ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

Nurses' knowledge and practice regarding the care of patients post paracentesis

Hassan Mohamed Elsayed [1], Zienab Hussien Ali [2], Abdelrahman Ahmed Ewais [3]

1-Assistant lecturer at Medical Surgical nursing, Faculty of Nursing /El Fayoum University.

2- Professor of Adult Health Nursing Department, Faculty of Nursing Helwan University

3- Lecturer of Internal Medicine Faculty of Medicine – Fayoum University.

Abstract

Background: nurses have a large role to play in the minimization and prevention of paracentesis complications and should be clinically well versed in all aspects of the condition to address risk minimization and for patient safety**. Aim of the study:** Assess nurses' knowledge and practice regarding the care of patients post paracentesis**. Research design:** A descriptive research design was utilized in this study**. Setting:** This study was conducted in the internal medicine and Endemic diseases departments in Fayoum University Hospital. **Sampling:** A convenient sample of all nurses working at the internal medicine and Endemic diseases departments. **Tools:** Three tools were used for data collection An interview questionnaire to assess level of nurses 'knowledge , observational checklist to assess level of nurses 'practice and. **Results:** The study results revealed that there was a highly significance improvement in total level of nurses' knowledge and practice regarding care of patient post paracentesis after reassessment and there was highly statistically significant Correlation between total nursing practice and total nursing knowledge regarding the care of patients post paracentesis. **Conclusion:** This study represents that more than half of the studied nurses had unsatisfactory level of knowledge and practice with a statistically significant correlations between nurses' total knowledge level, and clinical competency scores with their age, gender, educational level, years of experience, and training program attendance**. Recommendation:** Continuous nursing education about paracentesis care is recommended to upgrade the knowledge and skills of nurses.

Keywords: *Nurses Knowledge And Practice , Paracentesis..*

ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

Introduction:

Regarding **patrick & vijay, (2019)** Liver Cirrhosis is a final pathway for a wide variety of chronic liver diseases, is a pathologic entity defined as diffuse hepatic fibrosis with the replacement of the normal liver architecture by nodules. The rate of progression of chronic liver disease to cirrhosis may be quite variable, from weeks in patients with complete biliary obstruction to decades in patients with chronic hepatitis C. Cirrhosis is 1 of the leading causes of mortality in the United States and particularly afflicts persons in the most productive years of their lives**.** .

Regarding **Aponte et al., (2020)** Paracentesis is a procedure performed to obtain a small sample of or drain ascitic fluid for both diagnostic or therapeutic purposes. A needle or catheter is inserted into the peritoneal cavity and ascitic fluid is removed for diagnostic or therapeutic purposes. The fluid may be used to determine the etiology of ascites and evaluate for cancer or infection. Paracentesis is done in a lateral decubitus or supine position.

Based on **Kim et al.,(2014) & Elsayed et al., (2018)** Nurse should has a role to decrease these complications, the role include pre, during and post procedure planning. Pre procedure should check laboratory tests for the patient, hand washing to prevent cross infection, measure the vital signs especially blood pressure, ask the patient to empty his or her bladder to avoid perforation when the trocar is inserted**.**

As regard **Fahmy et al ., (2020)** The implementation of nursing guidelines led to a significant improvement in nurses' knowledge and practice in all tested areas which was observed throughout the follow up tests compared to pretests and had significance improvement in incidence of paracentesis complications that decreased after implementation of nursing guidelines regarding care of paracentesis patient.

Aim of the study

The aim of this study is to Assess nurses' knowledge and practice regarding the care of patients post paracentesis through:

- Assess nurses' knowledge regarding nursing care for paracentesis patients.
- Assess nurses' practice regarding nursing care for paracentesis patients.

Significance of the study

According to study of **(Molina,2021)** about paracentesis complications revealed that Persistent leakage of ascites fluid from the puncture site was the most frequent complication (35%), followed by secondary bacterial peritonitis and hematoma of the abdominal wall at the puncture site (13% and 12% respectively). A third of the patients did not present any complications after the procedure (31%).

Theoretical Framework:

In this study the researcher used **Knowledge To Action (KTA) framework** that was developed in Canada by **Graham et al. (2006)** as presented by figure (1), in response to the confusing multiplicity of terms used to describe the process of transforming knowledge to action. The application of this framework has significantly and positively influenced clinical practice and patient outcomes.

ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

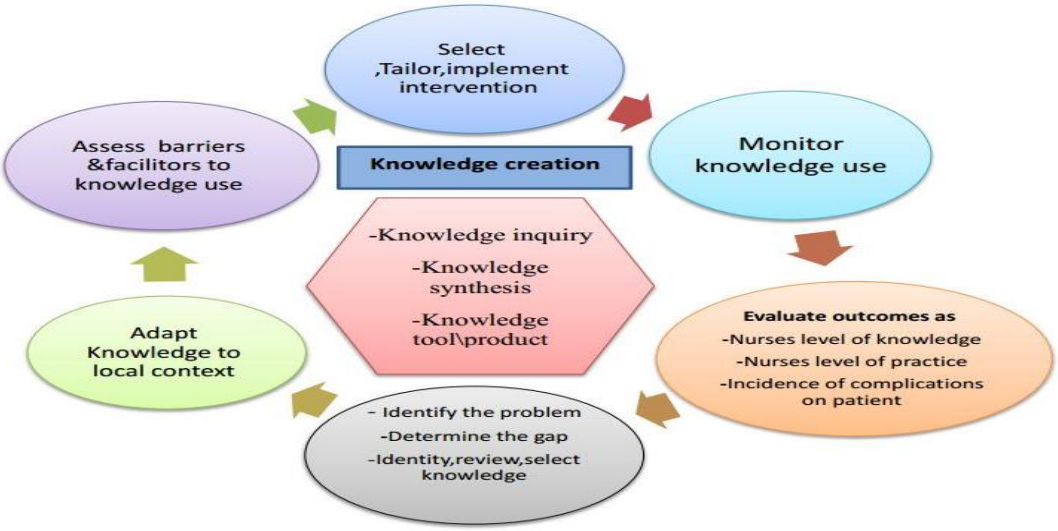

Figure (1): Knowledge-to-action cycle. **Graham, I. D., Logan, J., Harrison, M. B., Straus, S. E., Tetroe, J., Caswell, W., & Robinson, N. (2006). Lost in knowledge translation: time for a map? J Contin Educ Health Prof, 26(1), 13-24. doi:10.1002/chp.47**
(Modified by the researcher)

This framework proposes a dynamic and iterative process consisting of two interacting phases: (1) the knowledge-creation cycle and (2) the action cycle. The knowledge-creation cycle consists of three phases and involves distilling knowledge from its most basic form to create a collection of synthesized, appraised, and user-friendly products catered to the needs of researchers and clinicians alike. The action cycle is the process of translating's knowledge into practice comprising seven components: identifying the problem, adapting knowledge, assessing barriers, implementing, monitoring,and evaluating.
Application of this framework in the current study; firstly, in the knowledge-creation cycle; the researcher design an educational guidelines for nurses regarding care of paracentesis patient. This knowledge becomes more distilled, refined, and ultimately more usable to stakeholders. In the action cycle which describes a dynamic process of knowledge application, which is deliberately designed to change current ways of doing things, so that the innovative, evidence-based interventions are taken up and used in practice through the following phases according to the mentioned above framework; identifying the problem, in this study, it was the unsatisfactory level of knowledge and incompetent level of practice among nurses regarding care of paracentesis patient and increase level of paracentesis complication related to the defect in nurses knowledge and practice.

Subject and methods

Research design: A descriptive research design was used in this study.
Setting of the study: This study was conducted in the internal medicine, Endemic diseases and endoscopic departments in Fayoum University Hospital.
Subject: Convenient sample of all available nurses from the internal medicine and Endemic diseases departments (about 30).

Tools of data collection:

Tool I: Self Administration Interview Questionnaire to Assess Level of Nurses 'Knowledge:

It consists of two main parts:

Part (1): Demographic characteristics of study sample (30 nurses), including unit, age, sex, education, training courses, marital status and years of experience (10 items).

ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

Part (2): Nurses' knowledge assessment questionnaire about paracentesis care before, during and after paracentesis include; (definition of paracentesis, its indications, contraindications, possible complications and how to prevent them, needed supplies, nurses role before, during and after paracentesis procedure). It consists of 36 multiple choices questions, true or false questions and used for nurses before and after the implementation of educational nursing guidelines (36 items).

- **The scoring system:-**

Each item scored as **(one point)** for correct answer, and **(zero point)** for incorrect answer or unknown. Rating scale of all questions was collected based on **El-Sayed et al., (2018) .**Total score was 44 grades. Total score represented 100%. It was evaluated as follows:

- Satisfied ≥ 75% (33-44)
- Unsatisfied < 75% (0-33) .

Tool II: Nurses' Practice observational checklist regarding paracentesis care before, during and after paracentesis, adopted from **(National Clinical Paracentesis Guideline, 2015)** was used as a pre and post- test for assessing the nurses' practices pre, during and post paracentesis procedure. The steps of care categorized into (not done, incompletely done, and completely done). (34 items).

- **The scoring system:-**

Each item scored as **(two point) for** done complete action, **(one point)** for done incomplete action, and **(zero point)** for not done action. Rating scale of all questions was collected based on **El-Sayed et al.,(2018)**. Total score was 68 grades. Total score represented 100%. It was evaluated as follows:

- Satisfied ≥ 75% (51-68).
- Unsatisfied < 75% (0-51).

Validity and reliability:

Face and Content validity were conducted to determine whether the tools covers the aim of the study or not.it was ascertained by a jury of 5 expertise's: professor of medical surgical nursing from faculty of nursing, Cairo university, assistant professor of medical surgical nursing from faculty of nursing, fayoum university, assistant professor of medical from faculty of medicine, Fayoum university and two lecture of medical surgical nursing from faculty of nursing, Helwan university who review the tool for clarity, relevance, accuracy and comprehensiveness

reliability of developed tools was estimated using the Chronbach's alpha test to measure the internal consistency of the tools; it was found that the reliability questionnaire using Chronbach's alpha equation as illustrated in the following table:

Tool's name	Score	References
Demographic data	0,78	Detsky et al(1987)
Nurses' knowledge assessment sheet about paracentesis	0,81	Statistics (Alpha Cronbach)
Nurses' Practice assessment sheet about paracentesis	0,78	Statistics (Alpha Cronbach)

ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

Ethical and legal consideration:

The research approval was obtained from the ethical committee before starting the study.

- The researcher clarified the objective and aim of the study to nurses included in the study.
- The researcher assured maintaining anonymity and confidentiality of nurses data.
- Nurses were informed that they were allowed to choose to participate and they had the right to withdraw from the study at any time without giving any reason.
- The nurses (oral and written consent approval was obtained from them to participate in this study.

Pilot study

A pilot study was carried out on10% of nurses total (3 nurses) of the sample to test applicability and clarity of the tools. nurses' tool there was no modifications .so Patients in the pilot study were excluded from the study group and replaced by others.

Field work:

I- Assessment Phase:

A- Nurses' knowledge assessment about paracentesis care before, during and after paracentesis:

It was filled by the nurse, they were asked to respond to interview questionnaire using tool I. The questionnaire was administered to each nurse individually using the personal interview method. The interview was carried out in the separate space at the unit during break time. Sheet filling took about 15 minute. The data were collected through interview sessions.

B- Nurses' Practice assessment questionnaire about paracentesis care before, during and after paracentesis*:*

It was filled by the researcher using the tool II. The nurses' performance assessed using the continuous observation method. Each nurse was observed throughout paracentesis procedure from its initiation till its termination at the morning and afternoon shift. Each observation sheet was filled immediately while observing the nurse during procedure.

Statistical analysis

Data were presented in the form of tables and figures using the Statistical Package for Social Sciences version 21.0 (SPSS). Qualitative variables were presented in the form of frequencies and percentages and quantitative variables were presented in the form mean and SD. Test of significance was used to find out associations between study variables. Chi-square (χ^2) test of significance was used in order to compare proportions between two qualitative parameters. Spearman's rank

correlation coefficient (r) was used to assess the correlation between two variables. The confidence interval was set to 95% and the margin of error accepted was set to 5%. The p-value was considered significant as the following:

- P value $\leq$0.05* was considered significant.
- P value $\leq$0.001** was considered as highly significant
- P value >0.05 was considered insignificant.

ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

Results:

Table (1): Demographic characteristics for studied nurses regarding the care of patients post paracentesis (n=30)

	N	%
Gender		
Male	10	33.3
Female	20	66.7
Age		
20 <30	25	83.3
30 or more	5	16.7
Mean±SD	25.51±3.16	
marital status		
Single	13	43.3
Married	16	53.3
Divorced	1	3.3
Academic qualification		
Nursing Technical Institute	14	46.7
Bachelor of Nursing	15	50.0
Postgraduate	1	3.3
Years of Experience		
<5	18	60.0
5- <10	8	26.7
10 or more	4	13.3
Mean±SD	6.25±2.84	
training courses regarding care of patient undergoing paracentesis		
Yes	3	10
No	27	90
Numbers of training courses regarding paracentesis		
One	1	3.3
Two	2	6.6
training courses topics		
Liver cirrhosis and paracentesis	1	33.3
Paracentesis procedure	2	66.7

Table (1): showed the distribution of studied nurses according to their demographic characteristics. More than half of studied nurses 53.3% were from Endemic diseases departments. 66.7% of studied nurses were female. As regard, marital status, education and training courses more than half of studied nurses are married 53.3%, 50.0% had Bachelor degree of Nursing and (90%) had not abdominal paracentesis training courses. The three fifths of the studied nurses (60%) had the same experience less than 5 years of experience

Table (2): Distribution nurses total score of knowledge regarding care of patient general, before, during, and After paracentesis procedure(**No=30**)

Items of knowledge	**No=30**			
	Satisfactory		**Unsatisfactory**	
	N	**%**	**N**	**%**
General information about paracentesis	10	33.3	20	66.7
Before paracentesis procedure	11	36.7	19	63.3
During paracentesis procedure	12	40	18	60.0
After paracentesis procedure	10	33.3	20	66.7

ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

Table (2) Showed distribution of nurses total score of knowledge in relation to care of patient general, before, during, and After regarding the care of patients post paracentesis there was more than half of the studied nurses had unsatisfactory level of knowledge.

Figure (2): Distribution assessment of nurses' knowledge satisfactory and unsatisfactory level

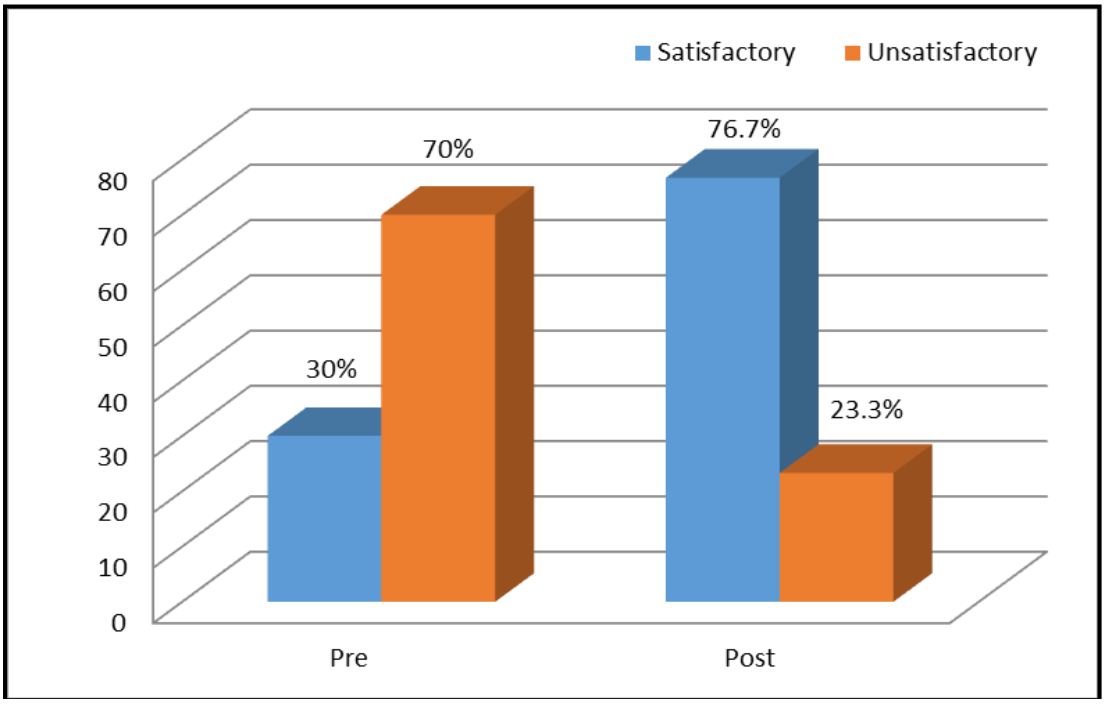

Figure (2) describe Distribution assessment of nurses' knowledge satisfactory and unsatisfactory level that shows 70% of the nurses have unsatisfactory level of practice.

Table (4): Relation between demographic characteristics and nurse's knowledge.

	Total knowledge					
	Satisfactory		Unsatisfactory		Chi-square	
	N	%	N	%	X^2	P-value
Gender						
Male	5	50.0	5	50.0	1.148	0.284
Female	6	30.0	14	70.0		
Age						
20- <30	6	24.0	19	76.0	10.364	<0.001*
30 or more	5	100.0	0	0.0		
Marital status						
Single	0	0.0	13	100.0	13.852	<0.001*
Married	10	62.5	6	37.5		

ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

Divorced	1	100.0	0	0.0		
Academic qualification						
Nursing Technical Institute	3	21.4	11	78.6	3.773	0.152
Bachelor of Nursing	7	46.7	8	53.3		
Postgraduate	1	100.0	0	0.0		
Years of Experience						
<5	0	0.0	18	100.0	26.232	<0.001*
5- <10	7	87.5	1	12.5		
10 or more	4	100.0	0	0.0		

>0.05 Non significant <0.05* significant <0.001** High significant

Table (4) describe Relation between demographic characteristics and nurse's knowledge shows that female gender more than 30 years old and post graduated 10 or more years of experience have the best satisfactory level of knowledge and there was highly statistically significant relation between age, marital status, years of exprience and nurses' knowledge with p-value<0.001.

Table (5): Relation between demographic characteristics and nurse's practice pre and post implementing of designated nursing guidelines.

	Total practice					
	satisfactory		unsatisfactory		**Chi-square**	
	N	**%**	**N**	**%**	**X^2**	**P-value**
Gender						
Male	5	50.0	5	50.0	2.857	0.091
Female	4	20.0	16	80.0		
Age						
20- <30	5	20.0	20	80.0	7.143	0.008*
30 or more	4	80.0	1	20.0		
marital status						
Single	0	0.0	13	100.0	10.952	0.004*
Married	8	50.0	8	50.0		
Divorced	1	100.0	0	0.0		
Academic qualification						
Nursing Technical Institute	2	14.3	12	85.7	4.694	0.096
Bachelor of Nursing	6	40.0	9	60.0		
Postgraduate	1	100.0	0	0.0		
Years of Experience						
<5	0	0.0	18	100.0	19.286	<0.001*

ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

5- <10	6	75.0	2	25.0		
10 or more	3	75.0	1	25.0		
Training in the field of specialization						
Yes	4	17.4	19	82.6	7.462	0.006*
No	5	71.4	2	28.6		

>0.05 Non significant <0.05* significant <0.001** High significant

Table (5) describe Relation between demographic characteristics and nurse's practice shows that female gender more than 30 years old and post graduated 10 or more years of experience have the best level of practice for patient undergoing paracentesis and there was statistically significant relation between age, marital status, years of experience and nurses' practice with p-value<0.01

Table (6): Correlation between total nursing practice and total nursing knowledge

Total practice	**Total Knowledge**	
	r	P-value
Total practices	0.427	<0.001*

>0.05 Non significant <0.05* significant <0.001** High significant

Table (6) describe correlation between total nursing practice and total nursing knowledge s that show highly statistically significant Correlation between total nursing practice and total nursing knowledge when p-value <0.001.

Discussion

Regarding demographic characteristics of the studied nurses, The current study showed that more than half of the studied nurses worked at Endemic diseases departments. The majority of them were female. Concerning marital status, education and training courses more than half of studied nurses are married, had Bachelor degree of Nursing and majority of studied nurse had not abdominal paracentesis training courses regarding care of patient undergoing abdominal paracentesis and had experience less than 5 years.

The current study finding showed that there was more than half of the studied nurses had unsatisfactory level of knowledge and this may be due to lack of education and information about ascities and paracentesis care at undergraduate. This finding was in the same line with **Reyad et al. (2022)** whose study in Faculty of Nursing, Helwan University entitled" Assessment of Nurses' Knowledge and Practice Regarding Intra-Abdominal Pressure Measurement and Abdominal Compartment Syndrome Prevention" the total level of nurses' knowledge it was determined that the majority (80%) of the studied nurses had an unsatisfactory level of total knowledge.

As regard Distribution of nurse's practice about paracentesis procedure shows 70% of the nurses have unsatisfactory level of practice, **this could be as a result of** lack in training programs regarding paracentesis care and procedure for new staff nurses.

ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

This finding agreed with **Fahmy et al. (2020)** who conducted a study in Faculty of nursing-minia University entitled" Effect of educational nursing guideline about paracentesis procedure care on nurses' performance" nurses were believing that they had not any role in paracentesis procedure considering it a medical procedure not as a nursing. In addition there was a lack in training programs regarding paracentesis care for new staff nurses, teaching aids and standards for care inside the units.

As regard Relation between socio-demographic data and nurse's knowledge and practice pre and post intervention shows that female gender more than 30 years old and post graduated 10 or more years of experience have the best satisfactory level of knowledge and there was highly statistically significant relation between age, marital status, years of experience and nurses' knowledge and practice.

The current study findings that **the majority of nurses were females**; this might be due to the fact that the profession of nursing in Egypt is more specialized and private to females; because the study of nursing field was exclusive to females till only few years ago. In addition, male nurses in contrast to females prefer to travel to work abroad due to the higher salaries and better opportunities.

This finding was in the same line with **Elsayed et al. (2018)** who conducted a study entitled "Applying nursing safety measure to prevent complications for liver cirrhotic patient undergoing paracentesis" at Mansoura University and **Gouda et al. (2019)** who conducted a study entitled " Factors Affecting Postoperative Nursing Performance in The Surgical Units" Department of Medical Surgical Nursing, Faculty of Nursing, Ain Shams University,and reported that This is may be due to the greater fraction of the nurses in Egypt were females and may also related to the studying of nursing in Egyptian university were exclusive for females only till few years ago.

While In contrast of **Ghonemy et al. (2016)** who conducted a study in Zagazig University entitled " Epidemiology and risk factors of chronic kidney disease in the El-Sharkia Governorate, Egypt." reported that the most of the studied sample were males and viewed that this result may reflect a social background, keeping women away from this job and due to the fact that most of female nurses are appointed to care for maternal and child health care. Also, this may be due to the fact that males cover night duties while a female does not.

Regarding to studied nurses Age, the finding of the present study illustrated that half of studied nurses aged from 20 to < 30 years with. this could be as a result of The State of the World's Nursing (SOWN) estimates 4.7 million "new" nurses will have to be educated and employed just to replace those older nurses who retire. In addition, there is the need to meet the challenge of the nurse shortage,

This study supported with (**Buchan et al., 2022)** whose study in USA entitled" The global nursing workforce and the covid-19 pandemic" the young nurses constituted the main work power in the hospitals and were confined to provide the direct nursing careto patients, while the older nurses assumed the administrative role or retire.

ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

The previous study finding was in the same line with **(Mobed et al., 2016)** whose study in faculty of nursing –assuit university en titled(Effect of Designed Nursing Guidelines on Nursing Intervention to Reduce Complications for Cirrhotic Patients Undergoing Paracentesis) and reported that two thirds of participants were from the age group less than 25 years with a mean ± SD of 23.77±1.14 years.

As regard level of education the current study relation relation revealed that the post graduated level of education is for nurses knowledge this could be as a result of Postgraduate nursing information and knowledge; the best access to scientific research and the newtrend nursing methods.

The previous study finding was in the same line with **Al-Yateem et al. (2021)** whose study in United Arab Emirates entitled (Nursing in the United Arab Emirates: Current challenges and opportunities) and revealed that Development of postgraduate nursing programs to match the growing needs of the population and national and international standards for providing quality healthcare services is also slow.

Conclusion:

Based on the findings of the present study, it can be concluded that assessment Nurse's knowledge regarding care of paracentesis patient in internal medicine unit and tropical unit are unsatisfactory level of nurses knowledge and practice about paracentesis care and procedure and there was highly statistically significant Correlation between total nursing knowledge and practice.

Recommendation:

A- Recommendation for Clinical Nursing Practice

1. Periodic monitoring for nurses' adherence to paracentesis procedure and to evaluate the level of nurses' performance.

2.Designing competency check list about care of paracentesis patient to be used as reference guide in their practice.

B- Recommendation for education

1. More attention must be paid to paracentesis procedure and its care in the curriculum for all educational categories of nursing students.

2.It is necessary to develop a continued nursing education and in-service training programs in internal medicine units at Fayoum University Hospitals especially for newly jointed nurses about standardized guidelines of care ascetic patients undergoing paracentesis in order to improve the quality of care using a scientific booklet, brochures and Panners.

ISSN 2786-0183
Helwan International Journal for Nursing Research and Pratctice
Vol. 2, Issue 1, Month: June 2023, Available at: https://hijnrp.journals.ekb.eg/

References:

1- PATRICK,S.. AND VIJAY, H. (2019). Overview of Cirrhosis, Sleisenger and Fordtran's Gastrointestinal and Liver Disease, 11th edition, pp.1678.

2- Aponte, E., Katta, S., & O'Rourke, M. (2020). An evidence-based manual for abdominal paracentesis, available at https://www.ncbi.nlm.nih. gov/books/NBK435998/ accessed at9 October 2021,6:00pm.

3- Kim, J.J., Tsukamoto, M.M., Mathur, A.K., Ghomri,Y.M., Hou, L.A., and Sheibani,S. (2014). Delayed paracentesis is associated with increased in-hospital mortality in patients with spontaneous bacterial peritonitis.Am Gastroenterol; 109(9):1436-42.

4- Elsayed, A., Hassanin, A., & Mohamed, H. (2018). Applying nursing safety measure to prevent complications for liver cirrhotic patient undergoing paracentesis, thesis submitted to the faculty of nursing Mansoura university in partial fulfillment of the requirements of master degree in Medical-Surgical nursing, Faculty of nursing, Mansoura university, Discussion part, p.77.

5- Fahmy, E., Bayomi, H., EzZ El-Deen, M., and Mohamed, R.(2020). Effect of educational nursing guideline about paracentesis procedure care on nurses' performance, Minia Scientific Nursing Journal, Volume 008_Issue 1_Pages 21-29.

6- Molina,k. (2021). Post paracentesis complications in patients with diagnosis of liver cirrhosis, Annals of Hepatology journal, Volume 24, issue 1, doi.org/10.1016/ j.aohep.2021.100484.

7- National clinical Paracentesis guidelines, (2015). Royal corwall hospitals NHS. 1-10

8- Mobed,K., Makhlouf,N., & abd Almageed,A.(2016). Effect of Designed Nursing Guidelines on Nursing Intervention to Reduce Complications for Cirrhotic Patients Undergoing Paracentesis, Vol, (4) No, (8) August 2016,Pp 33:45.

9- Reyad, O., Mahmoud, F., Eldriny, S. (2022). Assessment of Nurses' Knowledge and Practice Regarding Intra-Abdominal Pressure Measurement and Abdominal Compartment Syndrome Prevention. *The Egyptian Journal of Hospital Medicine*, 89(1), 4578-4586. doi: 10.21608/ejhm.2022.258690

10- Garbuzenko, D.V., and Arefyev, N.O.(2019). Current approaches to the management of patients with cirrhotic ascites. World J Gastroenterol. Available at https://www.wjgnet.com/1007-9327/full/v25/i28/3738.htm accessed at 25\8\2022 5:00pm.

11- Khan, N and Dushay, K.M.(2019): Autologous Blood Patch for Persistent Ascites Leak from Non-Closing Paracentesis Tracts, *Medical Sciences* journal, Volume 7, Issue 9,available at **https://doi.org/10.3390/medsci7090088** accessed at 22\3\2022 11:00am.

12- Gouda, A., Mohammed, E., and Ameen, D.(2019). Factors Affecting Postoperative Nursing Performance in The Surgical Units**,** Egyptian Journal of Health Care**,VOLUME 10,ISSUE 1,Pp 50:65.**

13- Ghonemy, T., Farag,S., Soliman, S., El-Okely, A., & El-Hendy, Y. (2016). Epidemiology and risk factors of chronic kidney disease in the El-Sharkia Governorate, Egypt. Saudi Journal of Kidney Diseases and Transplantation, 27(1), 111.

14- Buchan,J., Catton,H.,and Shaffer,F.(2022). THE GLOBAL NURSING WORKFORCE AND THE COVID-19 PANDEMIC, International Centre on Nurse Migration Available at https://www.icn.ch/system/ files/2022-01/Sustain%20and%20Retain%20in%202022% 20and%20Beyond-%20The%20global%20nursing%20 workforce%20and%20the%20COVID-19%20pandemic.pdf accessed at 28\8\2022 9:00pm

15- Al-Yateem N, Almarzouqi A, Dias J, Saifan A, Timmins F.(2021). Nursing in the United Arab Emirates: Current challenges and opportunities,Journal of nursing management , Volume29, Issue2, March 2021 ,Pages 109-112

16- Graham, I. D., Logan, J., Harrison, M. B., Straus, S. E., Tetroe, J., Caswell, W., & Robinson, N. (2006). Lost in knowledge translation: time for a map? J Contin Educ Health Prof, 26(1), 13-24. doi:10.1002/chp.47