

# The impact of awareness program on the knowledge and practice of women about pelvic organ prolapse

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### **Abstract**

Background: Pelvic organ prolapse (POP) is one of the most common gynecological health problems among women which affect on maternal morbidity and mortality. Prolapse may seriously influence the physical, psychological and social wellbeing of woman. Recently the health care giver focuses on prevention of prolapse rather than cure. The aim of this study was evaluating and improving the knowledge and practice of women, about POP. Subjects and Methods: A convenient sample of 110 women at reproductive age attending the obstetric clinic of Beni-Suef University hospital. The knowledge of women about POP was first assessed by using interview questionnaire and pretest. The awareness program included 2 sessions. They focused on improving the awareness of the women about the POP. Later, all women were assessed again over their knowledge and practice about the eight aspects using the same posttest. Results: Baseline assessment showed that only (4.5%) women had fair knowledge about POP. Educated women, working women, and those residing urban areas had better knowledge (p<0.05). After the awareness program, the knowledge of the women improved to (96.4%) with good knowledge (p<0.001). Conclusion: The educational program had a positive impact on the knowledge and practice of women about POP. Recommendation: Regulation development of medical services especially at rural areas for early detection and diagnosis of pelvic organ prolapse.

Key Words: POP- Awareness- Knowledge- Practice

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#### Introduction

Pelvic organ prolapse (POP) is defined as loss or weakness of support to the uterus, bladder and bowel leading to their descent from the anatomical position towards or through the vaginal. The incidence of pelvic organ prolapse that showed by pelvic organ examination without sign and symptoms of women varies between 37% and 50%, while varies between 6-8% by women reported there is a sensation of a mass bulging into the vagina (Mohamed, Hassan, Sayed, Gaheen, 2016). According to study done by (Mahmoud, 2012, the study showed that, in Egypt there are 384 new cases identified had POP every year.

The POP is considered a sensitive topic among women, families, and communities and also may seriously influence the physical, psychological and social wellbeing of affected women. Inappropriate maternal health care, poverty, gender discrimination related to health, nutrition, women's life cycle, heavy effort during postpartum period and domestic violence, also, no additional food during pregnancy and postpartum period, heavy work during pregnancy and inadequate postpartum care contribute to POP. Prolonged labor, over baby weight (more than 4kgm), unsafe abortions, sexual intercourse immediately after delivery, tightening of stomach using patuka (a piece of cloth used to wrap around the stomach) after delivery, hypertension and diabetes are supposed to be other causes of pelvic organ prolapse (Bø, Hilde, Stær, Jensen, et al., 2015).

Risk factors for POP includes several major risk factors, such as urinary incontinence before pregnancy, ethnicity, age at birth of first child, body mass index if  $\geq 25$ , family history, Also 18-56%. of women become degree 2 of POP after 6 months' postpartum, Moreover, 15-40% of primiparous women have major defect of the levator ani muscle (Sfeir 2016). Over the last few years, there has been increasing interest in the role of levator ani muscle injuries in the development of pelvic organ prolapse; there was relation between levator ani defects and pelvic organ prolapse; women with levator ani defects are at least twice as likely to show clinically significant pelvic organ prolapse and experience recurrence after pelvic surgery (Raj, Lama., and Maharjan, 2016). Vaginal childbirth is probably the most important factor in the pelvic organ prolapse, at the same time the caesarean section cannot be considered as preventative for developing pelvic organ prolapse (El Kady, Tamara, Sabaa, and Hafez, 2017).



The main symptom of the prolapse is the seeing or feeling of the bulge in the vagina. The presentation of symptoms may be varying among individuals and it also depends on the severity of prolapse. The mild degree of prolapse may be asymptomatic represent with feeling of something bulging from the vagina, feeling of pressure over the perineal area, prolonged urine stream, feeling of incomplete voiding, need to change position to complete voiding, stress urinary incontinence, constipation, feeling incomplete emptying, incontinence of stool or flatus, pelvic pain, dyspareunia and bleeding after intercourse (Thapa, Rana, and Gurung, 2014).

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Reduction of straining and intra-abdominal pressure could help prevent the development of prolapse. The widely accepted practice of treatment of bowel dysfunction/chronic constipation has not been tested as systematic intervention to prevent pelvic organ prolapse. Weight loss has also been suggested as a preventive measure; the few published cohort studies with short-term follow-up have shown that weight reduction is associated with subjective improvement in prolapse symptoms but, no objective change was seen in examination using the pelvic organ prolapse (Christina, Ranjita, and Arja, 2012)

Conservative interventions include physical interventions to improve the function and support of the pelvic floor muscles (pelvic floor muscle training) and mechanical interventions (insertion of vaginal pessaries) to support the prolapse, they are often offered for lower grades of prolapse and to women unwilling or unfit to undergo surgery (Shylin, 2011).

Although this subject is very important, women in Egypt have limited awareness of the nature of POP, its cause, prevention and treatment techniques El Sayed1, Hassan, Sayed, (2016). On the other hand, the health care team doesn't take care of the importance of improving woman knowledge about POP. The researcher in this study believed that, improving the woman knowledge and practice about POP will decrease the complications that may occur to women, which will decrease morbidity rate and costs that will treat the previous complications. Nurse has an important role in counseling woman about pelvic floor prolapse during reproductive age, as it may be important for woman to prevent POP and its complications. This program can be provided to the woman with little effort and low cost.

#### Significance

Awareness of women about knowledge and practice for prevention and treatment of pelvic floor prolapse and its effect on their health is one of the factors that can improve maternal co- morbidity rate. So, it is important for maternity nurses to be aware about the impact of poor knowledge about cause of POP and its effect on woman health. Also, findings of this study will help the health care provider to apply health teaching program about POP as a routine care for woman during reproductive age to improve their health and prevent complications occurs from POP.

Little studies have been carried out in Egypt about the knowledge and awareness of pelvic organ prolapse during reproductive age. According to this consideration, this study is being undertaken to provide baseline information about pelvic organ prolapse among women attending the obstetric clinic at Beni-Suef University hospital.

#### Aim

The aim of the current study is to evaluate and improve the knowledge and practice of women at reproductive age, attending the obstetrics clinic of Beni-Suef University hospital, about pelvic floor prolapse.

## **Hypothesis**

Women who follow awareness program about pelvic organ prolapse will have improvement on their knowledge and practice about POP than before.

## Subjects and Methods

An interventional non-controlled research design was used in this study. A convenience sample was utilized, a total of 110 women were recruited to participate in this awareness program according to the following inclusion criteria: delivered before at least once, at age from 20-45 years old, can read and write. The setting of data collection and the sessions of the program have been given at the gynecological outpatient clinic at Beni-Suef University Hospital in Egypt. The researcher collected sample in the period between June to September 2018.

### **Ethical Considerations**

An official permission was taken from the director of the university hospital at Beni-Suef University and the director of obstetric clinic to approve the research study. In addition, informed written consent was obtained from women who agreed to participate in the research study after the aim of the study was clarified for them and ensuring their participation is voluntary and confidentiality of all women was protected through coding of data by



the research investigator. Every woman has the right to withdraw from the study at any time without giving reasons and their withdrawal would not affect the care they were receiving at the hospital.

#### Tool:

- 1. Structured interviewing questionnaire, it was developed by the researcher after comprehensive reviewing of the available literature related to the studied topic. The tool included questions related to socio-demographic characteristics such as age, residence, education, moreover; and medical and obstetric history, such as number of para, gravida, abortion, complications in the previous pregnancy, Last part of the tool included data related to sign of prolapse, type of daily exercise application.
- 2. Pre-and post-test, it was developed by the researcher to Assesse women knowledge about pelvic organ prolapse. Test about POP that included eight questions 1. What is POP? 2. Causes. 3. Risk factors, 4. Degree of prolapse, 5. Signs and symptoms, 6. Its complications, 7. Prevention methods from POP, and 8. types of treatment. Every question included five open-ended questions. Correct answers were given a score of 1 making the score of each aspect 5 and the total score of the assessment 40. Reliability analysis for the questionnaire as detected by Cronbach's test was 0.71. Women who achieved more than 60% of total score were considered having good knowledge and those with lower scores were considered of poor knowledge.
- 3. Assessment the Practice used for prevention and treatment of pelvic organ prolapse, it was developed by researcher. This tool done before and after awareness program. This tool assessed women life style that used to prevent POP such as if prevent occurrences and management of constipation, management of prolonged cough, regular antenatal follow up, avoid bearing down during first stage of labor, delivered at hospital, rest and didn't carrying heavy objects for 6 weeks after delivery, take good and well balanced diet, avoid obesity, exercises that strengthen pelvic muscles such as walking, Kegel's exercise as daily habit. scoring system for this tool was as follow: Practices done were taken (2) score. Practices not done or did not know were taken (1) score. The total score level was as follows: Satisfactory practices > 60%. Unsatisfactory practices < 60%.
- 4. Kegel's exercise check list; it was developed by the researcher. This tool contains instructions and steps of Kegel's exercise. This tool was used to check if women can apply Kegel's exercise correctly after finished awareness program. If women done steps right take 2, women don't apply steps correctly taken 1, total score was good application > 60% and poor application < 60%

#### Procedure:

The researcher introduced herself to the women and explained the purpose of the study in order to obtain their written acceptance to be recruited in this study as well as to gain their cooperation. Data was collected through a period of three months from the beginning of June to the end of September 2018. Throughout the whole three months, the researcher attended at the obstetric clinic twice a week to recruit cases.

The study done through 3 phases; 1. interview questionnaire: The researcher collected data from women by met the women recruited for the study at gynecological outpatient clinic at the Beni-Suef University hospital. all women were interviewed individually to collect data related to socio-demographic status, present obstetrical history, as well as history of previous pregnancies and deliveries utilizing the structured interviewing tool. Interview was done by face to face with woman individually in Arabic. answers were written down in her interview questionnaire. The interview took around 15 minutes to be completed for each interview.

#### 2- Knowledge and practice Assessment

This assessment consists of 2 parts; The  $1^{st}$  part was formed specially to assist the women knowledge about pelvic organ prolapse, then the  $2^{nd}$  part of assessment of was to assist the women knowledge about the different types of practices which are important and needed for each woman as daily habit to prevent the occurrence of POP. The two parts assessed by using the pretest.

# 3- Implementation phase:

This awareness program consists of 3 sessions; the 1<sup>st</sup> session was related to the knowledge part of awareness program; this session took 40 minutes. The 2<sup>nd</sup> session was related to the practical part; this session took 15 minutes. Arabic-language brochures, supported by illustrated figures and graphs, have been distributed as takehome notes. The awareness program started immediately after finishing the interview and it was carried out through two educational sessions, each session, took about 20 minutes and there was a 10-minute break between the two sessions; in the first educational session, the researcher discussed; meaning of POP, causes, risk factors, signs and symptoms, the complications, and types of treatment with women. After finishing the 1<sup>st</sup> session, all women took break for 10 minutes, then started the 2<sup>nd</sup> session which contained the prevention and treatment



methods for POP. In this part the researcher taught the women the practices which should be done to prevent or treat POP according to practice tool (weight and constipation control, instruction and care during and after pregnancy, walking and Kegel's exercise). Then the researcher teach women how apply Kegel's exercise and instruct women about life style to control weight and constipation.

The 3<sup>rd</sup> session was done to evaluate the women about acquired knowledge and practice from awareness program, after finishing all content of program the researcher evaluated all women by using the same questionnaire (posttest) and assessed the practice accuracy of application Kegel's exercise by using Kegel's exercise chick list.

### Results

### Table (1) Socio- Demographic characteristics of the study sample

Regarding to table (1), a total of 110 women were recruited for the study. Their age ranged from 19-42 years with mean (28.7±6.2). (71.8%) were residing in rural areas, and 48.2% reported over weight. Educational level: 21.8% of the study sample were able to read and write, while 47.3 of the study sample had secondary education and highly educated mothers were 7.3 %, and regarding occupation, 70.9% of mothers in the study sample were housewives, and 70.9% of them worked 8-10 hrs. daily. (Table 1).

Table (1) Socio- Demographic characteristics of the study sample

Socio-demographic and Obstetric Characteristics		frequency n=110	Percentage 100(%)	
Age 1	8-25	34	30.9	
26- 30		41	37.3	
31- 37		22	20	
38-45		13	11.8	
Age (Mean±Sd) years		28.7±6.2		
Residence	Urban	31	28.2	
	Rural	79	71.8	
Education	Can read and write	24	21.8	
	Preparatory school	26	23.6	
	Secondary School	52	47.3	
	University	8	7.3	
Job	Working	32	29.1	
	Housewife	78	70.9	
Work hours	< 8 hrs (mild effort)	9	28.1	
	8-10 hrs (moderate effort)	15	46.9	
	> 10 hrs (heavy effort)	8	25	
<b>D</b> 1	Underweight <18.5	5	4.5	
Body mass index (BMI)	Normal weight 18.5-25	23	20.9	
	Over weight 25-35	53	48.2	
l	Obese > 35	29	26.4	

According to the result reveled in table (2) 48.2% of women in study sample had parity 2-3, and 74.5 of them had normal vaginal delivery. Also Related to previous pregnancy complications, 69.1% of women had vaginal infection, while 13.6% of study sample had vaginal tear from their previous deliveries. The results indicated that 76.4% of women had vaginal prolapse, in addition 85.7 of them were 1st degree of POP. (Table 2)



# <u>Table (2) Obstetric Characteristics of the Study sample n=110:</u>

Obstetric history			
Parity	Frequency n=110	Percentage 100(%)	
1	28	25.5	
2-3	53	48.2	
> 3	29	26.4	
Mode of delivery of previous deliveries			
Normal vaginal delivery	82	74.5	
CS	28	25.5	
Complications in previous pregnancy			
2. Preterm labor	7	6.4	
1. Vaginal tear	15	13.6	
2. PROM	12	10.9	
3. Vaginal infection	76	69.1	
Present of prolapse	Yes	No	
Total	84 (76.4)	26 (23.6)	

Regarding table (3) most of women (95.5%) had poor knowledge about all questions of prolapse, while (4.5%) % of women in the study had total fair knowledge about prolapse and no one had good knowledge. Table (3) Assessment knowledge of women about pelvic organ prolapse:

Women knowledge about prolapse	Poor Know	Poor Knowledge		Fair Knowledge	
	n=110	(%)	n=110	(%)	
1. Definition of prolapse	108	98.2	2	1.8	
2. Cause of prolapse	102	92.7	8	7.3	
3. Symptoms of prolapse	106	96.4	4	3.6	
4. Degree of prolapse	104	94.5	6	5.5	
5. Risk factors of prolapse	102	91.8	8	7.3	
6. Complications of prolapse	104	94.5	6	5.5	
7. Methods of prevention of prolapse	103	93.6	7	6.3	
8. Types of Treatment for prolapse	102	92.7	8	7.3	
Total Knowledge	105	95.5	5	4.5	

Figure (1), Shows the knowledge of the women about practices needed to prevent POP. 93.3% of women didn't know the practice needed to prevent or treat POP, and 3.1 had appropriate care during and after pregnancy, while 1.2% of women applied Kegel's exercise and 2.4% of women applied exercise to control their weight which can cause prolapse.



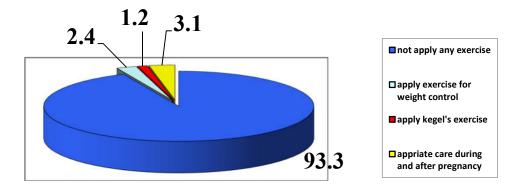


Figure (1), Assessment the knowledge of women regarding to practices needed for prevent POP.

**Figure 2:** shows the distribution of the women according to their practices that taken as preventive or treatment for POP before and after awareness program. It was found that most of the studied women had unsatisfactory practices before program 93.3 % while after program 96.2 of women had satisfactory practice for prevention or treatment of POP.

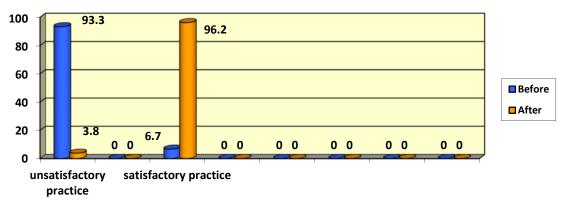


Figure (2), Assessment knowledge of women about practice needed to prevent POP before and after awareness educational program (no 110).

**Figure 3:** Show the distribution of the women according to their accuracy application of Kegel's exercise before and after awareness program as preventive or treatment for POP. It was found that most of the women 98.8% had poor application for Kegel's exercise before program, while after program 97.2 of women had good application after awareness program.

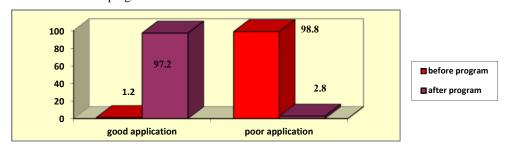


Figure (3), Assessment of women about accuracy application of Kegel's exercise before and after awareness program.

There was a statistically significant difference between good knowledge about prolapse scores and level of women's education, working status, work hours, BMI and residence (p=0.05), while No statistically significant difference was found in relation to age (p=439) (Table 4).



Table 4 Association between socio-demographic characteristics and knowledge of about POP.

Socio-demographic and obstetric Characteristics		Poor Knowledge n=110 (%)	Fair Knowledge n=110 (%)	P value
Age (Mean ±SD) years		27.9±4.3	26.7±4.7	0.439
Residence	Urban	13 (41.9)	18 (58.1)	0.048*
	Rural	62 (78.5)	17 (21.5)	
Education	Can read and write	19 (5.0)	5 (95.0)	0.008*
	Preparatory school	18 (30.0)	8 (70.0)	
	Secondary School	26 (63.4)	15 (36.6)	
	University	2 (10.5)	17 (89.5)	
Job	Working	7 (77.8)	2 (22.2)	0.017
	Housewife	12 (16.9)	59 (83.1)	
Work hours	< 8 hrs. (mild effort)	2 (22.2)	7 (77.8)	<0.001*
	8-10 hrs. (moderate effort)	10 (66.7)	5 (33.3)	
	> 10 hrs. (heavy effort)	5 (62.5)	3 (37.5)	
BMI	Underweight <18.5	4 (80)	1 (20)	0.001*
	Normal weight 18.5-25	20 (87)	3 (13)	
	Over weight 25-35	41 (77.4)	12 (22.6)	
	Obese > 35	18 (62.1)	11 (37.9)	

<sup>\*</sup>p value is considered significant

After the educational program, the knowledge of the women improved significantly to (90.9%) with good knowledge (p<0.001) distributed as following; (94.5%) definition of POP, (93.7%) cause of prolapse, (90.9%) symptoms of prolapse, (92.7%) risk factors of prolapse, (87.3%) complications, (91.5%) methods for prevention POP, and (90.9%) treatment of POP (Table 5).

<u>Table 5: Improvement of the women's Knowledge about Prolapse after attending the educational program.</u>

\*p value is considered significant.

Women knowledge about prolapse	Before	educational	After educational program		P value
	program	program			
	Fair knowl	Fair knowledge		Good knowledge	
Definition of prolapse	2	1.8	104	94.5	0.001*
2. Cause of prolapse	8	7.3	103	93.7	0.001*
3. Symptoms of prolapse	4	3.6	100	90.9	0.001*
4. Degree of prolapse	6	5.5	102	92.7	0.001*
5. Risk factors of prolapse	8	7.3	95	86.4	0.000*
6. Complications of prolapse	6	5.5	96	87.3	0.002*
7. Methods of prevention of prolapse	7	6.3	101	91.8	0.001*
8. Types of Treatment for prolapse	8	7.3	98	89.1	0.002*
Total	5	4.5	100	90.9	0.001*

## Discussion

This study aimed to assess and improve the knowledge and practices of women at reproductive age, attending the obstetrics clinic of Beni-Suef University hospital, about pelvic floor prolapse.

This study showed that the levels of awareness about POP among women in Beni-Suef were markedly poor, only 4.5% of the assessed women had fair knowledge. This results agreed with a study done by El Sayed, Ahmed, and Gaheen, (2016), and Shrestha et al., (2014) who reported that more than half of the studied women

(56.5%) didn't hear about uterine prolapse. Majority of the studied women (95%) exhibit poor knowledge regarding POP. Also a study done by **Suman (2013)**, who stated that pelvic organ prolapsed still neglected for so long and there is only a little literature on this topic. Moreover, **Raj, et al., (2016)**, found that the majority of the women in their study had never heard about POP, and only 37.5% of women have a little knowledge about it.

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Also according to Essa, (2002), who reported that the majority of the studied women reflected poor total score level of knowledge regarding genital prolapse. In addition, Shobhamani (2012), mentioned that majority of the multiparous women in his study had poor score of knowledge regarding uterine prolapse. Moreover, Shrestha (2015), reported that the majority of the studied women had poor knowledge of genital prolapse. On the other hand, these findings are contradicted with Suman (2013), and Brawal (2010). They stated that more than half of their studied women had fair and moderate level of knowledge.

The findings of this study showed that, educated women, those living in urban areas, and working women for 8-10 hours daily were more likely to be knowledgeable about POP. This finding was expected because educated women residing urban areas might have had a good chance to access information about POP. Also, the educational level in urban areas in Egypt is known to be higher than rural areas, which may explain why women residing urban areas had higher scores of knowledge compared with their counterparts in rural areas. Since educational level is usually translated into job opportunities, working women in current study had significantly better knowledge about POP. These findings agree with **Raj, et al., (2016),** and **Ghandour, et al., (2016)** who reported that there was significant relation between knowledge of women and their educational level, age, parity and annual income.

The current study showed that the awareness program achieved its goals to improve the knowledge of the women about POP, its symptoms, risk factors, complications, methods of prevention and treatment of POP. In accordance, the findings of this research agreed with study done by **Subhagan (2010)**, who applied educational program for 3 months about POP for women and proved that; women's knowledge, symptoms, and quality-of-life significantly improved in 3 months.

Regarding women's practices that actually taken as preventive practices to prevent the occurrence of pelvic organ prolapse. The current study revealed that the majority of the studied women (96.4%) didn't apply any exercises as preventive practices for pelvic organ prolapse. This finding in consistent with a study done in Tanta by El Sayed, et al., (2016) who reported that majority of women (81%) didn't apply any practice as prevention of pelvic organ prolapse. From the researcher point of view this finding due to lack of women's knowledge and awareness about preventive practices of pelvic organ prolapse.

Regarding women's practices that needed for preventing the occurrence of pelvic organ prolapse. The current study revealed that the majority of the studied women didn't practice or had unsatisfactory practices regarding prevention of uterine prolapse (93.3%). This results agreed with a study done by **Mohamed**, et al., (2016), who reported that, 81% of women in their study had unsatisfactory practices about prevention of uterine prolapse.

#### Conclusion

The findings of this research support the research hypotheses that, women who took part in the awareness program about POP had a significant increase in their knowledge and practices about the POP. A statistically significant difference was found between better knowledge scores and education, work and urban residence women.

## Recommendations

Based on the results revealed from current study;

- Further researches should focus on the effect of POP awareness program on knowledge and practices of women towards pelvic organ prolapse.
- 2. Nurses should teach and counsel women about symptoms and prevention of POP and target women at all ages with different educational level at both urban and rural communities.
- 3. Regulation development of medical services especially at rural areas for early detection and diagnosis of pelvic organ prolapse is crucial.



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