

Effect of Social-Platform Based-Education of Nurses' Performance Regarding the Care of Children Undergoing Liver Surgeries

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Abstract

Background: Pediatric liver disorders are particularly important since several childhood illnesses are risk factors for adult chronic liver diseases such as cirrhosis and hepatocellular carcinoma. **Aim:** The study aimed to evaluate the effect of social-platform-based education on nurses' performance regarding the care of children undergoing liver surgeries. **Research design:** A quasi-experimental design was utilized to achieve the aim of this study. **Setting:** The study was conducted at the Pediatric Surgery Unit affiliated with Sohag University hospitals. **Sample:** A convenient sample of 50 nurses, from the previously mentioned setting during the period of six months. **Tools:** two tools were used to collect data: Tool I: A structured interviewing questionnaire, and Tool II: Standardized observational checklists. **Results:** This study revealed that there was a statistically significant improvement in nurses' knowledge and practices post-social-platform-based education. There were statistically significant differences between nurses' knowledge and practices regarding the care of children undergoing liver surgeries and their socio-demographic characteristics. There was a positive correlation between nurses' knowledge and practices regarding the care of children undergoing liver surgeries pre- and post-social-platform-based education. **Conclusion:** The current study concluded that social-platform-based education has a positive effect on improving nurses' performance regarding care of children undergoing liver surgeries. **Recommendation:** Provide continuous in-service training programs regarding liver surgeries for nurses in different healthcare settings to improve and update their performance.

Keywords: Children, Liver surgeries, Nurses' performance, Social-platform-based education.

Introduction:

Pediatric liver surgery is a complex and challenging procedure that may be associated with major complications, including mortality (Lemoine et al., 2023). Hepatoblastoma and hepatocellular carcinoma (HCC) are the most common primary liver tumors affecting children and adolescents (Whitlock et al., 2022). Individuals of any age, gender, geography, or race might get liver illness. Cirrhosis can present with a wide range of clinical symptoms, but in many cases, it is an urgent condition that often results from

numerous liver disorders. Approximately 15,000 children in the USA are hospitalized every year for liver problems, according to the information that was accessible (D'Antiga, 2019).

The significance of pediatric liver disorders stems from the fact that some childhood ailments are precursors to adult chronic liver diseases such as cirrhosis and hepatocellular carcinoma. In Africa, pediatric liver transplantation (PLT) is currently only performed in Egypt and South Africa (Muncner et al., 2023). The under diagnosis of children's hepatobiliary illnesses raises the risk of morbidity and

death as the condition progresses to end-stage liver disease since there is a general lack of knowledge of the symptoms (**Della Corte, 2019**).

Severely disabled and immunocompromised pediatric patients need a full hospital infrastructure in addition to therapy from a skilled multidisciplinary team. Liver surgery is among the trickiest procedures performed in modern surgery. Children with end-stage liver disease (ESLD) undertake liver procedures in an attempt to improve their quality of life and reach an activity and health level similar to a child of the same age without liver illness (**Subramaniam & Sakai, 2019**).

Social media refers to internet-based platforms that allow for the sharing and exchange of user-generated content. In the United States, approximately 90% of adults use these platforms (**Hitlin, 2018**). Social media platforms are used by billions of people worldwide. In general, the term refers to Internet-based tools that allow individuals and communities to exchange ideas, information, images, and other content. Healthcare providers use social media to promote professionalism, increase patient awareness, provoke discussions about healthcare policies and practices, promote healthy lifestyles, and inform the public about health issues (**Lee Ventola, 2019**).

Nursing is a profession that is continually evolving, thus in-service training is required for practitioners. Instructional guidelines for in-service training are as follows: formal or informal, work-related learning activities that are provided to paraprofessionals, employed professionals, and other practitioners through opportunities or as a successful staff development initiative, wherein experts receive training in their collaboration with others to gain new knowledge, improved skills, and more competent, effective, and efficient service

in a variety of fields and to a variety of clientele. As per **Alex et al. (2020)**, the provision of optimal nursing care can only be achieved in an environment where nurses get continuous education through in-service training, which is an essential aspect of their job.

The technological revolution has created new opportunities to increase access to therapeutic interventions for mental health issues. According to **Podina et al (2019)**, there is growing evidence that technology-delivered therapy is beneficial for various health conditions. The potential cost savings and flexibility in terms of location, time, and expense of online therapy may make it widely adopted (**Song et al., 2019**). Additionally, nurses can integrate pathology management with everyday social interactions for patients with chronic illnesses because of technology-enabled education (**Di Tella, et al., 2019**).

The most important management strategy for pediatric liver procedures is believed to be nursing interventions, which cover all aspects of preoperative, postoperative, and follow-up care. The nursing staff's involvement influences the effectiveness of the procedure, and the pediatric patient's preparation for surgery is crucial. Accordingly, the nurses organize and carry out the care given to young patients and their families during the liver surgery procedure (**Mendes et al., 2019**). In Addition, nurse care aims to prevent complications, promote, maintain, and restore health, facilitate optimal functional ability in the patients' desired roles, maximize well-being, and promote patient and family satisfaction (**Lewis et al., 2020**).

Significance of the study

One of the contemporary methods of instruction is electronic learning. It delivers educational content by integrating various tools and technology. These devices and technologies include, but are not restricted to, computer simulation

modeling, compact discs, sophisticated networks like the internet and extranet, electronic media, and multimedia software. Social-platform education is an expansion of electronic education that combines many media to enable learner-software interaction, stimulating creativity and improving educational efficacy (Lawn et al., 2019).

Nurses play a crucial role in recognizing physiological and psychological needs, which are essential skills for the pediatric surgical nurse who should interpret them in the form of nursing intervention by providing care both preoperatively and postoperatively (Robin et al., 2019). So, it is important to assess nursing performance in caring for pediatric patients undergoing liver surgeries (Malik and Kumar, 2018).

Aim of the study:

The present study aimed to evaluate the effect of social-platform based-education of nurses' performance regarding the care of children undergoing liver surgeries through the following:

1. Assess nurses' knowledge regarding the care of children undergoing liver surgery.
2. Assess nurses' practice in the care of children undergoing liver surgery.
3. Design and implementing social-platform-based education to address the identified needs of nurses.
4. Determine the effect of social-platform-based education on nurses' performance in the care of children undergoing liver surgery.

Research hypothesis: The following research hypothesis was framed to fulfill the aim of the study:

Hypothesis 1: Nurses will have better knowledge and performance after implementation the social-platform based-education sessions.

Subject and Methods:

Research Design:

A quasi-experimental design was utilized to achieve the aim of this study.

Setting:

The study was conducted at the Pediatric Surgery Unit affiliated to Sohag University hospitals.

Subject:

Sample: A convenient sample of 50 nurses, from the previously mentioned setting during the period of six months.

Tools for data collection:

Tool I: A structured interviewing questionnaire:

It was developed by the researchers based on revising the related literature and covered the following two parts:

Part 1: Personal characteristics of the nurses (age, qualification, years of experience, and previous training related to liver surgeries).

Part 2: Nurses' knowledge: This part was adopted from Perry et al., (2018) after reviewing the related literature. It is designed to assess nurses' knowledge before and after the social media-platform based-education regarding liver diseases, and surgeries such as the definition, types, causes, complications, drugs, precautions, nursing care for children undergoing liver surgeries, and care after discharge.

Scoring system: As regards the scoring system for the questionnaire format, it is composed of 56 questions in the form of true or false questions, multiple-choice questions, and open-ended questions: According to nurses' answers a scoring system was followed to estimate the level of nurses' knowledge where each complete correct knowledge was scored 2, and each incomplete correct knowledge was scored 1 and wrong or don't know was scored zero. Then the total knowledge was classified into two levels: Satisfactory knowledge ($\geq 85\%$) and unsatisfactory knowledge ($< 85\%$).

Tool II: Standardized observational

checklists.

Observational checklists were used to assess nurses' practices regarding caring of children undergoing liver surgeries included infection control precautions, caring of the urinary catheter, central venous catheter care, post-operative care and wound care.

Scoring system:

Each complete correct practice was scored 2, each incomplete correct practice was scored 1, and not done was scored zero. Then the total practices were classified into two levels: competent level ($\geq 90\%$) or incompetent level ($< 90\%$).

The procedure of data collection:

Preparatory phase:

In order to create the data collection tools, it involved evaluating previously and currently published literature as well as theoretical understanding of several study-related topics through the use of books, papers, the internet, journals, and magazines.

Administrative design:

The heads of the previously chosen department received a letter from the Faculty of Nursing granting administrative approval to conduct this study and collect data.

Content validity and reliability:

The study tools were assessed by a board of five expert professors, three professors in the pediatric nursing field, and two professors in the hepatic surgery field. No modifications were made according to the panel judgment to ascertain the relevance, clarity, and completeness of the tools.

Pilot study:

In order to determine the suitability and clarity of the study instruments as well as the time required to complete each one, a pilot study was conducted prior to the main investigation, involving (10%) 5 nurses in the previously described environment included in the main study

sample were the nurses who participated in the pilot study.

Ethical considerations:

The study was approved by the faculty of nursing, Sohag University, and the ethical research committee. The researcher clearly communicates the aim and purpose of the study to each participant, and it is safe. The researchers maintain the subjects' identities and privacy. Participants can opt-out at any moment without repercussions.

Fieldwork:

Data collection was from the beginning of November 2023 until the end of April 2024. The researchers started by introducing themselves to the studied nurses and giving them a brief idea about the aim of the study. The researchers were available 2 days weekly (Sunday, and Tuesday) at Sohag University Hospital to evaluate the effect of social-platform-based education on nurses' performance regarding the care of children undergoing liver surgeries. The tools sheet was filled by each nurse. The tools were distributed to studied nurses two times; (1) pre-test to evaluate the effect of social-platform-based education on nurses' performance regarding the care of children undergoing liver surgeries before the implementation, and then used again as a post-test post one month to evaluate the effect of social-platform-based education.

The collection of data was done through four phases:

I- Assessment phase:

In this phase, the researchers defined target nurses and determined specific knowledge and practice to evaluate. The selected the assessment tool to collect data from the studied nurses. Then select appropriate social platforms (WhatsApp) where target nurses are active. The researchers ensure that the structured interview questionnaire are clear and relevant included personal characteristics, and their knowledge level followed by Observational checklists were used to

assess nurses' practices regarding caring for children undergoing liver surgeries. The time needed for completing this questionnaire was about (30-40 minutes) for each nurse.

II- Planning phase:

- In this stage, researchers are clearly outline nurses about the advantages of social platform-based education by the materials via the WhatsApp application.
- Social- platform-based education was created by analyzing the knowledge and practices of nurses as they appeared on the pretest. The instructional pamphlet's content was written in straightforward Arabic and adhered to the standards set by relevant literature.
- After obtaining the nurses' phone numbers, the researchers evaluated if each nurse had an internet connection so they could speak with each other through a WhatsApp group. To facilitate daily communication with nurses and introduce the contents of social- platform-based education (booklet, videos, and instructive photographs), the researchers created a WhatsApp group. To facilitate interaction among nurses through discussion forums. As well, create opportunities for nurses to share their insights and experiences, inspiring the educational process through social-platform. Content of the social-platform-based education about liver disease and surgeries including the following:

1. Share basic information on common liver diseases in children

(Definitions, types, causes, clinical manifestation, diagnosis, and drugs).

2. Complications and prevention of liver disease.
3. Nursing care for children undergoing liver surgeries (pre, intra, and post-operative care).
4. Infection control precautions.
5. Caring of the urinary catheter.
6. Central venous catheter care and wound care.

III- Implementation phase:

- The researchers used telephone numbers to reach all participants through social platforms such as WhatsApp group which was the most available and routinely used by the nurses involved in the study, and then sent the data or information through the previously mentioned method. The social-based education was implemented and delivered in the form of text, video, and brochure. The content included definitions of common liver diseases, types, causes, clinical manifestations, diagnosis, drugs, precautions, nursing care for children undergoing liver surgeries, complications care post discharge care. The educational materials featured theoretical information and practical demonstrations on urinary catheter management, infection control, care for central venous catheter, post-operative care, and wound care.
- The researchers sent text and audio messages detailing the goals of the based education materials once the WhatsApp group was established.
- The researchers made the decision to post the contents of every component of the based education instructions weekly on Monday WhatsApp meeting chat session. In order to facilitate conversation among all group

members, nurses were also urged to join the chat on time for this meeting.

- By sharing brief health messages every day regarding their experiences with juvenile liver disorders and liver surgeries, the nurses were encouraged to interact with one another.
- Following that, copies of the social platform-based teaching instructions video were sent to each participant via the WhatsApp group application. Every week over the next four weeks, they received a reminder checklist.
- Weekly phone calls were also sent to them to remind them to use the social platform-based instruction. The study instruments were completed by every participant both prior to and one month following the start of the social platform-based instruction.

IV- (Evaluation phase):

One month following the social media-based education, an assessment of the nurse's knowledge and skills was conducted using the same pre-and post-test questionnaires, allowing for the assessment of how much the nurses knowledge and skills had improved with regard to caring for children having liver surgery.

Statistical design:

After gathering, the data was totaled, sorted, organized, and checked. Tables and figures were generated from the data using SPSS for Windows, version 18. To represent the data as means and standard deviations for the qualitative variables and frequencies and percentages for the quantitative variables, descriptive statistics were employed.

The t-test—a comparison of the two means—was employed. The significance test of chi-square (χ^2) was applied. The

test utilized was Cochran Q, and a P-value of less than 0.05 was used to indicate statistical significance.

Results:

Table 1 showed that 50% of the studied nurses were aged between 30-≤ 35 years. Concerning years of experience, 60% of the studied nurses reported from 1<5 years of experience in pediatric surgery units. Regarding their gender, it was found that 64% of them were female. In relation to their qualifications, it was showed that 48 % of the studied sample had a bachelor in nursing science.

Figure 1 presented that 92 % of the studied nurses reported that they not attended any previous training courses about liver disease and surgeries.

Figure 2 illustrates that the main sources of knowledge about liver disease and surgeries among studied nurses were doctors (74%).

Table 2: reveals that there were statistically significant differences and improvement in all items of knowledge regarding liver disease and surgeries among the studied nurses pre and post-social-platform based-education ($P < 0.05$).

Figure 3: Illustrates that the majority of the studied nurses (90%) had an unsatisfactory total knowledge level regarding liver disease and care of children undergoing liver surgeries pre-social-platform-based education, while 93 % of them had total satisfactory knowledge level post social-platform-based education.

Table 3: Reveals that there were statistically significant differences and improvement in all items of nurses' practices regarding caring of children undergoing liver surgeries pre and post social-platform based-education at ($P < 0.05$).

Figure 4: Illustrates that (80%) of the studied nurses had incompetent practice total level pre- social-platform based-education, while 94 % of them had total competent practice level post social-platform based-education regarding care of children undergoing liver surgeries.

Table 4: illustrated that there was a statistically significant relationship

Table (1): Distribution of the studied nurses according to their personal characteristics (n=50).

Nurses' characteristics	No.	%
Age in years:		
20-≤ 25	11	22.0
25-≤ 30	14	28.0
30-≤ 35	25	50.0
$\bar{M} \pm SD$		30.22 ± 4.42
Gender:		
Male	18	36.0
Female	32	64.0
Years of experience		
Less than one year	7	14.0
1 year to <5 year	30	60.0
More than 5 year	16	32.0
Qualifications:		
Technical nursing diploma	17	34.0
Technical nursing diploma and specialist in nursing	6	12.0
Bachelors in nursing science	24	48.0
Postgraduate studies	3	6.0

between the educational level of the studied nurses and overall knowledge and practices throughout the phases of the social-platform based-education at $p < 0.01$.

Table 5: Revealed that there was a statistically significant correlation between total knowledge and practice scores at $p < 0.001$.

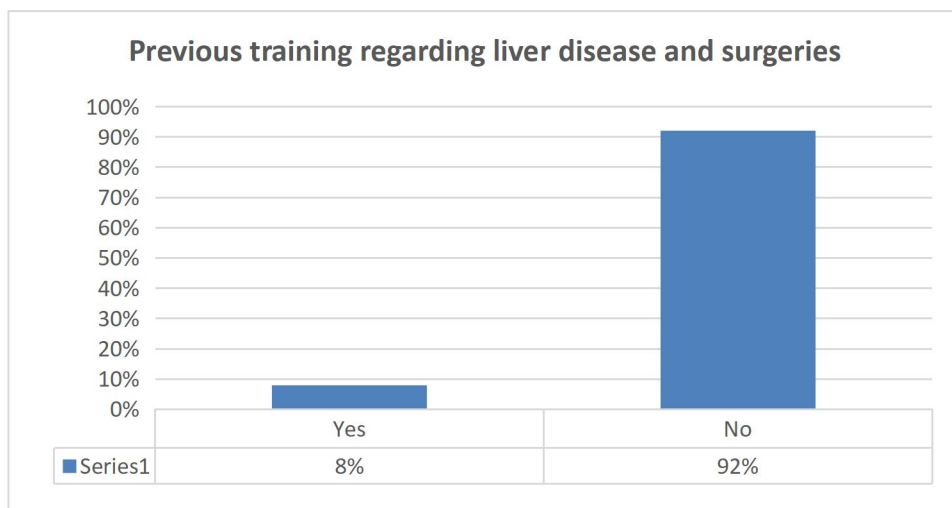


Figure (1): Distribution of the studied nurses regarding Attendance of previous training courses about liver disease and surgeries.

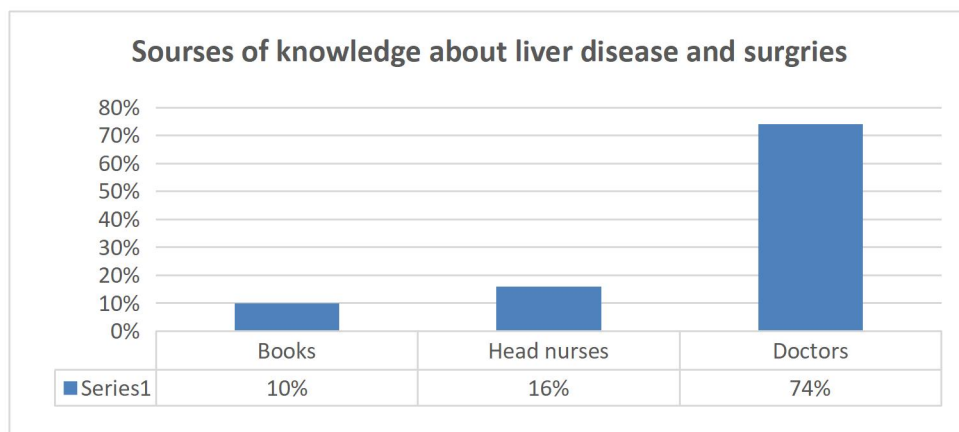


Figure (2): The studied nurses' distribution regarding sources of knowledge about liver disease and surgeries (n=50)

Table (2): Comparison of Knowledge scores regarding liver disease and surgeries among the studied nurses' pre and post-social-platform-based education (n=50).

Items	Pre social-platform based-education	Post social-platform based-education	X2	P-value
	M±SD	M±SD		
1. Definitions of liver disease	4.56±1.98	7.52±0.2	51.93	<0.001*
2. Types of liver disease	3.57±1.24	6.45±2.8	65.83	<0.001*
3. Causes of liver disease	4.21±1.62	7.22±1.1	30.46	<0.001*
4. Complications of liver disease.	3.78±1.22	6.13±1.31	75.37	<0.001*
5. Treatments of liver disease.	5.09±1.08	7.17±0.1	60.64	<0.001*
6. Precaution of liver disease.	4.34±1.11	6.52±1.27	30.46	<0.001*
7. Nursing care for children undergoing liver surgeries.	5.72±1.36	6.22±1.5	75.37	<0.001*
8. Care after discharge.	4.55±1.25	7.12±0.4	60.64	<0.001*

(*) Statistically significant at $p < 0.05$

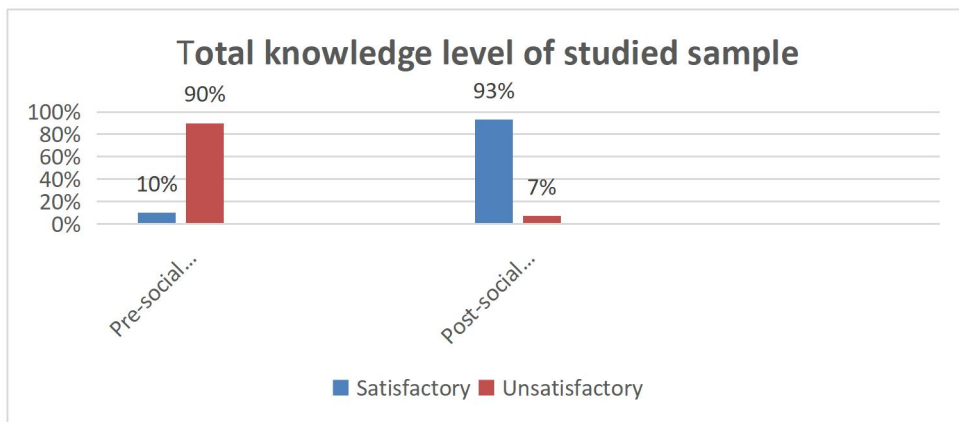


Figure (3): Total knowledge level regarding liver disease and care of children undergoing liver surgeries among the studied nurse's pre and post-social-platform – based education (n=50).

Table (3): Comparison of nurses' practices regarding caring of children undergoing liver surgeries pre and post-social-platform based-education (n=50).

Items	Pre social-platform based-education	Post social-platform based-education	X2	P-value
Infection control precautions	5.99±1.88	12.17±3.1	65.93	<0.001*
Caring of the urinary catheter	7.44±1.33	12.52±2.77	73.83	<0.001*
Central venous catheter care, post- operative care	8.21±1.45	13.22±2.1	47.46	<0.001*
Wound care	9.55±1.33	14.13±3.1	53.37	<0.001*

(*) Statistically significant at $p < 0.05$

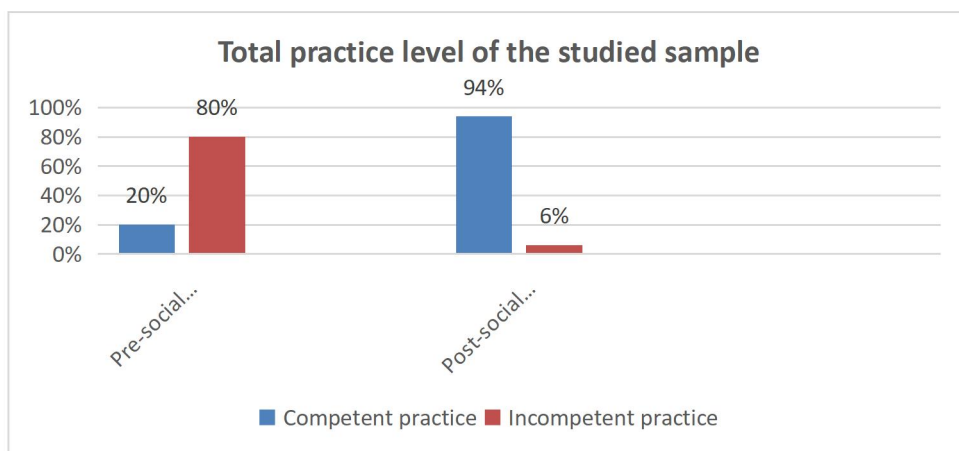


Figure (4): Total practices level regarding care of children undergoing liver surgeries among the studied nurses pre and post social-platform based-education (n=50).

Table (4): Correlations between nurses' knowledge and practices regarding liver disease and care of children undergoing liver surgeries and their personal characteristics (n=50).

	Knowledge	Practices
Pre-intervention		
Age	-.138	.068
Education	.136	.199
Years of experience	-.107	-.165
Crowding index	.066	-.085
Post-intervention		
Age	-.205	-.254*
Education	.303**	.355**
Years of experience	-.134	-.044
Crowding index	.088	-.005
Overall		
Age	-.089	-.089
Education	.176*	.197*
Years of experience	-.069	-.075
Crowding index	.029	-.046

(**) statistically significant at
 $p < 0.01$

Table (5): Correlation matrix of total knowledge and practices scores (n=50)

Items	Pre-test		Post-test	
	R	P	r	p
Knowledge VS practice	0.445**	<0.001*	0.602**	<0.001*

(**) statistically significant at $p < 0.01$

Discussion

According to **Gruschka et al., (2022)**, pediatric liver surgery is a difficult and complex procedure that carries a high risk of serious side effects including death. Helping nurses reach better levels of knowledge and skills is the primary objective of social-platform based education. The ease with which those with little literacy abilities can utilize social platform education is one of its benefits (**Abbasi et al., 2018**).

Regarding the personal information of the nurses under investigation, the current study found that half of the studied sample aged between 30 and 35 years. Abo El-Ata et al, study from 2021, "Nurses' knowledge and practice regarding nursing care of patients with liver cirrhosis" in Egypt, indicated that over half of the nurses in the study were older than thirty years. These results corroborated our study. Furthermore, in line with **Ibrahim & Khudhair's (2022)** findings, nearly half of the nurses surveyed were between the ages of 30 and 39. The researchers examined the "Effectiveness of an instructional program for nurses about nursing documentation at pediatric surgical wards" in Baghdad.

According to the current study, three-fifths of the nurses under investigation had one to five years of experience working in a pediatric surgery unit. The results of **Ibrahim & Khudhair's, (2022)** study, which showed that over half of nurses had between six and ten years of experience, and less than a quarter had between one and five years, were comparable to this study. Also, this result is consistent with that of **Paul et al. (2017)**, who discovered that most healthcare providers in Cameroon have five years of work experience after studying the "Knowledge, attitude and practice of staff of 4 hospitals in Yaoundé on the prevention of vertical transmission of hepatitis B." According to the study, the years of experience had a significant effect on the nurses' knowledge and practices, which resulted in improving the quality and consistency of care provided to the children undergoing liver surgeries.

According to the current survey, roughly two-thirds of the nurses under investigation were female. This conclusion was in line with the findings of the Egyptian study "Effect of an educational guideline on Nurses' performance caring for Patients post-liver Transplantation" by **Karaly & Abo Elfetoh (2019)**, which showed that most of the nurses under study were female. This could reassure the notion that women are more likely to work in the nursing profession. This may render to greater fraction of the nurses in Egypt was female as well the studying of nursing in the Egyptian Universities were exclusively for females until just ten years ago.

Nearly half of the nurses under study held bachelor's degrees in nursing science, according to the study's findings. In the same line, **Ameri et al., (2016)** reported that the majority of nurses had the bachelor degree in education. This conclusion was in conflict with a study by **Karaly & Abo El-Fetoh (2019)**, which

found that the majority of the nurses under investigation were secondary school graduates. This might be a reflection of the fact that nurses with bachelor's degrees in nursing science are better equipped to work in units that perform liver surgery.

The current study's findings regarding the attendance of prior training sessions on liver illness and liver procedures revealed that the majority of the nurses under investigation had not previously participated in any sessions. This may render to the lack of training for nurses and increased number of patients plus work load. **Abo El-Ata et al. (2021)**, who discovered that the majority of the nurses under study had not participated in any liver cirrhosis-related training programs, corroborated these findings. Furthermore, this conclusion is consistent with that of **Karaly & Abo El-Fetoh (2019)**, who found that most of the nurses under study did not participate in liver transplantation training programs. According to the researcher's point of view, it demonstrated how important it is for nurses to attend training sessions, particularly when it comes to pediatric liver procedures surgeries is crucial to provide proper quality nursing care for children undergoing liver surgeries.

According to the findings of the current study, about three-quarters of the nurses who were investigated stated that doctors were their primary sources of information regarding liver illness and liver surgery. From the perspective of the researchers, it verified that the nurses got their information from reliable sources.

The current study's findings demonstrated statistically significant improvements and differences in the examined nurses' pre- and post-social platform-based education in all knowledge items related to liver illness and the treatment of children undergoing liver surgery. According to the study, this could be because of how well social platform-based education works

and how driven nurses are to learn new things. This result is consistent with that of **Zarei et al., (2021)** study, "The impact of multimedia education on knowledge," which found that knowledge was enhanced by multimedia education. In a similar vein, **Mayer (2018)** reported the same outcome.

The findings of this study made it clear that, in terms of nurses' overall knowledge of liver diseases and the surgeries associated with them, the majority of them had unsatisfactory knowledge prior to receiving education through social media platforms. This may be related to the culture of the society and lack of nurse's incentives to improve their knowledge. This was in line with **Abo El-Ata et al., (2021)** study, "Nurses' Knowledge and Practice Regarding Nursing Care of Patients with Liver Cirrhosis" who reported that the majority of studied nurses had unsatisfactory knowledge. Additionally, the findings aligned with the research conducted by **Karaly and AboElfetoh, (2019)** demonstrated that every nurse in the study had an inadequate level of overall knowledge of liver transplantation.

Approximately, all of nurses had satisfactory knowledge after receiving this education. According to the researchers, this demonstrated how crucial it is to provide social platform-based education for nurses in order to enhance their expertise. The paucity of training programs, in the researcher's opinion, can account for the low level of researched nurses' knowledge of pediatric liver procedures. The researchers think that the dearth of training programs explains why there is a lack of knowledge of studied nurses in pediatric liver procedures. **Feizalazadeh et al., (2019)** investigated the "Effectiveness of multimedia based on education and traditional methods on life quality of hemodialysis patients" lends credence to this conclusion, as they

discovered that multimedia-based education significantly improves care.

The present study showed that the majority of the studied nurses had incompetent practice total level pre-social-platform based-education that improved and almost of them had total competent practice level post-social-platform- based education regarding the care of children undergoing liver surgeries. From the researchers' point of view, it indicated the good impact of social-based education. These findings were in line with those of **Algarni et al., (2019)** who investigated "Nurses' knowledge and practices toward prevention of catheter-associated urinary tract infection" at King Abdul-Aziz University in Jeddah, Saudi Arabia Kingdom. Their study found that most nurses had subpar practices. Additionally, this outcome is consistent with the findings of **Karaly & Abo El-Fetoh, (2019)** who found that prior to the implementation of instructional standards, over one-third of the nurses in the study had practice scores for central venous catheter care that were below adequate levels. According to the researchers, these findings might be explained by the fact that most of the nurses in the study had inadequate knowledge of how to care for central venous catheters.

In the same line, a study conducted by **Al-Hawaly et al., (2016)** who assessed nurses' performance regarding feeding patients with a nasogastric tube in Ismailia General Hospital and reported that the majority of the studied nurses had unsatisfaction practice in the feeding tub. However, this result conflicts with the findings of **Chaney et al., (2019)**, who investigated the "Role development of nurse practitioners and physician assistants in liver transplantation" and found that most nurses included in the

study practiced adequate immediate care for patients receiving a liver transplant in the postoperative phase. **Tegegne, et al., (2022)** study, "Knowledge and practice of wound care and associated factors among nurses working in South Wollo Zone Government Hospitals" in Ethiopia, did not yield the same results as this one. It was discovered that a majority of the nurses exhibited good wound care practices.

The present study showed that there was a statistically significant relationship between the educational level of the studied nurses and overall knowledge and practices throughout the phases of the social-platform-based education. The relationship between the total knowledge of nurses and their personal traits was not statistically significant. These findings conflicted with those of **Youssef & Ali (2022)**, who discovered a statistically significant relationship between the total amount of knowledge nurses had and their personal traits in their study "Assessment of nurses' knowledge regarding management of patients post liver transplantation" conducted in Egypt. Furthermore, no statistically significant relationship was found between the personal traits of nurses and their total practices. **Mohamed, (2021)** found no statistically significant differences between educational backgrounds and the assessment performance of nurses caring for patients with kidney transplantation" in a study involving nurses working in a transplantation unit affiliated with the Ghonim Center at Mansoura University in Egypt. These findings were not consistent with Mohamed's findings and found that there were no statistically significant differences between educational level and total level of practical knowledge among nurses under the study.

The present study showed that there was a statistically significant correlation between total knowledge and practice scores. From the researchers' point of view, it reflects the benefit of administering the social-platform based-education, which satisfied the demands of the nurses and gave them enough information related to best practices, thus meeting the study's objective and reflected the success of the study aim.

Conclusion:

In light of the current study, it can be concluded that social media-platform – based education has a positive effect on improving nurses' knowledge and performance regarding the care of children undergoing liver surgeries.

Recommendation:

Based on the result of the present study, the following recommendations were made:

- Provide continuous in-service training programs regarding liver surgeries for nurses in different healthcare settings to improve and update their performance.
- Further study recommended with a large sample size and with an extended follow up duration

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