Effectiveness of Intervention Guideline on Self Care of Women Suffering From Stress Urinary Incontinence

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Abstract

Background: Urinary incontinence is an important multifactorial health problem that affects women's life quality. Aim: To evaluate the Effectiveness of Intervention Guideline on Self Care of Women Suffering from Stress Urinary Incontinence **Methods:** A quasi-experimental study design was used. **Setting:** The study was conducted in the urodynamic unit at the Maternity Hospital Ain Shams University. **Study Sample:** It was a simple random sample of 100 stressed incontinent women admitted in urodynamic Unit at the Maternity Hospital. Data collected for a period of nine months from march to November 2021. Four tools were utilized for collected data **Tool I:** A structured interviewing questionnaire sheet to assess general characteristics of study sample, stress incontinence and their obstetrical data. **Tool II:** self-care practice check list to assess bladder retraining technique, hygienic measures, pelvic floor muscle exercise of study sample. **Tool III:** voiding diary to assess fluid intake, amount of urine excretes, amount of stress incontinence, frequency of leak urine of study sample. **Tool IV:** follow up chart to assess frequency of using the intervention guideline among study sample. **Results:** there were no statistically significant differences between the two groups regarding all general characteristics, regarding obstetrical and gynecological history of study sample 40.0%of the study group developed incontinence while 30.0% of control group had excessive bleeding there was highly statistically significant between the study group and control group of all items of voiding diary of post guideline at P <0.001. **Conclusion:** The study revealed improvement in the severity of stress urinary incontinence and self-care practice among the study group compared to the control group. **Recommendations:** Performing training guidelines for improving women's awareness about urinary incontinence and self-care. Replication of the study on a larger probability sample for generalizing the findings and studying the factors affecting women's utilization of urodynamic services.

Keywords: cesarian section**,** guideline, Self-care and Urinary incontinence.

Introduction

Urinary incontinence (UI) is loss of bladder control and considered as self-reported involuntary leakage of urine. It is a common disease that affects nearly 200 million people worldwide, most of which are women and approximately represent six times more common than in males. ***(Akinlusi et al., 2020).***

Three forms of UI are common: stress UI pointed to urine leakage caused by activity, extra effort, sneezing or coughing, meanwhile urge UI indicated a persistent feel of urgency need to urinate, and mixed UI referred to urine leakage resulting from stress and urge UI coexistence ***(Ural et al.,2020).*** Symptoms can range from mild leakage to wetting that is uncontrollable. It is a widespread issue; it is difficult to ascertain precise statistics since many women do not feel comfortable disclosing symptoms to relatives, friends or healthcare professionals ***(Nightingale, 2020).***

Many factors make women at risk for UI as pregnancy, vaginal birth, pelvic surgery, obesity, and age are recognized risk variables for UI in the general female population (***Asklund et al., (2017)*** Urinary incontinence is not a deadly disease, but may have serious effect, it effects on quality of life (QOL). Women with urinary incontinence had limitation in everyday life, sexual and interpersonal relationships. Ultimately, associated emotional concerns such as shame, depression, sadness, and poor body image and confidence have a detrimental influence on quality of life ***(Hay-Smith et al., 2012).*** Despite these adverse effects, most women with urinary incontinence do not seek health treatment because they perceive urinary incontinence is a

natural product of childbirth and aging, rather than a severe health issue ***(Kim et al.,2015).***

Surgery, substance rehabilitation, behavioral treatments, and biofeedback are part of the popular UI care regimen. Behavioral therapies like pelvic muscle technique and rectal balloon exercise have been proposed as noninvasive essential cure without any complications ***(Kim et al., 2015).(Roongsirisangrat et al., (2012)*** demonstrated that behavioral therapy is preferred by 61% of patients with stress UI. The rate of improvement (73%) using behavioral alteration therapy was comparable to that for pharmacotherapy (74%).

Self-care is one of the everyday life skills which is acquired by people to secure, maintain and improve their health. Self- care includes activities that people identify individually and do them to maintain their health

Several studies have published systematic reviews of self-care on pelvic floor muscles covering stress, urge, and mixed UI or have dealt with all nonsurgical care, including drugs ***(Park & Kang 2018).***

In developing new ways to prevent and control UI, nurses play an important role in fostering of urinary continence. This position encompasses research-based practice, education, training, and implementation of high-quality practices. Furthermore, nurses teach women how to maintain good health, avoid complications, and aid in the restoration of normal functions ***Asklund et al., (2017),*** Nurses can also be the most cost-effective health-care provider when it comes to urinary incontinence ***(Deng, 2011).***

This research is therefore intended to evaluate effect of self-care training guideline on enhancing urinary incontinence in urinary incontinence women.

Use of standardized validated questionnaires in these settings can aid the identification of incontinence and help to initiate discussions and treatments. Screening and early identification of pelvic floor dysfunction could aid in more timely and appropriate access to self-management options and support. ***(Park et al., 2014).***

Significance of the study

Urinary incontinence represents a public health problem, considering the high cost of clinical or surgical treatment and limited activities in patients at economically active age ***(El-Sayied, 2021).*** The prevalence of the condition is high with estimates of as many as one in three women over the age of 18. Despite this, only a small minority of sufferers are known to health services with only 20% of people with the condition receiving active treatment1. In the United States of America, UI accounts for approximately 2% of health expenses corresponding to an estimate of over 16 million dollars per year ***(Haylen et al., 2020).*** UI markedly reduces the QOL of professional women, representing an economic obstacle to society. In Egypt, according to statistical records of Ain Shams Maternity Hospital, there are about 150 adult women suffering from urinary incontinence admitted to the urodynamic clinic during the years of 2016-2017 ***(Siddiqui et al.,2020).*** So, the researcher conducts this study to evaluate the effect of self-care guideline on women suffering from urinary incontinence.

Aim of the Study

The current study aimed to evaluate the effectiveness of intervention guideline on self-care of women suffering from stress urinary incontinence

Research Hypothesis

Implementation of intervention guideline will reduce the stress urinary incontinence among the study group compared to the control group.

Subjects & Methods

Research Design

A quasi-experimental design was used to achieve the aim of the study it uses random assignment to estimate the causal impact of guideline on the target population was utilized to compare between both groups (Study and Control) ***(Leppert & Howard ,2011)***.

Study setting

The study was conducted in the urodynamic unit at the Maternity hospital (obstetric and gynecological hospital) Ain Shams University. This place was selected because it serves a lot of patients from all Egypt, it is considered as educational area and also it is considered as the research place of work.

Subjects: Was taken from the stress urinary incontinence women who admitted in urodynamic unit in Ain Shams the Maternity University Hospital

Size: The sample size calculation was based on the number of women with urinary incontinence admitted to the urodynamic unit at Ain Shams Maternity University Hospital in 2020-2021, which was 150 women. A simple random sample of (100) stress incontinence women and who are willing to participate in the study were collected. they divided into (50) women as a study group and (50) women as a control group. The study group had intervention guidelines, and the control group had routine care only.

Inclusion criteria

- All women under diagnosed with stress urinary incontinence.
- Healthy women (free from any medical diseases except urinary incontinence and surgical free of any operations except surgery related to treatment of urinary incontinence.
- Educated women.
- Non pregnant women.
- ***Exclusion criteria***
- Women not diagnosed with stress urinary incontinence.
- Women (has any medical diseases with urinary incontinence and surgical operations in addition to surgery related to treatment of urinary incontinence.
- Not educated women.
- Pregnant women.

Normal approximation using the Z statistic

A = (1/q1 + 1/q0) = 4.0000

B = (Zα+Zβ)2 = 7.8489

Total group size = N = AB/(E/S)2 = 97.169

With 0.95 Standard deviation and 54% effect size of the outcome in the population

Study group equal 49

Control group equal 49

Q1 means Proportion of subjects that are in Group 1 (study)

Q0 means Proportion of subjects that are in Group 0 (control); 1-q1 with a 95% level of confidence (β error = 5%), and a study power of 80% (β error=20%).

Tools of data collection

Data were collected by four tools through:

First Tool: Structured Interviewing Questionnaire

The researcher designed it in simple Arabic language based on reviewing the related literature (**Linton (2011); DeGroot *et al.*, (2015); Washington *et al.*, (2015).** It was used to assess women's general characteristics.

It was divided into three parts:

Part one: This part was designed to assess women's' personal data. e.g., age, occupation, level of education and socioeconomic level, duration of marriage and family income.

Part two: Concerned with women obstetric and, gynecological history as well as, urology and stress incontinence history.

Part three: This part Concerned with stress incontinence data.

Scoring system Level: it was categorized into three levels as follow poor= 0 - 50%, average= 51 - 75%, good= 76 -100%.

Second tool: This part designed to assess level of self-care practicing regarding bladder retraining technique, hygienic measures and pelvic floor muscle exercise.

Scoring system Level of total practicing self-care: was categorized into two levels as follow unsatisfactory=up to 70%, satisfactory= up to 100%.

Third tool: voiding diary. Designed by the researcher to follow the change in fluid intake, amount of urine excreted, amount of stress urinary incontinence and frequency of leakage before and after using the guidline ***(Lukacz et al., 2011).***

Fourth tool:Follow up sheet:

Designed by the researcher to assess frequency of using guidelines among study women.

Supportive material: A guide booklet: A guide booklet was designed by researcher using simple Arabic language and different illustrated pictures in order to facilitate women understand.

Validity: Validity was tested through a jury of 3 experts who composed of: three professors from Professor of Maternity & Gynecological Nursing at faculty of Nursing, Ain Shams University; for the content validity. The jury reviewed the tools for clarity, relevance, comprehensiveness, and simplicity; then based on the opinion of the jury minor modifications were done, and then the final forms were developed.

Reliability: Alpha Chronbach test was used to measure the internal consistency of the 5 tools used in the current study. It included reviewing of the current local and international related literature using books, articles and scientific magazines to develop tools for data collection.

Tools	Cronbach's alpha value
Obstetric, urology data of studied women **(Tool I)**	**80.2%**
Self-care practice (**Tool I)**	**90.1 %**
Voiding diary. **(Tool II)**	**85.6 %**
Follow up chart (**Tool II)**	**83.4%**

Procedures:

Ethical considerations:

Informed consent was taken from the director of the Maternity Hospital and the consent was taken from each participated women in the study after explaining the objectives of the study. Confidentiality of the collected data was ensured and withdraw from the study at any time was accepted

Statistical Deigns:

Data was categorized, coded and was entered using excelling while statistical analysis was done. Analyzed data and results were presented in tables using frequency distribution tables. The percentages score was used in all tables. The statistical significance of observed differences was assessed by using chi square.

Results

Table (1) shows that, the mean age of the study group was 28.84±5.34, while the mean age of the control group was 30.09±5.43. Regarding educational level 40.0% of the study group, 56.0% of the control group were had preparatory education, and 32.0% of the study group, 20.0%of the control group were had university or post graduate education. In relation to current job 72.0% of the study group and 68.0% of control group were housewife. Regarding marital status (80.0%) of the study group and 72.0% of control group were married, 20.0% of the study group, 28.0%of the control group were not married. Relatively to body mass index 44.0% of study group, and 52.0% of control group were obese. Finally, there were no statistically significant differences between the two groups regarding all socio-demographic characteristics.

Table (2) Clarifies that, the number of pregnancies (Gravidity) were 76.0% three times in study group while 68% of control group has three times or more., concerning the number of births (parity) 52.0% of study group delivered two times and 40% of control group three times, regarding the number of abortions 36.0% of study group and 40.0% were one time abortion for both groups. For methods of Birth 36.0% of study group were cesarean section while 40.0% of control group were normal vaginal delivery, relating to instrumental delivery 20.0% of the study group, 18.0% of the control group has forceps delivery while 12.0 of the study group and 10.0 %of the control group had ventouse delivery, relating to problem associated with previous delivery 76.0% of study group and 80.0% of control group had problems associated with previous delivery, regarding to incontinence 40.0% of the study group developed incontinence while 30.0% of control group had excessive bleeding.

Table (3): concerning symptoms of urinary incontinence table 3 shows that Urine leak with effort, Urine leak during sexual intercourse, Feel embarrassed, isolate yourself, Limit your work and social life, go to pee more than 8 times a day, Get up more than twice a night to urinate, avoid physical and leisure activities the most common symptoms in 96.0%, 60.0%, 76.0%, 40.0%, 72.0%, 52.0% respectively in the study group and 96.0%, 64.0%, 80.0%, 80.0%, 32.0%, 60.0%, 40.0 respectively in the control group.

Table (4) Represents that, there was highly statistically significant between the study group and control group of all items of voiding diary of post guideline at P <0.001, and there was statistically significant between the study group and control group of all items of voiding diary of follow up at P <0.05 while there was statistically insignificant association between the study group and control group of all items of voiding diary of pre guideline at P >0.05.

Table (5) Explains that, there was highly statistically significant between the study group and control group of all items of self-care regarding bladder retraining, there was highly statistically significant between the study group and control group of pelvic floor muscle exercise of post guideline and follow up at P

<0.001. There was statistically significant between the study group and control group, there was highly statistically significant between the study group and control group of hygienic measures of post guideline, and follow up at P <0.001, while there was statistically insignificant association between the study group and control group of practicing hygienic measures of pre guideline at P >0.05.

Table (6) shows that statistically significant relation between age of studied women in the study group and symptoms of urinary incontinence in post and follow up intervention p value (≤0.01) compared to pre intervention. Regarding the relation between BMI and symptoms of urinary incontinence, it shows that obese women suffering from symptoms of urinary incontinence than other groups in pre, post and follow up intervention with high statistically significant relation. Also it shows that statistically significant relation between parity of studied women in the study group and symptoms of urinary incontinence in post and follow up intervention p value (≤0.01) compared to pre intervention and highly statistical significant relation between methods of delivery of studied women in the study group and symptoms of urinary incontinence in post and follow up intervention p value (≤0.01) compared to pre intervention whereas normal and CS delivery had highest mean of symptoms.

Table (1): Distribution of study sample self-care in relation to their general characteristics (in both groups n=100).

Item	Study N=50		Control N=50		Total N=100	
	No.	%	No.	%	No.	%
Age (years)						
18-	18	36.0	14	28.0	32	32.0
28-	20	40.0	20	40.0	40	40.0
38-	4	16.0	6	12.0	10	10.0
48-60	8	16.0	10	20.0	18	18.0
Mean±SD	28.84±5.34		30.09±5.43		29.46±5.39	
Educational level						
Preparatory education	20	40.0	28	56.0	48	48.0
Secondary education	14	28.0	12	24.0	26	26.0
University and postgraduate	16	32.0	10	20.0	26	26.0
Current job						
Housewife	36	72.0	34	68.0	70	70.0
Crafts job	6	12.0	6	12.0	12	12.0
Employee	8	16.0	10	20.0	18	18.0
Marital status						
Married	40	80.0	36	72.0	76	76.0
Not married	10	20.0	14	28.0	24	24.0
Body Mass Index						
Normal weight (18.5–25)	16	32.0	12	24.0	28	28.0
Overweight (25–30)	12	24.0	12	24.0	24	24.0
Obesity (>30)	22	44.0	26	52.0	48	48.0
Mean±SD	32.14±8.14		34.25±9.17		33.27±8.44	

Table (2): Distribution of study sample self-care in relation to their history of obstetrics and gynecology (in both groups n=100).

History of obstetrics and gynecology	Study N=50		Control N=50		Total N=100	
	No.	%	No.	%	No.	%
Gravidity						
Once	8	16.0	4	8.0	12	12.0
Twice	4	8.0	12	24.0	16	16.0
Three or more	38	76.0	34	68.0	72	72.0
Parity						
Once	12	24.0	10	20.0	22	22.0
Twice	26	52.0	20	40.0	46	46.0
Three or more	12	24.0	20	40.0	32	32.0
Number of abortions						
Once	18	36.0	20	40.0	38	38.0
Twice	16	32.0	16	32.0	32	32.0
Three or more	16	32.0	14	28.0	30	30.0
Methods of Birth delivery						
Normal vaginal delivery	16	32.0	20	40.0	36	36.0
Cesarean section CS	18	36.0	16	32.0	34	34.0
Forceps delivery	10	20.0	9	18.0	19	19.0
Ventouse delivery	6	12.0	5	10.0	11	11.0
Problem associated with previous delivery						
No	12	24.0	10	20.0	22	22.0
Yes:	(38)	76.0	40	80.0	78	78.0
-Excessive bleeding (hemorrhage)	6	15.8	15	37.5	21	26.9
-Infection or sepsis	12	31.6	14	35.0	26	33.3
-Incontinence	20	52.6	11	27.5	31	39.7

Table (3): Distribution of study sample self-care in relation to their symptoms of urinary incontinence (in both groups n=100).

Symptoms of urinary incontinence	Study		Control		Total	
	No.	%	No.	%	No.	%
Urine leak with effort	48	96.0	48	96.0	96	96.0
Urine leak during sexual intercourse	30	60.0	32	64.0	62	62.0
Feel embarrassed isolate yourself	38	76.0	40	80.0	78	78.0
Limit your work and social life	38	76.0	40	80.0	78	78.0
Go to pee more than 8 times a day	20	40.0	16	32.0	36	36.0
Get up more than twice a night to urinate	36	72.0	30	60.0	66	66.0

Table (4): Distribution of study sample self-care in relation to their voiding diary/day (in both groups n=100).

Voiding diary/day			Pre (n=50)			Post (n=50)			Follow up			Chi-square test					
												Pre		Post		Follow Up	
			750 ml-1375ml (3-5.5 cups)	1500 ml-2500 ml 6-10	>2500ml >10 cups	750 ml-1375ml (3-5.5 cups)	1500ml-2500 ml 6-10	>2500ml >10 cups	750 ml-1375ml (3-5.5 cups)	1500 ml-2500 ml 6-10	>2500ml >10 cups	x^2	*p*	x^2	*p*	x^2	*p*
Fluids intake, the exact amount in ml	Study (n=50)	No.	4	20	26	32	12	6	30	11	9	0.919	0.632	23.236	<0.001**	8.611	0.021*
		%	8.0	40.0	52.0	64.0	24.0	12.0	60.0	22.0	18.0						
	Control (n=50)	Np.	6	16	28	9	20	21	7	22	21						
		%	12.0	32.0	56.0	18.0	40.0	42.0	14.0	44.0	42.0						
Amount of urine excreted, the exact amount in ml	Study (n=50)	No.	2	28	20	24	16	10	22	16	12	1.070	0.586	15.569	<0.001**	9.370	0.009*
		%	4.0	56.0	40.0	48.0	32.0	20.0	44	32	24						
	Control (n=50)	No.	4	24	22	6	25	19	8	23	19						
		%	8.0	48.0	44.0	12.0	50.0	38.0	16.0	46.0	38.0						
Amount of stress urinary incontinence, the exact amount in ml	Study (n=50)	No.	7	19	24	26	18	6	20	21	9	0.385	0.833	18.778	<0.001**	9.016	0.011*
		%	14.0	38.0	48.0	52.0	36.0	12.0	40	42	18						
	Control (n=50)	No.	6	17	27	8	20	22	10	18	22						
		%	12.0	34.0	54.0	16.0	40.0	44.0	20.0	36.0	44.0						
			1-3 times	3-6 times	>6 times	1-3 times	3-6 times	> 6 times	1-3 times	3-6 times	> 6 times						
Frequency of leak	Study (n=50)	No.	3	27	20	26	17	7	23	17	10	1.22	0.545	17.673	<0.001**	9.879	0.007*
		%	6	54	40	52	34	14	46	34	20						
	Control (n=50)	No.	5	22	23	7	24	19	9	21	20						
		%	10	44	46	14	48	38	18	42	40						
Total	Study (n=50)	No.	4	24	22	27	16	7	24	16	10	0.666	0.717	17.521	<0.001**	10.827	0.005*
		%	8.0	48.0	44.0	54.0	32.0	14.0	48.0	32.0	20.0						
	Control (n=50)	No.	5	20	25	8	22	20	9	21	20						
		%	10.0	40.0	50.0	16.0	44.0	40.0	18.0	42.0	40.0						

p-value >0.05 is insignificant; *p-value <0.05 is significant; **p-value <0.001 is highly significant-pre (pre implementing the guidline)-post (post implementing the guidline)-follow up (3-month post implementing the guidline)

Table (5) Distribution of study sample self-care in relation to their Domains of self-care (in both groups n=100).

Domains of self-care		Study Group				Control Group				Chi-square test	
		Satisfactory		Unsatisfactory		Satisfactory		Unsatisfactory			
		No.	%	No.	%	No.	%	No.	%	x2	p-value
Bladder retraining	Pre	10	20.0	40	80.0	8	16.0	42	84.0	2.687	0.319
	Post	45	90.0	5	10.0	17	34.0	33	66.0	21.602	<0.001**
	Follow up	45	90.0	5	10.0	15	30.0	35	70.0	18.583	<0.001**
Pelvic floor muscle exercise	Pre	12	24.0	38	76.0	10	20.0	40	80.0	2.771	0.312
	Post	42	84.0	8	16.0	20	40.0	30	60.0	20.896	<0.001**
	Follow up	40	80.0	10	20.0	19	38.0	31	62.0	17.199	<0.001**
Hygienic measures	Pre	8	16.0	42	84.0	10	20.0	40	80.0	3.356	0.266
	Post	45	90.0	5	10.0	22	44.0	28	56.0	21.147	<0.001**
	Follow up	40	80.0	10	20.0	20	40.0	30	60.0	15.131	<0.001**
Total self-care domains	Pre	10	20.0	40	80.0	10	20.0	40	80.0	0.000	1.000
	Post	45	90.0	5	10.0	17	34.0	33	66.0	21.616	<0.001**
	Follow up	45	90.0	5	10.0	16	32.0	34	68.0	18.403	<0.001**

p-value >0.05 is insignificant; *p-value <0.05 is significant; **p-value <0.001 is highly significant

-pre (pre implementing the guidline)
-post (post implementing the guidline)
-follow up (3-month post implementing the guidline)

Table (6): Relation between follow up symptoms with general characteristics and previous obstetric history pre and post implementation of guideline (study group n=50)

General Characteristics Items	Symptoms of urinary incontinence											
	Pre		F-value	p-value	Post		F-value	p-value	Follow Up		F-value	p-value
	Mean	±SD			Mean	±SD			Mean	±SD		
Age (years)												
18-24.9	24.00	0.00	1.529	0.201	43.00	2.31	4.378	0.003*	41.50	2.23	3.984	0.004*
25-34.9	25.93	5.03			40.86	4.59			39.43	4.43		
≥35-60	21.50	1.57			39.17	5.47			37.80	5.28		
Body Mass Index												
Normal weight (18.5–25)	20.83	1.40	4.479	0.008*	35.67	4.85	6.203	<0.001**	34.42	4.68	5.645	<0.001**
Overweight (25–30)	21.50	0.53			38.50	5.93			37.15	5.72		
Obesity (>30)	23.93	3.47			43.14	1.70			41.63	1.64		
Gravidity												
Once	23.23	3.76	0.364	0.697	39.95	5.03	4.079	0.023*	38.55	4.85	3.712	0.033*
Twice	22.33	1.37			41.00	4.73			39.57	4.56		
Three or more times	22.00	0.00			33.00	0.00			31.85	0.00		
Parity												
Once	22.86	2.61	0.20	0.654	37.95	4.88	20.01	<0.001**	39.33	5.06	18.21	<0.001**
Twice	25.33	7.61			41.81	0.50			43.33	0.52		
Three or more times	22.00	0.00			36.19	5.99			37.50	6.21		
Methods of delivery												
Normal vaginal delivery	82.50	0.58	3.352	0.012*	96.00	1.15	8.186	<0.001**	92.64	1.11	7.449	<0.001**
Cesarean section CS	84.86	8.40			94.57	4.40			91.26	4.25		
Instrumental delivery	75.17	4.88			89.67	8.22			86.53	7.93		
Forceps delivery	76.75	2.43			91.75	1.39			88.54	1.34		
Ventouse delivery	71.86	4.95			87.43	9.34			84.37	9.01		

p-value >0.05 is insignificant; *p-value <0.05 is significant; **p-value <0.001 is highly significant -pre (pre implementing the guidline)
-post (post implementing the guidline) -follow up (3-month post implementing the guidline)

Discussion

As regards to general characteristics, the present study showed that, the mean age was (28.84±5.34 & 30.09±5.43) of the study & control groups respectively. Concerning education less one third were (University or postgraduate& preparatory school) of study & control groups respectively. Most of the studied sample were married and housewife. Relative to body mass index about half of them were obesity with Mean±SD 32.14±8.14 for the study group, mean±SD 34.25±9.17for the control group and Mean±SD 33.27±8.44 for follow up group.

This finding in same line with study by (***Ahmed et al., (2020)*** who conducted study about " Effect of Pelvic Floor Stabilization Exercises on Symptoms and Quality of Life among Women with Urinary Incontinence" in Minia University Hospital for Obstetrics and Pediatrics, Egypt and founded that most of the studied women the mean age was (29.75±6.24) of the study group. Most of the studied sample were married and housewife and less than half of them were obese. Finally, there were no statistically significant differences between the two groups regarding all socio-demographic characteristics. Conversely.

This finding disagreement with study by (***Eldeen, (2016)*** who conducted study about " The effect of pelvic floor exercises and lifestyle modification on quality of life among women with urinary incontinence" outpatient clinic of gynecology at Ain Shams University Hospital, in Egypt and founded that more than half of the studied women had urinary incontinence their mean age was (41.63±6.45), all of them were married and primary education.

Regarding the occupation, the current study findings showed that less than three quarters of the studied sample has housewives, from researcher point view, this can be act as a reason that women with (UI) don't think that they are in need for medical advice. on other hand, this finding disagreement with study done in Minia, Egypt published by ***Mohammed et al., (2021)*** who conducted study about "Educational Interventions on Reducing Urinary Incontinence Episodes among elderly Women" in the Red Crescent Society at Minia Governorate, Egypt and reported more than half of the studied women were employee. The result of present study clarified that, the number of pregnancies (Gravidity) were more than half have three times in both two group, regarding the number of abortions about two fifths in both two group were none for both groups, more than one third of study group were cesarean section while two fifths of control group were normal delivery. This result agreement with study by (***Ajith et al., (2019)*** who conducted study about "Prevalence and factors of urinary incontinence among postmenopausal women attending the obstetrics and gynecology outpatient service in a tertiary health care center in Kochi, Kerala, India" and pregnancy and childbirth were established risk factors for incontinence. From researcher point view, normal vaginal might be due to pelvic floor muscle destruction, the chances to develop various forms of incontinence like incontinence and urge incontinence are higher in women who had vaginal delivery as compared to those who had cesarean section.

The result of present study displayed that there were statistically insignificant differences between study and control group at p >0.05 in all items of History of obstetrics and gynecology in their medical history. this outcome matched with study by(***Balambika et al., (2022)*** who conducted study in India under title "Effect of Pelvic Floor and Abdominal Muscle Exercise on Women with Urinary Incontinence-A Quasi-experimental Study" and reported that there were statistically insignificant differences between study and control group at p >0.05 in all items of History of obstetrics.

According to their symptoms of urinary incontinence, the result of current study revealed that, there was statistically insignificant differences between study and control group at p >0.05 in all items of symptoms and types of urinary incontinence. This finding in same line with study by (***Asklund et al., (2017)*** who conducted study about "Mobile app for treatment of urinary incontinence: a randomized controlled trial" in Sweden and showed that there were statistically insignificant differences between study and control group at p >0.05 in all items of symptoms and of urinary incontinence in their medical history. moreover, this finding supported with study by (***Mohamed et al., (2018)*** in Alexandria, Egypt and conducted study about "Effect of Pelvic Floor Muscle

Strengthening-Kegel's Exercise-on Severity of Urinary Incontinence and Quality of Life among Women" and reported that there were statistically insignificant differences between study and control group at p >0.05 in all items of symptoms urinary incontinence at preguidline.

Regarding to voiding diary, the Represents that, there was highly statistically significant between the study group and control group of all items of voiding diary of post guideline at P <0.001, and there was statistically significant between the study group and control group of all items of voiding diary of follow up at>0.05. This result in same line with study by (***Özden et al., (2022)*** who conducted study systematic review about "The effect of pelvic floor muscle training on urinary incontinence in patients with stroke" and illustrated that training guideline had positive effects in terms of daytime urination frequency and incontinence.

Related to level of total women satisfactory practice of self-care about urinary incontinence pre and post implementation of guideline the present study demonstrated that, there was highly statistical significant between the study group and control group of all items of domains of practice of post guideline and follow up at P <0.001, while there was statistically insignificant association between the study group and control group of all items of domains of practice of self-care preguideline at P >0.05. From the researchers' point of view, this reflected the positive effect of using the guideline in improving self-care among the studied women. These results are parallel with the study published by (***Gouda et al., (2022)*** who conducted study about Intervention guideline for Reducing Marital Problems among Women Suffering from Urinary Incontinence Egypt and reported that there was highly statistical significant between the study group and control group of all items of domains of self-care of post guideline, and follow up at P <0.001, while there was statistically insignificant association between the study group and control group of all items of domains of practice of pre guideline at P >0.05.

The result of present study Elucidated that, there was statistically significant positive correlation between the study and control group post guideline and follow up of women's total and total practice and practices at P <0.001. From the researchers' point of view, this association is explained by that improvement is reflected in the improvement of self-care level. Also, mean when the studied women had sufficient training they can practice well, and this reflected on the success of the intervention guideline and their positive effect.

This result match with study by (***Helmy et al., (2022)*** entitled " Effect of Video Assisted Teaching Guideline on urinary incontinence of Women Practice Pelvic Floor Muscle Exercises" who conducted at Beni-Suef University Hospital, Egypt and reported that there statistically significant positive correlation between the study and control group post guideline and follow up of women's total and total practice and practices at P <0.001.

This outcome disagreement with study by (***Sayed et al., (2022)*** who conducted study bout "Effect of Urogenital Infection Educational Guideline on Women and Practices" in Fayoum, Egypt and reported that high positive correlation between total level of practices self-care was noticed during the pretest with a p-value < 0.01.

Related to practice women self-care about bladder retraining, the present study showed that there was highly statistically significant between the study group and control group of all items of bladder retraining of post guideline and some items of follow up at P <0.001. This outcome matched with study by (***Vaz et al., (2019)*** who conducted study about " Effectiveness of pelvic floor muscle training and bladder training and hygienic measures for women with urinary incontinence in primary care: a pragmatic controlled trial" in Brazil and revealed that there was highly statistically significant between the study group and control group of all items of bladder retraining of post guideline and some items of follow up such as at P <0.001.

Effectiveness of intervention guideline on improving self-care practice level among the studied women.

This result in same line with study by (***Guralnick, et al., (2018)*** who conducted study about " ICS Educational Module: cough stress test in the evaluation of female urinary incontinence: introducing the ICS-Uniform Cough Stress Test" in France and showed that there was highly statistically significant of all items of wearing pads of post guideline at P <0.001**.

Concerning on pelvic floor muscle exercise the result of present study Illustrated that, there was highly statistically significant between the study group and control group of all items of exercise of post guideline and follow up except one item at P <0.001**. While there was statistically insignificant association between the study group and control group of all items of exercise of preguideline at P >0.05. from researcher point view, this result might be due to providing adequate information and physical skills training is a successful way to boost confidence to correctly perform pelvic floor muscle exercise.

This result accordance with study by (***Hamzaee et al., (2018)*** *who* conducted study about "Efficacy of Health Belief Model Compared to the Traditional Education on Kegel Exercises in Middle-Aged Women" showed that before the intervention, few of the subjects had done Kegel exercises correctly, which increased to all sample, after the intervention, but no changes were observed in the control group. There was a significant difference between the two groups before and after intervention all items of Kegel's exercise practice guidelines and self-efficacy but these changes were not significant in the control group. The researcher point view that practicing Kegel's exercise will improve pelvic muscles and enhance controlling of urination, which was clear difference between study group who done Kegel's exercise and control group who did not.

In contrast, this result disagreement with study by (***Fritel et al., (2015)*** entitled "Preventing urinary incontinence with supervised prenatal pelvic floor exercises" in France and found that studied women in both the supervised training group and the control at the same level in terms of frequency, duration, and number of repetitions of exercise.

Related to Practicing personal hygienic measures the present study Revealed that, there was highly statistically significant between the study group and control group of all items of practicing personal hygienic measures for post guideline, and follow up at P <0.001, while there was statistically insignificant association between the study group and control group of all items of practicing personal hygienic measures for the pubic area of preguideline at P >0.05.

This result in same line with study by (***Asklund et al., (2017)*** who conducted study about " Telehealth interventions to improve obstetric and gynecologic health outcomes" in Pennsylvania and reported that there was highly statistical significant between the study group and control group of all items of practicing personal hygiene for the pubic area of post guideline, and follow up at P <0.001, while there was statistically insignificant association between the study group and control group of all items of practicing personal hygiene for the pubic area of preguideline at P >0.05.

Conclusion

Guidelines implementation improved the, practice, self-care among the study group compared to control group of women suffering from urinary incontinence.

Recommendations

Performing training guidelines for improving women's awareness about urinary incontinence and self-care. Replication of the study on a larger probability sample for generalizing the findings and studying the factors affecting women's utilization of urodynamic services.

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Conflict of interest

No

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