



Original Article

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Knowledge on Intensive Care Delirium among Nurses at Hospital, Nepal

Abstract:

Introduction: The number of intensive care units and people in them is growing and intensive care unit delirium is increasing as a problem. It is a common acute organic brain dysfunction characterized by disturbance of consciousness and cognition. It is preventable and potentially reversible condition commonly seen in critically ill patients.

Objectives: The aim of this study was to assess knowledge on intensive care unit delirium among nurses working in critical care unit at Tribhuvan University Teaching Hospital, Kathmandu.

Methodology: This descriptive cross sectional study was undertaken at Tribhuvan University Teaching Hospital (TUTH), Kathmandu. Period of data collection was for two months. Eighty five nurses working in critical care unit participated in the study and self-administered questionnaire was used and non-probability, purposive sampling technique was used for data collection.

Results: Among 85 respondents, more than half (65.9%) had moderate knowledge, more than one quarter (34.1%) had poor knowledge and none of the respondents had good knowledge. There was a significant association between work experience ($p=0.010$) and in-service training ($p=0.001$) with knowledge. However, there was no association between age, education level and knowledge of respondents.

Conclusion: The study revealed that the nurses had moderate to low level of knowledge on intensive care unit delirium. There was statistically significant association between work experience, in-service education or training and knowledge on ICU delirium.

Key Words: Knowledge, ICU delirium, Nurses, Intensive care unit, Critically ill patients.

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Introduction

Thousands of patients presenting with complex illnesses and co-morbidities are admitted yearly in Intensive Care Units (ICU) around the world. The complexity of their health situations is such that these patients have a high risk of developing many complications, including delirium.¹

The word delirium is defined as a disturbance of consciousness and cognition that develops over a short period of time (hours to days) and fluctuates over time.²⁻⁴ It is a serious, high-frequency

complication in patients in the intensive care unit² or delirium is a common response to the ICU environment.⁵

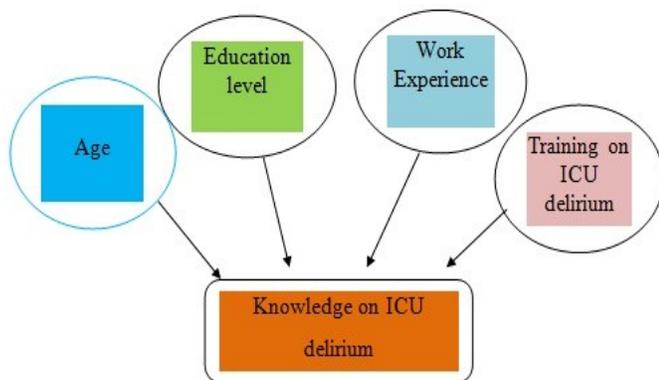
The reported prevalence of delirium was 78% to 87% among ICU patients.⁶ It occurred in up to 80% of ICU patient among 11 countries in South and North America and Spain.⁷ Similarly, 60-80% of mechanically ventilated ICU patients and 50-70% of non-ventilated ICU patient develop ICU delirium.⁸ In Nepal the prevalence of delirium in hospitalized critically ill patients at Manipal Teaching Hospital was around 16%⁴ and 11% to 26% of

hospitalized medical inpatient at Nepal Medical Teaching Hospital, Jorpati in Nepal.⁹

Knowledge about prevalence of delirium, chances of missing the recognition of delirium and risk factors that are present in our settings is essential¹⁰ and basic knowledge to manage it is very important.¹¹ Early recognition of delirium and institution of preventive measures improve the quality of critical care immensely.¹⁰

Conceptual Framework

Figure 1: Conceptual framework of knowledge on ICU delirium



Methodology

This descriptive cross sectional study was undertaken at Tribhuvan University Teaching Hospital (TUTH), Kathmandu from June - July 2015. A total of 85 nurses working critical care units were included in the study and those nurses who were not present during study period were excluded from the study.

Self administered structured and semi-structured questionnaire was used for data collection. The questionnaire consisted 2 parts: part I; socio-demographic profile of nurses and part II; 20 questions to assess knowledge on ICU delirium. One mark was given for one right answer and zero for wrong answer. There was no negative marking.

Formal permission was taken from the concerned authority of TUTH, Kathmandu to conduct the study. The questionnaire was pre-tested on 10 nurses working in critical care units and they

were excluded from the study. List of name of the respondents was retrieved from the critical care units. Explanation about the purpose of study was given to the study respondents and written consent was obtained from each respondent. An instruction regarding answering was given to the respondents. The questionnaires were collected during a duty shift of the staffs (from 8am to 4pm).

Data was sorted, coded, and entered into Microsoft access and then to Statistical Package for the Social Sciences (SPSS) software version 18 for management and analysis. Descriptive statistics including frequency, mean, range, and standard deviation were used to summarize respondents' baseline socio-demographic data. Chi squared test was used for non parametric categorical data and t-test for parametric data. p value less than 0.05 was considered significant.

Result

Data was collected from January to March 2016. During the study period 85 nurses who met the inclusion criteria were enrolled in the study.

Table 1: Frequency and Percentage Distribution of Socio-demographic variables n=85

Variables	Categories	f	%
Age of respondent Mean = 25.79 (\pm 3.016)	20-25 years	41	48.2
	26-30 years	39	45.9
	31-35 years	5	5.9
Level of education	PCL Nursing Bachelor in Nursing or above	42	49.4
		43	50.6
Recently working area	ICU (Intensive Care Unit)	30	35.3
	ICCU (Intermittent Coronary Care Unit)	14	16.5
	MICU (Medical Intensive Care Unit)	17	20
	SICU (Surgical Intensive Care Unit)	24	28.2
Work Experience Mean= 4.12 (\pm 2.951)	\leq 5 years	66	77.6
	>5 years	19	22.4
Training/in-service education	Attended	12	14.1
	Not attended	73	85.9

Table 1 denotes that around half of the respondents (48.2%) belonged to the age group of 20-25 years with mean age 25.79 (\pm 3.01) years. The mean duration of experience of the respondents was 4.12 (\pm 2.95) years.

Figure 2: Overall Knowledge Score obtained by Respondents

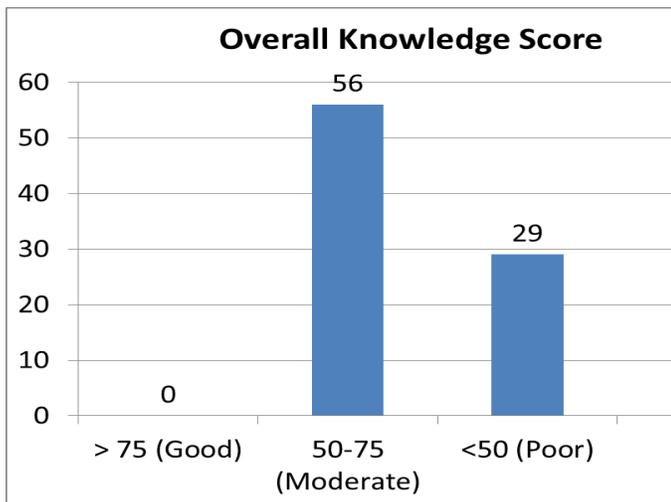


Figure 2 denotes that out of 85 respondents, more than half i.e. 65.9% had moderate knowledge, more than one quarter i.e. 34.1% had poor knowledge on ICU delirium and none of the respondents had good knowledge.

Table 2: Association between age of respondents and Knowledge on ICU delirium n=85

Variables	No.	Knowledge Level		p value
		Good (>50%)	Poor (≤50%)	
Age of the Respondent				
• ≥ 26	44	27	17	0.107
• <26	41	18	23	
Education level of nurses				
• Bachelor in Nursing & above	43	26	17	0.160
• PCL Nursing	42	19	23	
Training on ICU delirium				
• Attended	12	12	0	0.001*
• Not attended	73	33	40	
Work experience of nurses				
• >5 Years	19	15	4	0.010*
• ≤5 Years	66	30	36	

*Significant at 0.05 level of significance

Table 2 shows that there was no association between the knowledge level of the respondents and 'age' ($p=0.107$), 'education level of nurses' ($p=0.160$). However, there was a statistically significant association between the knowledge level and 'duration of work experience' ($p=0.010$) and 'training attended on the ICU delirium' ($p=0.001$).

Table 3: Respondent's Level of Knowledge on Different Section of ICU Delirium n=85

Section of ICU Delirium	Level of Knowledge (%)			Total Score	Mean Score
	Good	Moderate	Poor		
Knowledge regarding ICU delirium	1.2	37.6	61.2	12	5.14 (± 0.543)
Knowledge regarding risk factors of ICU delirium	3.5	43.5	52.9	11	5.36 (± 0.809)
Knowledge regarding prevention of ICU delirium	5.9	69.4	24.7	16	8.94 (± 2.249)
Knowledge regarding management of ICU delirium	4.7	77.7	17.6	9	5.15 (± 0.866)

Table 3 shows More than three fifth (69.4%) and more than four quarter (77.7%) of the respondents had moderate level of knowledge regarding prevention and management of ICU delirium with the mean knowledge score of 8.94 and 5.15 respectively. Similarly, 61.2% and 52.9% of the respondents had poor knowledge regarding general knowledge and risk factors of ICU delirium with mean score of 5.14 and 5.36 respectively,

Discussion

Nurses are important members of the healthcare team. They play a vital role in the institutional care of the patients, including the ones who are in intensive care units.¹² ICU delirium is common manifestation of acute organic brain dysfunction in critically ill patients^{5,13-14} especially amongst mechanically ventilated patients¹⁴ and is a serious problem that has recently attracted much attention.¹³ The present study evaluated the knowledge of nurses on ICU delirium in a Nepalese tertiary care teaching hospital. In general, the knowledge level was moderate to low and none of the nurses had good knowledge. Many studies had similar findings regarding the level of knowledge.^{2,3,15-17} There was no association between the knowledge level of the respondents and 'age' in this study. This result is similar with the study conducted by Hamdan - Mansour A, et al, which showed

that there was no association between age and knowledge on ICU delirium². However analogous study conducted in Iran, by Mohammadi GR et al, found that there is significant association between age and knowledge on ICU delirium.¹⁵ There is no significant association between education level of respondents and knowledge on ICU delirium in this study. However, the study conducted in Jordan by Hamdan- Mansour et al, found that there was significant association between education level and knowledge on ICU delirium.²

Similarly, this study found that there was significant association between work experience and knowledge. This finding is supported by study conducted in Iran by Mohammadi et al¹⁵ and Dadgari et al.¹⁸ However, another study done in Jordan by Elfeky and Ali found that there is no significant association between work experience and knowledge on ICU delirium.⁵

In regards to in-service education or training, there is significant association between training attended on the ICU delirium and knowledge on ICU delirium. This finding was similar to the study conducted in Jordan by Hamdan-Mansour et al² and Yue et al⁸ Another study suggested that comprehensive educational programs were needed to decrease accident related to ICU syndrome and to improve the health of ICU patients.¹⁷

Conclusion

The study revealed that the nurses had moderate to low level of knowledge on intensive care unit delirium. There was statistically significant association between work experiences, in-service education or training related to ICU delirium and knowledge on ICU delirium. As the level of knowledge was moderate to low level, formal training as well as regular in-service training was recommended to the institution which might help the nurses to obtain their knowledge. This would ultimately result in improved patients' care.

Recommendation

Delirium is extremely common in the intensive care unit especially amongst mechanically ventilated patients. Nurses need to receive education on current assessment and management modalities to enhance health outcomes for patients in the ICU with delirium. The regular education programs should be complemented with evaluative research focusing on both nursing care and patient outcomes

Acknowledgement

We would like to express sincere thanks to all the participants for their valuable participation in this study. We are equally thankful to the administration of Tribhuvan University Teaching hospital for letting us an opportunity to conduct this study.

Ethical Consideration

Study was conducted after written permission from authority concerned Respondents were explained the objectives of the study and verbal and written consent was taken before administering questionnaire. Respondents were informed that they can leave the study anytime they want and anonymity and confidentiality of the respondents was maintained.

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References

1. Harroche J, St-Louis L, Gagnon M. The detection of delirium in the ICU: An important aspect of care. *JNEP*. 2014;4(9):135-145. Available from: file:///C:/Users/gautam/Desktop/d%20detecn%20imp%20aspect.pdf.
2. Hamdan-Mansour A, Farhan N, Othman E, Yacoub M. Knowledge and Nursing Practice of Critical Care Nurses Caring for Patients with Delirium in Intensive Care Units in Jordan. *J Contin Educ Nurs*. 2010;41(12):571-576. Available from: http://www.researchgate.net/publication/45638573_Knowledge_and_nursing_practice_of_critical_care_nurses_caring_for_patients_with_delirium_in_intensive_care_units_in_Jordan

3. Christensen M. An exploratory study of staff nurses' knowledge of delirium in the medical ICU: An Asian perspective. *Intensive and Critical Care Nursing*. 2014;30(1):54-60. Available from: www.sciencedirect.com
4. Ellis MP. *Handbook of evidence-based critical care*, 2nd edition, Spring New York Dordrecht Heideberg London, 2010.
5. Elfeky HA, Ali FS. Nurses' Practices and Perception of Delirium in the Intensive Care Units of a Selected University Hospitals in Egypt. *Journal of Education and Practice*. 2013;4(19) Available from: [http://pakacademicsearch.com/pdf-files/edu/413/61-70%20Vol%204,%20No%2019%20\(2013\).pdf](http://pakacademicsearch.com/pdf-files/edu/413/61-70%20Vol%204,%20No%2019%20(2013).pdf)
6. Pisani M. Characteristics Associated With Delirium in Older Patients in a Medical Intensive Care Unit. *Arch Intern Med*. 2007;167(15):1629-1634. Available from: <http://archinte.jamanetwork.com/article.aspx?articleid=769859>
7. Salluh J, Soares M, Teles J, Ceraso D, Raimondi N, Nava V et al. Delirium epidemiology in critical care (DECCA): an international study. *Critical Care*. 2010;14(6):R210. doi: 10.1186/cc9333
8. Yue P, Wang L, Liu C, Wu Y. A qualitative study on experience of nurses caring for patients with delirium in ICUs in China: Barriers, burdens and decision making dilemmas. *International Journal of Nursing Sciences* 2015. Available from: www.sciencedirect.com/science/article/pii/S2352013215000150
9. Singh P. Delirium at Nepal Medical College Teaching Hospital: reason for referral and subtypes. *Nepal Med Coll J* 2009; 11(1): 28-30. Available from: http://nmcth.edu/images/gallery/Editorial/JfUNpm_singh.pdf
10. Thapa P, Chakraborty PK, Khattri JB, Ramesh K, Sharma P. Delirium in Critically ill patients in a Tertiary Care Centre in Western Region of Nepal. *Kathmandu Univ Med J*. 2014;46(2):117-20. Available from: <http://www.kumj.com.np/issue/46/117-120.pdf>
11. Mattoo SK, Grover S, Gupta N. Delirium in general practices. *Indian J Med Res*. 2010;131:387-398. Available from: <http://icmr.nic.in/ijmr/2010/march/0304.pdf>
12. Parajuli S, SelVaraj V. Knowledge of Nurses towards Cardio-pulmonary Resuscitation in a Tertiary Care Teaching Hospital in Nepal. *Journal of Clinical and Diagnostic Research* 2011;5(8): 1585-1588
13. Ashwini, Prabhu S, Shetty S, Prabhu V, Pais M, Kuriakose B. Effectiveness of structured teaching programme on prevention of ICU delirium among Manipal College of Nursing, Manipal, Karnataka, India. *NUJHS*. 2015;5(2):28-30. Available from: <http://nitte.edu.in/journal/june2015/7.pdf>
14. Cavallazzi R, Saad M, Marik P. Delirium in the ICU: an overview. *Ann Intensive Care*. 2012;2(1):49. doi: 10.1186/2110-5820-2-49
15. Mohammadi GR, Ebrahimian AA, Mahmoudi HE. Evaluating the knowledge of intensive care unit nursing staff. *Iranian Journal of Critical Care Nursing*. 2009;2(1):41-46. Available from: http://www.inhc.ir/files/site1/user_files_662776/eng/ebrahimian-A-10-41-1-1f1c3e8.pdf.
16. Gehan A, Younis, Sabath M, Elfetoh A. The effect of educational program on critical care nurses' knowledge, practice and clinical outcome regarding delirium among critically ill patients. *International Journal of Current Research*. 2014;6(07):7663-7673. Available from: <http://www.journalcra.com>
17. Yang YK. Intensive Care Unit Nurse's Knowledge and Nursing Performance on Intensive Care Unit Syndrome. *J of Korean Acad Nurs Admin*. 2010;16(2):240-249.
18. Dadgari A, Farideh SJ, Dadvar L. Nurses' knowledge, attitude and practice in prevention of ICU syndrome. 2007;2(3):28-35.