

The Effect of Social Media–Based Education on Nurses' Performance in the Care of Patients with Pancreatitis

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Abstract

Background: The term "acute pancreatitis" describes inflammation of the pancreas that causes the organ's own enzymes to begin auto-digestion. One of the most important ways to give nurses the theoretical and technical knowledge they need to build the skills and competencies necessary for the continuous improvement of nursing practice is through social media-based education. **Aim:** To evaluate the effect of social media–based education on nurses' performance in the care of patients with pancreatitis. **Design:** A quasi-experimental research design was employed for this study. **Setting:** The research was carried out in the medical department at Sohag University. **Subjects:** A convenient sample comprising approximately 50 available nurses was included in the study. **Tools:** Two instruments were utilized for data collection: Tool I: a structured interview questionnaire, which consisted of two sections; section one: Nurse's personal data, section two: Nurse's knowledge assessment questionnaire, and Tool II: a nurse's observation checklist. **Results:** The findings indicated that highly significant differences were noted in the mean scores of nurses' knowledge and practice following social media–based education at $P < 0.001$ compared to before the education. **Conclusion:** The study concluded that social media–based education significantly enhances nurses' performance in the care of patients with pancreatitis. **Recommendations:** It is recommended to implement ongoing in-service educational programs for nurses caring for patients with acute pancreatitis. Additionally, it is suggested to replicate this research with a larger probability sample drawn from various geographic areas in Egypt to facilitate generalization.

Keyword: Acute Pancreatitis, Nurses' Performance & social media–based education.

Introduction:

Acute pancreatitis is marked by pancreatic inflammation, leading to autodigestion of its enzymes. This condition has various causes and can range in severity from mild cases that may resolve quickly with some complications to severe cases like necrotizing pancreatitis, which carries a higher risk of multi-organ failure and increased mortality (Acute pancreatitis. MSD Manual Professional Version, 2024).

Acute pancreatitis can affect individuals across all age groups; however, the mortality rate associated with this condition tends to rise with age. The risk of multiple organ failure increases with age, likely due to the progressive decline in physiological functions of vital organs over time. It is essential to closely monitor the functioning of key organs, such as the lungs and kidneys, and to implement aggressive treatment strategies to mitigate the risk of death from acute pancreatitis in older adults (Ashraf et al., 2021).

Acute pancreatitis is frequently diagnosed in intensive care units around the globe. Over the past

decade, the incidence of pancreatitis has risen. It is now the third most common gastrointestinal condition leading to hospital admissions. The serious complications related to pancreatitis make it a potentially fatal condition. Should the illness advance to a critical stage, the death rate may rise significantly from one percent to more than thirty percent. Pancreatitis is associated with elevated levels of morbidity, mortality, and prolonged hospital admissions (Capurso et al., 2023).

The clinical presentation of acute pancreatitis varies from mild to severe and often resembles other conditions. Typical symptoms include sudden onset of abdominal pain, nausea, and vomiting. The pain often localizes in the epigastric region and may radiate to the periumbilical area, ranging from mild to severe. Many patients describe a sharp or knifelike pain radiating to the back. In mild cases, symptoms may improve with positional changes. Pain duration can vary from a few days to several weeks. Notably, some patients may experience pancreatitis with minimal or no pain (Guilabert et al., 2024).

Acute pancreatitis can impact multiple organ systems, emphasizing the need to recognize and

manage systemic complications for optimal patient care. Severe complications include hypovolemic shock, acute respiratory distress syndrome (ARDS), acute kidney injury (AKI), and gastrointestinal bleeding. Hypovolemic shock results from decreased intravascular volume and vasodilation due to inflammatory mediators, which also contribute to ARDS and AKI. Additional pulmonary complications may include pleural effusions, atelectasis, and pneumonia (**Iannuzzi et al., 2022**).

The prompt identification and diagnosis of pancreatitis are crucial for averting disease advancement and associated complications. Advanced practice nurses must conduct a thorough history and physical examination to accurately diagnose pancreatitis and rule out differential diagnoses with similar presentations. They should be adept at identifying risk factors linked to pancreatitis, possess sharp assessment skills, and be knowledgeable about which diagnostic tests to order. To avert disease progression, it is also crucial to determine the underlying cause of pancreatitis (**Kosti et al., 2023**). Nurses have a significant role in enhancing health standards; therefore, It is imperative that they remain knowledgeable about both theoretical and practical aspects within this domain. Ongoing training is crucial for enhancing the professional expertise and abilities of personnel, consequently refining best practices for a range of tasks and duties (**National Institute for Health and Care Excellence, 2020**).

The management of nursing care for patients with pancreatitis involves administering pain relief and offering emotional support. Nurses are required to observe patients for indications of local or systemic complications. Close monitoring is essential for detecting signs and symptoms of pancreatic infection, which may manifest as heightened abdominal pain and tenderness, fever, and an elevated white blood cell count (**Pandanaboyana et al., 2022**).

The educational program is regarded as a crucial tool for equipping nurses with the theoretical and technical knowledge necessary to develop the skills and competencies required for the ongoing enhancement of nursing practice (**Mosadeghrad et al., 2024**). It encourages nurses to take ownership of their professional growth. This program is structured to aid healthcare workers in maintaining and advancing their competencies while acquiring new knowledge (**Pandanaboyana et al., 2024**).

As a vital component of the healthcare system that employs a holistic health approach, nurses have a significant impact on the efficiency of the healthcare system and play a crucial role in health promotion, disease prevention, and the provision of treatment and care (**Gardner et al., 2020**). This matter benefits

individuals, communities, and populations within the healthcare setting. The significance of nurses' roles in healthcare investments and the enhancement of community economic growth is indisputable (**Singh et al., 2023**).

Globally, billions of individuals utilize social media, which is continuously changing in meaning. As described by **Kazemi et al., (2021)**, the term typically refers to Internet-based tools that enable individuals and communities to exchange information, ideas, images, and various types of content. Healthcare providers leverage social media to foster professionalism, enhance individual awareness, engage patients, discuss healthcare regulations and practice issues, encourage healthy behaviors, and disseminate health information to the public.

Individuals who consume news through newspapers, television, and radio may pursue healthcare services as a result of their exposure to media. The phrase "social media" includes any written, spoken, or broadcast message intended for a broader audience. One significant tool for fostering social cohesion is the media (**Viswanath et al., 2020**). The combination of mobile health services with face-to-face interactions offers a promising method for promoting healthier behaviors. Smartphones provide a wide range of applications designed to meet users' needs, such as Instagram, WhatsApp, email, and SMS (short message service). While WhatsApp has emerged as the favored platform for multimedia communication, SMS continues to be an essential tool for physicians to send reminders to children and their parents about adhering to prescriptions. Furthermore, WhatsApp remains a widely utilized application for facilitating communication within the healthcare field. The term "mobile health," or "mHealth," pertains to the use of wireless and mobile communication technologies to improve healthcare delivery, outcomes, and research. Digital technology can assist in overcoming traditional obstacles related to geography, economics, and literacy (**Ouedraogo, 2021**).

Utilizing mHealth to improve the skills and awareness of nurses is a highly cost-effective approach, especially in low- and middle-income nations. Mobile phone interventions, which may include voice messages, SMS (short message service), videos, and applications, can be executed either independently. This approach has the potential to significantly improve health outcomes by increasing access to essential information and empowering healthcare providers (**Irvine & Russell, 2022**).

The function of nursing in managing patients with pancreatitis is essential due to the intricate nature of

the condition, which frequently necessitates comprehensive care strategies customized to meet individual requirements. Nurses act as crucial advocates for patients, promoting effective communication between the healthcare team and the patient, evaluating and tracking symptoms, administering treatments, and offering education on lifestyle changes. Given that chronic pancreatitis often demands long-term management strategies, the nursing role encompasses chronic disease education, pain management, and support systems for both patients and their families (Shiza et al., 2023).

Significance of the Study:

The prevalence of pancreatitis has risen over the past decade. Estimates suggest that the occurrence of acute pancreatitis in Egypt varies from 5 to 30 cases per 100,000 individuals each year. This rise in acute pancreatitis incidence underscores the necessity for a theoretical and practical nursing care foundation to achieve effective therapeutic outcomes for patients. As education is pivotal for the professional growth of nurses, this study sought to identify and investigate nurses' experiences with two educational approaches (social media platforms such as websites and apps, and in-person education) through a qualitative methodology (Saini et al., 2023).

Social media platforms like Facebook, Instagram, WhatsApp, Snapchat, and Twitter have eliminated barriers associated with face-to-face interactions, facilitating consistent and effective communication. According to Darvish et al. (2024), patients utilize social media to share medical records with others facing similar challenges, gain insights into their conditions, and communicate swiftly and effectively. It is increasingly evident that social media platforms, along with mobile applications and communication technologies, are at the forefront of healthcare innovation. However, there is limited evidence to suggest that this significantly influences the health outcomes of women. Consequently, this study aimed to evaluate the effect of social media-based education on nurses' performance in the care of patients with pancreatitis

Operational definitions

Nurse performance refers to the activities, achievements, or successful execution of a nurse's responsibilities in relation to the duties assigned to them (Supri, et al 2019). It is defined as "their comprehension and application of social media-based education in the treatment of patients suffering from pancreatitis.

Social media-based education: The initial goals of social media marketing were to establish an "online community for everyone" and to foster interpersonal

relationships. In the present study, nurses who had internet access on their mobile devices (whether through mobile data or home WiFi) and utilized social media platforms (such as Facebook, Viber, or WhatsApp) were instructed on how to care for children using chest tube techniques. The communication methods included messages sent via the WhatsApp application, direct calls from mobile phones, interactive resources, images, videos, and responding to inquiries, all of which are part of the envisioned participation in online forums.

Aim of the study:

The study aimed to evaluate the effect of social media-based education on nurses' performance in the care of patients with pancreatitis through the following objectives:

- 1- Assess nurses' knowledge and practices regarding pancreatitis
- 2- Design, and implement social-media-based education based on the needs of nurses.
- 3- Evaluate the effect of social-media-based education .

Research hypothesis:

- Social -media-based education is expected to improve nurses' knowledge post-intervention than pre-intervention
- Social -media-based education is expected to improve nurses' practice post-intervention than pre-intervention

Subjects & Method

Research design: A quasi-experimental research design was employed for this study. One group pre-posttest quasi-experimental research design was utilized to achieve the aim of the current study. A quasi-experimental design is one type of experimental design that is very similar to the true experimental design except it lacks one criterion as randomization or control (Gray et al., 2019).

Setting:

The research was carried out in the medical department at Sohag University.

Subjects:

A convenient sample comprising approximately 50 available nurses was included in the study

Study Tools:

Tools: Two tools were employed for data collection:

Tool 1: a structured interview questionnaire, designed by the researcher in straightforward Arabic

after reviewing relevant literature to evaluate nurses' knowledge and practices regarding acute pancreatitis (Kosti et al., 2023; Pandanaboyana et al., 2022; Saini et al., 2023; Shiza et al., 2023). Various types of questions were utilized, including open-ended questions, true or false questions, and multiple-choice questions, which were divided into two sections.

Section one: Nurse's personal data:

This section was designed to evaluate the demographic characteristics of the nurses, including age, sex, educational level, years of experience, and prior attendance at training courses related to acute pancreatitis. It comprises 5 items.

Section two: Nurse's knowledge assessment questionnaire (pre and post-test) This text is focused on evaluating nurses' comprehension of the anatomy and physiology of the pancreas (Lewis et al., 2015), the definition of acute pancreatitis (Urden et al., 2019), the factors contributing to acute pancreatitis (Kosti et al., 2023), the pathophysiological aspects of acute pancreatitis (Shiza et al., 2023), the clinical signs associated with acute pancreatitis (Urden et al., 2019), the categorization of acute pancreatitis, and the criteria used to predict the severity of pancreatitis. This includes Ranson's criteria, the Acute Physiology and Chronic Health Evaluation (APACHE) II criteria, and the Bedside Index for Severity in Acute Pancreatitis (BISAP Score) (Pandanaboyana et al., 2022), along with the complications and nursing management strategies (Urden et al., 2019).

Scoring system:

The assessment comprised 39 questions; of these, twenty-seven were multiple-choice, six were true or false, and six were open-ended. Multiple-choice questions received one point for a correct answer and zero for an incorrect one. True or false questions were scored in the same manner, with one point for a correct answer and zero for an incorrect answer. Open-ended questions were granted one point for a correct response. The total scores for the items were aggregated and subsequently converted into a percentage score. Knowledge was deemed unsatisfactory if the score was below 75%, and satisfactory if the score was 75% or higher.

Tool II: Nurse's observation checklist.

The established care guidelines served as the basis for the development of the checklist. This tool included every step required to assess nurses' care of patients with acute pancreatitis. It was used both before and right after the educational program was put into place, and for a month after that. The following steps are on the checklist:

-Pain management and assessment, which produced a total of twenty scores after ten steps (Lynn, 2015).

-Blood glucose monitoring, which produced forty scores after twenty steps (Berman et al., 2014).

-Injecting insulin, which took 35 steps and yielded 70 scores (Lynn 2015).

-The thirteen-step central venous pressure measurement (C.V.P.) produced twenty-six scores (Niciol et al., 2012).

-Monitoring fluid balance, which consisted of thirteen steps and resulted in twenty-six scores (Niciol et al., 2012).

-Monitoring and management of the nasogastric tube, which encompassed sixteen steps and produced thirty-two scores (Lynn 2015).

Scoring system:

The total score for all steps amounted to 244, with each step assessed as follows:

1. A score of 1 was given for correctly performed actions.
2. A score of 0 was given for incorrectly performed actions.

The scores for each item were summed and then converted into a percentage score; practice was classified as incompetent if the score fell below 75% and competent if the score was 75% or above.

Fieldwork:

The fieldwork commenced in July 2023 and continued until December 2023. The researchers conducted two visits per week for two weeks (Saturdays and Mondays, from 10:00 a.m. to 12:00 noon) to complete both the pre-test and post-test. The average time required to complete the tools ranged from 35 to 40 minutes. Education was delivered through social media platforms such as WhatsApp, Telegram, and Facebook applications.

Validity& Reliability

The validity of the tools hinges on whether the instrument accurately measures its intended purpose. This assessment was conducted by gathering feedback from a jury composed of five professors, including three from Medical-Surgical Nursing and two from nursing education. They evaluated the tools based on clarity, comprehensiveness, accuracy, relevance, and the extent to which they elicited the desired information; consequently, the tools were validated for both face and content. No modifications or rephrasing were made based on the jury's feedback. To determine the relevance, clarity, and completeness of the tools, expert responses were solicited, with participants either agreeing or disagreeing with the face validity.

Tools reliability:

The reliability of the proposed tools was assessed using the Cronbach alpha test, yielding a result of 0.899 for knowledge and 0.876 for practices.

Pilot study:

The pilot study involved 10% (5 nurses) of the total sample to verify that the tools were clear and applicable, as well as to estimate the time needed for completion. No changes were made, and the subjects included in the pilot study were also part of the main study sample.

Ethical considerations:

Approval for the research was granted by the Scientific Research Ethical Committee at the Faculty of Nursing, Sohag University, prior to the commencement of the study. The researcher explained the significance and objectives of the study to all participating nurses. Informed consent was obtained from each nurse involved in the study. All nurses were made aware that participation was voluntary and that they could withdraw from the study at any time without providing a reason, with confidentiality of their information guaranteed. They were also informed that the data collected would be utilized solely for the current study and for their benefit.

Social media instructional guidelines construction:

The process comprised three distinct phases: the preparatory phase, the implementation phase, and the evaluation phase.

Preparatory phase:

This study commenced with a preparatory phase during which several activities were conducted:

An official correspondence was dispatched from the Dean of the Faculty of Nursing to the manager of the previously identified settings, seeking permission to carry out the study. This correspondence detailed the study's objectives and the data collection tools to secure consent and collaboration for data gathering. Subsequently, the researchers convened with the nurses who consented to participate in the study, elucidating the study's aim and objectives, and obtaining oral consent prior to the application of the social media-based educational method.

An assessment utilizing the prior tool was conducted by reviewing historical and contemporary literature encompassing various facets of the research, including books, articles, periodicals, magazines, and studies pertinent to the research topic.

Implementation phase:

The researchers incorporated nurses from the selected settings into the established social-media-based educational groups. They utilized a telephone number to connect with all participants via social media platforms such as WhatsApp, Telegram, and Facebook, which were most accessible and frequently used by the study sample, subsequently disseminating data or information through the aforementioned channels. The educational content was delivered in various formats, including text, video, and brochures.

The social-media-based educational sessions encompassed: the study's purpose, intervention steps, acquisition of oral informed consent, scheduling for additional social media-based educational sessions, and methods for contacting the researchers. Utilizing study instruments I, II, and III, a pre-test of knowledge and an observational checklist for practice were administered. At the conclusion of the session, an educational booklet was distributed to the nurses. The framework of the social-media-based educational session included: An outline of pancreatitis was covered in the content. Pancreatic anatomy and physiology, the definition of acute pancreatitis, its causes, pathophysiology, clinical manifestations, classification, and criteria for predicting the severity of pancreatitis, complications, and nurses' management were all covered in the three theoretical sessions. The pain assessment, blood glucose monitoring, insulin injection, central venous pressure measurement, fluid balance monitoring, and nasogastric tube care were all covered in the three practical sessions.

Then videos, PowerPoint, and text messages through instant messaging software applications such as Viber, What App, and Facebook to the content of information displayed by using interactive visualized and animated instructions about the care of patients with pancreatitis

Evaluation phase:

This phase was used to to evaluate the effect of social media-based education on nurses' performance in the care of patients with pancreatitis the post-test was done for nurses after one month to estimate the effect of the social-media- based education using the same pre- education tools.

Statistical Analysis:

Data were analyzed using the Statistical Package for Social Sciences (SPSS), version 22. Qualitative data were presented as numbers and percentages. The mean and standard deviation for each of the demographic data, and t-test and Chi-square test were recorded. Comparison between pre and post-

test; $P > 0.05$ was considered to be statistically significant of results; $P > 0.05$ was statistically significant of results.

Results:

Table (1): Indicates that 84% of the nurses studied were recruited at an age younger than 30 years, with a mean age of 26.56 ± 5.33 . Among them, 96% were female, approximately 44 had qualifications from a Technician Institute of nursing, and around 70% had less than 10 years of nursing experience. Furthermore, it is evident that 100% of these nurses had not participated in any prior training courses regarding acute pancreatitis.

Table (2): This table illustrates that there was a statistically significant difference in the total knowledge scores before and one month after the implementation of social media-based education (p value < 0.001).

Figure (1) demonstrates an enhancement in the overall knowledge level of nurses, with 94% achieving satisfactory knowledge levels following social media-based education, compared to 66% who had unsatisfactory knowledge levels prior to this educational intervention.

Table (3): This table reveals a statistically significant difference in the total practice scores before and one month after the social media-based education (p value < 0.001).

Figure (2) depicts an improvement in the overall knowledge level of nurses, with 92% attaining competent practice levels after the social media-based education, while 60% had incompetent practice levels before this educational initiative.

Table (4): Shows a positive correlation between the total knowledge and practice scores of nurses before and one month after the social media-based education ($r = 0.369, 0.539$ respectively), ($p = 0.016, 0.001$ respectively).

Table (5): Indicates that there was no statistically significant correlation between the total mean scores of nurses' knowledge and practice in relation to their age. However, a statistically significant positive correlation was found between the total mean scores of nurses' knowledge and their years of experience, as well as between the total mean scores of nurses' practices and their educational background..

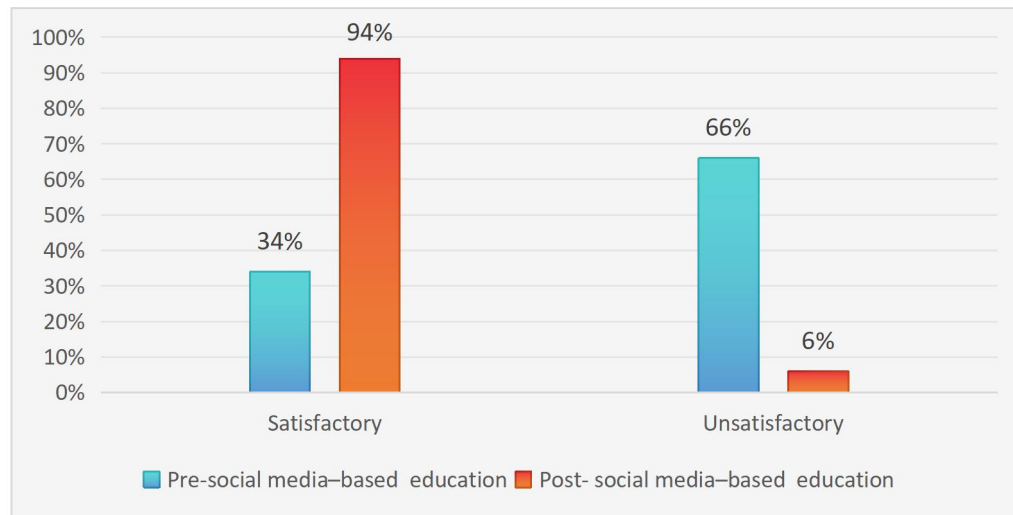
Table(1): Personal characteristics of the studied nurses (n=50).

Variable	No	%
Age:		
>30 years	42	84.0
< 30 years	8	16.0
Mean \pm SD	26.56 \pm 5.33	
Sex:		
Female	48	96.0
Male	2	4.0
Qualification		
Nursing Diploma	14	28.0
Technical institute of health	7	14.0
Technician Institute of nursing	22	44.0
Bachelor of nursing	7	14.0
Years of experience		
> 10 years	35	70.0
<10 years	15	30.0
Attendance training courses about acute pancreatitis		
No	50	100.0

Table (2): Differences between nurses' total mean Knowledge scores pre and post social media-based education in the care of patients with pancreatitis (n=50).

Variable	Pre Mean \pm SD	Post Mean \pm SD	P. value
Total Knowledge Scores	16.8 \pm 4.05	65.33 \pm 1.7	<0.001**

- Independent t-test ** Significant difference at p. value <0.01.

**Figure (1): Total nurses' knowledge level pre and post social media-based education in the care of patients with pancreatitis (n=50).****Table (3): Differences between nurses' total mean practices scores pre and post social media-based education in the care of patients with pancreatitis (n=50).**

Variable	Pre Mean \pm SD	Post Mean \pm SD	P. value
Total Practices Scores	148.42 \pm 16.33	240.43 \pm 0.8	<0.001**

- Independent t-test ** Significant difference at p. value <0.01.

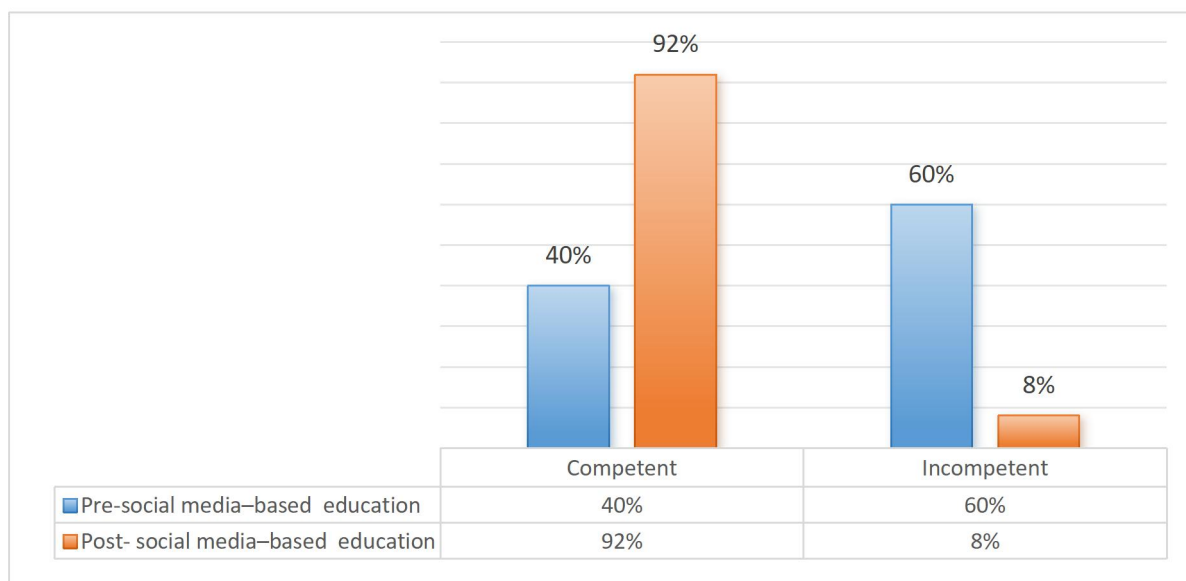
**Figure (2): Total nurses' practices level pre and post social media-based education in the care of patients with pancreatitis (n=50).**

Table (4): Correlation between total nurses' knowledge and Practice scores pre and post social media-based education in the care of patients with pancreatitis (n=50).

Correlations	Total Knowledge			
	Pre		Post	
	R	P	R	P
Total Practice	0.369	0.016*	0.539	<0.001**

- Independent t-test ** Significant difference at p. value <0.01.

Table (5): Correlation between nurses' personal data and their total mean knowledge and practices scores post social media-based education.

Item	Total mean 'knowledge score		Total mean practice score	
	R	P	R	P
Age	.131	.419	.088	.542
Years of experience	.258	.054*	.039	.806
Education	.063	.648	.287	.037*

Discussion:

The social media-based education designed for nursing personnel represent a crucial component. These initiatives are urgently crafted to aid staff nurses in cultivating and refining the competencies necessary to deliver high-quality care. Effective continuing social media-based education in nursing have been recognized for their capacity to elevate the quality of nursing care by enhancing the knowledge base of staff, which in turn raises standards and fosters a more cost-effective service (Weymann et al., 2025).

Patients suffering from pancreatitis have several significant causes, including issues related to wiring, plumbing, complications both pancreatic and extra-pancreatic, various procedures and treatments, as well as emotional and mental health conditions. Educational guidelines serve as a crucial resource for equipping nurses with the theoretical and technical knowledge required to develop the skills and competencies essential for the ongoing assessment of the impact that these guidelines have on the performance of nurses caring for patients with pancreatitis (Hussein & Khudair, 2019). Consequently, the aim of this study was to evaluate the effect of social media-based education on nurses' performance in the care of patients with pancreatitis.

The results of the present study revealed that the majority of the nurses examined were recruited at an age younger than 30 years, with an average age of 26.56 ± 5.33 . Most of them were female, and approximately less than half possessed qualifications from a Technician Institute of nursing. Furthermore, less than three-quarters had less than 10 years of nursing experience. In Egypt, the majority of nurses are women, which may stem from the longstanding belief that nursing is primarily a female profession. This observation can be linked to the fact that around half of the nurses are recent graduates from nursing institutes, which explains their relatively young age.

These findings are consistent with those of Musleh (2022), who observed that most nurses fell within the age group of under 40 and had graduated from a Technician Institute of nursing. More than half of the nurses studied reported an average work experience of less than 10 years. This aligns with the findings of Abdulatif (2023), who indicated that the majority of nurses were aged between 20 and 45 years, with a notable presence of male nurses.

The findings of the current study also indicated that none of these nurses had participated in any prior training courses related to pancreatitis. This observation is in agreement with the results presented by Al-Janabi & Al-Ani (2024), who concluded that most of their sample lacked any formal training courses. This finding suggests that the nursing staff's deficiency in expertise and insufficient understanding in caring for patients with pancreatitis—a potentially hazardous profession—could lead to significant consequences. It is essential for nurses to receive adequate training in managing chest drains to ensure that patients receive competent and safe care. This assertion is supported by Mohammed et al. (2019), who noted that none of the nurses studied had received previous training concerning acute pancreatitis. In contrast, these results contradict those of Mamdouh et al. (2022), who reported that less than two-thirds of nurses had undergone prior training program before the implementation of the educational program.

This discovery corresponds with the research carried out by Reyad et al. (2022), which revealed that the majority of the nurses examined were between the ages of 20 and 30. In contrast, Houmkoua et al. (2021) found that approximately one-third of the nurses were aged between 30 and 35. In terms of gender, the current study showed that most of the nurses surveyed were female. This pattern can be linked to the recent increase of males entering the nursing field, leading to a higher number of females in the study sample. This result aligns with the

findings of **AbdElgilil et al. (2020)**, who observed that nearly two-thirds of the nurse sample comprised females. However, these results differ from those of **Desouky et al. (2021)**, who indicated that the majority of the nurses studied were male. Regarding marital status, the present study indicated that over half of the nurses surveyed were married. From the researcher's viewpoint, this may be associated with the young age of the majority of the sample, which is predominantly within the 21 to 30 age range, and the fact that most of the sample were female in this study. With respect to educational qualifications, this is due to the presence of health technical institutes within designated post-secondary educational institutions, and the program requires two years of education after high school graduation, facilitating a quicker entry into the workforce due to the nursing profession's demand. This observation is in line with the findings of **Atia et al. (2022)**, who reported that about two-thirds of the nurses studied had graduated from a technical institute. However, this finding contradicts that of **Reyad et al. (2022)**, who stated that half of the nurses held a bachelor's degree. Concerning years of experience in the nursing profession, the findings of the current study indicated that more than one-third of the nurses studied had less than ten years of experience. From the researcher's perspective, this inconsistency may be due to the early appointments of nurses in the field. This finding contrasts with that of **AbdElhafiez et al. (2021)**, who indicated that more than two-thirds of the nurses studied had over ten years of experience.

The present study demonstrated a statistically significant difference in total knowledge scores when comparing the period before and one month following the implementation of social media-based education. The researchers suggest that the advantages offered by social media-based education in acquiring essential knowledge may account for this difference. This situation may stem from the lack of prior training programs on acute pancreatitis (indicating deficiencies in training), the absence of updates to the knowledge gained during undergraduate education, insufficient motivation from administration, the lack of a pre-employment orientation program, and an inadequate number of nursing staff.

Numerous studies have concluded that nurses have insufficient knowledge regarding acute pancreatitis and have emphasized the importance of educational programs in improving this knowledge. This assertion is supported by **Skidmore (2025)**, who emphasized that Advanced Practice Nurses (APNs) must be adept at performing comprehensive histories and physical examinations to accurately diagnose pancreatitis and rule out differential diagnoses of similar conditions. APNs should also be capable of identifying risk factors associated with pancreatitis, possess strong assessment skills, and know which

diagnostic tests to request. To avert disease progression, it is crucial to determine the underlying cause of pancreatitis. Additionally, **Rooyen et al. (2019)** indicated that in-service education programs effectively promote behavioral changes among nurses. This conclusion is further supported by **Abd El-Aziz et al. (2018)**, who discovered that nurses' knowledge and practices improved immediately following their participation in the training program.

The present study revealed an improvement in the overall knowledge level of nurses, with the majority attaining satisfactory knowledge levels after participating in social media-based education, in contrast to over three-fifths who had unsatisfactory knowledge levels before this educational intervention. From the researchers' viewpoint, this indicates the nurses' eagerness to enhance their knowledge by learning opportunistically through social media-based education. The results align with those reported by **Abd El- Naeem (2025)**, who noted that most of the nurses examined displayed a generally inadequate level of knowledge prior to the introduction of an educational program. This inadequacy was linked to the lack of pre-employment orientation, insufficient training, and increased workloads that may hinder their capacity to read and improve their knowledge.

The findings of the current study support the conclusions of **Abdulatif (2023)**, who noted that, three months after the post-test, there was a slight decline in percentages, with the majority of nurses achieving satisfactory and good levels across all knowledge items. Additionally, the results of the current study are in agreement with those of **Hussein (2021)**, who emphasized that nursing skills must be maintained and improved through training, ongoing education, professional conferences, practical experience, and mentorship. This strategy is essential for providing quality and effective healthcare to patients and is crucial for the development of nursing skills to keep up with new techniques and procedures. A continuous course featuring interactive simulations and skill development scenarios offers an excellent opportunity for the advancement of nursing practices.

This discovery corresponds with the research carried out by **Mohammed et al., (2019)**, who indicated that most of the nurses examined displayed a generally inadequate understanding of acute pancreatitis prior to the implementation of the educational program.

This result aligns with the observations made by **Sailors & Whitmire (2018)**, who noted a rise in participant knowledge after the post-intervention educational program in comparison to the pre-intervention program, especially in domains such as

anatomy, the physiology of the pancreas, chronicity, and the management expectations for chronic pancreatitis care, which includes pain management and strategies for disease management through home interventions. This research stands in contrast to the findings of **Mahdey et al. (2021)**, who found that 40% of nurses possessed an unsatisfactory level of knowledge.

The present study demonstrated a statistically significant difference in total practice scores both prior to and one month following the implementation of social media-based education. This enhancement can be ascribed to the efficacy of the social media-based education and the essential need for such educational initiatives. These findings are consistent with those of **Abdelmonem (2018)**, who observed a significant increase in the knowledge scores of nurses after the educational module. Furthermore, **Abd El-Aziz et al. (2018)** identified a considerable improvement in the knowledge and practices of nursing personnel subsequent to the execution of the training program.

The current research indicated an elevation in the overall practice levels of nurses, with the majority achieving competent practice levels after the social media-based education, whereas three-fifths had incompetent practice levels prior to this educational effort. These results are in agreement with the observations of **Mohammed et al. (2019)**, who found that most of the nurses examined displayed a generally inadequate level of practice concerning acute pancreatitis before the social media-based education. This improvement can be attributed to the effectiveness and influence of the social media-based education, which enabled advancements in the practices of the nursing staff, underscoring the necessity for such educational programs. Supporting our conclusions, **Mohammed et al. (2019)** also reported a statistically significant enhancement in the practices of nursing staff immediately following the implementation of the educational program.

From the perspective of the researcher, education based on social media, which was conducted for nurses through four distinct phases (assessment, planning, implementation, and evaluation), significantly influenced the practices of nurses. Additionally, this enhancement may be attributed to the fact that a majority of the nurses were of a younger age, which likely contributed to their readiness to learn new concepts.

The findings of the current study revealed a positive correlation between the overall knowledge and practice scores of nurses both prior to and following the social media-based educational intervention. The researchers indicated that this illustrates the advantageous effects of incorporating simulation-

based education into nursing practice enhancement, successfully elevating the knowledge of nurses and correlating with their clinical practice level ratings. This observation is consistent with the findings of **Elazazy et al. (2022)** and **Alshonee et al. (2024)**, who identified a significant positive correlation between the knowledge and performance of nurses both before and three months subsequent to the training program.

In contrast, this study diverges from the results reported by **Stephanie et al. (2023)**, who found no statistically significant correlation between the overall practice of nurses and their comprehensive knowledge. Moreover, **Reyad et al. (2022)** noted that there was no statistically significant difference among the nurses studied concerning the relationship between total knowledge and their practical application.

The present study revealed that there was no statistically significant relationship between the overall mean scores of nurses' knowledge and their age. Nevertheless, a statistically significant positive relationship was identified between the overall mean scores of nurses' knowledge and their years of experience, as well as between the overall mean scores of nurses' practices and their educational qualifications. From the researchers' viewpoint, this fulfilled the objectives of the current study and confirmed the effectiveness of training based on social media. Furthermore, this highlights the importance and effectiveness of social media-based education, which is often associated with improving knowledge and understanding among the nurses involved in the study and equipping them with strategies to learn and apply quality information. The rationale for this connection is that nurses' practices improved when they possessed adequate information. The increase in knowledge following social media-based training led to an enhancement in nurses' practices due to sufficient understanding, which may corroborate this result. This may be due to the fact that younger nurses have greater opportunities to acquire knowledge.

Supporting our findings, **Shaker et al. (2020)** demonstrated a statistically significant correlation between the age of nurses and their overall knowledge immediately after and during the follow-up of the program. Moreover, this result is consistent with the research conducted by **Reyad et al. (2022)**, which reported a statistically significant correlation between the age of nurses and their overall knowledge immediately after and during the follow-up of the program. In contrast, this study diverges from the findings of **Mahedy et al. (2021)**, who indicated that there was no statistically significant correlation between the overall practice of nurses and their total knowledge, nor a statistically

significant relationship between overall practice and their demographic characteristics such as age.

This finding does not align with the research conducted by **Parajulee & Selvaraj (2021); Amatya & Gorkhali (2025); Abd El-naeem (2025)**, which indicated no relationship found between the total knowledge score, age, and educational level.

In addition, **Thomas (2023) and Lin et al. (2021)** reported that no significant association was identified between the knowledge and practice scores of the nurses studied and demographic variables. These findings are consistent with those of **Mohsen et al. (2020)**, who observed a strong statistically significant correlation between age and the practice of nurses.

Nevertheless, this finding aligns with the results of **Abdulatif (2023)**, who indicated that nurses from technical institutes achieved significantly higher scores compared to those holding a baccalaureate degree in nursing or a nursing diploma. This observation is also consistent with the findings of **Abolwafa (2019), Mohamed (2019), and Hassan & Aboulazem (2022)**, who reported that the highest knowledge scores were observed among nurses possessing a baccalaureate degree in nursing.

Regarding years of experience, this may be linked to the experience of the nurses, which acts as a factor influencing their knowledge level. In line with the current study, **Shaker et al. (2020)** also identified a statistically significant correlation with the total knowledge score ($P < 0.001$) following the program, in relation to the years of experience of the nurses examined.

Moreover, these findings correspond with the research conducted by **Abdlrahim et al. (2021)**, which asserted that extensive nursing experience is more advantageous than nursing education, thereby enhancing the connection between knowledge and practice.

Conclusion:

According to the results of the current research, it was determined that education delivered through social media greatly improves the performance of nurses in the treatment of patients suffering from pancreatitis. Additionally, a highly significant correlation ($P < 0.01$) was found between the overall knowledge and practice scores of nurses who received social media-based education.

Recommendations

Based on the findings of the present study, it can be recommended:

- Implementing ongoing in-service educational programs for nurses caring for patients with pancreatitis.
- Producing handbooks, pamphlets, and brochures to update nursing procedures and details on caring for patients with pancreatitis.
- To generalize the results, the study should be repeated with additional nurses and in various settings on the nurses' performance in caring for patients with pancreatitis.

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