

Critical Care Nurses' Knowledge regarding Nursing Care for Comatose Patients in Babylon Governorate Hospitals

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Abstract

Background: Nursing care for comatose patients admitted to critical care units requires carrying out essential care to enable patients to perform daily life tasks and prevent complications. The comatose patients are entirely dependent on critical care nurses for recovery, and it is the nurse's responsibility to always think critically before intervening; thus, critical care nurses working in these areas must have sufficient knowledge to assess and intervene. **Objective:** This study aimed to assess the critical care nurses' knowledge regarding nursing care for comatose patients. **Methodology:** A descriptive study (cross-sectional) was conducted to accomplish the aim of this study from the period between 19th September 2021 up to 6th July 2022. A non-probability (purposive) sample consisted of (178) critical care nurses who worked in the CCU and ICU in the six hospitals at Babylon Governorate was selected. **Results:** The results of this study showed that the highest percentage (74.2%) of critical care nurses were aged ranging between 22 and 29 years old, more than half (51.1%) were females nurses, and (61.2%) of them were married, in addition, more than half of the participants (53.9%) were graduated from colleges of nursing. Moreover, most of the study sample (66.9%) had (1-5) years of experience in nursing. In relation to the work unit, more than half of critical care nurses (59%) worked in ICU, while most of the participants (62.9%) had (1-3) years of experience in their current workplace, and more than half of them (53.4%) were worked at evening shift and (55.1%) of them did not have any training courses about nursing care for comatose patients. The overall findings of critical care nurses' knowledge demonstrated that (78.7%) of them expressed a moderate level of knowledge related to nursing care for comatose patients. **Conclusion:** The overall findings illustrated that the majority of critical care nurses expressed a moderate level of knowledge regarding nursing care for comatose patients.

Keywords: Critical Care Nurses, Knowledge, Nursing Care, Comatose Patient

1. Introduction

The brain is the core unit that regulates all of the body's activities, and it cannot function without the help of neurons. The normal functioning of the brain and its link with the outside environment is known as consciousness. Consciousness is being awake, alert, and aware of one's environment. Altered level of consciousness (LOC) is defined as an impaired degree of wakefulness and awareness in one or both. This alteration is gauged on a continuum from full alertness and full cognition (consciousness) up to deep coma. Coma is described as a condition of full unresponsive to external or internal stimuli and marked by a lack of arousal. The comatose patients do not open their eyes spontaneously and do not respond to sensory cues (Hoesch et al., 2008; Teles et al., 2013; Shalaby et al., 2019).

Coma is one of the main results of brain damage. After a coma caused by a severe brain injury (structural or non-structural), patients may deteriorate with gradual neuronal damage

progressing to brain death (complete cessation of all brain activity) or improve with initial signs of eye-opening without behavioral response. Coma that does not resolve with a complete restoration of consciousness gives rise to the vegetative state, the minimally conscious state, and other clinical syndromes associated (Schiff, 2009; Mandeep, 2012).

The fundamental nursing activities are performed to provide care and comfort to the comatose patient, and it must always be remembered that a comatose patient is entirely dependent on nurses for recovery, and it is the critical care nurse's responsibility to always think critically before intervening. Thus, every nurse that working in the critical care units must have sufficient knowledge to assess and intervene. There must be sufficient personnel to monitor the patient carefully, and adequate supervision by a charge nurse is required to ensure that patients get good care. By increasing their knowledge, critical care nurses may significantly influence their patients' lives (Khemnar, 2016).

One of the most significant issues in today's healthcare systems is obtaining a competent nurse in a globalized world that increasingly needs the professional to be capable of independent thought and critical thinking, as well as creative, educated, and knowledgeable. Critical care nurses have a unique chance to assist patients in examining their lifestyle, identifying risks and possible areas for change, advising on a focused, tailored strategy, and assisting them in achieving their goals. That cannot be done without well-trained, knowledgeable nurses, especially in critical care settings like in the sample of our study (critical care nurses), since they need to be able to assess and evaluate their patients, especially those with a disturbing level of consciousness (Jaddoua et al., 2013).

Objective

The current study aimed to assess the critical care nurses' knowledge regarding nursing care for comatose patients.

2. Methodology

Research Design

A descriptive study (cross-sectional) was conducted to accomplish the aim of the current study from the period from 19th September 2021 to 6th July 2022.

Study Setting

The study was conducted in critical care units (CCUs) at six hospitals in Babylon Governorate (Imam Al-Sadiq General Teaching Hospital, Al-Hilla General Teaching Hospital, Shaheed Al-Mihrab Center for Catheterization and Cardiac Surgery, Imam Ali Hospital, Dhul-Kifl General Hospital, and Marjan Teaching Hospital).

Study Sample

A non-probability (purposive) sample consisted of (178) critical care nurses from the CCU and ICU of Babylon Governorate Hospitals were chosen based on certain criteria to assess their knowledge regarding nursing care for comatose patients.

Study Questionnaire

The questionnaire was constructed from various previous literature reviews and articles related to this topic in order to meet the aim of the current study, and it consists of two parts and includes the following:

Part I: Demographic and Professional Characteristics
This part contains demographic and professional characteristics of the critical care nurses consisting of (9) elements that include (age, gender, marital status, academic qualifications, years of experience in the nursing field, work unit, years of experience in the current workplace, work shift, and a number of

training courses about nursing care for comatose patients).

Part II: Critical Care Nurses' Knowledge regarding Nursing Care for Comatose Patients

This part contains (46) multiple choice questions, which were divided into (12) sub-domains that include: general information about coma consists of (4) items, Glasgow Coma Scale (GCS) consists of (8) items, maintaining the airway patency of comatose patients consists of (3) items, maintaining the blood circulation of comatose patients consists of (3) items, maintaining the fluid balance of comatose patients consists of (3) items, maintaining nutritional needs of comatose patients consists of (3) items, mouth care of comatose patients consists of (3) items, protecting the patient from injury and maintaining skin and joint integrity of comatose patients consists of (4) items, eye care of comatose patients consists of (3) items, maintaining the body temperature of comatose patients consists of (3) items, maintaining the bladder and bowel elimination of comatose patients consists of (6) items and meeting family needs of comatose patients consists of (3) items.

Pilot Study

The researcher carried out a pilot study on a randomly selected exploratory sample of (20) critical care nurses, or approximately 10% of the original sample, to estimate the clarity and relevance of the questionnaire. Later, the participants in this sample were not included in the original sample used to conduct the final study.

Questionnaire Validity

The validity of the questionnaire was obtained by reviewing it by (13) experts who had more than 10 years of experience in their job and modifying it based on what they submitted.

Questionnaire Reliability

The reliability coefficient utilizing the "Cronbach's Alpha" tested for the knowledge questionnaire was (0.786).

3. Methods of the Data Collection

The data were collected from the date (23th February 2022 to 14th April 2022) by using the designed tested questionnaire in Arabic version filled by the critical care nurses after acquiring the institution's permission. The researcher took oral and written agreements from each nurse to participate in this study. The time to answer the instrument's questions with each participant took approximately (15-30) minutes.

Knowledge Scoring System

The knowledge scoring was according to correct answer (1) point and incorrect answer (0) point. Knowledge scores response was classified as poor knowledge (0-0.33), moderate knowledge (0.34-0.66), and good knowledge (0.67-1.00).

Methods of Statistical Data Analysis

The researcher analyzed the collected data by using the Statistical Package for Social Sciences (SPSS-

version 20) and Microsoft Excel (2010) programs in order to obtain the final findings. Descriptive statistics were utilized in the current study (frequencies, percentages, mean of scores, and standard deviation).

4. Results

Table 1: Descriptive Statistic of Demographic and Professional Characteristics

Factors	Classification	Freq.	%
Age/years ($M \pm SD = 28.46 \pm 6.197$)	22-29 years old	132	74.2
	30-39 years old	33	18.5
	40-49 years old	7	3.9
	≥ 50 years old	6	3.4
	Total	178	100.0
Gender	Male	87	48.9
	Female	91	51.1
	Total	178	100.0
Marital Status	Single	67	37.6
	Married	109	61.2
	Divorced	2	1.1
	Total	178	100.0
Academic qualifications	Nursing School	42	23.6
	Nursing Institute	40	22.5
	Nursing Bachelors	96	53.9
	Total	178	100.0
Years of experience in nursing	1-5 years	119	66.9
	5-10 years	39	21.9
	>10 years	20	11.2
	Total	178	100.0
Work unit	CCU	73	41.0
	ICU	105	59.0
	Total	178	100.0
Experience in the current workplace	1-3 years	112	62.9
	3-5 years	50	28.1
	>5 years	16	9.0
	Total	178	100.0
Work shift	Morning	83	46.6
	Evening	95	53.4
	Total	178	100.0
Number of training courses about nursing care for comatose patients	No	98	55.1
	1 session	32	17.9
	2 sessions	27	15.2
	>2 sessions	21	11.8
	Total	178	100.0

Table (1) represents demographic and professional characteristics in terms of frequencies and percentages. The findings showed that the mean age of the study sample is 28.46 (± 6.197), and the age between 22 and 29 years old was recorded as the highest percentage ($n=132$; 74.2%). Regarding gender, more than half of the studied participants were females ($n=91$; 51.1%) compared with those who were males ($n=87$; 48.9%). Marital status-related findings, it is evident from the findings that married nurses were highly ($n=109$; 61.2%) as compared with those who were single and divorced. Respected to the academic qualifications, more than half of critical care nurses were bachelor's graduates ($n=96$; 53.9%) as compared with those who graduated from nursing schools ($n=42$; 23.6%) and those who graduated

from nursing institutes ($n=40$; 22.5%). Concerning the years of experience in nursing, the findings revealed that most of the critical care nurses had 1-5 years of experience in nursing ($n=119$; 66.9%) as compared with those who had 5-10 years ($n=39$; 21.9%) and those who had more than 10 years ($n=20$; 11.2%). However, in relation to the work unit, most of the critical care nurses worked in ICU ($n=105$; 59%) compared with those who worked in CCU ($n=73$; 41%). In addition, most of the critical care nurses had 1-3 years of experience in the current workplace ($n=112$; 62.9%) and mostly worked at evening shift ($n=95$; 53.4%). Finally, in relation to training courses about nursing care for comatose patients, more than half of critical care nurses were without training courses ($n=98$; 55.1%).

Nurses Knowledge	Freq.	%	M.s ± SD
Poor	16	9.0	0.50± 0.132
Moderate	140	78.7	
Good	22	12.3	
Total	178	100.0	

"(M.s) Mean of Scores, (SD) Standard deviation, Level of Assessment (poor= 0-0.33, moderate=0.34-0.66, good=0.67-1.00)"

It is apparent from the table (2) that out of 178 critical care nurses had 16 (9%) of them had poor knowledge, 140 (78.7%) had moderate knowledge, and 22 (12.3%) had good knowledge. The majority of them (78.7%) expressed a moderate level of knowledge related to nursing care for comatose patients, with a moderate mean score of 0.50 (± 0.132).

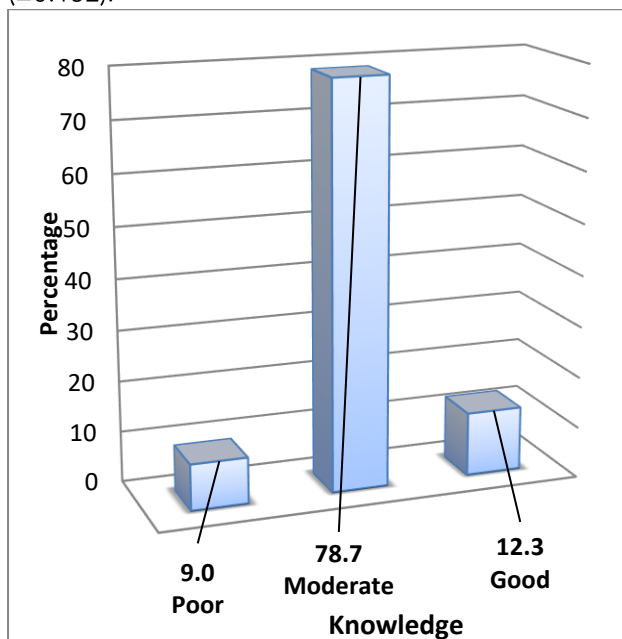


Figure 1: Critical Care Nurses' Knowledge regarding Nursing Care of Comatose Patients

5. Discussion

Demographic and Professional Characteristics for the Critical Care Nurses

The findings of the table (1) showed that the mean age of the study sample is 28.46, and the age ranging between 22 and 29 years old were recorded as the highest percentage ($n=132$; 74.2%) from all sample (178) of critical care nurses. This might be due to almost of the nurses graduated from the college of nursing and, at the same time, newly recruited nurses working together in critical care units (Researcher). The results of this study were similar to the study conducted by Albougami (2019) in Saudi Arabia, in which results showed that the age of participants was (20-30) years old, which constituted ($n=90$; 60.4%) of the whole sample. Furthermore, these results supported with the study carried out by Majeed (2017) in Baghdad teaching hospitals, who reported that most of the participants were aged between 20 and 29, which constituted ($n=30$; 60%) of the whole sample.

Regarding the gender of the participants, more than half of the studied sample were females ($n=91$; 51.1%) compared with those who were males ($n=87$; 48.9%). This high proportion of female nurses is probably a normal pattern in the nursing profession and supports the traditional belief that nursing is primarily a female profession and might be due to secondary nursing schools only accepting females only till a few years ago. In addition, there was a differentiation in the admission of females to colleges and institutes of nursing, so the critical care nurses were mostly feminine (Researcher). These findings consistent with a study conducted by Liyew et al. (2020) in Ethiopia, they found that most gender of their study were females ($n= 162$; 54.2%) of the whole sample. In addition, these findings agreed with the findings of Youssef et al. (2014) that carried out in Egypt, who showed that most of the participants in their study were females (65.7%).

According to marital status, the findings showed that the married nurses were highly ($n=109$; 61.2%) compared with those who were single and divorced; due to cultural issues, being married is a more socially acceptable one in our culture (Researcher). These results congruent with the study done by Faris & Hassan (2016), which showed that most of the study sample were married ($n=28$; 70%) of the whole sample. Similarly, these results agreed with the study Jaddoue & Ghanim (2011) conducted in Baghdad, which reported that most participants were married. In proportion to academic qualifications, the results declared that more than half of the critical care nurses were bachelor's graduates ($n=96$; 53.9%) as compared with those who graduated from nursing schools and nursing institutes. This might be due to the health institutions encouraging the presence of bachelor's graduates in critical care units such as CCU and ICU, as they had more knowledgeable than the rest of the nursing staff and graduated from the faculty of nursing had curriculum about how to deal with critical cases (Researcher). These results supported by the study of Lin et al. (2011), which were mentioned that major percentage of the nurses had a bachelor's degree ($n=167$; 81.5%) of the whole sample. Moreover, a study conducted by Köse et al. (2016) found that most nurses had a bachelor's degree ($n=50$; 68.5%) of the whole sample, which supported the current study's findings.

Concerning the years of experience in nursing, the findings revealed that most of the critical care nurses had 1-5 years of experience ($n=119$; 66.9%). This might be due to the nurses most of them were directed to administrative duties and always busy

with it. Furthermore, most of them were newly recruited nurses. The present study results congruent with a study carried out by Ehwarieme et al. (2021), which revealed that (n=138; 65.1%) had (1-5) years of experience in nursing.

In relation to the work unit, most of the critical care nurses worked in ICU (n=105; 59%) compared with those who worked in CCU (n=73; 41%); this is because the numbers of (ICU) nurses in the morning and evening shifts more compared to the CCU in hospitals (Researcher). These findings agreed with the study conducted by Sedain & Bhusal (2019) that found that 53.2% of the nurses worked in ICU.

In addition, most of the critical care nurses had 1-3 years of experience in their current workplace (n=112; 62.9%); this may be because most of the critical care nurses were recently graduated, and their first working area was in critical care units, where the age group (22-29) years was recorded as the highest percentage (Researcher). In the study conducted by Santos et al. (2016) in Brazil that showed that a higher percentage of nurses had (1-3) years worked in the current unit (n=57; 44.9%) of the whole sample, which the results were similar with the findings of the current study. Oppositely, these results disagreed with the study carried out by Köse et al. (2016), who revealed that (43.8%) of nurses had been working in the ICU for ranging between 2 and 6 years.

Moreover, more than half of the critical care nurses worked at evening shift (n=95; 53.4%) compared with those who worked at morning shift; which may be because nurses' evening shifts in the ICU and CCU were worked for four-day shifts in the hospitals (Researcher). The present study's findings disagreed with the study of Ibrahim et al. (2015), which found that most of the nurses who worked at morning shift constituted (n=95; 61.7%) of the whole sample.

The present study revealed that more than half of the critical care nurses did not have any previous training courses about nursing care for comatose patients (n=98; 55.1%), while less than half of the studied critical care nurses had previous training courses. This is because most critical care nurses are newly hired, and most of them worked at evening shifts and did not attend training courses (Researcher). The current study's findings were inconsistent with a study conducted by Jaddoue & Ghanim (2011), who reported that majority of nurses (96%) of the nurses did not have a training session in nursing care for unconscious patients. Also, these results disagreed with the results of Mohamed et al. (2019), which showed that (35.4%) of the studied nurses never attended any training about coma.

Overall Critical Care Nurses' Knowledge regarding Nursing Care for Comatose Patients

Table (2) indicated that majority of the critical care nurses (78.7%) expressed a moderate level of knowledge related to nursing care for comatose patients, with a moderate mean score of 0.50. These findings could be due to critical care nurses did not receive sufficient information during the academic

study and from the training course and lack of obligation to make evidence-based practice. In addition, it may be due to the presence of different educational levels. Moreover, the fact that continuing education for nurses is required because most of them may forget what they learned in nursing care for comatose patients, or have not paid much attention to the practical aspects (Researcher). These findings were in line with the findings of Khemnar (2016) in India, which found that 63% (126) of nurses expressed average knowledge score. On the other hand, a study conducted in Egypt by Mohamed et al. (2019), found that more than two-third of studied nurses had good knowledge regarding the care of comatose children; at the same time, this study did not support the findings of the current study.

6. Conclusion

The overall findings of critical care nurses' knowledge demonstrated that majority of them expressed a moderate level of knowledge related to nursing care for comatose patients.

7. Recommendations

Continuing to provide special training courses for critical care nurses to increase their knowledge regarding nursing care for comatose patients, especially newly employed nurses in the critical care units (CCUs), they should get training on coma cases and how to provide nursing care for these cases. Also, encourage critical care nurses to attend and participate in seminars and conferences with senior specialists in training and developing nursing staff who have long experience in teaching comprehensive and integrated nursing care for comatose patients.

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