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**A study to assess the pain level of the critically ill patients admitted in ICUs and the nurse's perception on pain of critically ill patients in selected tertiary care hospital, Udupi district.**

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## "ABSTRACT

A study to assess the pain level of the critically ill patients who are unable to communicate and the perception of the nurses regarding the pain of the critically ill patients admitted in tertiary care hospital of Udupi district, Karnataka was conducted by Ms. Chhanda Chakraborty in partial fulfillment of the requirements for the award of Master of Science in Nursing at Manipal College of Nursing Manipal, MAHE.

The objectives of the study were to assess the critically ill patients' level of pain during positioning, and endotracheal suctioning procedures as measured by the BPS, the perception of the staff nurses regarding the pain experience of the critically ill patients and communication pattern of the health care providers while performing the selected procedures.

The conceptual framework is based on "A Conceptual Model of Pain Assessment for non-communicative persons with dementia based on the pain theory".

Quantitative research approach with descriptive survey design was adopted. The sample consisted of unconscious and/or sedated patients on mechanical ventilator admitted in the medical ICUs and the staff nurses working in the medical ICUs of Kasturba Hospital (KH), Manipal.

The data collection instruments were personal profile of the critically ill patients, demographic proforma of staff nurses, standardized behavioural pain scale (BPS). There were physiological parameters and perception scale, developed by the researcher was also utilized to gather data. Administrative permission was taken from Dean, Manipal College Of Nursing, Manipal, Medical Superintendent, Nursing Superintendent, HOD of Medicine Department, ICU

Intensivist, Kasturba Hospital, Manipal, Institute Research Committee, MCON, Manipal, Institute Ethical Committee, Kasturba hospital, Manipal, Assent from the family members of the critically ill patients, Consent from the nurses working in the Medical ICUs, Kasturba Hospital, Manipal was obtained prior to the study.

The data was analyzed using SPSS version 16.0 package. Descriptive as well as inferential statistics were used to analyze the data.

The study findings revealed that majority of the participants were in the age group of 41- 66 and most of them (68%) were male. Majority had (32%) both diabetes and hypertension as premorbid illness and maximum of participants (42%) were having diseases of the respiratory system. Out of 100 critically ill patients only (3%) received sedatives. Duration of mechanical ventilation accounted for 3-5 days among 38% of the critically ill patients.

Majority of the nurse, 39 (62.9%) belongs to the age group of 21- 30 years. All (100%) of were female and among them 29(46.8%) had a GNM qualification . Most of the nurses, 38 (61.3%) had the experience of 1-5years in the ICU.

The cumulative mean BPS score was 3.73 (SD 0.54) before positioning and 4.15 (SD 0.74) before endotracheal suctioning which has been increased to 6.53 (SD 0.58) during positioning and 7.90 (SD 0.76) during endotracheal suctioning followed by decrease in pain after (4.90, SD 0.72) positioning and (5.10, SD 0.73) endotracheal suctioning.

Most of the patient (56%) had no pain on day one before positioning but majority (64%) of them had moderate pain on day one before endotracheal suctioning. On day two 60% and 80% of the patients had moderate pain before positioning and endotracheal suctioning respectively.

All the patients (100%) had moderate pain during both the procedures for all two days. After the procedures (92 %) and (94%) of the patients had moderate pain one first day respectively for positioning and endotracheal suctioning and on the 2nd day (94%) and (97%) of the patient had moderate pain for positioning and endotracheal tube suctioning respectively.

There was an increase in mean systolic BP (134.52), mean diastolic BP (76.61) and mean heart rate (99) during positioning compared to before positioning (mean SBP 128.44, mean DBP 72.33, mean HR 95.87) and after positioning (mean SBP 128.81, mean DBP 72.34, mean HR 24.39) positioning. There was an increase in mean systolic BP (131.52), mean diastolic BP (76.7) and mean heart rate (100.10) during endotracheal suctioning compared to before (mean SBP 126.10, mean DBP 72.09, mean HR 97.17) and after (mean DBP 132.44, mean SBP 72.14, mean HR 97.41) endotracheal suctioning. Data also shows that mean oxygen saturation decreased (95.13) during positioning and (89.075) during endotracheal suctioning compared to before and after (97.08, 94.28) positioning and (96.44, 94.075) endotracheal suctioning. Mean Respiratory rate (24.93) increased during positioning and decreased (22.75) during endotracheal suctioning. There was an increase in mean systolic BP, diastolic BP and heart rate during the selected procedures compared to before and after the procedure and oxygen saturation decreases during both positioning and endotracheal suctioning compared to before and after the procedures. Respiratory rate increased during positioning and decreased during endotracheal suctioning. It indicates that positioning and endotracheal suctioning can cause variation in physiological parameters.

There was significant weak correlation between pain during positioning and diastolic BP ( $\rho = 0.22$ ,  $p = 0.02$ ), heart rate ( $\rho = 0.25$ ,  $p = 0.01$ ), oxygen saturation ( $\rho = -0.29$ ,  $p = 0.01$ ) and weak correlation between pain during suctioning and heart rate ( $\rho = 0.23$ ,  $p = 0.01$ ).

Study findings in communication pattern showed that while performing positioning and endotracheal suctioning 78% and 67% of the critically ill patients were addressed by his or her name respectively. This data also shows that maximum of the critically ill patients (85% and 86%) didn't received any verbal reassurance from the health care provider about the subsidence of procedural pain for the positioning and endotracheal suctioning respectively.

For most of the critical ill patients (83%, 75%) communication pattern was ineffective while positioning and endotracheal suctioning respectively.

Maximum ( 96.8%) of the nurses have positive perception about the pain experience of the patient but may have lack of awareness about the pain scales specially the pain scales useful for pain assessment of critically ill patients. Among the 62 nurses 6(9.6%) had mentioned awareness about facial pain scale and numerical pain scale.

Thus the study findings could be concluded that unconscious and or sedated patients can experience pain while positioning and endotracheal suctioning and the nurses have positive perception about the pain experience of the patient but may have lack of awareness about the pain scales specially the pain scales useful for pain assessment of critically ill patients.

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