

WOMEN'S KNOWLEDGE REGARDING PELVIC ORGAN PROLAPSE

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Abstract:

Pelvic organ prolapse is considered as one of the most common causes of reproductive morbidity which influences the women's quality of life. **Aim:** The present study aimed to assess women's knowledge regarding pelvic organ prolapse. **Subjects and Method:** The study followed a descriptive design on 220 women with pelvic organ prolapse who were chosen by convenient sample technique. **Setting:** The study was conducted at Outpatient Gynecological Clinics in the Obstetrics and Gynecology Center at Mansoura City, Egypt over a period of six months from July 2017 to the end of December 2017. **Data collection tools:** Two tools were used for data collection including; A structured interviewing questionnaire and pelvic organ prolapse knowledge questionnaire. **Results:** The study revealed that majority of women had lack of knowledge regarding pelvic organ prolapse. **Recommendations:** The study recommended the importance of developing pelvic organ prolapse guidelines aiming for improving women's knowledge and awareness regarding symptoms and proper management.

Keywords: Pelvic organ prolapse, Women's knowledge regarding pelvic organ prolapse.

Introduction:

Pelvic organ prolapse (POP) is the first group of reproductive health morbidities which influences the women's quality of life ⁽¹⁾. Pregnancy and normal delivery expose the women to lots of strain and stress in which perineum and pelvic floor muscles lose its tone and result in the occurrence of POP for high risk women, especially in developing countries where POP is considered one of the main indications for hysterectomy ⁽²⁾.

Worldwide, POP is a health problem affecting about 30% of the women between 20-59 years of age and more than half of the women over the age of 50 years ^(1&3). However, the actual number of women affected by POP is unknown because many women didn't seek medical help because of the shame

from this condition which affects a sensitive part of the women's body ⁽⁴⁾.

POP is defined as a herniation or a descent of one of the pelvic organs such as uterus, vaginal apex, bladder, or rectum from its normal anatomical position into or beyond the vagina ^(5& 6). It is also defined as the descent of one or more of the vaginal walls or the cervix causing anterior vaginal wall prolapse, posterior vaginal wall prolapse, uterine or cervical prolapse or vaginal vault prolapse after hysterectomy ^(7&8).

There are many factors that may contribute to the development of POP such as; loss of muscle tone as the result of aging, improper medical practices during labor which cause injury especially among multipara women more than three times, obesity, delivery of macrosomic fetus,

chronic coughing and chronic constipation (9&10).

Women with POP may complain from vaginal, urinary and bowel symptoms; vaginal symptoms include sensation of pressure or seeing or feeling a vaginal bulge and dyspareunia; urinary symptoms may include urinary incontinence, frequency and incomplete emptying of the bladder; bowel symptoms include incontinence of flatus or feces, straining during defecation, and sensation of incomplete emptying. All these symptoms have social implication which affects the women's quality of life (11&12).

POP is a reproductive health condition that has not received a sufficient attention despite its high prevalence (13). The women's reproductive health is in need to have much more care from the beginning of the motherhood to prevent the impending complications. Therefore, women are needed to be assessed for their knowledge regarding all items of POP. So, the present study was conducted to assess women's knowledge regarding pelvic organ prolapse in Mansoura university, Egypt.

Significance of the study

Pelvic organ prolapse (POP) influences the women's quality of life due to its associated symptoms and recurrent surgical interventions among postmenopausal women (14,15&16). The mean prevalence of POP in low and middle-income countries is 19.7% and range from 3.4%-56.4% (17).

Even though, prolapse is not considered a life threatening condition, it affects women physically, psychologically and sexually which lead to occupational and social limitations. It also increases the risk of reproductive and urinary tract infection (14). Women may consider that

POP is a normal consequence of age and because of their sensitivity to be examined vaginally, women may neglect or postpone the seeking care until symptoms reach the high level of severity and the only possible correction would be the surgery (18, 19&20).

Lack of women's knowledge regarding POP definition, path physiology and proper management may lead to many fatal consequences on the women's health.

Study Aim

The present study aimed to assess women's knowledge regarding pelvic organ prolapse.

Study Question

What is women's knowledge regarding pelvic organ prolapse?

Subjects and Method

Study design

The study followed a descriptive design.

Study setting and participants

The study was conducted at Outpatient Gynecological Clinics in the Obstetrics and Gynecology Center at Mansoura City on 220 women diagnosed with POP.

Sampling

A convenient sample technique was utilized to calculate the predetermined sample size according to the following formula:

$$\text{Sample size} = [(Z_{1-\alpha/2})^2 \cdot P(1-P)]/d^2$$

Where, $Z_{1-\alpha/2}$ = is the standard normal variety, at 5% type 1 error ($p<0.05$) it is 1.96. P = the expected proportion in population based on previous studies. d = absolute error or precision. So, Sample size = $[(1.96)^2 \cdot (0.167) \cdot (1-0.167)]/(0.05)^2 = 213.8$

Based on the above formula, the sample size required for the study was 214.

Sample size: The study included 220 women with POP during the period from July 2017 to December 2017.

Tools of data collection

Two tools were used for data collection

Tool I: A structured interviewing questionnaire; it was developed by the researcher after reviewing the related literature and consisted of two parts; the first part describes the socio-demographic characteristics of the women while the second part include the women's medical, surgical, family, reproductive and pelvic organ prolapse history.

Tool II: Pelvic organ prolapse (POP) knowledge questionnaire; It was adapted from Lyatoshinskaya et al. (2016)⁽¹⁸⁾ and translated into Arabic to assess women's knowledge regarding pelvic organ prolapse. It included 17 items to assess women's knowledge regarding pathogenesis, diagnosis and treatment of pelvic organ prolapse.

The scoring system regarding the women's knowledge was as follow:

Score (2) for correct answer, score (1) for don't know and score (0) for incorrect answer. The total score of the women's knowledge regarding POP = 34 and it was classified into adequate and inadequate as follows: inadequate level of knowledge < 60%. (score up to 20), and adequate level of knowledge ≥ 60% (score 21- 34).

Pilot study

A pilot study was conducted on 22 women with POP (10% from the sample size) who attended at the Outpatient Gynecological Clinics in the Obstetrics and Gynecology Center at Mansoura City to evaluate the clarity and applicability of the tools that were used in the study before the start of data collection as well as to estimate the time needed for answer. The results of the pilot study weren't included in the sample size and according to the data analysis of pilot results, modifications of the tool were done as paraphrasing of some sentences.

Validity of the tools

Before conducting the current study, content validity of the study tools was determined after reviewing the literature.

Ethical considerations

An official permission was taken from the Ethics Committee of Faculty of Nursing, Mansoura University. The purpose of the study was explained to the study subjects and their written consent to participate in the study was obtained. Anonymity, privacy, safety and confidentiality were absolutely assured throughout the whole study.

Field work

The study field work started actually from July 2017 to the end of December 2017. It was carried out through two stages; preparatory and operating stages. Preparatory stage included; reviewing literature, developing tools and pilot study while the operating stage included; data collection and data analysis.

Statistical analysis

The collected data were sorted, organized, categorized, transferred into especially designed formats and then statistically analyzed using SPSS program (Statistical package for the social sciences) version 22. The data were properly tabulated and presented. Statistical descriptive measures as number, percentage, mean and Standard Deviation ($mean \pm SD$) for quantitative data were used. Relation between categorical variables was tested using Chi-square test(χ^2). The threshold of significance is fixed at 5% level (p-value).

Results

Table one shows that slightly more than half of the studied women (55.5% and 54.5% respectively) aged from 35-50 years with $mean \pm SD = 48.3 \pm 10.6$ and their income wasn't enough. While almost four

fifths of the studied women (79.1 %) were married and from rural area. In relation to their level of education, almost half of the studied women (48.2%) were illiterate and almost three quarters of them (73.6%) were housewives.

Table two illustrates that more than half of the studied women (52.7% and 50.5% respectively) had from one to three times pregnancy and delivery and delivered vaginally from one to three times. Also almost two thirds (65%) had inter-pregnancy interval more than 1.5 years. While slightly more than three quarters of the studied women (75.9%) didn't have a history of C.S delivery and slightly more than four fifths (82.2%) didn't have a history of vaginal delivery using ventouse. It also shows that most of the studied women (93.4% and 97.3% respectively) had a history of suitable duration of vaginal deliveries and hadn't practiced any postnatal exercises.

Table three exhibits that regarding pathogenesis of POP; more than two thirds of the studied women and more than three fifths of the studied women (71.8 % and 60.9% respectively) didn't know that POP can happen at any age and is more common in old women. Also the table shows that slightly more than three quarters of the studied women and more than half of the studied women (76.4% and 54.1% respectively) didn't know that obesity is considered a risk factor for POP and urogenital tract infections can't cause POP.

It also shows that regarding diagnosis of POP; more than half of the studied women (64.1% and 52.3% respectively) didn't know that a blood test can't be used for diagnosis of POP and the doctor's examination is the proper way for POP diagnosis.

It also reveals that regarding treatment of POP; more than two thirds of the studied women (71.8%, 69.5%, 70.5% and 68.2% respectively) didn't know that; the removal of the uterus isn't the only possible correction of POP, there are many treatment measures can be done once a woman has POP, a rubber ring called pessary can be used to treat symptoms of POP and certain exercises can help to stop POP from getting worse.

Figure one illustrates POP knowledge scores among the studied women. It is obvious that the women's knowledge score regarding diagnosis was the lowest score followed by pathogenesis score and treatment score with Mean \pm SD (4.4 \pm 1.5, 6.1 \pm 2.1 and 6.3 \pm 1.6 respectively).

Figure two represents POP total knowledge score among the studied women. It reveals that majority of the studied women (80%) had inadequate knowledge regarding POP.

Table four shows that married, illiterate, not working women aged from 35- 50 years and women having not enough family income had inadequate knowledge regarding POP with a highly statistically significant value ($P=< 0.001$) and women from rural residence had inadequate knowledge regarding POP with a statistically significant value ($P=0.005$).

Table five shows that women with less than 3 times gravida and para and not practicing any post-natal exercises had inadequate knowledge regarding POP with a highly statistically significant value ($P=< 0.001$).

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Table 1. Number and percent distribution of women according to general characteristics (n=220)

General characteristics	No.	%
Age (years)		
<35	20	9.1
35 – 50	122	55.5
>50	78	35.5
Mean ±SD	48.3 ±10.6	
Marital status		
Married	174	79.1
Divorced	10	4.5
Widow	36	16.4
Level of education		
Illiterate	106	48.2
Read/write	16	7.3
Primary education	26	11.8
Secondary education	58	26.4
University education	14	6.4
Occupation		
Work	58	26.4
Housewife	162	73.6
Residence		
Rural	174	79.1
Urban	46	20.9
Family Income		
Enough	100	45.5
Not enough	120	54.5

Table 2. Number and percent distribution of women according to reproductive history (n= 220)

Reproductive history	No.	%
Gravidity		
1 – 3	116	52.7
>3	104	47.3
Parity		
1 – 3	116	52.7
>3	104	47.3
Previous vaginal deliveries		
None	23	10.5
1 – 3 times	111	50.5
>3 times	86	39.1
Duration of vaginal delivery (n=197)		
<3 hours	4	2.0
3 – 24 hours	184	93.4
>24 hours	9	4.6
Previous vaginal delivery using ventouse (n=197)		
No	162	82.2
Yes	35	17.8
Previous Caesarean section		
None	167	75.9
1 – 3 times	33	15.0
>3 times	20	9.1
Practicing pelvic floor muscle exercise		
No	214	97.3
Yes	6	2.7
Inter-pregnancy interval (IPI)		
Had only one pregnancy	15	6.8
<1.5 years	62	28.2
>1.5 years	143	65.0

Table 3. Number and percent distribution of women according to knowledge regarding POP (n=220)

Items	Score of knowledge					
	Correct		Incorrect		Didn't know	
Knowledge regarding pathogenesis of POP	No.	%	No.	%	No.	%
Pelvic organ prolapse.....						
Is more common in young women	34	15.5	52	23.6	134	60.9
Is caused by giving birth many times	63	28.6	64	29.1	93	42.3
Can happen at any age	28	12.7	34	15.5	158	71.8
Can happen because of lifting heavy objects	99	45.0	20	9.1	101	45.9
Can affect obese women	11	5.0	41	18.6	168	76.4
Is caused by urogenital tract infections	50	22.7	51	23.2	119	54.1
Pathogenesis score (Mean ±SD)	6.1±2.1					
Knowledge regarding diagnosis of POP	Correct		Incorrect		Didn't know	
	No.	%	No.	%	No.	%
Pelvic organ prolapse can be diagnosed by.....						
Reporting symptoms as pelvic heaviness and/or pressure	108	49.1	37	16.8	75	34.1
Examining the patient	93	42.3	12	5.5	115	52.3
Running a blood test	34	15.5	45	20.5	141	64.1
Inspecting uterine, vaginal, bladder or rectal bulge	39	17.7	91	41.4	90	40.9
Diagnosis score (Mean ±SD)	4.4±1.5					
Knowledge regarding treatment of POP	Correct		Incorrect		Didn't know	
	No.	%	No.	%	No.	%
Pelvic organ prolapse						
Can be stopped from getting worse by carrying out certain exercises	20	9.1	50	22.7	150	68.2
Is irreversible condition after being diagnosed	32	14.5	35	15.9	153	69.5
Can be corrected by surgical operation	49	22.3	60	27.3	111	50.5
Can be treated by using a rubber ring called a pessary to relieve its symptoms	21	9.5	44	20.0	155	70.5
Can be corrected surgically by using a vaginal or abdominal method	38	17.3	65	29.5	117	53.2
Is corrected only by the removal of the uterus	30	13.6	32	14.5	158	71.8
Is corrected by using mesh implants	15	6.8	74	33.6	131	59.5
Treatment score (Mean ±SD)	6.3±1.6					

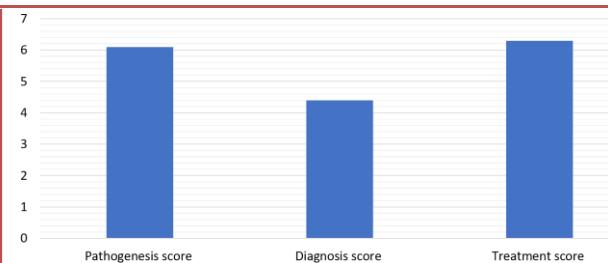


Figure 1. Pelvic organ prolapse knowledge scores among the studied women

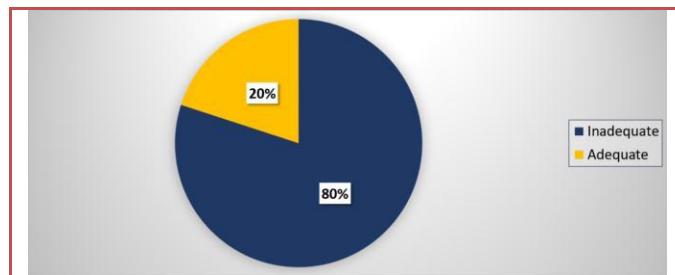


Figure 2. Distribution of pelvic organ prolapse total knowledge score among the studied women

Table 4. Association between general characteristics of women and the total knowledge score regarding POP (n=220)

General characteristics	Inadequate (n=176)		Adequate (n=44)		Chi square test	
	No.	%	No.	%	X ²	P
Age (years)						
<35	16	9.1	4	9.1		
35 – 50	82	46.6	40	90.9		
>50	78	44.3	0	0	44.967	<0.001**
Marital status						
Married	130	73.9	44	100.0		
Divorced	10	5.7	0	0.0		
Widow	36	20.5	0	0.0	14.54	<0.001**
Level of education						
Illiterate	99	56.3	7	15.9		
Read/write	10	5.7	6	13.6		
Primary	19	10.8	7	15.9		
Secondary	39	22.2	19	43.2		
University	9	5.1	5	11.4	23.792	<0.001**
Occupation						
Working	36	20.5	22	50.0		
Housewife	140	79.5	22	50.0	15.828	<0.001**
Residence						
Rural	146	83.0	28	63.6		
Urban	30	17.0	16	36.4	7.944	0.005*
Family Income						
Enough	66	37.5	34	77.3		
Not enough	110	62.5	10	22.7	22.458	<0.001**

(*) P is statistically significant if ≤ 0.05 (**) P is highly statistically significant if < 0.001

Table 5. Association between reproductive history of women and the total knowledge score regarding POP (n=220)

Reproductive history	Inadequate (n=176)		Adequate (n=44)		Chi square test	
	No.	%	No.	%	X ²	P
Gravidity						
1 – 3	106	60.2	10	22.7		
>3	70	39.8	34	77.3	19.859	<0.001**
Parity						
1 – 3	106	60.2	10	22.7		
>3	70	39.8	34	77.3	19.859	<0.001**
Practicing pelvic floor muscle exercise						
No	176	100.0	38	86.4		
Yes	0	0.0	6	13.6	24.673	<0.001**
Inter-pregnancy interval (IPI)						
Had only one pregnancy	13	7.4	2	4.5		
<1.5 years	55	31.3	7	15.9		
>1.5 years	108	61.4	35	79.5	5.146	0.076
(**) P is highly statistically significant if < 0.001						

DISCUSSION

The present study was implemented to assess women's knowledge regarding pelvic organ prolapse (POP). The findings of the present study answered the research question concerning women's knowledge regarding POP. The study revealed that majority of the studied women had inadequate knowledge regarding POP.

Parallel to the present study finding, a descriptive study conducted by *Elsayed, Ahmed and Gaheen, (2016)*⁽¹⁴⁾ in outpatient's clinics at Tanta University and El-Menshawy hospitals, Egypt among 200 married women to assess knowledge and practices of women regarding risk factors of uterine prolapse founded that the majority of the studied women had poor level of knowledge regarding all items of uterine prolapse. In addition, a cross sectional descriptive study conducted by *Singh, Lama and Maharjan, (2016)*⁽²¹⁾ in

Nepal to assess knowledge on risk factors of uterine prolapse among 185 women who have at least one child below five years of age and residing at Bajrabarahi municipality of Lalitpur district revealed that more than half of the studied women had inadequate knowledge. These studies findings similarity regardless of the socio-demographic and cultural differences may be because POP is a health problem that didn't receive sufficient attention at most countries all over the world.

The present study also revealed that, women's knowledge regarding diagnosis of POP achieved the lowest score followed by women's knowledge regarding pathogenesis then regarding the treatment. These study findings were partially in agreement with the findings of a descriptive study conducted by *Lyatoshinskaya et al., (2016)*⁽¹⁸⁾ on 137 women in Vienna and 112 women in

Moscow to evaluate the level of POP knowledge which demonstrated that women achieved the lowest score with the diagnosis of POP followed by the pathogenesis then the treatment in Vienna only while the findings of Moscow were not at the same order.

These results were in disagreement with a cross-sectional written survey conducted by **Mandimika, Murk, McPencow et al., (2014)**⁽²²⁾ in New Haven County, Connecticut on 431 women to assess the baseline knowledge about urinary incontinence and pelvic organ prolapse which found that for POP, the lowest scores were related to etiology followed by treatment then the highest scores were with the diagnosis. This may be due to women in most countries all over the world don't consider POP symptoms as pathologic symptoms but they consider aging process the main etiology for appearance of such symptoms so, they didn't seek for diagnosis of such symptoms or management.

The present study revealed association between women's total knowledge score regarding POP and the general characteristics of the studied women. In terms of age, education and family income, the present study revealed that illiterate women aged from 35-50 years and had inadequate family income had inadequate knowledge regarding POP. The present study findings were partially in agreement with **Singh, Lama and Maharjan, (2016)**⁽²¹⁾ who found that illiterate women aged from 25-29 years had significantly inadequate knowledge while family income had no significant association with lack of knowledge. Another contradicting study conducted by **Mandimika, Murk, McPencow et al., (2014)**⁽²²⁾ who mentioned that the advanced age, moderate family income and high education were significantly associated with lacking of POP proficiency. This may be due to education

can be a major indicator for women's knowledge in our developing countries, but because POP is a neglected issue in maternity care, even in developed countries with high education there is lack of knowledge regarding this issue.

Besides, the present study revealed that women from rural residence had inadequate knowledge regarding POP than women from urban residences. This finding was in line with another cross sectional descriptive study conducted by **Shrestha et al., (2014)**⁽¹⁷⁾ in Nepal on 4,693 married women aged 15–49 years at 25 districts to assess knowledge on uterine prolapse among married women at reproductive age which reported that women residing in the Eastern, Central, Western, and Mid-western developmental regions had higher knowledge of uterine prolapse than those in the Far-western region. This may be due to nonexistence of medical services in rural residence as in urban residence and delay of seeking medical help until having serious complications due to inaccessibility of the medical services in addition to the rural cultural, and economic barriers.

Conclusion

The study concluded that women had inadequate knowledge regarding POP with the lowest score regarding the diagnosis followed by the pathogenesis then the treatment.

Recommendations

1. The importance of developing pelvic organ prolapse guidelines aiming for improving women's knowledge and awareness regarding symptoms and proper management.
2. Implementation of educational programs by health care providers regarding POP targeting women at all places especially rural communities.
3. Regular development of medical campaigns especially to rural areas for early detection and diagnosis of POP.

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4. Further studies are needed in this field to assess the effect of health education programs on the women's knowledge regarding POP.

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