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Pain assessment and management in the critically ill unconscious patient in the adult intensive care units

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CHAPTER 5

SUMMARY, MAIN FINDINGS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This final chapter presents the summary of the study, main findings, limitations and recommendations for clinical practice, intensive care nursing education and further research.

5.2 SUMMARY OF THE STUDY

The purpose of the study was to describe the parameters identified by intensive care nurses that can be used to assess pain in the critically ill unconscious patients' in the adult intensive care units and whether these parameters are considered by the ICU nurses when managing the unconscious patient's pain.

The objectives of the study were:

- To describe the parameters identified by ICU nurses that can be used for assessing pain in unconscious patients.
- To determine wherether these parameters are considered by ICU nurses when managing the unconscious patient's pain

5.3 MAIN FINDINGS

The demographic data of forty nurses (n=40) working in the intensive care unit for six months or more was collected. They were then asked to complete a Likert–type questionnaire consisting of ten questions related to parameters that could be indicative of pain in unconscious patients **(**refer **Annexure A).** This formed the first part of the study.

A demographic data and prospective record review of the unconscious patient's ICU chart was then undertaken for the first 48 hours of admission **(**refer **Annexure B)** and formed part two of the study. A comparison was then undertaken between part one and two to see if the parameters the ICU nurses identified as being indicators of pain in the unconscious patients were considered in their management of the unconscious patients pain. All the nurses in the study had the experience of working in the ICU for six months or more. The main findings of the study are as follows:

- Of the forty nurses surveyed in the study, 65.0% were registered nurses with no formal ICU training and 35.0% were trained and registered with SANC as intensive care nurses.
- Of the 40 nurses, 77.5% worked on day shift and 22.5%worked on night shift.
- Mean years of nursing experience of the nurses was 11.2 years and nurses with the nursing experience of 1-5 years formed the largest number of nurses in the study (27.5%).
- Nurses with ICU experience between 1-5 years formed the largest number of ICU nurses in the study (55.0%)

- Of the responses elicited from the ten questions asked in the questionnaire **(**refer **Annexure A),** 90.0% of nurses agreed that raised BP, 37.0 % that pyrexia, 92.5% that increased respiratory rate, 17.9% that dilated pupils and 70.0% that increased heart rate could all be indicators of pain in the unconscious patient. 57.5 % also disagreed that patients that are sedated require less analgesia than those not sedated. 66.7% agreed that smaller doses of analgesia frequently, are more effective than large doses less frequently. 47.5% disagreed that patients with GCS of less than 4/10 require analgesia less often. 85.0% of nurses disagreed that haemodynamically unstable patient should not be given analgesia and 85.0% agreed that pain should be assessed every time before administration of analgesia.
- Of the 40 patients in the study, 80.0% were males and 20.0% females.
- Patients between the ages of 18-36 years formed the largest number of patients in the study (47.5%).
- Patients with head injury from trauma formed 45.0% of the unconscious patients surveyed.
- Most of the patients (75%) were on morphine intravenously, 10.0% on panado and 15.0% on DF 118.
- The most used route for the administration of analgesia was the intravenous route (75.0%).
- All the 75.0% of patients on morphine titration were also prescribed for dormicum titration.
- Significant increases (events) in heart rate (62.5%), blood pressure (80.0%), temperature (22.5), pupil size (17.5) and respiratory rate (87.5%) occurred in the patients nursed by the nurses that agreed that raised heart rate, blood pressure, pyrexia, dilated pupils and increased respiratory rate, dilated pupils could all be

indicators of pain in the unconscious patient, pain medication was not given by the nurses in the hour of these increases or events.

- Pain medication was given strictly according to prescription by 45.0% of ICU nurses, 42.5% gave it when they thought it was necessary, 10% of ICU nurses withheld pain medication from the patients most times of the day or night and 2.5% did not give any pain medication at all.
- There was no significant difference in the pain management categories of ICU trained and untrained nurses (p=0.058). Nurses on day or night shift did not also differ significantly in their management of the unconscious patients pain (p=0.071)

Most intensive care nurses have a good idea about parameters that could be indicative of pain in unconscious patients, since these patients are unable to talk, that is the only way nurses could determine that they are in pain and give them analgesia. Though pain may not be the only cause of elevated vital signs or parameters in unconscious patients, it needs to be ruled out first and other treatments carried out if they remain elevated.

5.4 LIMITATIONS OF THE STUDY

- A significant limitation of this study was the use of only physiological parameters for pain assessment and not behavioural. It was the researcher's intention from the proposal stage of this study to compare the responses of ICU nurses to a record review of the patients ICU chart to determine if the responses influence the management of the unconscious patient's pain. Since behavioural parameters are not routinely recorded on the ICU charts in South Africa, it was thought that a

comparison will be challenging. It was however realised later during the detailed literature review and data analysis that the use of behavioural and physiological parameters go hand in hand in unconscious patients' pain management. The use of both parameters would make analysis easier and more comparative to international studies.

- The findings of this study could be applicable to most ICUs in the public sector but cannot be generalized since education about pain management and translation of that into practice could be different in every ICU depending also on unit protocols and prescriptions.
- Another limitation of the study is the number of nurses involved (n=40) in the study and the fact that only one academic hospital was used. A large number of nurses and patients from more hospitals could make it possible to generalize the results of the study.
- Although all the parameters in the questionnaire **(**refer **Annexure A)** are defining pain, some nurses thought a few of the questions especially the negative questions were confusing and took a long time in coming up with an answer though a pilot study was conducted and the instrument tested successfully.
- The parameters in the questionnaire could not only be indicative of pain in the unconscious patient but can also be related to other signs of discomfort, disease condition or anxiety experienced by critically ill patients.
- Prospective record review of patients' records yielded a lot of information which made it difficult for statistical analysis thus parameters should be limited to significant ones and instead of 24-48 hours. The first 24 hours or second 24 hours will make it easier for analysis.

- It was observed during data collection that ICU nurses tend to give pain medication during procedures such as suctioning and bed baths which are also recorded on the ICU charts although this was not included in the data collection in this study. Further studies must therefore consider the inclusion of such procedures.
- The data collection instrument was developed by the researcher for this study. It was therefore being used for the first time and needs to be reviewed for future studies.
- The scope of the research was limited by its nature which was done in partial fulfilment of the requirements of the degree Master of Science (MSc) Nursing. As such, it is a first level non-experimental, descriptive, prospective and comparative study. A comparative study over a longer period was not done at this stage but the issues identified are vitally important and could form a basis for future studies.

5.5 RECOMMENDATIONS ARISING FROM THE STUDY

Providing physical comfort and pain relief for the critically ill patient is a very important factor in optimizing their outcome. Scope of Practice for Registered Nurses R2598 by the South African Nurses Council (SANC, 1984) states that it is the duty of the registered nurse to diagnose the health needs and execute treatment or medication prescribed by a registered person and monitoring of patient's vital signs of his reaction to disease conditions.

It is thus imperative that intensive care nurses are suitably skilled and educated to provide adequate pain relief for critically ill unconscious patients who will lead to improved patients' outcome and shorter hospital stay.

In an attempt to improve the quality of intensive care nursing in the public sector, specific recommendations and guidelines are made in relation to the professional support and improving pain assessment and management in critically ill unconscious patients.

5.5.1 Recommendations for Clinical Practice

The implications of findings for clinical practice is based on the inability of intensive care nurses to provide adequate pain relief for critically ill unconscious patients that will enhance their chances of recovery and reduce the time spent in the ICU and cost involved in their treatment since their knowledge about parameters that are indicators of pain does not translate into practice.

Considering the adverse effects of inadequately managing patients' pain, it is important for intensive care nurses to be educated in effective pain management practices in the clinical setting. The ICU team (doctors, nurses) should consider:

- Developing clinical guidelines for assessment of pain for unconscious patients putting into consideration the parameters that could be indicative of pain in unconscious patients.

- Developing clinical guidelines for pain management in unconscious patients based on the finding that knowledge about parameters that could be indicative of pain in the unconscious patient does not influence pain management by ICU nurses.
- Developing protocols for unconscious pain management for each ICU considering the special needs of patients in those ICUs when it comes to pain assessment and management.
- Making pain the 'fifth vital sign' thus making provision for documentation of pain assessment and management on ICU charts.
- That procedures are performed often in ICUs and because so many of them cause pain, clinicians who expect that patients will have pain can prepare the patients by using pharmacological and non-pharmacological methods.
- That pain must be assessed and treated regularly since smaller doses of analgesia often is more effective than larger doses less often. There is also the need to reassess the patient after giving analgesia to see if it has been effective. Therefore pain assessment and reassessment must form part of an ICU nurse's routine.

Nurse Managers in ICUs should ensure that the above protocols and guidelines are adhered to by ICU nurses and regularly supervised to make them a part of everyday assessment and management of patients to ensure that adequate pain management is given the attention that it deserves especially unconscious patients who cannot verbalise their pain.

5.5.2 Recommendations for Intensive Care Nursing Education

- The fact that a significant number of ICU nurses disagreed that the parameters could not be indicative of pain though they are supported by literature raises the need for education in the ICU about pain assessment and management especially in unconscious patients.
- Although findings also indicated that ICU nurses know about pain assessment and management in unconscious patients that does not translate into practice. It is thus important to ensure that continuous education of nurses on giving priority to pain management is emphasized.
- Intensive care nurses and educators should work closely to ensure that the curricula for ICU training for nurses gives pain the priority that it deserves. Pain should be considered as the 'fifth vital sign' and the importance of adequately assessing and managing pain emphasised during the training of ICU nurses.
- Practising ICU nurses must also be given the opportunity to go on refresher and short courses or seminars on pain assessment and management and clinical instructors must ensure that pain assessment and management especially in unconscious patients forms part of clinical skills assessment for both ICU nurses and students.

A study of 91 ICU nurses by Aslan et al, (2003), with the average clinical experience of the 5.4 years suggested that the nurses were professionally experienced but had minimal understanding of pain management and control. Of the 91 nurses, 14.3% (n = 13) had been exposed to instructions in these areas and training was limited to two hours only. The above finding is in agreement with that of other studies that have reported that ICU nurses

have limited knowledge of pain and the actions of analgesics and are ineffective in pain assessment (Brett, 2001; Libreri, 1995).Nurses must know the consequences of poorly managed pain through education so as to give it the priority it deserves.

5.5.3 Recommendations for Further Research

- No studies were found on pain assessment and management in the critically ill unconscious patient in the intensive care units in South Africa. A follow-up on this research must include a bigger population of patients and nurses so that the results could be more generalised. This research was also done in only one academic hospital so involvement of more hospitals is recommended.
- A qualitative approach which will include interviewing nurses to know their views about parameters they use in assessing pain in unconscious patients and problems they encounter in pain assessment and management in unconscious patients is recommended.
- The specific characteristics of patients in the different ICUs and their specific needs for pain medication must also be put into consideration.
- The instrument used in the study is being used for the first time and may have to be revised and problems encountered corrected to make future research easier.

5.6 CONCLUSION

In conclusion, this research report has highlighted parameters identified by intensive care nurses that can be used in assessing critically ill unconscious patients' pain and if parameters identified influenced their pain management. These findings will be of use in ICUs in the delivery and evaluation of optimal intensive nursing care and in determining curricula for training of ICU nurses.