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Nurses' knowledge and practices related to pain assessment in critically ill patients in a selected private hospital in Bangladesh

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ABSTRACT

Background: Most of the time pain is difficult to assess and manage because of being inherently a subjective experience influenced by multiple factors. The perception and tolerance of pain may vary because of different psychological and social influences of the patient. Therefore it is important for health care providers to assess the pain so that individualized management interventions can be provided. This study was aimed to assess the nurses' knowledge and practices related to pain assessment in critically ill patients.

Methods: A descriptive cross-sectional study was carried out among 200 registered nurses working at different ICU in Square Hospital. The study was conducted within April to August 2017. A non-probability purposive sampling technique was used. The data was collected using pre-tested self-administered semi-structured questionnaire and it was analysed using SPSS 22.0 version.

Results: About 81% of the respondents were in the age group 22-32 years and the mean age of the respondents was 27.74±12.06 years. About 79.0% of the respondents were female and 59.5% of the respondents had diploma in nursing. The mean monthly income of the respondents' was 19450.5 taka. The majority (59.5%) of the respondents had less than 2 years' service experience. About 85.5% of the respondents said it is important to assess the pain and need for analgesia before, during, and after wound care.

Conclusions: Our findings reported that the nurses were reasonably knowledgeable about the principles of pain assessment. More than four-fifths of the respondents had adequate knowledge about pain assessment.

Keywords: Pain, Assessment, Knowledge, Practice, Nurses, Patients

INTRODUCTION

The critically ill patients normally are characterized to experience pain. In the face of life threatening injury or illness, pain and its treatment are forgotten, or underappreciated by the health care providers. 1-3 Pain assessment is said to be at the top level in proper pain relief and also an important goal in patients care.⁴ The universal goal for healthcare providers is a maintaining an optimal level of comfort for critically ill patients, because a pain is one of the major experiences that can maintain a patients' comfort.5 The gold standard of pain assessment given the subjective nature of pain is the selfreporting of the pain.⁶ Unsatisfactorily managed acute pain has a negative impact on the physical and psychological consequences as well as negative impact to many organ systems.

Pain can compromise recovery and as well as negative impact to both mortality and morbidity as a result of such effects. Good analgesia is particularly vital for critically ill patients, this is due to its psychological and

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physiological benefits.⁹ The ability to deep breath and cough with minimal pain and discomfort enhances respiratory function, facilitates physiotherapy, expedite weaning from mechanical ventilation and encourages earlier mobilization as well.⁹ Due to this evidence, proficient pain management for critically ill patients is a significant factor in meeting their needs and increased the chance of recovery.¹⁰ The American Pain Society (APS) identifies pain assessment as the number five vital sign.¹¹ Pain control adequately is also considered as a basic human right, humane, and neuro-hormonally beneficial to the patient.^{12,13} The provision of pain management and comfort to all patients unable and able to communicate by health care professionals is said to be an ethical issue.¹⁴

Although pain being a significant issue or challenge within the critical care environment, the problem has not been addressed adequately by critical care nurses. 10 Clinician-related barriers, such as knowledge deficits regarding the pain assessment and management principles contribute considerably to suboptimal pain management among critically ill patients. 6 Inaccurate pain assessment and the resulting inadequate treatment among critically ill adults have been found to have serious physiological and psychological sequelae. 13,15 This study was aimed to assess the nurses' knowledge and practices related to pain assessment in critically ill patients in a selected private hospital in Bangladesh.

METHODS

A descriptive cross-sectional type of study was conducted during a period of April to August 2017 at different ICU in Square Hospital LTD, Dhaka Bangladesh. It encompasses medical critical care units, Neurosurgery, neonatal ICU, Pediatrics ICU and the Emergency units.

A total of 200 registered nurses were selected using nonprobability purposive sampling technique. Nurses who were in the selected ICU during the period of this study and met the inclusion criteria were included. Those who were not available or decline to participate were excluded. The questionnaire used was pre-tested before starting the data collection. The information was self-administered semi-structured collected using questionnaire and all the data collected were coded numerically and entered into the SPSS 22.0 version for analysis. The descriptive analysis of data was presented as tables. A Pearson Chi-square test was also done, a pvalue less than or 0.05 was considered statistically significant.

Ethical considerations

The study was approved by Faculty of Allied Health Sciences Ethics Committee (FAHS), Daffodil International University Dhaka Bangladesh.

RESULTS

Socio-demographic characteristics of the respondents

Table 1 showed that more than four-fifth (81%) of the respondents were in the age group 22-32 years old and the mean age of the respondents was 27.74±12.06 years. Close to eight-tenths (79%) of the respondents were female and the rest were male. The majority (59.5%) of the respondents had diploma, followed by bachelor degree in nursing (25%) and the rest had masters and above level of education. Above half (57%) of the respondents were unmarried and more than eight-tenths (84%) of the respondents were Muslims. About 70% of the respondents' monthly income was 12001-22000 taka and the mean monthly income of the respondents was 19450.5 taka. The majority (59.5%) of the respondents had less than 2 years' service experience and most of the respondents had less than 2 years' experience as a nurse in this unit (ICU).

Table 1: Socio-demographic characteristics of the respondents (n=200).

Variables	Frequency	Percentage (%)		
Age (years)				
≤21	4	2.0		
22-32	162	81.0		
33-43	24	12.0		
44 and above	10	5.0		
Mean±SD	27.74±12.06			
Gender				
Male	42	21.0		
Female	158	79.0		
Educational level				
Diploma	119	59.5		
B.Sc. in nursing	50	25.0		
Masters & above	31	15.5		
Marital status				
Married	88	44.0		
Unmarried	112	57.0		
Religion				
Muslim	168	84.0		
Non-Muslim	32	16.0		
Monthly income (T	'aka)			
≤12000	2	1.0		
12001-22000	140	70.0		
22001-32000	36	18.0		
33000 & above	22	11.0		
Mean	19450.5			
Years of experience	e as a registerec	d nurse		
<2 years	119	59.5		
2-5 years	28	14.0		
Above 5 years	53	26.5		
Years of experience as a nurse in this unit				
< 2 years	99	49.5		
2-5 years	58	29.0		
Above 5 years	43	21.5		

Nurses' knowledge related to pain assessment in critically ill patients

Table 2 showed that more than four-fifths (84%) of the respondents currently had adequate knowledge about pain assessment and above half (58.5%) of the respondents were using a pain assessment tool. About 74.5% mentioned that the pain scores and management discussed during nurse to nurse report and 74.5% of the respondents stated that pain assessment and management are also discussed during unit rounds. About 69.0% mentioned that pain assessment and management is a unit priority and more than eight-tenths (85.5%) of the respondents said it is important to assess the pain and need for analgesia before, during, and after wound care. Nine-tenths (90%) of the respondent's mentioned that it is important to assess the pain and need for analgesia before, during, and after Drain removal and 70% of the respondents stated that It is important to assess the pain and need for analgesia before, during, and after spontaneous breathing (weaning) trial. About 83.5% of the respondents mentioned that before, during and after Patient repositioning it is important to assess for pain and need for analgesia.

Table 2: Nurses' knowledge related to pain assessment in critically ill patients (n=200).

Items	Yes N (%)	No N (%)
Current adequate knowledge about pain assessment	168 (84)	32 (16)
Using a pain assessment tool	117 (58.5)	83 (41.5)
Pain scores and management discussed during nurse-to- nurse report	149 (74.5)	51 (25.5)
Pain scores and management discussed during unit rounds	149 (74.5)	51 (25.5)
Pain assessment and management is a unit priority	138 (69)	62 (31)
It is important to assess for pain and need for analgesia before, during, and after wound care	171 (85.5)	29 (14.5)
It is important to assess for pain and need for analgesia before, during, and after drain removal	180 (90)	20 (10)
It is important to assess for pain and need for analgesia before, during, and after spontaneous breathing (weaning) trial	140 (70)	60 (30)
Before, during and after patient repositioning it is important to assess for pain and need for analgesia	167 (83.5)	33 (16.5)

Nurses' knowledge related to pain assessment in critically ill patients

Table 3 showed that the majority (41.5%) of the respondent's opinion regarding who provides the most accurate rating of pain intensity was nurses, followed by physicians (33%) and the rest of the respondents mentioned patients (25.5%). Close to half (49%) of the respondents mentioned that pain assessment tool is minimally important, followed by not at all important (21%). About 44.5% of the respondents stated that frequent assessment and documentation of a pain in patients able to communicate was minimally important.

Table 3: Nurses' knowledge related to pain assessment in critically ill patients (n=200).

Items	Frequency	Percentage (%)			
In your opinion, who provides the most accurate					
rating of pain intensity					
Physicians	66	33.0			
Patients	51	25.5			
Nurses	83	41.5			
In your opinion, how important is a pain assessment TOOL					
Not at all important	42	21.0			
Minimally important	98	49.0			
Moderately important	30	15.0			
Extremely important	30	15.0			
In your opinion, how imp	portant are free	quent			
assessment and documen	itation of pain i	n patients			
able to communicate					
Not important	45	22.5			
Minimally important	89	44.5			
Moderately important	27	13.5			
Extremely important	39	19.5			

Nurses' practices related to pain assessment in critically ill patients

Table 4 showed that most of the respondents (61.5%) were using a pain assessment tool for patients sometimes, followed by routinely (23%), often (11%) and seldom (4.5%). About 71% of the respondents used to read any guidelines for pain assessment and management for critically ill patients and more than seven-tenths (77.5%) were feeling competent in effectively assessing patients for having pain. About 61% of the respondents always agreed with patients statements about their pain and 73.5% of the respondents were documenting the findings after pain assessment for patients able to communicate.

Association between level of education and other variables

Table 5 showed that among the educational category those respondents with Masters or PhD had enough knowledge about pain assessment and all of them were

using pain assessment tool. However it has been reported that educational level of the respondents was found significantly associated with current knowledge

(p<0.001) about pain assessment and using a pain assessment tool (p<0.000).

Table 4: Nurses' practices related to pain assessment in critically ill patients (n=200).

Items	Frequency	Percentage (%)	
Frequency of using a pain assessment tool for patients			
Seldom (1-25%)	9 4.5		
Sometimes (26-50%)	123	61.5	
Often (51-75%)	22	11.0	
Routinely (76-100%)	46	23.0	
Reading any guidelines for pain assessment and management for critically ill patients			
Yes	142	71.0	
No	58	29.0	
Feeling competent in effectively assessing patients for having pain			
Yes	155	77.5	
No	45	22.5	
Always agree with patients' statements about their pain			
Yes	122	61.0	
No	78	39.0	
Documenting the findings after pain assessment for patients able to communicate			
Yes	147	73.5	
No	53	26.5	

Table 5: Association between level of education and other variables (n=200).

Variables	Educational level			Chi gayaya	P value		
	Diploma	B.sc in nursing	Masters/PhD	Total	Chi-square	r value	
Current knowle	Current knowledge about pain assessment						
Yes	109	28	31	168	40.181	P<0.001	
No	10	22	0	32			
Using a pain assessment tool							
Yes	62	24	31	117			
No	57	26	0	83	26.269	P<0.001	
Total	119	50	31	200			

DISCUSSION

In the present study about 84% of the respondents currently had adequate knowledge about pain assessment. Our finding is higher than the one reported in a similar study, where only 41% of the nurses indicated that they had sufficient knowledge. Above half (58.5%) of the respondents were using a pain assessment tool and about 74.5% of the respondents mentioned that pain scores and management discussed during nurse to nurse report. Nine-tenth (90%) of the respondent's mentioned that it is important to assess for pain and need for analgesia before, during, and after drain removal. Critically ill patients have a right to pre-emptive analgesia. It's among the scientific practices or principles for pain management. The properties of the respondents of the respondents of the respondent of the respond

Close to half (49%) of the respondents said pain assessment tool is minimally important, followed by not at all important (21%). About 44.5% of the respondents

said frequent assessment and documentation of a pain in patients able to communicate is minimally important. This is contrary to the findings of other studies conducted in Tanzania and Canada who reported minimal or no documentation practices among nurses caring for critically ill patients. ^{18,19}

Most of the respondents (61.5%) were using a pain assessment tool for patients sometimes, followed by routinely (23%), often (11%) and seldom (4.5%). Our finding is lower than that of a similar study conducted in Canada, who reported that almost all nurses caring for critically ill patients (98%) used a tool to assess for pain for patient able to self–report pain. These differences in the practices may be attributed to differences in ongoing professional education received, staffing, and presence of guidelines among others. In this study it has been found that educational level of the respondents was significantly associated with current knowledge about pain assessment (p<0.001) and using a pain assessment

tool (p<0.001). Some studies also reported that there is increasing evidence on the impact of continuing education programmes on pain assessment practices.^{22,23}

CONCLUSION

The findings of this study revealed that the nurses were reasonably knowledgeable about the principles of pain assessment. Nevertheless, lack of knowledge on some key principles of pain assessment is worth noting. More than four-fifths of the respondents currently had adequate knowledge about pain assessment. It also reveals that educational level of the respondents was found significantly associated with current knowledge about pain assessment and using a pain assessment tool.

Recommendations

This study recommended a need to implement a continuous professional education program regarding the pain and its assessment. It also recommends for a supportive environment to ensure proper and continued use of tools, protocols and charts.

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