

Effect of Social-platform Psychoeducational Instructions regarding Delirium on Nurses' Care for Intensive Care Unit Patients

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Abstract

Background: In ICU patients, delirium is a widespread, life-threatening, and preventable cause of morbidity and mortality. Untreated delirium increases mortality, morbidity, and functional decline, necessitating more nursing care, increasing healthcare costs, and lengthening hospital stays. Nurses' knowledge and techniques for delirium are insufficient in several studies. So, **the study aimed** to evaluate the effect of social-platform psycho-educational instructions regarding delirium on nurses' care for intensive care unit patients. **Design:** A quasi-experimental research design was used to achieve the aim of this study. **Setting:** This study was applied in Egypt at Sohag City. **Sample:** - A total purposive sample of 200 nurses from 10 and 30 April 2019 by using an online questionnaire via Google Form. **Tools:** Three tools were used: Tool I: Nurse's knowledge assessment questionnaire regarding delirium, Tool II: Nurse's reported practice, and Tool III: Nurse's satisfaction with social-platform psychoeducational interventions. **Results:** The study findings revealed that nurses' knowledge and practices among the majority of studied nurses were satisfactory post- social-platform psychoeducational instructions compared to pre-instructions. There was a positive correlation between nurses' total knowledge and practices. **Conclusion:** The study concluded that social-platform psycho-educational instructions regarding delirium had a positive effect on improving nurses' performance caring for intensive care unit patients. **Recommendations:** Providing nurses with a well-planned health education program to improve their knowledge and practice regarding delirium.

Keywords: Delirium, Intensive care unit patients, Nurses' care, Psychoeducational, Social-platform.

Introduction:

Delirium is defined as a disruption of awareness that causes an inability to maintain or change focus. This change in consciousness occurs suddenly, varies throughout the day, and isn't always tied to dementia (World Health Organization, 2018). Delirium develops in 20 percent to 50 percent of patients who are not on mechanical ventilation and 60 percent to 80 percent of ICU patients who are on mechanical ventilation, according to several studies (Ibrahim et al., 2018 & Smonig et al., 2019).

Intensive care unit patients are severely ill patients suffering from respiratory, cardiovascular, neurological, or other disorders. These patients frequently require 24-hour care, including cardiac and neurological monitoring. Brain dysfunction is common in ICU patients due to pain, intrusive procedures, unfamiliar

settings, and the fear of death (Wassenaar et al., 2017).

A typical indication of severe brain dysfunction in ICU patients is delirium. According to the American Association of Retired Persons, delirium is one of the six leading causes of injuries associated with hospitalization in people over the age of 65. Delirium is widespread in ICU patients due to acute multisystem illness, associated disorders, medicines, and other environmental variables (Travers et al., 2017).

Physical restraints, tube feeding, catheterization, and the removal of visible light during the day are all used. Preexisting dementia, hypertension, alcoholism, and high severity of illness at the time of admission are all risk factors for delirium in the ICU. If sedative medicines are administered to patients in the intensive care unit, they may develop delirium. Benzodiazepines and

dexmedetomidine have been associated to delirium. Delirium has been recommended as a new vital sign, and it is frequently the first symptom of clinical change (Davis et al., 2017).

Several authors have identified that nurses lack the necessary knowledge and skills to identify delirium effectively and are poorly engaged in delirium screening practices. It is evident from the literature that nursing staff working in ICUs internationally, are inconsistent and poorly engaged in recognition of delirium. The barriers identified in the literature include; lack of time, lack of knowledge related to delirium, difficulty assessing patients who are intubated and sedated, the perceived complexity of screening tools, lack of feedback on performance, and lack of physician support (Devlin et al., 2018 & Tsang et al., 2019).

In Egypt, Elfeky & Ali, (2018) revealed that despite having many years of experience in working with critically ill patients, all ICU nurses (100%) ranked delirium assessment as the fourth priority after level of consciousness, pain assessment, handling agitation, and caring for devices. More than half of the studied nurses (54.2%) never assessed delirium and 100% of nurses never received training in assessing and handling delirium. While, Abusaad et al., (2017), found that, the majority of nurses have poor knowledge about delirium, particularly its definition, causes, and its management. Also, more than half of them have a negative attitude regarding delirium and the majority of them have unsatisfactory practices.

The most common barriers to delirium screening were the absence of tools and difficulties of delirium screening for patients on a ventilator at ICUs Effective strategies or types of educational interventions for nursing staff in improving both knowledge, skills, and confidence in recognizing delirium are interactive sessions, didactic lectures, web-based nurse training, case scenarios, scripted unfolding case studies, team objective structured clinical encounter (TOSCE), in-service education and use of resource nurses for training (Coyle et al., 2018 & Lee et al., 2020).

"Psychoeducation is a critical component of evidence-based therapy for anxiety disorders" (Cassie et al., 2020). CBT is a multi-component treatment that involves psychoeducation as one of its components. The goal of psychoeducation is to empower the client and assist them in developing adequate coping skills (Hedman & Axelsson, 2019). Nurses have an important role in training service users and caregivers, delivering health education in society, and supporting other multidisciplinary team members to grow as instructors and advisors (WHO, 2020).

The digital revolution has created new opportunities for improving access to excellent mental health therapies (Holmes et al., 2018). There is mounting evidence that technology-assisted psychological therapy is useful in the treatment of mental illnesses (Podina et al., 2016). Because it saves money and time, online treatment may be readily accepted (Livingstone et al., 2011).

There are various social media applications that are used as teaching methods in nursing education when students doing their practice periods in hospital or school, which increase the student-centered option, such as Blogs, which provide a mean for online discussions and encourages collaboration among students by promoting discussion of course content outside of the classroom, thus allowing students to become more engaged with each other in the learning process through responding to blog posts (Arbour et al., 2019).

While, twitter promotes active learning, supports reflection and higher levels of thinking and also promotes interactions among students and between students and faculty, it enhances the clinical decision-making skills of nursing students in critical care situations. In addition, students can view videos of clinical scenarios and tweet their observations on the patient's evolving condition for instructor feedback. Also, there is wikis, enhances students' collaboration that developed by teams of nursing students such as nursing care plans, evidence-based nursing care projects or group developed scholarly papers. While, Facebook integrated as an educational tool into nursing courses to increase the fidelity, or realism, of case studies or simulations, it provides

academics with a present and innovative means of communicating with students to promote student learning through discussions and photo or video sharing, it provides students the opportunity to autonomously direct, self-evaluate and self-reinforce behavior that supports their learning (Clifton & Mann, 2019).

In addition, there is YouTube, which provides various patient case studies and educational videos that can be used in the classroom to promote student engagement through active learning, critical thinking and application of knowledge; it allows learners to engage with the content verbally and visually. On the other hand, there are new computer-based applications designed to encourage educational process applied to education and particularly using Internet allows the formulation of interactive self-assessment tests that can be valuable tools to motivate students in learning tasks and to test their progress previously to be certainly examined. In addition, it can do assessment of learning process, which is considered an essential part of the educational practice, and allows the achievement of learning objectives by learners and enhancing the quality and efficacy of teaching practice that impact on instructional needs and curricula (Miguelanez, 2019)

Because of the amount of time they spend at the bedside, ICU nurses are in a better position to assess their patients' cognition. Nurses who lack the knowledge and abilities to adequately evaluate patients will be unable to intervene early enough to prevent future mental illness in their patients. Unrecognized delirium in older persons leads to difficulties during hospitalization, a longer duration of stay, and death, according to many studies. Many variables impede nurses' ability to detect delirium in their patients, and the term "delirium" itself can be troublesome for healthcare professionals. Because health practitioners commonly document cognitive and behavioral changes as "confusion," knowledge deficiencies are perpetuated (Ghaeli et al., 2018).

Significance of the study:

Delirium is the most common neuropsychiatric disorder in hospitals, affecting 15% to 25% of patients on general medical wards, up to 60% on surgical wards, and up to 80% of the sickest ventilated patients in critical care. We did empirical observation and checked medical records in the ICU at Mansoura University's Emergency Hospital to determine the prevalence of delirium among ICU patients. We determined that no information had been saved. As a result, health care providers were having a hard time recognizing and managing ICU delirium patients. A lack of evaluation tools is one of these concerns, which leads to delirium being misdiagnosed, treated incorrectly, or even neglected. This condition raises the likelihood of substantial morbidity and mortality (Halter, 2018 & Heeder et al., 2019).

As a result, nurses must be aware of these hazards and be able to practice in accordance with current research recommendations; thus, studies into nurses' knowledge and practices surrounding the assessment of delirium in ICU patients are required. So, the study aimed to evaluate the effect of social-platform psycho-educational instructions regarding delirium on nurses' performance caring for intensive care unit patients

Operational definitions:

Social media platforms are web-based communication tools that enable people to interact with each other by sharing and consuming information. Available social media in this article are Mobile phones, Messenger, and WhatsApp (Gonzlez-Padilla & Tortolero-Blanco, 2020).

Aim of the study:

To evaluate the effect of social-platform psycho-educational instructions regarding delirium on nurses' care for intensive care unit patients through:

- Assessing the nurses' knowledge about delirium pre and post-social-platform psychoeducation instructions.
- Assessing the nurses' practice regarding delirium pre and post-social-platform psychoeducation instructions.

- Determining the association between nurses' knowledge and practices pre and post-social-platform psychoeducation instructions.

Research hypothesis:

Social-platform psychoeducational instructions will have a positive effect on nurses' care regarding delirium among intensive care unit patients

Subjects and Methods

Research design:

A quasi-experimental research design was used to achieve the aim of this study with a pre/post-test used in the study for the evaluation of knowledge in applying the information presented in a training session or with the introduction of a new concept.

Research Setting:

This study was conducted in Sohag City, Egypt, using an online questionnaire via Google Form and submitting the following link (<https://docs.google.com/forms/dle/1FANPQKsd>)

Subjects:

A total purposive sample of 200 nurses from 10 and 30 April 2019 by using an online questionnaire via Google Form was obtained from social media such as Facebook and WhatsApp groups who are providing direct care during day shifts for critically ill patients in the previous settings were included in the study. Nurses were distributed as follows: 120 nurses from general ICU and 80 from CCU who meet inclusion criteria. The inclusion criteria are: - Nurses on duty. - At least one year of experience in ICU. - Qualification for nursing practice either by diploma (after secondary school) or Bachelor, already use social platforms, and agreed to participate in this study, no history of mental illness, and all of them took the pre-and post-test. The sample size included nurses who completed online tools via Google Form that was opened on 10 and 30 April 2019 for about twenty days after the link was closed.

Tools of data collection:

Tool I: Nurse's knowledge assessment questionnaire regarding delirium, which included two parts:

Part 1: Demographic data of nurses: It included demographic characteristics of the studied nurses which consisted of 4 items related to age, gender, qualification, unit type, years of experience in ICU, working hours, and residence.

Part (2): "Nurses' knowledge questionnaire of delirium" This tool was adapted from (10) and modified by the researcher after reviewing the literature (Elliott, 2014; Glynn & Corry, 2015; Rivosecchi et al., 2018; Smith, A. 2019; Kim, & Hong, 2019) to assess the level of intensive care nurses' knowledge about delirium. There were 43 multiple choice and true/false questions in this tool, which were divided into seven parts. It included questions related to the definition, incidence, types, risk factors, clinical manifestation, assessment, management, and nursing care of delirium.

The scoring system

Each correct response is worth one point, while incorrect, missed, or unknown responses are worth zero (0). The total answers were divided by the number of items for each area of knowledge, yielding a mean score. These results were then translated into a percentage. The overall score (43 points) is split into two categories: inadequate knowledge (less than 75 %) and adequate knowledge (more than 75 %) (Equal to or greater than 75 %).

Tool II: Nurses' reported Practices about Delirium" It was constructed and developed by the researcher after reviewing the literature (Oh, 2018 & National Institute for Health & Care Excellence., 2019). It was used to evaluate intensive care nurses' practices with delirium patients. This instrument consists of twelve primary components for delirium assessment and management. The researcher observed each nurse for 60 minutes. This checklist contains (98) items separated into twelve sections, including delirium assessment, normal fluid balance, aeration and oxygenation, nutritional support, circulation, efficient communication, pain management, skin care,

sensation, safety, infection prevention, and sleep/wake pattern.

Scoring system:

The steps which were done correctly were scored (1), and the items not done were scored zero. For each area, the scores of the items were summed up, and the total was divided by the number of the items, giving the mean score for the part. Total scoring was (98 grades). These scores were converted to a percentage score. Total scoring will be classified into two categories as follow: incompetent practice level (< 75 %) and competent practice level (>75%).

Tool III: Nurses' satisfaction with social-platform psychoeducational instructions: it included three statements regarding whether the contents of the social-platform psychoeducational instructions were enough, satisfaction with the social platform psychoeducational instructions, did social-platform psychoeducational instructions improve nurses' knowledge and practices.

The procedure of data collection:

Preparatory phase:

To build the tools for data collecting and construct the social-platform psychoeducational instructions, the researchers investigated current and previous available literatures, including textbooks, journals, periodicals, and internet searches. Before beginning the study, the Dean of the Nursing Faculty sent an official letter to the directors of Sohag University Hospital, requesting their permission and cooperation in gathering data from the chosen setting.

Validity of the tools:

Face and content validity of the tools for clarity, comprehensiveness, appropriateness, and relevance by a board of five experts professors in psychiatry health nursing with more than ten years of experience in the fields were assessed; the board ascertained the face and content validity of the tools.

Reliability of the tools:

Reliability was assessed through Cronbach's alpha reliability test $\alpha = 83\%$ which revealed that the first tool, consisted of relatively homogenous items as indicated by

high reliability, $\alpha = 80\%$ which revealed the reliability of the second tool, reliability of the third tool was $\alpha = 912$.

A pilot study

A pilot study was undertaken on 10% of the nurses once the tool was developed (20 nurses). It was left out of the overall sample. It was done to detect any ambiguity in the tools, verify item transparency, and establish the time required for data gathering. The results of the pilot study were used to develop the final form of the tools, which included the clarification and testing of the practicality of the research process.

Ethical considerations:

Official permission was obtained through an issued letter from the Dean of Faculty of Nursing, Sohag University to conduct this study. Before beginning the questionnaire, the researcher advised the nurses that the study was optional, that they might refuse to participate at any moment, and that they could withdraw from the study at any time without giving a reason. They were also told that their information would be kept private and solely utilized for research purposes.

The Implementation of the study was carried out in three phases (assessment, implementation, and evaluation phases).

I- Assessment phase:

The research was carried out using an online Google form spreadsheet. The participant nurses were given a link to gather data, which included an online questionnaire. This link was shared in groups on Facebook and WhatsApp. The nurses were informed about the study's background, objectives, and expected outcomes on the first page of the questionnaire. The link; <https://docs.google.com/forms/dle/1FALPQKsd> was sent to all the studied nurses to identify their knowledge and reported practice (pre-psychoeducational instructions).

Two times, online tools were used. For the first time, they were employed as a pre-test for evaluating nurses' delirium knowledge and reported practice. Then, one month later similar tools were utilized again to assess the impact of social-platform psychoeducational instructions

on nurses' knowledge and practice in addressing delirium.

The average time it took nurses to complete the online tools was about 25-30 minutes. The goal of the study, the components of the tools, and how to complete the online questionnaire were all explained to each nurse who participated in the study. After describing the goal of the study, the researchers provided the psychoeducation materials to the participant nurses in WhatsApp and Facebook groups, and the researchers explained to the nurses how to use the psychoeducation.

II- Implementation Phase:

The actual fieldwork lasted roughly 20 days, starting on April 10th and ending on April 30th, 2019. The researchers began by introducing themselves and explaining the nature and purpose of the study to the nurses. Participants were required to complete and submit an online-prepared Google Form. Women were sent the link to the Google form via Facebook and WhatsApp groups. Each nurse was examined by utilizing an online questionnaire as a (pretest) to acquire baseline data before the online videos and presentation. On the first page of the online questionnaire, nurses were educated about the study's goal and expected outcomes, the tools' contents, and how to respond. During this phase, the researchers met the study participants online via Zoom meetings (phone calls, videos, and chat.

Sessions were conducted in Arabic to ensure that all study topics were understood, which included: (six sessions (4theoretical and 2 practical sessions). Sessions lasted 30-40 minutes for each theoretical and practical session and were held twice a week. Nurses who took part in the pre-test received the booklet via Google Form and Facebook and WhatsApp groups. To help nurses better comprehend delirium, the researchers prepared movies, PowerPoint slides, and posters. The researchers also generated online videos and audio to explain the contents of the booklet to help nurses grasp it better.

The content of the psychoeducational instructions is presented as follows: 4 theoretical and 2 practical sessions

First session: An introductory session that emphasized establishing rapport between the researchers and the studied adolescents participating in the study and explanation of the purpose of the instructions

Second session: Education about delirium definition, incidence, and types.

Third session: Education about delirium risk factors, clinical manifestation, and assessment.

Fourth session: Education about delirium management, and nursing care of delirium.

Fifth session: It consisted of techniques about meditation (definition, steps of meditation) and the importance of practicing exercises such as deep breathing exercises, muscle relaxation exercises, and yoga exercises. Also, assessment of delirium, establish/maintain normal fluid balance, establish/maintain aeration and oxygenation, provide nutritional support, and maintain circulation.

The sixth session: included education about how to effectively communicate, pain management, skin care, sensation, safety, prevention of infection and sleep/wake patterns, and a summary of the program and the studied nurses were asked to answer the questionnaire in the online link post-psycho-educational instructions.

Different Teaching methods were used as discussion, PowerPoint presentation, discussion, demonstration, and teaching videos

III. Evaluation phase:

The tools were re-posted to the nurses on the Google Form for collecting after one month of sending the booklet, videos, PowerPoint presentation, and posters (post-test) using the same pre-test tools (the tool I (part 2), II, and III) to evaluate the effect of social-platform psycho-educational instructions regarding delirium on nurses' care for intensive care unit patients

Statistical analysis:

Data entry and statistical analysis were performed using SPSS for Windows, version 20. Data were presented using descriptive statistics in the form of frequencies and

percentages for qualitative variables and mean and SDs for quantitative variables. Differences between two means tests (t-test) were used. Statistical significance was considered at P-value <0.05.

Results:

Table (1) shows that (58%) of the studied nurses were aged < 25 years with a mean of 25.8 ± 4.7 years, and 74% of them were females. Concerning qualifications of the studied nurses (60%) of them were Technical Institute of nursing. Three-fifths (60%) were working in general ICU. Regarding years of experience, 40% of them had experienced less than 5 years. As regards, working hours (54%) work for more than eight hours daily. Concerning residence (72%) of the studied nurses were living in the urban area

Table (2): Shows a highly statistically significant increase in the studied nurse's knowledge about delirium pre and post-social platform psychoeducational instructions (P-value: 0.0001). The total mean score of the studied nurses' knowledge was 19.83 ± 6.00 pre-social platform psychoeducational instructions while it increase to 40.21 ± 1.84 post-social platform psychoeducational instructions with highly statistically significant differences. In addition, the total knowledge scores in this table demonstrated a statistically significant difference.

Figure (1) illustrates that (83%) of the studied nurses had an unsatisfactory level of knowledge regarding delirium pre-social platform psychoeducational instructions compared with post-social platform

psychoeducational instructions, and 92% of them had a satisfactory level of knowledge.

Table (3): Portrays a highly statistically significant improvement in the studied nurse's practices regarding delirium pre and post-social platform psychoeducational instructions (P-value: 0.0001). The total mean score of the studied nurses' knowledge was 50.38 ± 21.23 pre-social platform psychoeducational instructions while it increase to 93.56 ± 7.87 post-social platform psychoeducational instructions with highly statistically significant differences. In addition, the total knowledge scores in this table demonstrated a statistically significant difference.

Figure (2) shows that (62%) of the studied nurses had an incompetent level of practice regarding delirium pre-social platform psychoeducational instructions compared to (93%) of them who had a competent level of practice post-social platform psychoeducational instructions.

Table (4) illustrates a significant correlation between the total knowledge and total practice scores of the studied nurses' pre and post-social platform psychoeducational instructions.

Figure (3): Showed that all of the studied nurses (100%) reported that the content of the social-platform psychoeducational instructions was enough and (97 %) of them were satisfied with social platform instructions. Concerning its effect on knowledge and practices, all (100%) of them stated that the social-platform psychoeducational instructions improved their knowledge and practices.

Table (1): Frequency and percentage distribution of the studied nurses regarding their demographic data (n=200)

Demographic characteristics	No.	%
Age (Years)		
< 25 years	116	58.0
25 - ≥ 36 years	84	42.0
Mean ± SD	26.7 ± 4.3	
Gender:		
Male	52	26
Female	148	74
Qualifications:		
Technical Institute of nursing	120	60.0
Baccalaureate degree in nursing	80	40.0
Unit type		
General ICU	120	60.0
Coronary ICU	80	40.0
Years of experience:		
< 5 years	80	40
5 - <10 years	76	38.0
10 - ≥15 years	44	22.0
Working hours		
• 6 – 8 hours	92	46.0
• > 8 hours	108	54.0
Residence		
Urban	144	72.0
Rural	56	28.0

Table (2): Mean Scores of Knowledge among the Studied mothers about delirium Pre/ Post Social Platform Psychoeducational instructions (n=200)

Knowledge items	Maximum Score	Pre social platform psychoeducational instructions	Post social platform psychoeducational instructions	t-test	P-value
Definition of delirium	1	0.61 ± 0.8	0.98 ± 0.3	19.183	0.0001**
Incidence of delirium	1	0.71 ± 0.3	0.92 ± 0.23	17.532	0.0001**
Types of delirium	3	1.41 ± 0.2	2.32 ± 0.43	10.47	0.0001**
Risk factors of delirium	10	5.53 ± 1.2	9.32 ± 0.33	13.32	0.0001**
Clinical manifestation of delirium	8	2.69 ± 1.59	7.45 ± 0.20	12.49	0.0001**
Assessment of delirium	5	1.20 ± 1.13	3.77 ± 0.46	10.57	0.0001**
Management of delirium	6	3.0 ± 0.19	5.8 ± 0.34	15.67	0.0001**
Nursing care for delirium	9	4.78 ± 1.89	8.62 ± 0.97		
Total knowledge scores	43	19.83 ± 6.00	40.21 ± 1.84	20.139	0.0001**

(*) statistically significant at $p \leq 0.05$ (**) highly statistical significance at $p < 0.001$

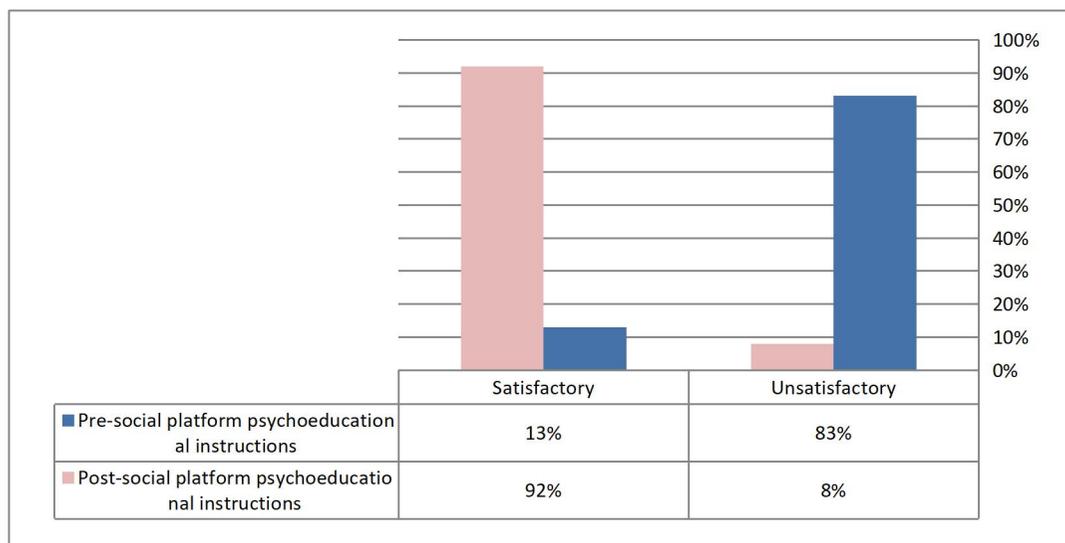


Figure (1): Percentage Distribution of the Total nurses' Knowledge Level regarding delirium

Table (3): Mean Scores of practices among the Studied Nurses about Delirium Pre/ Post Social Platform Psychoeducational instructions (n=200)

Practices items	Maximum Score	Pre social platform psychoeducational instructions	Post social platform psychoeducational instructions	t-test	P-value
Assessment of delirium	8	1.12±0.79	6.98±1.99	19.183	0.0001**
Establish/maintain normal fluid balance	9	7.45±2.14	9.00±0.00	17.532	0.0001**
Establish/maintain aeration and oxygenation	9	5.56±1.57	8.23±1.48	10.47	0.0001**
Provide nutritional support	12	6.24±2.56	11.48±1.12	13.32	0.0001**
Maintain circulation	7	4.89±2.15	6.93±0.22	12.49	0.0001**
Effective communication	10	4.04±2.23	9.54±1.01	10.57	0.0001**
Pain management	9	3.43±2.92	8.63±0.91	15.67	0.0001**
Skin care	4	1.62±1.54	3.84±0.45	13.55	0.0001**
Sensation	10	4.69±3.23	9.53±1.13	14.67	0.0001**
Safety	5	2.92±1.47	4.83±0.56	10.22	0.0001**
Prevention of infection	9	5.36±2.59	8.54±0.94	16.78	0.0001**
Sleep/wake pattern	6	2.34±1.92	5.66±0.67	12.59	0.0001**
Total knowledge scores	98	50.38±21.23	93.56±7.87	20.139	0.0001**

(*) statistically significant at $p \leq 0.05$

(**) highly statistical significance at $p < 0.001$

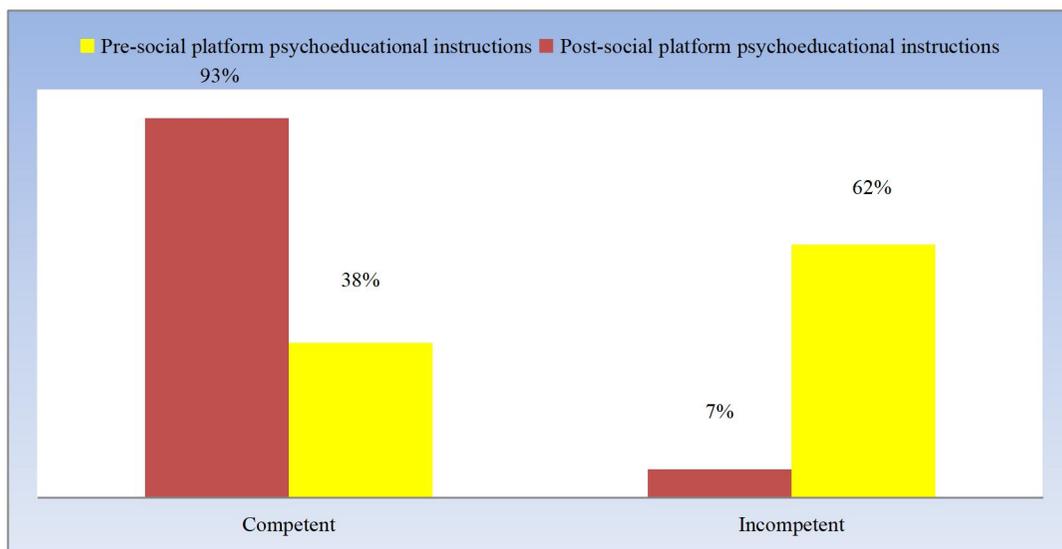


Figure (2): Percentage Distribution of the Total nurses’ practices Level regarding delirium Pre & Post-Social Platform Psychoeducational instructions (N= 200)

Table (4): Correlation between total knowledge score and total practices score of the studied nurses’ pre and post-social platform psychoeducational instructions (n=200).

Correlation	Pearson correlation coefficient			
	Total practice score			
	Pre-social platform psychoeducational instructions		Post-social platform psychoeducational instructions	
	r	P	r	P
Total knowledge score	.451	.000**	.622	.000**

** Correlation is significant at the 0.0001 level

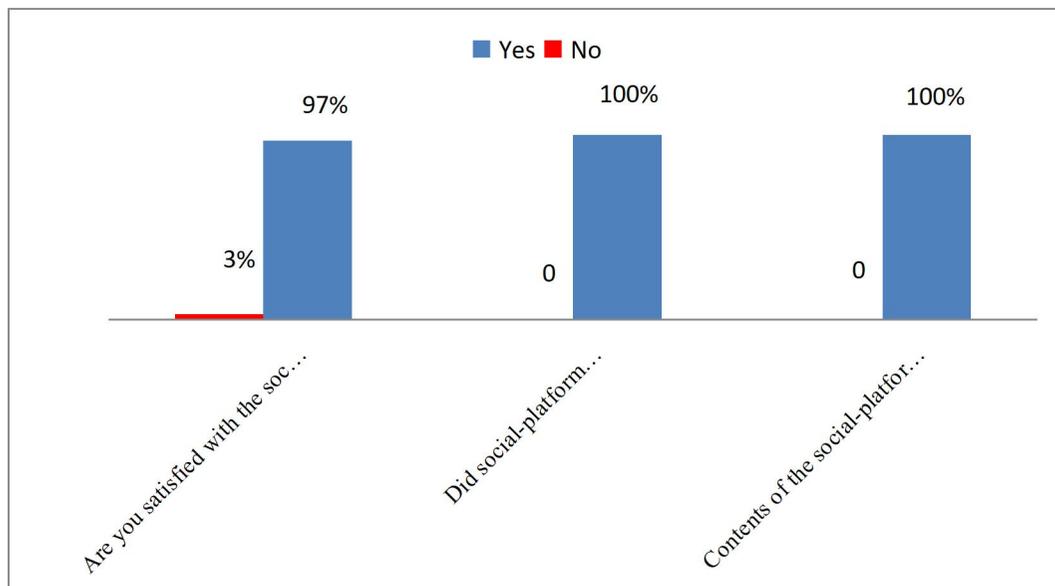


Figure (3): Percentage Distribution of the Studied Nurses regarding their satisfaction with Social-Platform Psychoeducation Instructions (n= 200)

Discussion:

Delirium in the elderly is associated with high mortality rates and poor patient quality of life following release from the hospital. Several non-pharmacological nursing interventions have also been demonstrated to dramatically reduce the incidence of delirium and improve the management of delirium in older adults in previous research. Nurses are uniquely positioned to address the problem of delirium since they are frontline caregivers. Providing nurses with the required knowledge and skills can help hospitals provide better care to elderly patients (Weheida et al., 2018).

According to the present study findings, more than half of the studied nurses were aged < 25 years with a mean of 25.8 ± 4.7 years. This result is in the same line as the study conducted by Abusaad et al., (2017) who studied "Learning Needs Assessment of Pediatric Nurses Regarding Delirium and Its Barriers of Screening at Intensive Care Units" and found that the mean age of nurses (29.32 ± 4.72). This age is considered early for exposure to working in an ICU setting after graduation, as 60.7% of nurses in the present study had a duration working in the ICU of less than five years.

Also, this result is supported by Weheida et al., (2018) who studied "Relationship between Nurses' Burnout and Implemented Evidence-Based Guidelines in Intensive Care Units" and Lieow et al., (2019), who studied "Effectiveness of an advanced practice nurse-led delirium education and training program" and reported that half of their study sample age was less than 30 years old.

Concerning gender, the study revealed that the majority of nurses were females. This result is supported by Pinto & Biancofiore, (2016), who studied in Italy "The ABCDE bundle: A survey of nurses' knowledge and attitudes in the intensive care units" and reported that the sample was females.

Concerning qualifications of the studied nurses, the current study showed that three-fifths of them were Technical Institute of nursing which is matched to other studies conducted by Selim & Ely, (2017) who studied "Delirium the under-recognized syndrome: a

survey of healthcare professionals' awareness and practice in the intensive care units" and Awad., (2019) who done a study about "Critical Care Nurses' Knowledge, Perception and Barriers Regarding Delirium in Adult Critical Care Units." and reported more nurses graduated from Technical Institute of nursing than a bachelor degree.

The current study showed that two-fifths of nurses were working for less than 5 years working in ICU; this may be explained as most of the studied nurses were aged less than 30 years. This finding was parallel to a previous study conducted by Selim & Ely., (2017) reported that the mean duration of nurses working in ICU is 5.8 ± 3.7 years and about half of them are working for less than 5 years. However, the current result is not similar to Tsang et al., (2019) who studied "Qualitative descriptive study to explore nurses' perceptions and experience on pain, agitation and delirium management in a community intensive care unit" and reported that the mean nurses working in ICU were 9.8 ± 9.0 .

Concerning residence, the current study revealed that less than three-quarters of study nurses were living in urban areas. These findings are not similar to Weheida et al., (2018) found that three-quarters of study nurses live in the rural area.

As regards the knowledge of the studied nurses about delirium, the majority of them had unsatisfactory knowledge level pre-social platform psychoeducational instructions. From the researcher's point of view, Lack of awareness about delirium may be due to an absence of ongoing educational program or sessions about this intervention, supervision, continual evaluation of nurses' practice, lack of delirium protocols and guidelines, curriculum gaps during training, and a lack of funds for regular workshops. The previous finding is supported by Hamdan-Mansour et al., (2018) who studied Jordan "Knowledge and nursing practice of critical care nurses caring for patients with delirium in ICUs" and found that nurses' knowledge level about ICU delirium is low.

Also, the result is the same line as Riekerk et al., (2019) who studied "Limitations and practicalities of CAM-ICU

implementation, a delirium scoring system, in a Dutch ICU" and revealed that the knowledge of the studied sample about the potential influence of delirium on the duration of mechanical ventilation was lacking. Similarly, **Fick et al., (2017)** who studied found that nurses in their study had some knowledge of delirium. This result is consistent with many other previous studies (**Abusaad et al., 2017, Selim & Ely, 2017, Ramoo et al., 2018, Coyle, 2019**) who found that majority of nurses had poor knowledge.

The result of the current study cleared that the total means score of the studied nurses' knowledge was increased with highly statistically significant differences. In addition, the majority of them had a satisfactory level of knowledge of post-social platform psychoeducational instructions. From the researcher's point of view, this indicated the importance of introducing social platform psychoeducational instructions for nurses to improve their knowledge. Also, reflected the positive effects of post-social platform psychoeducational instructions and the implementation of in-service educational programs to help studied nurses solve the problem through clinical training.

Regarding the practice of the studied nurses for delirium, it was revealed that the studied nurses had an incompetent level of practices regarding delirium pre-social platform psychoeducational instructions compared to the majority of them had a competent level of practices and improvement of nurses' practices post-social platform psychoeducational instructions. According to the researcher's point of view, the lack of practice is due to a growth in the number of patients and workload, as well as a lack of education, control, and regular evaluation of nurses. Furthermore, nurses' practice was based on imitations. This conclusion is similar to the findings by **Hamdan-Mansour et al., (2018)** who found that the majority of the sample had a low level of nursing practice in managing ICUs.

Many authors described this change in nurses' practices (**Rawson et al., 2017; Oh, 2018; & Lieow et al., 2019**). They discovered that after implementing the program, nurses'

total mean scores improved. In addition, the mean of nurses' cumulative practice scores before and after the instructions differed statistically significantly. In-service education was beneficial in increasing nurses' skills.

Similarly, a previous study conducted by **Oh, (2018)** who studied "The effectiveness of clinical practice education using the checklist on the performance of delirium care for nursing students" found that nursing intervention of delirium showed that the majority of ICU nurses had the highest mean score practices after implementation of the educational program.

The present study revealed a significant correlation between the total knowledge and total practice scores of the studied nurses' pre and post-social platform psychoeducational instructions. From the researchers' point of view, it reflected that improving knowledge leads to adequate practices. This could be explained by nurses with less knowledge about delirium in the ICU being more likely to have a lower level of effective nursing practice regarding its management. Previous studies had shown that several nursing interventions could significantly reduce the incidence of delirium and are highly effective in improving the management of delirium among older people. Providing nurses with the necessary knowledge and skills can be an effective way of improving the care of older people in hospitals (**Weheida et al., 2018**).

On the other hand, this result is not similar to **El-Nosary et al., (2016)**, who studied Nurses' knowledge and practices about delirium among intensive care unit patients at the emergency hospital and reported that there was no correlation between the knowledge of delirium and nursing practice for intensive care nurses.

Similarly, **Saleh, et al., (2020)** concluded in their study "Assessment of Nurses' Knowledge and Practices Regarding Care of Patients with Delirium" that the educational program in this study had a positive outcome when implemented in ICU nurses in Yemen. They noticed a marked improvement in their knowledge about delirium and their practices in nursing care for patients.

The present study reveals that all of the studied nurses reported that the content of the social-platform psychoeducational instructions was enough and almost all of them were satisfied with social platform instructions. Concerning its effect on knowledge and practices, all of them stated that the social-platform psychoeducational instructions improved their knowledge and practices. This result reflects the benefit of administering the social-platform psychoeducational instructions, which met the nurses' needs and provide them with sufficient knowledge and practices. Also, reflected the success of the study aim.

Conclusion:

Depending on the results of the current study, the study concluded that social-platform psycho-educational instructions regarding delirium had a positive effect on improving nurses' performance caring for intensive care unit patients. A highly statistically significant correlation was found between nurses' knowledge and practice regarding delirium

Recommendations:

The following recommendations were suggested based on the results of the present study:

- 1- Providing nurses with a well-planned health education program to improve their knowledge and practice regarding delirium.
- 2- Psychological support should be carried out through the media to help nurses become more knowledgeable and reinforce possible interventions that are essential to support and help in psychological adjustment.
- 3- Brochures and booklets with sufficient information regarding delirium should be printed and distributed to all nurses caring for intensive care unit patients
- 4- Further research is needed to determine the educational needs of ICU nurses.
- 5- The study has to be replicated on a larger sample from different parts of Egypt.

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