
EFFECT OF AN EDUCATIONAL GUIDELINE ABOUT GYNECOLOGICAL EXAMINATION ON NURSES' KNOWLEDGE AND PRACTICES

Dr. Kamillia Rajab Abu Shabana¹, Dr. Mahmoud Salah Mahmoud Rady², Dr. Nagat Salah shalaby³ and Huda Abdulazim Elbnedari⁴

Professor of Maternity and Gynecology Health Nursing, Faculty of Nursing, Ain Shams University¹, Assistant professor of Obstetrics and gynecology medicine Faculty of Medicine, Al-Azhar University², Assistant professor of Maternity, Gynecology, and Obstetrics, Nursing Faculty of Nursing, Port Said University³, Master degree in Maternity, Gynecology & Obstetrics Nursing Faculty of Nursing Port Said University⁴

ABSTRACT

Background: Gynecological examination has been long considered a fundamental component of the woman health and it is the most commonly performed procedure in gynecological practice. **aim:** Evaluate the effect of implementing an educational guideline about gynecological examination on nurses' knowledge and practices. **Design:** Quasi-experimental design was utilized to conduct the study. **Setting:** Study carried out in two hospital in Damietta Gavernate namely; Al-Azhar university hospital, and El Zarka Central Hospital. **Subjects:** All nurses working in privous mention settings were inculded in the study, thier size were 40 nurse. **Tools:** Three tools were used for data collection; a structured interview to collect the needed data about nurses' knowledge, observational checklist to collect the needed data about nurses' practices regarding gynecological examinations. **Results:** Reveled that no one of the studied nurses had previous training courses related to gynecological examination. There was a marked improvement in nurses' knowledge and practices regarding gynecological examination post-intervention (87.5%-85%) respectively compared to pre-intervention were (55%-30%) respectively at ($P = < 0.01$). **Conclusion:** Educational Guideline About Gynecological Examination has positive effect on nurses' knowledge and practices. **Recommendations:** educational guideline about gynecological examination should be all obstetric health caregivers.

Keywords: Gynecological examination, Educational guideline, Nurses' knowledge, practices

INTRODUCTION

Gynecological examination is an essential part of gynecological care and it refer to the physical examination of the female pelvic and breast organs . A large number of women in the world will have a gynecological examination at some time in their lives, and some may undergo several examinations during their lifetime. (Lambert, Daly & Kunaviktikul, 2014). Gynecological examinations indicated in several conditions as; persistent vaginal discharge, dysuria or other urinary symptoms, amenorrhea, abnormal vaginal bleeding, lower abdominal pain, insertion or removal of an birth control device or vaginal diaphragm, performing a smear test, pregnancy diagnosis, gynecological screening and evaluating suspected or reported rape or sex offense . There are many types of gynecological examinations which include, Inspection of the external genitalia, examination of the urethra,Skene's and Bartholin's glands, speculum examination, Pap smear (cervical biopsy), and bimanual examination. The rectovaginal examination,vulvar examinations, and Breast examinations (Yanikkerem,2010; Williams, et al., 2017& Elbana, 2019).

Although significant of gynecological examinations, there are some complications for examinations, which include physical, psychological, and psychosexual complications. The physical one is hemorrhage, Also ureteric and bladder injury may occur. some women with atrophic vaginitis, the speculum exam could also be very painful. Also, there are psychological complications. like trigger anxiety or post-traumatic stress disorder, additionally many ladies have negative experiences of gynecological examination as during the examination, women are in a particularly vulnerable situation and had a lack of data about the procedure. (Weisz, Escuredo, Soto &Gutiérrez,2019 & Siwe, et al., 2013).

Besides that, the procedure could also be experienced as very unpleasant and humiliating fear of discovery of a pathological condition, also some women experience many feelings like embarrassment about undressing, worries about cleanliness, qualms about vaginal odor. Also, the gynecologist might discover something about sexual practices. (Royal College of Obstetricians and Gynecologists,2006). Regarding the psychosexual complications include psychosexual symptoms like lack of physical strength, fatigue, listlessness, poor concentration, forgetfulness sexual pain disorders, diminished sexual desire &refuse to engaged in new sexual relations.As the gynecological examination is embarrassing and stressful for women, they expects that the nurse should provide full information to relief anxiety and increase sense of safety during the examination, as well as

be support persone to the woman durig the peocedure (Yonis, Khhtab, Zurayk, El mouelhy, 2018).

Nurses play important roles in gynecological care, as she provides hands-on care to women which may range from total care (doing everything for someone) to partial care as helping a patient with illness prevention. The nurse maintains a patient's dignity while providing knowledgeable, skilled care. Also address psychosocial, developmental, cultural, and spiritual needs, which produces quality health services. Quality health services includes professional practices, competence, and application of appropriate technology, through applying many advanced teaching methods like an educational guideline (Karaca and Durna, 2019; Murphy, McKenna, Abdelazim, Battiwalla, & Stratton, 2019).

Educational guideline is a statement by which to determine a course of action. A guideline aims to streamline particular processes according to a set routine or sound practice (Mohamed, & Mohamed, 2019). Educational guidelines are important for health care especially within the gynecological examination as building knowledge and considered as a powerful tool for perfect practices and enhancing women's health which in turn decreases maternal mortality and morbidity. (Sajjadnia, et al., 2015).

In the Egyptian community gynecological morbidities are high especially in rural areas. (Sajjadnia, et al., 2015). A study conducted by Yonis et al (2018) suggests that pelvic examinations may cause pain, discomfort, fear, anxiety, or embarrassment in about 30% of women as a result of bad nursing care. Although its major benefits to women, health care professionals should aim to make this examination as comfortable and non-threatening as possible, maintaining sensitivity and respect for the woman's dignity .

According to the researcher available review of literature it was lacking in study of the effect of educational guidelines about gynecological examinations on nurse's knowledge and practies .So the current study was conducted to fill the gap of knowledge and add knowledge to the maternal newborn nursing speciality .

AIM OF STUDY

Investigate the effect of implementing an educational guideline regarding gynecological examination on nurses' knowledge and practices.

Research hypothesis:

- 1- The educational guideline will upgrade the nurses' knowledge about gynecological examinations.
- 2- The educational guideline will improve nurses' practices for women who undergoing gynecological examinations.

SUBJECTS AND METHOD

four main designs were followed :

(1) TECHNICAL DESIGN**A-Research design**

A quasi-experimental design was conducted in this study.

B- Setting

The study was conducted at two Hospitals in Damietta Governorate (Alazher University Hospital & El Zarka Central Hospital).

C- Subjects

A total of (40) nurse whose are working in obstetrics and gynecology department in selected hospitals were recruited in the study.

TOOLS OF DATA COLLECTION:

Two main tools were used for data collection :

Tool (I): A structured Interview : its designed by the researcher ,this tool was included the following parts 1- sociodemographic data: collect the data like age, educational level, area of residents', years of experience, and attending training courses related to gynecological examinations. 2-level of knowledge :to collect the needed data about nurses knowledge befor and after the intervention , regarding gynecological examinations, definition, indication, types, and importance of gynecological examinations., nurses role in gynecological examinations(pre ,during and post examinations roles) ,and infection prevention measure during the examinations. **Knowledge scoring system:**

The response to each question ranged from 2= correct, 1=incomplete answer. And incorrect answer scored (0). The total scores were graded as < 60 % uncorrected, ≥ 60 corrected for each area of knowledge the score was summed up and converted into percent score.

Tool (II): Observational checklist : its adapted from Qaseem et al; (2014). It maily used to assess nurses' practices regarding gynecological examinations It was included (5) parts as follows; the first part was nurses prepration for gynecological examinations ,The secod part

was the nurses' role during gynecological examinations. The third part was post gynecological examination nursing role. The fourth part was breast self-examinations for women and the fifth part was vulvar self-examinations for women.

Observational checklist scoring system:

Each item was scored on a 3-points Likert scale (0= not applicable or not observed, 2= correct, 1= incorrect). The total score ranged from 30-90. The total score was summed up and converted into percent score, Nurses consider incompetent if nurses total score was < 60, and nurses consider competent if nurses' total score was ≥ 60 .

Ethical Consideration:

Official Approval was taken from the Scientific Ethical Research Committee in the faculty of nursing at Port Said University to carry out the research project, as well as the selected hospital director to participate in the study. Informed consent was collected from all nurses after full explanation of the study aim, objective, time, benefits, importance, freedom of participation and withdrawal issues. Privacy and confidentiality were kept during and after data collection.

(2) OPERATIONAL DESIGN:

The operational design included the preparatory phase, implementing phase, and evaluation phase.

I-Preparatory Phase:

The researcher conducts a pilot study to assess the content validity and reliability of tools used and practicability of the study and reviews national and international web site (port said scientific journal of nursing, PSSJN, IOSR Journal of Nursing and Health Science (IOSR-JNHS), American Journal of Nursing Research, AJNR, International Journal of Caring Sciences, the university of michigan, center for vulvar diseases, Royal collage of nursing, Egyptian bank of knowledge, google, international library, googel scholar and PubMed) and reviews the advanced related literature (gynecological examination CDHB clinical skills unit, improving the pelvic exam experience, vaginal and pelvic examination, guidance for nurses) different studies, and theoretical knowledge of various aspects using books, articles, internet, periodicals, and magazines, then prepares the tools of data collections.

Tool validity :

All tools of data collections were developed and sent to five specialized university experts Prof in the field of study according to their comments, modifications were considered. Tools were submitted to three scholastic nursing specialists in the field of

Maternity Nursing and Community Health Nursing to test content validity. Modifications were carried out according to the recommendations of the specialists.

Reliability :

Tools validate for clarity, appropriateness, and completeness of the content. The reliability of the proposed tools was tested utilizing Cronbach's alpha. For the Preposttest, Cronbach's alpha of 0.81 showed a strong significant positive correlation between the items of the tool.

Pilot Study:

After a review of the questionnaire by experts and their approval, a pilot study was carried out before starting the actual data collection. The purpose of the pilot study was to ascertain the clarity, and applicability of the study tools, and to identify the obstacles and problems that may be encountered during data collection. It also helped to estimate the time needed to fill in the questionnaire It was done on 10% of of the study participant (4 nurses) and these were not included in the total sample of the research work to ensure the stability of the answers. Internal, external, and conclusion validity was done. Based on the results of the pilot study, modifications, clarifications, omissions, and rearrangement of some questions were done. To ensure the stability of the answers. Also, internal, external, and conclusion validity was done.

II- Field of work

The researcher has visited the previously mentioned study setting three days per week, in the morning shift. Frist interview each nurse individual to obtain confidentiality of the study. Each day three nurses were assessed pre interventions. The aim of the study was explained to each nurse to prompt her trust to participate in the study and then obtained her oral consent to participate in the study. The nurses' knowledge and practices was assessed pre-intervention. Then educational guideline implementation phases were started. In the beginning, the studied nurses were divided into 8 groups each group consisted of 5 nurses. Each group was given the freedom to choose their optimal time for receiving the educational guideline.

Then educational guideline was implemented through eight sessions. The duration of each session was twenty minutes. Methods of teaching were lectures, small group discussions, bedside teaching, demonstration, and applications. Media used lab top, gynecological examination equipment, handout, audiovisual material, and the real object.

Three sessions were devoted to knowledge and five sessions were devoted to clinical training. At the end of the session, the designed booklet (handout) was provided immediately post interventions for nurses. After completion of the intervention nurses' knowledge and practices were checked each day three nurses were observed while providing care of women during gynecological examinations. Each nurse was chick while providing care to three women each day. Then the median was obtained for statistical analysis.

III- Evaluation phase.

The educational guideline outcome was evaluated by using Tool I, II. Immediately post interventions as nurses' knowledge was assessed by the tool I while nurses' practices were evaluated by tool II.

ADMINISTRATIVE DESIGN

Before starting data collections an official letter from the faculty of nursing was sent to the selected area of the study (The director of the outpatient gynecological clinic in Damietta and Alzarka Central Hospital) to obtain permission to carry out the present research.

STATISTICAL DESIGN

Collected data was arranged, tabulated, and analyzed according to the type of each data. Data entry and analysis were done using SPSS 16 (statistical packages for social science). Quality control was done at the stages of coding and data entry.

RESULTS:

Table (1): reveals that half (50%) of the studied nurses were in the age group of (20- <30) years old. And three-quarters of them (75%) of them had technical institute in nursing, and more than two-thirds of them (62.5%) were living in urban areas and two thirds (60%) had years of experience ≥ 10 years. also, No one of them received any special training courses related to gynecological examination.

Table (2): showed that less 45% of the studied nurses had incorrect knowledge about gynecological examinations at the pre-intervention of the educational guideline. Meanwhile the majority (87.5%) of them had correct knowledge about gynecological examinations at post-intervention

Table (3): revealed that 30% of the studied nurses had incorrect practices about gynecological care at the pre-intervention. While, the majority (85%) of them had correct practices about total gynecological examinations at post-interventions

Figure (1): presented that, two third (60%) of the studied nurses had incorrect practical skills regarding educational role about women breast self- examinations at pre-interventions. While majority (85%) of them had correct practical skills post-intervention.

Figure (2): revealed that less than one third (25%) of the studied nurses had correct practical skills about educational role regarding women self -vulvar examination at the pre-interventions. While, more than three quarter (80%) of them had correct practical post-interventions.

Table (4): revealed that there was a highly statistically significant relation between total knowledge about the gynecological examination of the studied nurses and their residence and education level at ($P = < 0.01$).

Table (5): showed that there was a highly statistically significant relation between total practice about the gynecological examination of the studied nurses and their residence and education level at ($P = < 0.01$).

Table (6): showed that there was a positive correlation between total knowledge of the studied nurses about the gynecological examination and their total practice at the post-intervention

Table (1): Distribution of the nurses according to their general characteristics (n=40).

Items	N	%	X sd
Age (Year)			
20-	20	50	
30-	17	42.5	
≥ 40	3	7.5	30.7 ± 3.10
Educational level			
Diplom	3	7.5	
Technical Institute degree	30	75	
Bachelor degree	7	17.5	
Postgraduate	0	0.0	
Area of residence			
Rural	25	62.5	
Urban	15	37.5	
Years of Experience			
1-3	7	17.5	
4-6	5	12.5	
6-9	4	10	8.81 ± 1.71
≥ 10	24	60	
Attending training program for gynecological examinations			
Yes	00	00	
No	40	100	
Attending training program didn't related to gynecological examinations			
Yes	9	22.5	
No	31	77.5	
Courses had taken since (n=9)			
Less than one year	1	11.1	
1 - 3 years	6	66.7	
More than 3 years	2	22.2	

Table (2): Distribution of the nurses according to their level of knowledge before and after intervention (n=40).

Level of total knowledge about gynecological examination	Pre-intervention		Post-intervention		X2	p-value
	N	%	N	%		
	Correct >60 %	22	55	35	87.5	19.10
Incorrect <60%	18	45	5	12.5		

Table (3): Distribution of the nurses according to their level practices before and after intervention (n=40).

Level of total practical skills about gynecological examination	Pre-intervention		Post-intervention		X2	p-value
	N	%	N	%		
	satisfactory practical skills >60%	12	30	34	85	22.36
unsatisfactory practical skills <60%	28	70	6	15		

Table (4): Relation between general characteristics of the studied nurses and their total knowledge about gynecological examination at post-intervention of an educational guideline (n=40)

Items		Level of total knowledge about G.E				X2	P-Value
		correct >60% (n=35)		incorrect <60% (n=5)			
		No	%	No	%		
Residence	Rural	20	57.1	5	100	11.61	007**
	Urban	15	42.9	0	0.0		
Education level	Diploma	0	0.0	3	60	13.50	.001**
	Technical Institute degree	28	80	2	40		
	Bachelor degree	7	20	0	0.0		

*significant at $p < 0.05$. **highly significant at $p < 0.01$.

Table (5): Relation between general characteristics of the studied nurses and their total practice about gynecological examination at post-intervention of an educational guideline (n=40).

Items		Level of total practice about G.E.				X ²	P-Value
		satisfactory >60% (n=34)		unsatisfactory <60% (n=6)			
		No	%	No	%		
Residence	Rural	19	55,9	6	100	11.61	.007**
	Urban	15	44,1	0	0.0		
Education level	Diploma	0	0.0	3	50	9.58	.031*
	Technical Institute degree	27	79.4	3	50		
	Bachelor degree	7	20,6	0	0.0		

*significant at $p < 0.05$. **highly significant at $p < 0.01$.

Table (6): Correlation between total knowledge of the studied nurses and their total practices at post-intervention.

Item	Total knowledge		Total practice	
	r	P-value	r	P-value
Total knowledge			.332	.000**
Total practice	.332	.000**		

(*) Statistically significant at $p < 0.05$.

DISCUSSION:

Gynecological examination is an essential part of any women's health care and must be accessible for all women to meet their health needs. Gynecological services must comply with the best available scientific evidence for the provision of high-quality care. Nurses with improved knowledge and skills help to improve their ability to provide safe and effective quality care for women undergoing gynecological examination. Moreover, several studies supported that health care providers had an approval role in improving women health Elbana, (2019).. So the current study aimed to evaluate the effect of implementing an

educational guideline regarding gynecological examination on nurses' knowledge and practices in the Damietta Governorate. This aim was significantly approved with the framework of the present study hypothesis which was, nurses who receive the educational guideline will enhance their knowledge about gynecological examinations and, will conduct correct practices for women who undergoing gynecological examinations.

The present study reveals that no one of the studied nurses received any special training courses related to gynecological examination in Damietta Governorate. This result agrees with a study conducted by, Belal, Gaheen, Mohamed in (2016). Who found that all of the studied nurses didn't receive any training specialized in obstetrics. Also the present study was in keeping with Sobeih and Nassr, (2015) as they reported that no one of the nurses attended any training regarding gynecological examinations. Within the same line, Kaushal, (2015) emphasizes the positive impact of an educational program on the knowledge and practices, hence, the healthcare organizations can engage in continuous training programs to regularly maintain and enhance the performance of the nurses. Moreover, Meddings et al. (2014) stated that changing practice isn't easy and may be costly, but it'll cost healthcare organizations more financially without adequately educating nurses about best practices.

Also, Gordon, (2015) stated that Further training and education of nursing professionals can help to alleviate and limit the health complication which will be followed by improper gynecological examinations and increase the standard of care provided by healthcare providers nationally. Meanwhile, the attendance of such training courses had statistically significant associations with nurses' practices. In this respect, the American Association of Colleges of Nursing (AACN) encourages lifelong learning and offers incentives for nurses seeking to advance their education (AACN, 2014). This result reflects the urgent need for training regarding gynecological examinations.

The study highlights that there was a marked improvement in total knowledge of the studied nurses about nursing role pre, during, and post gynecological examinations post-interventions with a highly statistically significant difference between pre and post-intervention as less than half of the studied sample had incorrect knowledge about gynecological examinations at the pre-interventions. While the majority of them had correct knowledge about gynecological examinations at post-intervention. This was agreed with Elbana, (2019). Who reported that there was a highly statistically significant difference in

studied nurses' general knowledge related to their role of gynecological examination between the pre and post-intervention. As Elbana mentioned that more half of studied maternity nurses' had a poor level of knowledge regarding all knowledge items concerning gynecological examination at the pre-intervention phase. These results also agree with Mahrous, (2018): who stated that about three-quarters of the studied nurse had poor knowledge regarding gynecological examinations pre-interventions. From the researcher's point of view, These findings may be due to a lack of implementing educational guidelines about gynecological examination at the studied setting. This high lightened that the educational training was highly indicated.

Within the light of the current study, there was a marked improvement in total practices near two thirty of the studied nurses who had incorrect practices about total gynecological examinations at the pre-intervention phase . But post-intervention the percent of nurses who had incorrect practices decrease to reaches to less than one quarter. While the most of them had correct practical skills about gynecological examinations at post-interventions. Within the same scenario Abd-Elhamid, El-khashab, Saleh, (2016). They illustrated that there was a highly significant statistical improvement of a total nurses' practice level regarding gynecological examinations. Also, this result was congruent with El Ghaty et al, (2013) ,Who reported there have been highly statistically significant differences between nurses' practice pre and post-interventions.

Besides that, this result agrees with Ali and Taha,(2014): who stated that the advance in nurses' practices after the intervention was also noticeable since their practices before the guideline were even worse compared with knowledge. And none of them had adequate practice at the pre-program phase but, the adequate practice continued throughout the follow-up. This might be associated with the effect of knowledge on practices, like an increased level of information, the amount of self-confidence also increases, and therefore the individual can practice more accurately.

About the total practice of studied nurses regarding educational role about women breast self –examination.. The present study shows that there is a, statistically significant difference in the study nurses' total practices about BE as the level of practices increased post interventions related to know the appropriate time, frequency of performing, the examination positions, and steps of examinations. These results are consistent with Ahmed;(2020). Who showed that during the preprogram, three-quarters of the study participants have correct knowledge about the importance of BSE, and most of the

participants know that it helps early detection of breast cancer (BC), and know the appropriate time and frequency of performing BSE immediately after the program implementation. In the same line, a study by Ahmed et al. (2017), Revealed that more than two-fifths of adolescent girls their practices about BSE improved post interventions, also agree with. A study carried out by Anakwenze et al. (2015), contradicted with the results of the current study, These results were also consistent with Ramadan and Mohamed (2015), who revealed that there was a significant improvement in the level of women's practice of BSE after the program implementation.

Also agree with a study performed by Moussa and Shalaby (2014), who stated that the educational program had a significant effect on increasing the level of practice on BSE from no one to almost all of the participants performing BSE correctly. And according to Moussa and Shalaby, the main reason for not practicing BSE before the program was that they did not know the right way to perform it. Furthermore, a study carried out by Moustafa et al. (2015), at Zagazig City, found that there was a significant improvement in the participants' level of practices about the right time and position of practicing BSE.

It is obvious from the present study that nurses practices about educational roles regarding women self-vulvar examinations, were three quarter of the studied nurses had incorrect practical skills about nurses educational role about women self-vulvar examination pre-intervention. While more than three quarter of them had correct practical skills post-intervention. It is worth noting that all of (100%) the studied nurses had correct and complete knowledge about women self-vulvar examinations post interventions, but more than three quarter of them only provide women health teaching about it, because of , they know that I,m watching them while practicing , meanwhile less than one quarter of them refuse to do that because of they are very embarrassing to say steps of self-vulvar examination to the women which may be due to their cultures' background. There's no study illustrated nurses' educational role about women self-vulvar examination but, there are some articles and books(Vulvodynia: A Self-Help Guide) that discuss the vulvar self-examination as a procedure .

Although according to Mercy, et al ;(2019): Invasive cervical cancer is preventable, yet affects 500,000 women worldwide each year, and over half these women die. and barriers to cervical cancer screening include lack of awareness of cervical cancer and the cervix, fear of the speculum, and lack of women-centric technologies. like Vulvar self-

examination (VSE) which was an essential examination that all women should perform monthly, as it enables potential patients to discover vulvar cancer in early-stage . In a study conducted by Choi, and Park,;(2018),. Reveled that young women's willingness to conduct VSE. was higher if the perceived benefit and the individual health motivation were higher. However, it was lower if the perceived barriers were higher . For that the systematic strategies should be included in VSE education programs to increase perceived benefits of, and health motivation for conducting VSE while reducing the perceived barriers to VSE.

Additionally, the finding of the present study proved that (less than half and onequarter) (40% and 25%) respectively of the studied nurses had correct practical skills about breast self-examinations and self-vulvar examination at the pre-intervention. While, most (85% and 80%) of them respectively had correct practical skills about breast self-examinations and self-vulvar examination at post-interventions. The possible explanation of these results may be due to differences in culture as breast self-examination had occupied mined of many researchers contradict self-vulvar examination. Also, we can realize that defect in social media(Bahia foundation) as breast self-examination occupied the wholly view, but self- vulvar examination almost no one or a very few nurses and women know about it although the high prevalence of cervical cancer. Mercy,et al ;(2019).

The current study revealed that there was a highly statistically significant relation between total knowledge, total practices about the gynecological examination of the studied nurses, and their residence and education level at ($P = < 0.01$). This findings disagreement with the study of Kavitha et al. (2014); Who found that there was no significant relation between nurse interns' knowledge and practice regarding emergency obstetric management and their resident and level of education. While the findings of the current study were in agreement with the results of the previous studies of *Pehlivan and Kaushar*.(2013); They conclude that rural students had a high level of knowledge and practice than urban. Again, the study of Nassar. (2015); Who shows that the level of educations was good predictors to assess knowledge and practice of nurse Furthermore, the study of Yahya et al. (2017); found that there is a positive correlation between knowledge score and practice and personal characteristic of the studied nurse.

As regarding the correlation between total knowledge and total practice of the studied nurses at post interventions. The present study showed that there was a highly positive association between them. theses finding agree with Elbana,(2019) in Benha, who proved

that there was a highly positive association between them that indicated knowledge improvement subsequently improves practice. Also, these findings were agreed with Ramadan, SharKawy,(2019). Who revealed that there is a positive correlation between knowledge and practice score of nurse interns after implementation of the program.

In the same line, these findings agree with the study of Nassar (2015). Who mentioned that the applications of the training program had been more effective in increasing the nurse interns' knowledge that leads to improvement in their practice. Also, the study was carried out by Mohamed (2018). Who reveals a positive correlation between participants 'knowledge and practice after the implementation of the program. While these results in disagreement with the study of *Eldeeb and Eldosoky* (2016). Who showed a non-significant correlation between knowledge and skills scores among nurse interns regarding gynecological examinations. Before the conduction of educational guidelines, there was overall poor practice. This is explained by a lack of knowledge about gynecological examinations in the pre interventions period. Lack of clinical education, skill expertise, and practice style traits have all been documented as influencing nurses' use of evidence-based practice. Post interventions, there was a significant statistical improvement in practices. This could be justified by improving knowledge post-intervention led improvement in practics. This finding coincides with many studies that supported the positive correlation between knowledge and practices.

CONCLUSION:

The educational intervention is highly improved nurses' knowledge and practices regarding gynecological examination.

RECOMMENDATIONS:

This study recommended that educational guideline about gynecological examination should be provided for all obstetric health caregivers.

REFERENCES :

Abd-Elhamid, a. El-khashab,m. Saleh,n. (2016): Impact of Training Education Program on Improving of Nurses Performance Regarding Infection Control in Endoscopy UnitAfro-Egypt J Infect Endem Dis 2016; 6(1): 16-28 <http://mis.zu.edu.eg/ajied/home.aspx>

Albashayreh, A. I., Al-Rawajfah O. M., Al-Awaisi H., Karkada S., & Alsabei S. (2018): Psychometric properties of an Arabic version of the patient satisfaction with nursing care quality questionnaire. *The Journal of Nursing Research*, p.p, 1-9.

Ali HZ, Taha MN.(2014): Effect of Infection Control Training Program on Nurse's Performance and Microbial Results on GIT Endoscopes. *Advances in Life Science and Technology* 2014;27:6-16

Ahmed AM, Abd EL, Hamed AA, Azzam HF (2017). Effect of breast self - examination training program on knowledge and practice of adolescent girls *Int J Res Appl Nat Soc Sci* 5:35–48 , [Downloaded free from <http://www.enj.eg.net> on Monday, June 22, 2020, IP: 102.184.251.186].

Ahmed,S.(2020):The effect of health promotion program on female breast self-examination knowledge and practice ,Canal University, Suez Canal, Egypt.,Tel: +201097338157;,e-mail: shabd.gimsct@gmail.com,Received 30 September 2018,Accepted 29 October 2018/*Egyptian Nursing Journal* 2019, 16:25–35 [Downloaded free from <http://www.enj.eg.net> on Monday, June 22, 2020, IP: 102.184.251.186]

American Association of Colleges of Nursing (AACN) (2014): The Impact of Education on Nursing Practice. Available at <http://www.aacn.nche.edu/media-relations/fact-sheets/impact-of-education.internet> accessed in November, 2014.

Anakwenze CP, Coronado-Interis E, Aung M, Jolly PE (2015). A theory-based intervention to improve breast cancer awareness and screening in Jamaica *Prev Sci* 16:578–585

Belal, G. Gaheen, M. Mohamed, F. (2016): The educational needs among obstetrical and gynecological nurses in El-Gharbia Governorate *Journal of Nursing Education and Practice*; ISSN 1925-4040 E-ISSN 1925-4059 Received: October 5, 2016, Accepted: November 29, 2016 Online Published: December 21, 2015, DOI: 10.5430/jnep.v6n4p84 URL:<http://dx.doi.org/10.5430/jnep.v6n4p84>.

Choi,J. and Park,M.:(2018):Factors predicting young women's willingness to conduct vulvar self-examinations in Korea,December 2018*Health Care For Women International* 40(2):1-12,DOI: 10.1080/07399332.2018.1531003

El Ghatey A, Mahrous F, Gendy J.,(2013): Impact of Universal Infection Control Intervention Program for Nurses at Asser Hospital Medical-Surgical Nursing Department, Faculty of Nursing, King Khalid University, Abha, Saudi Arabia. *Journal of American Science* 2013; 9(12) 940:948 <http://www.jofamericanscience.org>.

Elbana, H, M;(2019): Maternity nurses' performance regarding gynecological examination: Educational intervention, *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 7, Issue 6 Ver. IX. (Nov.-Dec.2018), PP 66-77 www.iosrjournals.org

Eldeeb G A, and Eldosoky E K (2016): Relationship between Effectiveness of Time Management and Stress levels among Nursing Students. *Journal of Nursing and Health Science*, 5, (2), PP 95-100 .

Gordon P.(2015): The Effects of Nursing Education on Decreasing Catheter-Associated Urinary Tract Infection Rates, Doctor of Nursing Practice (DNP), College of Health Sciences, Walden University, P.1-18.

Karaca A, Durna Z. Patient satisfaction with the quality of nursing care patient satisfaction with nursing care. *Nursing Open*. 2019;00:1–11. <https://doi.org/10.1002/nop2.237>

Kaushal G. (2015): Impact of Training on Knowledge, Attitude and Practices Scores of ICU Nurses regarding Standard Precautions of Infection Control in a Super Speciality Hospital of Delhi, *Indian Journal of Research*, Volume: 4 | Issue: 8.P.282-285.

Kavitha P., Tesfay A., Prasath R., Habtegiorgis L., Girmay S., and Sereke Y. (2014): To assess level of knowledge of nurse interns on emergency obstetric management at orotta national referral maternity hospital, *Int. J. of Allied Med. Sci. and Clin. Research* Vol-2(4) pp. 287-293.

Lambert V., Daly J., Kunaviktikul W., (2014): Nursing Education on Women's Health Care in Australia, Japan, South Korea, and Thailand. *Journal of Transcultural Nursing*. 15(1):p.p 44-53. Mid: 14768415 available at <http://dx.doi.org/10.1177/104365960>.

Meddings J., Rogers, M. M., Krein, S. L., Fakh, M. G., Olmsted, R. N., & Saint, S. (2014). Reducing unnecessary urinary catheter use and other strategies to prevent

catheter-associated urinary tract infection: an integrative review. *BMJ Quality & Safety*, 23(4), 277-28289.

Mohamed A (2018) designing a training program for improvement of nurse interns' knowledge and practice regarding occupational hazards. unpublished doctorate thesis, faculty of nursing, zagazig university

Mohamed, S.M.& Mohamed, A.F.,(2019): *Maternity and Gynecological Nursing*. pp. 660–665 and 827–848. ISBN 978-0133876406.

Mercy N. Asiedu MSc Júlia S. Agudogo Mary Elizabeth Dotson , Marlee S. Krieger ,John W. Schmitt MD Megan Huchko MD, Gita Suneja, Rae Jean Proeschold-Bell , Jennifer S. Smith , Deborah Jenson , Wesley Hogan, Nirmala Ramanujam, ;(2019), A Novel, Versatile Speculum-free Callascope for Clinical Examination and Self-Visualization of the Cervix, bioRxiv preprint doi: <https://doi.org/10.1101/618348>. It is made available under a [CC-BY-NC-ND 4.0 International license](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Murphy, J., McKenna, M., Abdelazim, S., Battiwalla, M., & Stratton, P. (2019). A Practical Guide to Gynecologic and Reproductive Health in Women Undergoing Hematopoietic Stem Cell Transplant. *Biology of Blood and Marrow Transplantation*.

Moussa MMM, Shalaby NS (2014). Effect of breast self-examination education program on knowledge, attitude and practice of nursing students. *Int J Res, Studies Biosci* 2:40–49

Moustafa DG, Abd-allah ES, Taha NM (2015). Effect of a breast-self examination(BSE) educational intervention among female university students. *Am J, Nurs Sci* 4:159–165

Nassar R., (2015): Designing training program: A Mean for Prevention of Occupational hazards that Face Nurse interns, faculty of Nursing Menoufia university.

Ramadan, E. Abd El Hady, R. SharKawy, A. (2019): Effect of Training Program on Nurse Intern's Knowledge and Practice Regarding Obstetric and Gynecological Skills at Benha University Hospital, *American Journal of Nursing Research*, 2019, Vol. 7, No. 5, 889-898 , Available online at <http://pubs.sciepub.com/ajnr/7/5/22> Published by Science and Education Publishing, DOI:10.12691/ajnr-7-5-22.

Pehlivan & Kaushar (2013): The Effect of the Time Management Skills of Students Taking a Financial Accounting Course on their Course Grades and Grade Point Averages. *International Journal of Business and Social Science* Vol. 4 No. 5; May 20-34.

Qaseem A., Humphrey L.L., Harris R., Starkey M., and Denberg T.D., (2014): Screening pelvic examination in adult women: a clinical practice guideline from the American College of Physicians. *Clinical Guidelines Committee of the American College of Physicians. Ann Intern Med.* 161:67–72.

Royal College of Obstetricians and Gynecologists (2006); Vaginal and pelvic exam (guidance for nurses and midwives), Published by the Royal College of Nursing, 20 Cavendish Square, London, W1G 0RN, available at: www.rcog.org.uk.

Sajjadnia Z., Sadeghi A., Kavosi Z., (2015): Factors affecting the nurses' motivation for participating in the in-service training courses: A case study. *J Health Man & Info.* 2(1): 21-26. <http://dx.doi.org/10.3855/jidc.526>, Summary Report. Available online at, <http://www.hpvcentre.net/statistics/reports/EGY.pdf>.

Siwe, K., Berterö, C., & Wijma, B. (2013). Gynecological patients learning to perform the pelvic examination: a win-win concept. *Sexual & Reproductive Healthcare*, 4(2), 73-77.

Sobeih H. and Nasr M. (2015): Indwelling Urinary Catheter Management: Effect of an Interactive Workshop on Nurses' practice and Perception. *New York Science Journal* 2015;8(5).PP.117-124.

Weisz, L. M. C., Escuredo, I. M., Soto, J. B. A., & Gutiérrez, J. J. G. (2019). Toxic epidermal necrolysis (TEN): Acute complications and long-term sequelae management in a multidisciplinary follow-up. *Journal of Plastic, Reconstructive & Aesthetic Surgery*.

Williams, P. L., et al. Gray's, (2017): *Anatomy*, 38th ed. New York: Churchill Livingstone, pp. 1861–1877.

Yahya W S, Alamodi L A, Mohammed A T, Shibah A M, Jabri S A, Albosruor Z A (2017): The Effect of Time Management on Academic Performance among Students of Jazan University. *The Egyptian Journal of Hospital Medicine*, 69 (8), PP: 3042-3049.

Yanikkerem, E., Özdemir M., and Gülten Karadeniz, PhDP, (2010): Women's attitudes and expectations regarding gynecological examination; 25(5): 500–508. doi:10.1016/j.midw.2010.08.006.

Yonis, N., Khttab H., Zurayk H., El mouelhyM., (2018): A Community Study of Gynecological and Related Morbidities in Rural Egypt, The Journal of Nursing Research 24(3):175-86.

تأثير دليل ارشادي تعليمي عن الفحوصات النسائية على معلومات وممارسات الممرضات

الخلاصة

تعتبر الفحوصات النسائية الجزاء الاساسي والاكثر شيوعا من الرعاية النسائية في العالم وتهدف هذه الدراسة الى تقييم تأثير تنفيذ دليل ارشادي تعليمي عن الفحوصات النسائية علي معلومات وممارسات الممرضات تجاه الفحوصات النسائية و تستخدم المنهج شبه التجريبي وتشمل الدراسة (40)ممرضه العامليات مستشفيي الازهر الجامعي ومستشفيي الزرقا المركزي بمحافظة دمياط . تم جمع البيانات باستخدام ادوات التالية: استمارة مقابلة شخصيه لتقييم معلومات الممرضات عن الفحوصات النسائية ومقياس ملاحظة لأداء الممرضات قبل واثناء وبعد الفحوصات النسائية ، وقد اظهرت نتائج الدراسة تحسن ايجابي احصائي ملحوظ في معلومات وممارسات الممرضات بعد تطبيق البرنامج واوصت الدراسة بتقديم ارشادات تعليمية مستمرة للممرضات بخصوص الفحوصات النسائية .

الكلمات المرشدة : الفحوصات النسائية، المعلومات والممارسات التمريضية، البرنامج الارشادي التعليمي .