from in vertebral disk herniation (IDH). Initially, nearly all patients reported considerable pain and discomfort, with sizeable fraction undergoing surgery for their IDH. However base line severity measures and surgical or medical treatment explained little of the variation in 10 years out comes (18).

By contrast, education exerted a strong impact on changes overtime in pain; just 9% of college graduates reported leg or back pain always or almost always after 10 years, compared to 34% for people without a high school degree. This close association of education with pain is constant with recent research emphasizing the importance of neurological and perhaps economic factors in the perception of pain (18).

Low back pain (LBP) is the most prevalent musculoskeletal condition and the most common cause of disability in developed nations (19). The life time prevalence of LBP (at least one episode of LBP in a lifetime) in developed countries is reported to be up to 85% (20). Low back pain results in significant levels of disability producing significant restrictions on usual activity and participation, such as an inability to work (21). Furthermore, the economic social and public health efforts of LBP appear to be increasing LBP incurs billions of dollars in medical expenditures each year (22) and this economic burden is of particular concern in poorer nations such as Africa, where the already restricted health care funds are directed toward epidemics such as HIV/AIDS (20).

The literature on the epidemiology of LBP is accumulating, but for the most part, studies are restricted to high income countries, therefore little is known about the epidemiology of LBP in the rest of the world (23). In developed countries such as the United States of America (USA) and Australia, LBP prevalence ranges from 26.4% to 79.2% (24). There appears to be general albeit anecdotal assumption that LBP prevalence in Africa is lower than that reported in the developed nations (24).

A systematic review in to the global prevalence of LBP by Walker, 2000, identified that of the 50 included studies, only 8% were conducted in developing countries, with only one study conducted in Africa (25). The lack of information on the prevalence of LBP in developing countries is therefore a significant short coming (26), particularly as it is predicted that the greatest increases in LBP in developing nations such as Africa may arrest understanding prevalence and causality of LBP in developing nations such as Africa may assist understanding of global LBP causes and management (27), and will determine whether the factors differ in socio cultural characteristics (27).

One study done in 2 public hospitals in George Town and New Amsterdam, Guyana, by Ameta AO, Samaro. LN (1999) on 90 patients who had major lower abdominal surgery either low segmental cesarean section (n=42) or abdominal hysterectomy (n=46) found that, firstly all the patients reported pain around the operation site during the first 24 hours of surgery. In the study 10% indicated that this was mild pain while 30% and 60% reported experiencing pain of moderate to severe intensity respectively (28).

According to the study of the 90% who felt moderate to severe pain 26% informed the nurse while 74% did not, the reason identified for not informed the nurse were 47% could bear the pain, 31.5% were afraid of disturbing the nurse, 15.7% expected that the nurse knows when to give what is prescribed, and 5.8% for miscellaneous reasons. Of 26% who informed the nurse, only 19% received any analgesic medication while 81%

received none. the nurses' response was also studied for why the medication was not given and the patients replied as, the injection was to be administered at specific time, the injection was not immediately available and she would be back to administer the medication ,but the nurse did not return back to them .the study also revealed that, there were no documentation or records of patient complaints on nurses' notes and none was reported to doctors .Doctors seldom assess or document pain states in the notes during wards round (29).

One study done at John at Well Children's day surgery ward in Southampton on 228 children who underwent or chidopexy, circumcision and hernia operations and had their pain managed by nurses showed almost 94% were ready for discharge within four hours of return to ward .Among these 47% went home pain free,44% with minimal discomfort(pain score 1) and 10% with moderate discomfort(pain score 2).Thus nurses have an important role in initiating treatment and providing ongoing pain management and support for patients to improve their quality of life(16).

Another study carried out in Halifax general hospital west Yorkshire, England (1995 ) by Caroline mackintosh on 160 patients who had undergone major surgery under general anesthesia for various types of operations .From her study she found that 98(92.4%) remembered being given information,3(28%) were unsure and 5(4.7%) stated categorically that they had received no information about their procedure prior to surgery .For the assessment of pain level she had used the Mc Gill pain questionnaire for verbal intensity scoring found that 7(7%) said none, 18(17%) mild, 51(48%) discomfort, 14(13%)distressing, 6(6%) horrible and 10(9%) excruciating type of pain her study on post-operative analgesia at the same period shows that only 23(21.72%)of the patients received intramuscular analgesia as their primary method of pain control(30) .

A study done in JUSH by Yohanis Ayalew in 2003 shows from the total of 41 admitted patients none of them reported that they had been given pre information about the possible occurrence of pain and to whom to report during their stay in the hospital .None of the study population was assessed by the nurse to identify the incidence and severity of pain .Only 18(43.9%) of them reported to the nurse that they were suffering of pain, while the rest 23(56.1%) did not. On memorial pain assessment 34 (80.92%) were express moderate to severe pain. Seventeen (41.5%) patients got help from nurses. Twenty one (51.9%) nurses were fairly knowledgeable while 11(26.82%) and 9(21.95%) were not knowledgeable and knowledgeable respectively.(13)

The purpose of this study was to assess nurses' approach to pain assessment and management in relation to patient satisfaction at Asella Hospital.

## **METHODS, MATERIALS AND SUBJECTS**

### **Methods**

This study was conducted at Asella hospital in Asella town which is located at 175 kms south west of Addis Ababa. Institution based cross sectional study was conducted. All nurses working in surgical unit were used as the source population for nurses and all surgically admitted patients were source population. All sampled nurses working in surgical unit and sampled patients surgically admitted patients were used as the study population.

### **Inclusion and Exclusion criteria**

#### **Inclusion criteria**

- ✓ Nurses working at surgical ward.
- ✓ Surgically admitted patients.
- ✓ Nurses or patients who are willing to participate.

#### **Exclusion criteria**

- ✓ Nurses or patients who are medically unfit.
- ✓ Nurses who are at management site like head nurses.
- ✓ Nurses who are recently recruited(less than one month).

All nurses working in surgical wards and patients admitted there who had pain report during data collection were included using convenience Sampling technique.

Data was collected by using self-administered questionnaire by three colleagues who completed grade 10 and they were selected by lottery method and their willingness and they have trained on data collection. Structured self-administered questionnaires were given to the participant nurses and interview was used for admitted patients by data collectors who have half day training. This is brief on the aim of the study how to enable the respondents to fill the pain rating, scale, and how to fill out the questionnaire before they started data collection. They have also trained how they help by giving clarification to those patients who faced difficulties in filling the rating scale. Data was collected using self-administered questionnaire and face to face interview and review of evidence from charts of patients.

### **Data Analysis and Presentation**

The collected data was edited, cleared and analyzed by using master sheet. Results were presented in tables,

graphs and charts. In addition cross-tabulation and statistical test was done to look for any association using test. Finally, interpretation was done using frequency distribution and percentage.

### ***Ethical Consideration***

Data collection was begun after permission taken from the student research project office of Jimma University and official of Asella hospital, more over the purpose of the study was explained to the respondents and significant other, and data was collected after assuring their willingness through gaining informed consent. Confidentiality was assumed by the PI that the collected data remained anonymous.

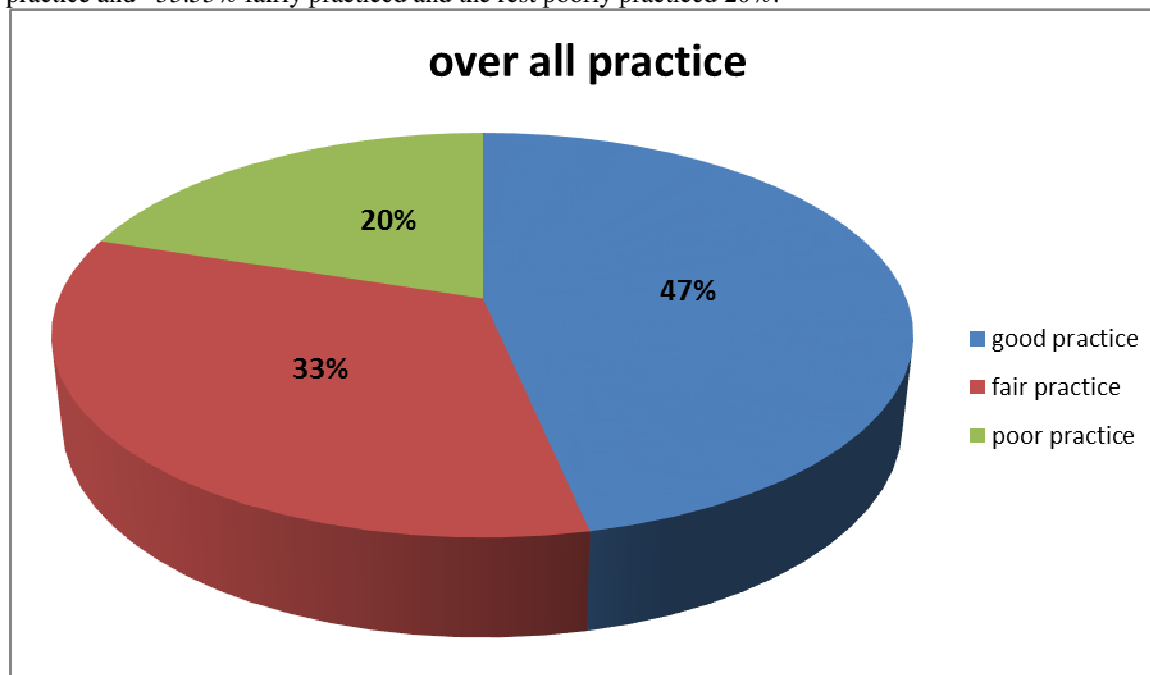
## **RESULT**

### ***Pain assessment tool***

From a total of nurses who were working at surgical site, 86.67% of nurses have routinely used method in the ward while the rest 13.33% have no method to asses patient's pain. While 53.38% of them used visual analogue scale and 46.62% of them used verbal rating scale. The reason of nurses who were not using pain assessment was lack of knowledge and being too busy which accounts 50% equally.

Regarding frequency of pain assessment, 60% of respondents told it should be always while the rest 40% says it should be sometimes and for this they reason out medical diagnosis should be known first 66.67%, not ordered and being too busy each account 16.67%.

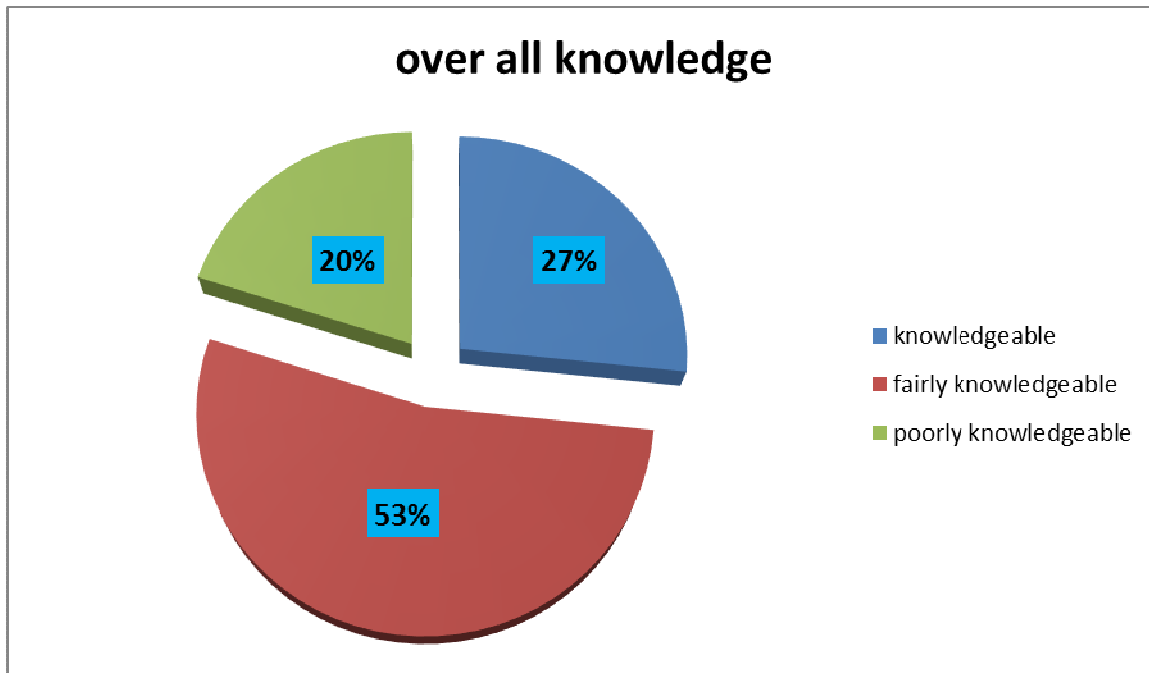
As to how often they assess patients' pain 60% of them asses sometimes while the rest 40% asses of always. Nurses who do not asses always reason out nurses can use their judgment 77.78% and 22.22% being too busy. Regarding recording of patients report of patients and their intervention of patients chart's 66.67% record always, 26.67% sometimes and 6.67% never record. Reason for not recording always was 46.15% diagnosis is enough, being busy, no record available each account 15.38%. Regarding intervention done for patients who complain pain, 40% give analgesics, 33.33% report to doctors, 13.33% of them reassure verbally while the rest massage and other also position. Regarding pain assessment tool practice nearly half of them 46.67% had good practice and 33.33% fairly practiced and the rest poorly practiced 20%.



**Fig 1- distribution of nurses by their level of practice on pain assesment and management at Asella hospital, Asella town, Arsi zone, Eastern Ethiopia, 2015**

### **Over all knowledge of nurses in pain assessment and management**

Regarding their knowledge level among the nurses majority of them 53.33% were fairly knowledgeable while the rest 26.67% and 20% were knowledgeable and poorly knowledgeable respectively about pain assessment and management



**Fig 2- distribution of nurses by their level of knowledge of pain assesment and management atAsella hospital, Asella town, Arsi zone, Eastern Ethiopia, 2015.**

From the total of 120 respondents majority of them, 96(80%) have informed about their pain always while the rest 24(20%) patients have informed about their pain sometimes. 74(61.7) of respondents have been informed about pain relief method always and the rest 46(38.3%) have been informed sometimes.92 (76.67%) of respondents report about suffering from pain always, 26(21.67%) report sometimes while the rest 2(1.67%) never report. Response given by nurses for patients who report always were, 86(93.47%) have got analgesics at least once and 6 (6.52%) said wait but didn't come back. The reason for not reporting always reflected by respondents were, nurses are too busy 22(91.6%) and could not find nurses 2(8.4).

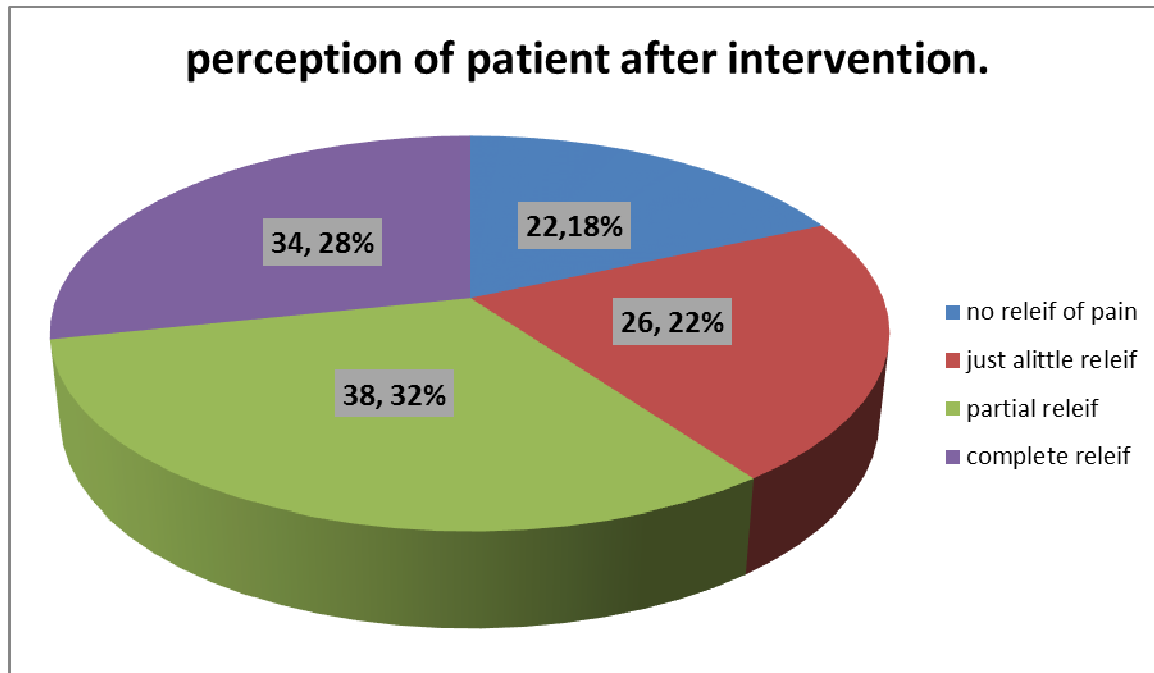
Regarding ordered analgesics, 102(85%) of patients have ordered analgesics on their chart while the rest 18(15%) haven't. out of the ordered analgesics, 78(65%) was tramadol followed by diclofenac 20(16.67%)and the rest was paracetamol 8(6.67%). 100(83.33%) of patients got analgesics exactly as ordered always while the rest got some times. Nurses also have their own pain relief measures as 114(95%) of respondents. Out of these, 36(30%) heat or cold application, 34(28.3%) positioning, 26(21.67%) reassurance and the rest 18(15%) was massage.116 (96.67%) of patients having no special record by nurses concerning their pain.

**Table4: Distribution of admitted patients' responses to pain assessment and management by the staff nurse at Asella hospital, Asella town, Arsi zone, Eastern Ethiopia, 2015.**

	Intervention done by nurses	No	%
1	Pre information	16	13.33
2	pain relief measures	84	70
3	Patients report attended	4	46.3
4	Note written on the chart	8	6.67
5	Pain assessment	8	6.67

***Incidence and characteristic of pain.***

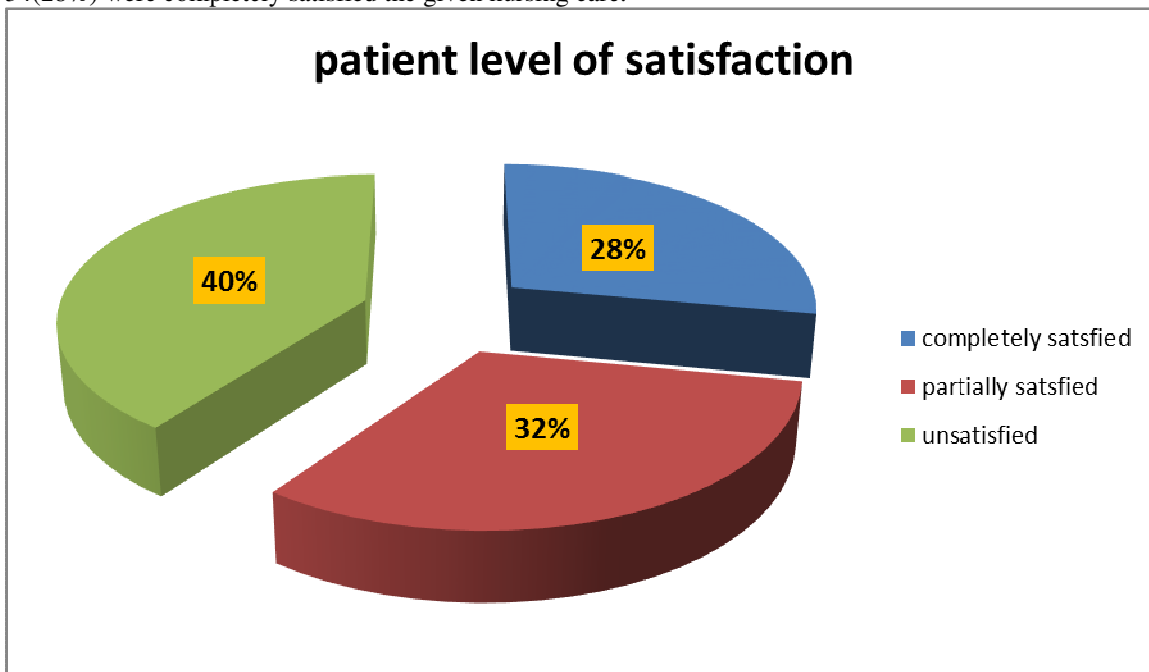
Regarding pain intensity record, 46(38.33%) of patients have moderate pain, 40(33.34%) of patient s have no pain and mild pain by each 16.67% and the rest 34 have severe pain. Depending on patients selection of adjective rating scale, 36(30%) of patients have mild pain, 30(25%) have just noticeable pain, 18(15%) had moderate pain and 18(15%) have severe pain 16(13.33%) have no pain and the rest 2(1.67) have weak pain. Regarding perception of pain after intervention, 38(31.67%) of patient have partial relief (Figure 3).



**Fig 3- distribution of patient perception of pain after intervention at Asella hospital, Asella town, Arsi zone, Eastern Ethiopia, 2015.**

**Patient level of satisfaction for given nursing care**

Concerning satisfaction of patients on nursing care majority 48(40%) of patients were unsatisfied while only 34(28%) were completely satisfied the given nursing care.



**Fig 4 distribution of patients by their level of satisfaction at Asella hospital, Asella town, Arsi zone, Eastern Ethiopia, 2015.**

**DISCUSSION**

As it was seen in the introduction and literature review, unrelieved pain can be harmful to recovery, leads to abnormal anatomy and interfere with quality of life. However, it remains one of the most neglected areas of effective treatment and intervention.

The results of this study revealed that the incidence of moderate to severe pain was 80(66.67%) among the study population. This finding is similar to the study done in Halifax general Hospital (England), by Caroline

Mackintosh which showed 76% incidence of moderate to severe pain among patients who had under gone surgery (30).The study also agreed with the study done at JUSH in 2003 by Yohannes Ayalew which showed 80.92% of patients had moderate to severe pain (13). This might be due to similar status of the study area in which they were zonal town and peoples were almost have similar life hierarchy.

When we compare these findings with the study done in Guyana by Samaro which showed 90% of the participants had moderate to severe pain (29). This difference may be due to different sample size of the study population.

Another important factor which should be considered is patient's reports of pain. In this study 92(76.67%) of admitted patients reported complain of pain to nurses. From these patients 86(93.47%) have got response/help from the nurses. These findings shows grater report of pain and greater nursing response or help as we compare with the study done by Yohannes in JUSH which showed 43.9% patients reported their pain and 41.5% got help from nurses (13). These indicate majority of nurses take measures based on patients report of pain rather than by their own.

The study also revealed that 48(40%) of patients reported that they are unsatisfied after intervention. These findings disagreed with study done in well children's day surgery which showed only 10% of patients were unsatisfied (16). This dis agreement was may be due to sample size difference and also the set up difference.

According to this study majority of the nurses, 8(53.33%) were fairly knowledgeable on pain assessment and management. This finding was almost similar with the study done in JUSH hospital by Yohannes which showed 21(51.2%) were fairly knowledgeable.

Although this study was the first of its kind from Asella Hospital, sample collection was delimited to this Hospital. Had the sample collection involved many hospitals of the country by considering more number of study participants, it would have further strengthened the current findings. Despite these limitations, the current study generated valuable data to be used for immediate intervention besides serving as a baseline for further study.

## **Conclusion and Recommendation**

### ***Conclusion***

In this study, the majority of the nurses 73.33% were not knowledgeable on pain assessment and management while about 53.33% were not good on pain assessment tool practice. Concerning the patients, 38.33% of them have moderate pain and 40% of them were unsatisfied.

### ***Recommendation***

Based on the study findings the following recommendations were forwarded:

- To provide effective program of pain relief for patients, the nurses must be fortified with the knowledge of the complex psychosocial and cultural factors of patients and skills training to assess each patient's status of pain. Therefore the training institutions should consider these factors and include pain management as vital topics in their curriculum so that it could be routinely measured and reordered as one of the vital signs.
- Nurses at any level in the hospital should have the concepts of the total person and establish best relationship to avoid wider gap of communication among themselves and patients they serve
- The leaders of the hospital are responsible to improve these nursing activities through regular and consistent monitoring and evaluation of the nursing care quality.
- All nurses have to record every activities performed for the patients.
- The attempt of Asella hospital administrators to resolve prominent shortage of supplies for provision of quality nursing care through discussion with staffs and the higher officials mandatory.

### **Competing interest**

The authors declared that they have no competing interest.

### **Authors' contributions**

AN was fully involved in all phases of the study: research design, data collection and data analysis, interpretation, and write-up of the manuscript; GG involved in designing of the study proposal and critically revised the manuscript for publication. Both authors read and approved the final manuscript.

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