

Effect of Guideline about Endometriosis on Enhancing Young Female Knowledge and Utilization of Health Services

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Abstract: This study aimed to study the effect of guideline about endometriosis on enhancing young female knowledge and utilization of health services. **Setting:** This study was accomplished at Mansoura university hospital specific at gynecological outpatient clinic, Egypt. **Design:** Quazi experimental pre and post test design. **Subjects:** one hundred and sixty two young female from October 2017 to April 2018. **Type of sample:** purposive, **Tools:** An interviewing questionnaire schedule, self monitoring schedule & likert scale. **Results:** The present study results had revealed that the mean age among studied sample was (21.95 ± 2.02) , also, there were significant improvement of total score of knowledge pre, post, & 3 months post intervention among studied sample (8.12 ± 0.59) , (15.46 ± 1.49) and (13.97 ± 2.89) respectively. In addition more than three quarter among studied sample had utilized health services regarding painful and heavy menstruation complains, while 39.9% complains from dyspareunia, furthermore the majority of studied sample agreed to utilize the guideline. **Conclusion:** The majority among studied sample had incorrect knowledge about endometriosis pre intervention compared to highly significant improvement post and 3 months post intervention. While after implementing had significantly improvement and follow-up. In addition increase awareness regarding endometriosis and utilized health services. Additionally the majority of studied sample agreed to utilize of guideline in the future. **Recommendation:** Design guideline, purshor about endometriosis must be available at gynecological and obstetrics clinic to be distributed among young female.

Keywords: Endometriosis, Enhancing, Guideline, Knowledge, Utilization of health services.

1. INTRODUCTION

Endometriosis is a chronic disorder resulting from the implantation of endometrial tissue outside the uterus (Taylor & Lebovic, 2014). It induces a chronic inflammatory reaction that may result in scar tissue. Firstly present on the pelvic peritoneum, ovaries, recto-vaginal septum, bladder, and bowel. (American College of Obstetricians and Gynecologists, 2010).

Moreover endometriosis is frequently had described as a clinical enigma as there is no established etiology However, it is highly expected that certain genes predispose women to develop the disease; theories remain speculative and range from congenitally acquired or genetic predispositions to alterations in the endocrine system (Buck Loius et al., 2011). Furthermore the risk of developing endometriosis increase if age(30-40years), infertility period, BMI, dyspareunia, pelvic pain, and family history of endometriosis could be considered as predictive factors for severity of endometriosis, also increase the amount and duration of menstrual bleeding, menstrual pattern. (Painter et al., 2011 and Moini et al., 2013).

Furthermore the clinical features mostly nulliparours or have had one child, infertility or voluntary postponement of conception till late age, short menstrual cycles, increased duration of bleeding , excessive bleeding and cramping, frequency micturation , dysuria or hematuria, pain, inflammation or pelvic heaviness depending on the location of

endometrial tissue implantation, duration of disorder and the phase of menstrual cycle, dyschezia, diarrhea, rectal bleeding, dyspareunia (Taylor & Lebovic, 2014). Additionally there were approximately (6-8) years, interval between onset of symptoms and diagnosis. These problems are a consequence of lack of knowledge about the pathogenesis of the disease and the pain mechanisms as well as the lack of awareness of physicians in this field. (Mechsner, 2016)

Moreover the most important symptom indicating endometriosis is chronic pelvic pain(CPP). Also, other symptoms included dysmenorrhoea, sub-fertility, ovarian cysts and dyspareunia painful cyclical periods and relief based on the female's menstrual cycle (Simoens et al.2012, and Taylor & Lebovic, 2014). All of these symptoms can affect the general physical, mental, and social wellbeing of female (Kennedy et al. , 2005, and Nnoaham et al., 2011). Additionally, presence of negative impact of this condition on women's health status, social and sexual relationships, work and study, quality of life, especially in the diverse domains of health as psychosocial functioning and pain. (Culley et al., 2013, De Graaff et al., 2013).

There is no a definite cure, although endometriosis can be treated effectively with drugs, while most treatments are not suitable to use for long-term because it had side-effects (Kennedy et al. , 2005 and Rogers et al. 2009). Surgery can be used effectively to reduce the endometrial lesion and scar tissue, but success rates are based on the extent of disease and the presence of proper specialist and the surgeon's skills. (Meuleman,et al., 2009).

In addition, the management is offered for each one based on their symptoms, age, and fertility condition. Adequate treatment requires a combination of treatments given over their lifetime. The current treatments include medical, surgical, or a combination of these approaches. (Muzii, 2012)

Providing women with more knowledge and enabling them to be positive responsible for early detection and protect their own health. Therefore, it is important to educate women about the symptoms of endometriosis, risk factors, and preventive measures. (Price, and Knibbs, 2009).

Additionally gynecological nurses play an essential role in providing specialized care and in creating suitable patient pathways for caring women with endometriosis it can be an emotional challenge. Biomedical knowledge, personal assumptions about endometriosis, personal values and personal pain experiences have affected the clinical practice of nurses. However, care seemed less influenced by nursing values and ethics. Also, nurse managers implement self-reflection in the clinical setting and systematically promote it in clinical practice, to form and maintain a holistic approach to the patient that goes beyond its biomedical diagnosis. (Anne et al., 2016).

Significant of the study:

World Endometriosis Research Foundation (WERF), "estimate that 176 million women globally, and in North America 8.5 million women are affected with endometriosis. (World Endometriosis Research Foundation, 2015). Up to 50% of women with infertility,10% of women of childbearing age, and 70-90% of women with pelvic pain have endometriosis [American Society for Reproductive Medicine, 2014]. Furthermore In Dakahlia Governorate, Egyptian prevalence of endometriosis in adolescents with severe dysmenorrhea was 12.3 % during the period of January 2012 to October 2014. (Ragab, 2015).

In addition endometriosis is a chronic disease, which is under- diagnosed, under reported, and under researched (Gao et al., 2006). Usually called "cancer of the career woman", is recognized as a "social disease" for its prevalence and debilitating impact on young female, leading to a heavy socio-economic burden of disease (El-Maraghy et al., 2017)

Additionally the similarity of signs and symptoms to another disease with endometriosis and a misdiagnosis of affected women may be due to inappropriate secondary care or most often, general practitioners had a lack of knowledge& experiences, awareness and sympathy and display attitudes that perpetuate myths about endometriosis (Culley et al., 2013). Because there was a limited number of studies regarding raise awareness of the young females about endometriosis. So this study was conducted.

Aim of the work:

The study aimed to study the effect of guideline about endometriosis on enhancing young female knowledge and utilization of health services.

Research hypothesis:

Application guideline about endometriosis will expect to enhance young female knowledge and their utilization of health services.

Operational definitions:

Endometriosis: presence of similar tissue outside the uterus.

Guideline: information and instructions for guidance and helping.

2. SUBJECTS AND METHOD

Design of the study: Quazi experimental (pre and post test) design.

Study Setting: This study was accomplished at Mansoura university hospital specific at gynecological outpatient clinic, Egypt, from October 2017 to April 2018.

Subjects of the study:

Selected 162 female who attending gynecological outpatient clinic, Mansoura University Hospital, who fulfilled the following criteria:

Inclusion criteria:

- Reproductive age (18- 25 years)

Exclusion criteria:

- Pregnant women
- Had received training program about endometriosis
- Diagnosed with endometriosis
- Suffering from any type of chronic illness
- Had psychological disorders

Sample size:

To calculate sample size, a pilot study on 16 women was carried out, and it is found that only 10% has correct knowledge about endometriosis. Using Dssresearch.com sample size calculator (dssresearch.com, 2016), and assuming improving correct knowledge to be 20% at alpha error 5% (confidence 95.0%) and beta error 10% (Power of the study 90.0%); the calculated sample size is 147 women. To establish good quality of data, adding up 10%, thus the studied sample becomes 162 women.

Data Collection Tools:

Collected data utilized the following tools:

- **(1)First Tool: A Structured Interviewing Questionnaire Schedule:** It was designed by the researchers after reviewing related literatures, to be filled from each young female. It consisted of three parts:

- **The first part:** Covered the data related to young female

A- General characteristics (age, level of education, occupation & residence).

B-Obstetric and menstrual history

- **The second part:** assessed young female knowledge concerning endometriosis, it include 8 questions as: (definition - symptoms – risk factors – sites of endometriosis - diagnoses, complications & treatment of endometriosis, promotion their health regarding endometriosis).

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- **Scoring of Knowledge:** as correct question answer was given [2] score and incorrect question answer was given [1] score

- **(2)The second tool:** self monitoring schedule to assess young female utilization of health services, it included five items which checked as (yes) or (no) for each statement,
- **(3)The third tool:** likert scale to assess young female attitude regarding an instructional supportive guideline, each female was instructed to respond to each item as agreed, disagreed and uncertain.

-An instructional supportive guideline to enhance young female knowledge,& utilization of health services.

Validity of the Tool:

These tools were reviewed by three specialists of maternal nursing and obstetrics and gynecology medicine, according to their comments it was considered.

Reliability of the tool was tested using Cronbach's alpha which it was 0.75, 0.80 and 0.79 for tools, respectively, it means good reliability of the tool.

Ethical Considerations:

[1] The head of women health & midwifery department permission.

[2] Ethics research committee(ERC) of the faculty of the nursing Mansoura university approval.

[3]Else, the director of outpatient clinics permission was taken.

[4] From each female informed consent was obtained .They had rights to refuse to participate or withdraw at any time from the study. Study tool of data collection and guideline did not harm the young female dignity, not touch moral, religious or cultural issues.

Pilot study:

A pilot study was conducted for 16 of the young female (about 10% of the sample size) in order to test the applicability and relevance of the study tools and to test the clarity of the designed questionnaire as well as to calculate the sample size. Based on the analysis of pilot study the researcher considered these modification; these young female were excluded from the study sample.

Field work:

Three phases was utilized to conduct the study:

- **First Phase: preparation phase**

-The relevant literature related to the study was collected then the researcher designed and prepared tools to be ready for data collection; finally the pilot study was conducted to assess practicability and applicability of the study tools.

- **Second Phase: implementation phase:**

-The present study was conducted at October 2017 –April 2018. The researcher had visited the previous mention study setting from 9:00 am to 1:00 pm and interviewed young female for three days per week, initially interviewed each young female according to their sequences of their attendance from clinic registration book.

- Each young female was interviewed individually in separate room to maintain confidentiality of the study, each day about 1-3 of young female was interviewed, then an instructional guideline was implemented through four sessions, each session take about 20- 25 minutes.

- Methods of implementing guideline teaching sessions included (lecture, group discussion, role play, lab top for ppt presentation). The sessions were implemented at the end of day at 1:00 pm.

- At each session 10 minutes was devoted for each participants to express their feeling toward session.

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- Objective of 1st session: established rapport and relive fear & tension from young female who participate in the present study, young female knowledge regarding endometriosis was assessed pre intervention.
- The 1st session containing (registration- researcher introducing herself to each young female who participate in the study at the separate room then explain the aim of the study was explained to each female to gain her confidence and trust, take the telephone of each participant and give the researcher telephone to each participant and obtained written informed consent from each young female to participate in the study. Using interviewing questionnaire schedule to collect required data about general basic characteristic & knowledge about endometriosis (pre evaluation knowledge state about endometriosis).
- Objective of 2nd session: raising and improving young female knowledge regarding endometriosis.
- At the second session firstly the young females were educate about (definition - symptoms – risk factors – sites- diagnosis, complications, treatment & promotion their health regarding endometriosis and observe an explanatory video about disease occurrence.
- Objective of 3rd session: enforcement of their knowledge through group discussion and answering their questions.
- Objective of 4th session: evaluate of their knowledge and attitude

Third Phase: evaluation phase:

- By the ending of the 3rd session distributed an instructional supportive guideline among young female who participant in the study.
- During this phase young female knowledge was evaluated during of 4th session immediately post session then after 3 months by using the same format at outpatient clinic or by telephone. Finally their attitude concerning to an instructional guideline.
- The dropouts' number was thirteen young female.

Statistical analysis:

Version 20.0 of [SPSS] (Statistical Package for Social Sciences) was utilized for the analysis of the obtained data. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables and means ± standard deviations for quantitative variables, and paired t test. Statistical significance was considered at (P ≤ 0.05).

3. RESULTS

Table (1): Studied sample distribution related to their general characteristics

Characteristics	Total N= (162)	
	No	%
Age (years)		
18-	23	14.2
20-	63	38.9
22-	76	46.9
Mean ± SD	(21.95 ± 2.02)	
Education		
Primary	22	13.5
Preparatory	38	23.5
Secondary	98	60.5
University	4	2.5
Residence		
Urban	65	40.1
Rural	97	59.9
Marital status		
Married	149	91.9
Single	13	8.1

Table one illustrates studied young female general characteristics. It was found that the mean age of the studied sample was (21.95 ± 2.02) , majority of studied young female was married. Also, around two third of them had secondary education; and more than half studied young female was from rural area.

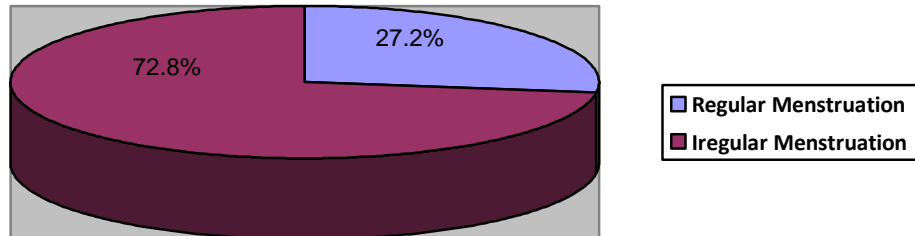


Figure: (1)

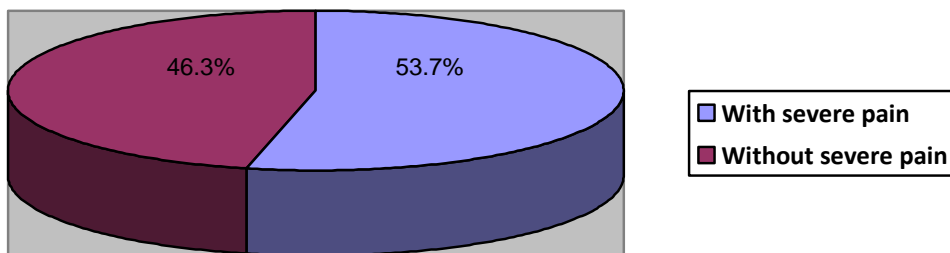


Figure: (2)

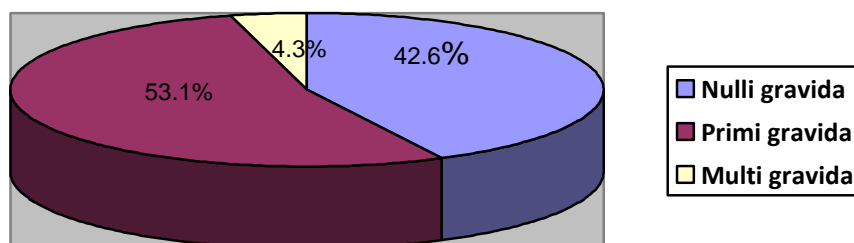


Figure: (3)

Figures [1- 2- 3]: Studied sample distribution related to their obstetrics and menstrual history.

Table (2): Frequency distribution according studied sample knowledge about endometriosis pre intervention compared to immediately post and 3 months post prevention

Item	pre knowledge N= (162)		post knowledge N=(162)		follow up knowledge N= (149)	
	Correct	Incorrect	Correct	Incorrect	Correct	Incorrect
Definition of endometriosis(endo)	4(2.5%)	158(97.5%)	160(98.8%)	2(1.2%)	145(97.3%)	4(2.7%)
Risk factors of (endo)	7(4.3%)	155(95.7%)	154(95.1%)	8(4.9%)	123(82.4%)	26(17.4%)
Sites of (endo)	3(1.9%)	159(98.1%)	150(92.6%)	12(7.4%)	122(88.6%)	17(11.4%)
Manifestations of (endo)	1(0.6%)	161(99.4%)	149(92.0%)	13(8.0%)	124(83.2%)	25(16.8%)
Complications of (endo)	2(1.2%)	160(98.8%)	149(92.0%)	13(8.0%)	122(81.9%)	27(18.1%)
Diagnosis	2(1.2%)	160(98.8%)	146(90.1%)	16(9.9%)	117(78.5%)	32(21.5%)
Promotion of their health regarding (endo)	1(0.6%)	161(99.4%)	147(90.7%)	15(9.3%)	118(79.2%)	31(20.8%)
Treatment of (endo)	1(0.6%)	161(99.4%)	139(85.8%)	23(14.2%)	116(77.9%)	33(22.1%)
	Total pre test knowledge score		Total post test knowledge score		Total follow up knowledge score	
Mean ± SD	8.12± 0.59		15.46 ±1.49		13.97 ±2.89	
P1=(Pre Vs Post) P2=(Post Vs Follow up) P3=(Pre Vs Follow up)	Paired t test = 60.41, P= 0.000 (P1)		Paired t test = 6.7, P= 0.000 (P2)		Paired t test = 24.44, P= 0.000 (P3)	

Table (2) shows that frequency distribution of knowledge among studied young female regarding endometriosis was significant improvement pre intervention compared to immediately post and 3 months post intervention among studied sample regarding definition of (endo), risk actors of (endo), sites of (endo), complications of (endo), diagnosis, treatment of (endo), and Promotion of their health regarding (endo).

In addition Table (2) had illustrated that total mean score of knowledge among studied young female regarding endometriosis total mean score was a highly significant knowledge improvement immediately and 3 months post intervention compared to pre intervention mean score was (15.46 ±1.49), (13.97 ±2.89) and (8.12± 0.59) respectively.

Figure: (4)

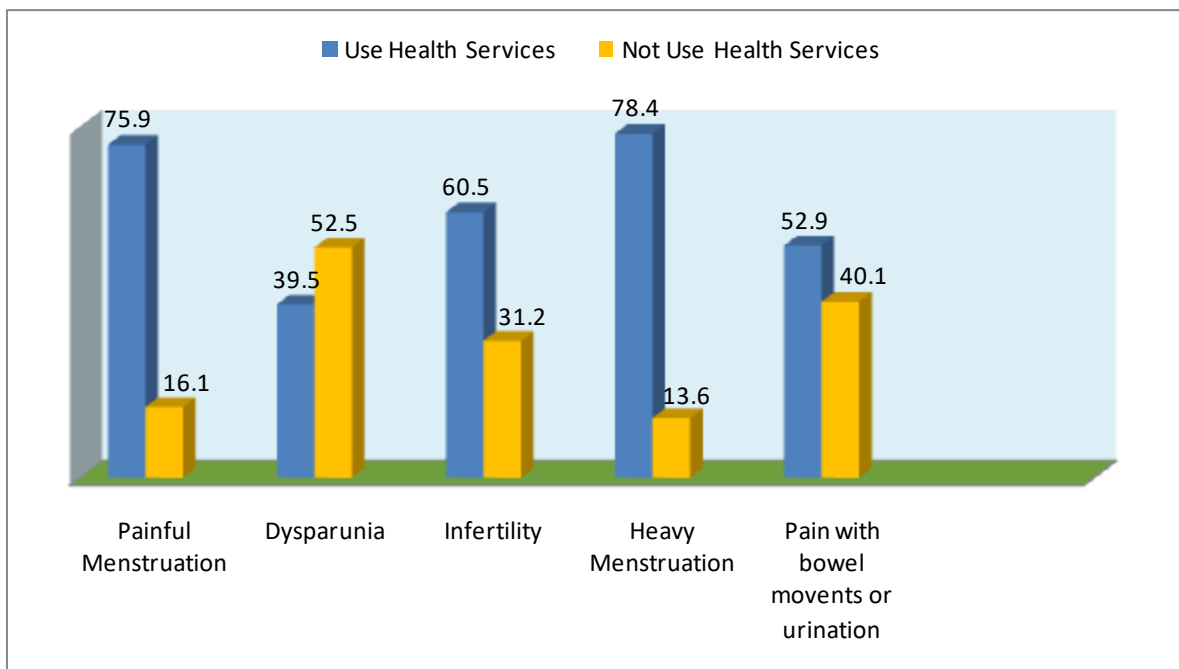


Figure (4): Studied sample distribution related to their self reported complain to seek immediately health services

Table (3): Frequency distribution according to studied sample attitude related to utilization of guideline

Item	Agreed		Uncertain		Disagreed	
	No	%	No	%	No	%
The aim of guideline is clear	157	96.9%	5	3.1%	0	0%
Guideline language easily understood	149	91.9%	10	6.2%	3	1.9%
Guideline included all information related to endometriosis	160	98.8%	2	1.2%	0	0%
It was recommended to be utilized by my friends and family	149	91.9%	12	7.5%	1	0.6%
I seek health service for investigation and diagnosis	142	87.7%	20	12.3%	0	0%

Table (3) shows that the majority among studied sample were agreed about the aim of guideline was clear, its language easily understood, included all information related to endometriosis and recommended to be utilized by my friends and family.

4. DISCUSSION

The current study was aimed to study the effect of guideline about endometriosis on enhancing young female knowledge and utilization of health services; this aim was significantly achieved within frame work of the present study research hypothesis which was application of guideline will expect to enhance young female knowledge and utilization of health services.

The finding of present study had revealed that the majority among studied sample had incorrect knowledge about the definition, risk factors, manifestation, sites, diagnostic test, prevention, complications and treatment. This is revealed that Egyptian young female had no information and did not hear before about endometriosis. Majority was from rural area in which it was immoral to discuss issues related to reproductive organ among young female, the present study finding had pointed out our attention toward significant improvement of young female knowledge pre intervention compared to immediate and 3 months post intervention .In addition endometriosis vague and not easy to detect, diagnose and differentiate it from other similar manifestation of other disease. Consequently the present study finding stress on the importance of awareness raising program, utilization of health services and use instructional supportive guideline to enhance young female knowledge and their utilization of health services

Post knowledge intervention current study had found that a significant knowledge improvement among studied sample compared to post intervention this finding had stress on the importance of present instructional supportive guideline. In addition it was written and prepared in simple language; this was reflected upon utilization of appropriate simple, clear language and consistency of the guideline educational sessions, also, the appropriate method in implementing guideline educational sessions from using teaching methods and audiovisual aids. Also the nature of studied young female can read and write which facilitate their utilization of guideline in addition they had the desire to know about endometriosis. This result in agreement with (**Abd eloaty et al., 2016**).

Regarding to follow up knowledge among studied sample the current study had showed that, there was significant improvement 3 months post intervention in their knowledge this may be due to simple language and clarity of guideline which can be clearly understood by study sample. Furthermore retained knowledge after three months based on hard copy about endometriosis, willingness of the young female to gain information about the endometriosis and may be due to fear about negative effect on their future reproductive life because the of studied sample were young female.

The present study finding had revealed that more than three quarter among studied sample who complained from painful menstruation was the main complain and had heavy menstruation among the majority of studied sample so they seek health services for management and diagnosis, which consequently had reflected upon their health seeking behavior and raising awareness among studied sample this stress on the importance of guideline. This was in agreement with **Fourquet, et al., (2010)** who report that endometriosis affects health on general, physical, mental and social wellbeing, sexually life, work, relationship, all daily life, and mention that there is a necessitate for more potent spread awareness sessions about the message(painful menstruation is not normal).

Moreover this finding was congruent with **Ballweg, (2004)** who stated that lack of awareness and understanding of the endometriosis have negative impact on the course of disease so become worsens. This is in agreement with **Brandes et al.,(2017)** who stated that in gynecological practice, special attention should be given to the very young female, as the early onset of endometriosis symptoms and a long delay in diagnosis may indicate the risk of an unfavorable course of the patient's medical and socio-medical history over time.

Concerning to utilize health services the present study had revealed that more than half among studied sample seek health services for presence of painful bowel movement or urination. In addition more than one third among studied sample seeking for dysparunia. This result divert our attention to, when raising awareness among young female regarding endometriosis as a health problem which affect quality of life of young female such as work, study, marital status, through affecting physical and social and psychological aspect. Moreover Egyptian young female didn't make follow up regularly and annually checkup, beside this silently endure pain without complain. This result had reflected upon awareness and utilization of health services.

In the same line according to **Ballard, et al., 2006 and, Dessole, et al., 2012**) who stated that the 1st step in delay the diagnosis of endometriosis is raising awareness through all different age groups. In addition educational program about menstrual issues, what is normal and abnormal to break cycle carless and delay for seeking health services?. Moreover designing health education programs about endometriosis and its related risk factors should be a priority to ensure early diagnosis of the disease (**Mamdouh, et al., 2011**).

Concerning young female attitude the current study findings had showed that majority among studied sample were agreed about information providing regarding endometriosis, recommended to be repeat utilization of guideline in the future among their friends and relative, seek health service for investigation and diagnosis, This result may be due to clear, simple and easy language to understood of supportive instruction guideline which supported them to remove cloudiness, ambiguity understand and regarding endometriosis and enhancing their knowledge, attitude and utilization of health services.

Finally the present study finding had directed our attention that the, guideline is the most key excessively adopted health promotion strategies used for young female, and is almost universally represented as effective health promotion is better than cure this is when the young female has awareness, utilize health services. In addition all supportive instruction guideline educational sessions concentrate on change false concept and increase awareness of participant young female regarding health problem for early detection, management and prevention of further complications of endometriosis which was reflected upon their utilization of health services for early detection and management of endometriosis.

Limitation of the study:

Limited numbers of studies about awareness of women regarding endometriosis, during implementation thirteen participants were drop.

5. CONCLUSION

The majority among the studied young female had incorrect knowledge about endometriosis pre intervention compared to significant improvement of their knowledge immediate and 3 months post intervention, the majority among studied sample was agreed and utilize guideline. Also, it was observed that the majority of studied sample seek immediately health services for associated complains of endomteriosis symptoms. Additionally the majority of studied sample agreed with utilization of guideline.

6. RECOMMENDATIONS

- Design and distribute guideline or purshor about endometriosis for each female attending obstetrics and gynecological clinic.
- **Further study:**
- Replicate the current study on another different setting & larger sample size.

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CONFLICTS OF INTEREST DISCLOSURE:

The authors declare that there is no conflict of interest.

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