Impact of Instructional Intervention about Personal Hygiene upon Women who complain Pelvic Inflammatory Disease

أثر التداخل الإرشادي عن العناية الشخصية على النساء اللواتي يعانين من مرض التهاب الحوض

Faeza A. Fakhry, MScN*
Rabe'a M. Ali,PhD**

*** Academic Nurse, High Institute of Infertility Diagnosis and A.R.T. University of AL-Nahrain**
**** Professor, Mothar and Neonate Health Nursing, College of Nursing, University of Baghdad**

المستخلص

الهدف: لتحديد اثر العناية الشخصية على المرأة المصابة بمرض التهاب الحوض.

المنهجية: الدراسة الحالية استخدمت تصميم شبه تجريبي في المعهد العالي لتشخيص العقم والتقنيات المساعدة على الإنجاب في مدينة الكاظمية ومستشفى مدينة الامامين الكاظمين الطبية. تم جمع العينة للفترة من (26) كانون الثاني 2014 ولغاية (30) نيسان 2014. عينة عمديه شملت (60) امرأة ، (30) منهن اعتبرن عينة الدراسة (التداخل الإرشادي للنساء اللواتي يعانين من مرض التهاب الحوض) و(30) أخرى اعتبرن العينة الضابطة ويتلقين العناية الروتينية في المعهد والمستشفى . شملت
الاستمارة على الخصائص ألاجتماعية ، الصحة الإنجابية للمرأة ، معلومات متعلقة بمرض التهاب الحوض والمعلومات المتعلقة بالنظافة الشخصية المتبعة للمرأة، تم إجراء الدراسة الاستطلاعية لاختبار ثبات الاستبانة وجرى صدق المحتوى من خلال (15) خبير واستخدام الإحصاء الوصفي في تحليل البيانات.

النتائج : اظهرت النتائج ان المرأة التي تستعمل المحاليل والغسول الكيماوية لغسل منطقة العانة (66.7%) لكلتا العينتين ، والتي تستعمل صابونة الأعشاب لمنطقة العانة (53,3%) (36,7%) لعينة الدراسة والضابطة ، والتي تغسل المنطقة كمعدل (1-2) مرة يوميا (46.7%) (43.3%) لعينة الدراسة والضابطة ، وغسل المنطقة من الأمام إلى الخلف (80%) (63.3%) لعينة الدراسة والضابطة ، والتي بتجفيف المنطقة (50%) (56.7%) لعينة الدراسة والضابطة ، واستعمالها المناديل الصحية الورقية لتجفيف المنطقة (50%) (60%) لعينة الدراسة و الضابطة ، والتي تغير ثيابها الداخلية يوميا (100%) (90%) لعينة الدراسة والضابطة ، وتعرض ثيابها الداخلية لأشعة الشمس (76.7%) (70.7%) لعينة الدراسة والضابطة ، والتي ترتدي الثياب الداخلية القطنية (60%) (50%) لعينة الدراسة والضابطة ، والتي تقوم بتبديل الحفاظة الداخلية في فترة الحيض خلال اليوم كمعدل من (1-2) مرة (60%) (70%) لعينة الدراسة والضابطة .

التوصيات:– إجراء برامج تعليمية وإرشادية للنساء اللواتي يعانين من مرض التهاب الحوض ، بإتباع الوسائل الصحية للعناية الشخصية للمرأة (لمنطقة العانة)، وإتباع الوسائل الصحية أثناء فترة الجماع كأن يستعمل الزوج الواقي الذكري أو القذف الخارج أو الامتناع عن الجماع في حالة أخذهما العلاج .

Abstract

Objective: To determine the impact of personal hygiene on woman who complain pelvic inflammatory disease
Methodology: A quasi experimental study in the High Institute Infertility Diagnostic and A.R.T.(assistance reproductive technology) in AL-Kadimya city and al-Emamian al Kadmain medical city hospital. The sample collected during (26^{th}) January – (30^{th}) April 2014. A purposive sample of (60) women, (30) of them regard as study group and (30) regard as a control group whom they take routine care in the institute and hospital. The questionnaire consisted of socio-demographic data, reproductive health for women, information related to pelvic inflammatory disease, and information related to personal hygiene. pilot study has been carried out to test the reliability of the questionnaire and content validity has been carried out through the (15)experts. Descriptive and inferential statistical analyses are used to analyze the data .
Results : The results presented that woman who used special chemical disinfectant solutions and irrigations for clean the perineal area (66.7%) for both samples, who are using herbal soap (53%) (36.7%) for the study and control sample respectively, washing the area daily as range from (1-2) times were (46.7%) (43.3%) for the study and control sample, washing the area from front to back (80%) (63.3%) for the study and control sample, who leave the area dry (50%) (56.7%) for the study and control sample, who used healthy tissues for drying the area (50%) (60%0 for the study and control sample, with her change underwear daily (100%) (90%) for the study and control sample, with her expose underwear to the sun shine (76.7%) (70.7%) for the study and control sample, with wear cotton cloths (60%) (50%) for the study and control sample, with change the sanitary pads in the menstrual period during the day as the range from (1-2) times (60%) (70%) for the study and control sample .
Recommendations: Setting up procedures of instructional and educational programs to the women who suffering of pelvic inflammatory disease, by using healthy methods of personal hygiene (perennial's care area), and during intercourse, such as using condom or external ejaculation by the husband, or abstinence sexual intercourse during treatment course in case taking the treatment both of partners .

Keywords: Personal Hygiene, Women's Reproductive Tract, Pelvic Inflammatory Disease.

Introduction:

Pelvic inflammatory disease (PID) is one of the most serious complications of sexually transmitted disease in women. It can lead to irreversible damage to the uterus, ovaries, fallopian, or other parts of the female reproductive system, and is the primary preventable cause of infertility in women [(1)]. Gonorrhea and Chlamydia are the most common causes of PID. Any medical procedure that opens a woman's cervix can allow bacteria to pass through the cervix into the uterus and fallopian tubes. These procedures can include: abortion, D&C (dilatation and curettage), and IUD (intrauterine device) insertion[(2)] . Pelvic inflammatory disease is a common infection in women at reproductive age and present various health and economic burden on family and community. It is responsible for short and long-term morbidity that may need for intervention subsequent to the original infection. Pelvic inflammatory disease PID may be presented in mild picture much more common than severe or chronic PID, and it is important to be recognized and treated early[(3)].

Methodology:

A quasi experimental studycarried on in the High Institute Infertility Diagnostic and A.R.T. (assistance reproductive technology),and al-Emamian al Kadmain medical city hospital.. The sample collect in period between (26) January 2014 – (30) April 2014. A purposive sample of (60) women, (30) of them regard as study group and other (30) regard as a control group whom they take routine care in the institute and the hospital. Through an extensive review of relevant literature and previous studies, an assessment tool was constructed for the purpose of the study as means of data collection , it was comprised of, socio-demographic data, reproductive health for women, information who related about pelvic inflammatory disease, and personal hygiene. Pilot study has been done on (10) women to test format stability in period between 26 January – 6 February 2014.

The validity done throughout review of (15) experts in various medical and nursing specialty. The data collect through application of indocervical culture test , observation and interview. The data will managed and analyzed by using descriptive statistics (frequency distribution and percentage for values), and inferential statistics (R-test, Chi-square and t-test) by using SPSS. **R.S:** Relative Sufficiency, SD: Standard Deviation, G. M.S: Grand Mean of score,

F: Failure for RS % (< 75.0) & P: Pass for RS % (≥ 75.0) of Negative items, since answering with "Yes" having scale (1), and "No" having scale (2), except of scale (Yes, sometimes, and No) and then assessment within negative items at Yes assigned with F (≥ 66.67), and vice versa for positive items. For positive items (RS%): Low (33.33 – 55.55); Moderate (55.55 – 77.77); High (77.77 – 100.0) For Neg. items (RS%): High (33.33 – 55.55); Moderate (55.55 – 77.77); Low (77.77 – 100.0) ; P: Pass, F: Failure.

Results

Table (1): Distribution of Knowledge Related Pelvic Inflammatory Variables in the Studied Groups With Comparative Significant

The information	Groups	Study		Control		C.S. (*) P-value
		No.	%	No.	%	
1 Have you ever be infected by pelvic inflammatory disease ?	Yes	27	90	26	86.7	F.E.P.T. P=1.000 (NS)
	NO	3	10	4	13.3	
2 Did the partners affected by sexual transmitted diseases such as ?	None	15	50	13	43.3	$\chi 2$=0.276 P=0.871 NS
	Chlamydia	14	46.7	16	53.3	
	Gonorrhea	1	3.3	1	3.3	
3 Are you and your partner suffering from urinary tract infection ?	Yes	27	90	27	90	F.E.P.T. P=1.000 (NS)
	NO	3	10	3	10	
4 Are you suffering from incontinence, and burning in urination ?	Yes	22	73.3	27	90	F.E.P.T. P=0.181 (NS)
	No	8	26.7	3	10	
5 Are you suffering from abdomen, and lower back pain ?	Yes	30	100	29	96.7	F.E.P.T. P=1.000 (NS)
	NO	0	0	1	3.3	
51 If the answer is yes, did the pain before period or after ?	Before	15	50	15	50	χ^2=1.677 P=0.432 NS
	After	5	16.7	2	6.7	
	Before and After	10	33.3	13	43.3	
6 Did the vaginal discharges like white , yellow or …. ?	White	15	50	15	50	χ^2=3.429 P=0.330 NS
	Yellow	6	20	2	6.7	
	Green	0	0	1	3.3	
	White and Yellow	9	30	12	40	
7 Did the vaginal discharges accompany with bleeding ?	Yes	1	3.3	3	10	F.E.P.T. P=0.612 (NS)
	NO	29	96.7	27	90	
8 Are you suffering from irritation, itching, and vaginal pain ?	Yes	29	96.7	27	90	F.E.P.T. P=0.612 (NS)
	NO	1	3.3	3	10	
9 Is there bad smell in the vaginal discharges ?	Yes	25	83.3	27	90	F.E.P.T. P=0.706 (NS)
	NO	5	16.7	3	10	

HS=High significant, S= Significant, NS= Not significant., C.S: comparative Significant, P: Probability level, %= percentage, F:frequency, F.E.P.T = fisher exact probability test

Table (1) shows the information related to pelvic inflammatory disease variables at the studied groups with their comparisons significant, the results has indicated that there has been a non significant different at P>0.05 between the studied groups. Regarding to women's previous infection with pelvic inflammatory diseases, the highest percentage (90%), (86.7%) of women answered (Yes), in the study and control groups respectively. Regarding partners exposure to sexually transmitted diseases the highest percentage (46.7%), (53.3%), are affected with "Chlamydia", at study and control group respectively. Relative to partners suffering from urinary tract infection, the highest percentage (90%) of women answered (Yes), at each group, (73.3%), and (90%) suffering from incontinence, and burning in urination in the study and control groups respectively, (100%), and (96.7%) suffering from abdomen, and lower back pain in both groups respectively, (85.3%), and (93.3%) having pain (Before, and Before and After), in both groups respectively. Regarding women's " vaginal discharges color the highest percentage (80%), (90%) in both groups respectively answered (white, and white & yellow), (96.7%), (90%) in both groups respectively answered vaginal discharges accompanied with bleeding. Finally, relative to women's suffering from irritation, itching, and vaginal pain the highest percentage (96.7%), (90%) in both groups respectively answered (Yes). With respect to the item " bad smell in the vaginal discharges ", most (83.3%), (90%) women are answered (Yes), in the study and control groups respectively .

Table (2): Distribution of the Personal Hygiene Variables in the Studied Groups with Comparative Significant

The Personal Hygiene	Groups	Study		Control		C.S. (*) P-value
		No.	%	No.	%	
1- Did you use special chemical disinfectant solutions, and irrigations ?	Yes	20	66.7	20	66.7	F.E.P.T. P=1.000 (NS)
	NO	10	33.3	10	33.3	
1-1 If the answer is yes what are the types ?	NO	10	33.3	10	33.3	χ^2=2.859 P=0.414 NS
	Herbal Soap	16	53.3	11	36.7	
	Chemical Soap	1	3.3	2	6.7	
	Sod. Bicarbonate	3	10	7	23.3	
2- How many times are you washing daily ?	1 - 2	14	46.7	13	43.3	χ^2=1.654 P=0.437 NS
	3 - 4	5	16.7	9	30	
	5 - 6	11	36.7	8	26.7	
3- Do you wash the region from front to the back?	Yes	24	80	19	63.3	F.E.P.T. P=0.252 (NS)
	NO	6	20	11	36.7	
4- Did you leave the region dry ?	Yes	15	50	17	56.7	F.E.P.T. P=0.796 (NS)
	NO	15	50	13	43.3	
5- Did you use healthy tissues for drying the area ?	Yes	15	50	18	60	F.E.P.T. P=0.604 (NS)
	NO	15	50	12	40	
6- Did you change your underwear daily ?	Yes	30	100	27	90	F.E.P.T. P=0.237 (NS)
	NO	0	0	3	10	
7- Did you expose your underwear to sun ?	Yes	23	76.7	21	70	F.E.P.T. P=0.771 (NS)
	NO	7	23.3	9	30	
8- Did you wear cotton cloths?	Yes	18	60	15	50	F.E.P.T. P=0.604 (NS)
	NO	12	40	15	50	
9- Did you & your husband follow healthy practices during intercourse	Yes	1	3.3	2	6.7	F.E.P.T. P=1.000 (NS)
	NO	29	96.7	28	93.3	
10- How many times did you change the sanitary pads in menstrual period during the day?	1 - 2	18	60	21	70	F.E.P.T. P=0.589 (NS)
	3 - 4	12	40	9	30	

HS=High significant, S= Sig., NS= Not Significant, C.S: comparative Significant, P: Probability level, %= percentage, F:frequency, SD: standard Denation, RS: Relative Sufficiency, Ass.: Assessment

Table (2) shows personal hygiene variables at the studied groups, and comparisons significant, the results has indicated that there has been a non significant different at P>0.05 between the studied groups. With respect to the item for use special chemical disinfectant solutions, and irrigations, the highest percentage (66.7%) at each group of women answered (Yes), In addition to that, the item "If the answer is yes what are the types ?", the highest percentage (53%), (36.7%), in the study and control groups respectively using "Herbal Soap". Relative to the item, times of washing daily, the highest percentage (46.7%), (43.3%) of women answered (1- 2) times, in both groups respectively. Relative to the item "Do you wash the region from front to the back?", the highest percentage (80%), (63.3%) answered (Yes) in both groups respectively. With relative to the item "Did you leave the region dry accounted (50%), (56.7%) in the study and control groups respectively. Regarding the item use of healthy tissue for drying the area (50%), (60%) answered (Yes), in the study and control groups respectively. Regarding to the item change of underwear daily , most women answered (Yes), (100%), (90%) in both groups respectively. In addition to that, the item of expose underwear to the sun, women answered (Yes), accounted 76.7%), (70%) in both groups respectively. Relative to the item wearing cotton cloths, women who answered (Yes), accounted (60%), (50%) in the study and control groups respectively. In addition to that, the item, following the healthy practices during intercourse , most women answered (No), and they are accounted (96.7%), (93.3%) in the study

and control groups respectively, then followed with the item, times of change the sanitary pads in the menstrual period during the day, women's whom had answered (1-2) times, are accounted (60%), (70%) for the study and control groups respectively.

Table (3): Summary Statistics for Knowledge Related to Pelvic Inflammatory Disease and Personal Hygiene Main Parts of the Studied Groups, as well as an Overall Assessment for Pre Instructional Intervention (Before Implementation) in the study group

Main Domains ((Parts))	No.	Study				Control			
		GMS	SD	RS	Ass.	GMS	SD	RS	Ass.
The knowledge related to pelvic inflammatory disease (-)	30	1.233	0.122	61.7	(F)	1.210	0.134	60.5	(F)
The Personal Hygiene (+)	30	1.392	0.188	69.6	(P)	1.421	0.196	71.0	(P)
Overall main domains before Intervention (-)	30	1.457	0.086	72.8	(F)	1.457	0.082	72.8	(F)

R.S: Relative Sufficiency, SD: Standard Deviation, G. M.S: Grand Mean of score, F: Failure assessment P: Pass assessment, F: frequency, SD: standard Denation, RS: Relative Sufficiency, Ass.: Assessment

Table (3) represents the summary statistics for main parts, as well as overall assessment for pre instructional intervention in the studied groups. The result shows that in relative "Information's related to pelvic inflammatory disease", the results of preceding indicators given failure assessment in both groups, then followed with "Personal Hygiene ", the results of preceding indicators given pass assessment in the both groups, then finally followed with "Overall main domains of pre instructional intervention ", the results of preceding indicators given failure assessment in the both groups.

Table (4): Comparisons Significant between (study and control) Groups for the Studied Main Parts at Pre Instructional Side

Main Domains	t-test for Equality of Means			C.S. (*)
	t-test	d.f.	Sig. (2-tailed)	
knowledge related to pelvic inflammatory disease	0.721	58	0.474	NS
Personal Hygiene	-0.589	58	0.558	NS
Overall pre instructional side	-0.001	58	1.000	NS

(*) Not Significant. at P>0.05, C.S: Comparative Significant, d.f: degree of freedom

Table (4) the results show that with respect to subject's of all parts, as well as an overall of pre instructional parts, no significant different are accounted between the study and control groups.

Table (5): Distribution of the Post Instructional Side in the Studied groups with Comparative Significant

Post Instructional Side	Resp.	Study					Control					C.S. P-value
		No.	%	MS	SD	RS	No.	%	MS	SD	RS	
Did the infectious vaginal discharges especially yellowish color disappear?	No	3	10	2.33	0.66	77.67 P	3	10	2.37	0.67	79.0 P	0.825 NS
	Sometime	14	46.7				13	43.3				
	Yes	13	43.3				14	46.7				
Did the vaginal discharges accompany with bleeding disappear ?	No	1	3.3	2.87	0.43	95.67 P	22	73.3	1.3	0.53	43.33 F	0.000 HS
	Sometime	2	6.7				7	23.3				
	Yes	27	90				1	3.3				
Did the bad smell with vaginal discharges disappear ?	No	2	6.7	2.57	0.63	85.67 P	5	16.7	2	0.59	66.67 P	0.001 HS
	Sometime	9	30				20	66.7				
	Yes	19	63.3				5	16.7				
Did the irritations, itching, and vaginal pains disappear ?	No	3	10	2.5	0.68	83.33 P	27	90	1.13	0.43	37.67 F	0.000 HS
	Sometime	9	30				2	6.7				
	Yes	18	60				1	3.3				
Did the vaginal acidity percent during post coital procedure become less ?	No	1	3.3	2.57	0.57	85.67 P	14	46.7	1.7	0.75	56.67 F	0.000 HS
	Sometime	11	36.7				11	36.7				
	Yes	18	60				5	16.7				
Did the vaginal pains and bleeding through intercourse disappear ?	No	2	6.7	2.67	0.61	89.0 P	6	20	2.23	0.77	74.33 P	0.017 S
	Sometime	6	20				11	36.7				
	Yes	22	73.3				13	43.3				
Did the urinary pains, burning, and incontinence become less ?	No	5	16.7	2.47	0.78	82.33 P	0	0	2.67	0.48	89.0 P	0.482 NS
	Sometime	6	20				10	33.3				
	Yes	19	63.3				20	66.7				
Did the lower abdomen and back pains become less ?	No	10	33.3	2.07	0.87	69.0 P	1	3.3	2.23	0.5	74.33 P	0.509 NS
	Sometime	8	26.7				21	70				
	Yes	12	40				8	26.7				
Did the laboratory exams stay positive ?	No	17	56.7	1.43	0.5	47.67 F	27	90	1.13	0.43	37.67 F	0.006 HS
	Sometime	13	43.3				2	6.7				
	Yes	0	0				1	3.3				

R.S: Relative Sufficiency, SD: Standard Deviation, M.S: Mean of score, F: Failure P: ass, P: Probability level, NS: Not Significant, S:Significant, HS: Highly Significant, F: frequency, %percent, P: probability level

Table (5) results have indicated that study group are accounted a better responding compared with controlled group and they are accounted pass assessment (93.33%), while controlled group are accounted (46.67%) .

Table (6): Association Between the Studied Groups According to Overall Assessment before Instructional Intervention with Comparison Significant

Groups	No. and Percents	Overall parts before Intervention		Total	C.S. P-value
		Under	Upper		
Study	No.	22	8	30	C.C.=0.073 P=0.573 NS
	% Groups	73.3%	26.7%	100%	
	% Overall parts before Intervention	52.4%	44.4%	50%	
Control	No.	20	10	30	
	% Groups	66.7%	33.3%	100%	Odds Ratio 1.375 Study/Control 95% C.I. (0.45 : 4.17)
	% Overall parts before Intervention	47.6%	55.6%	50%	
Total	No.	42	18	60	
	% Groups	70%	30%	100%	
	% Overall parts before Intervention	100%	100%	100%	

(*) NS: Not Significant. at P>0.05, %:percent, CI: Confidence interval, No.: Number, P: probability level, No.: Number, CS: Comparative Significant

To predicts or to find out relationship for the studied "Pre and Post Instructional Intervention", the table illustrated and testing the redistribution's effectiveness among different levels of the predicted variables with their two categories responses, and as follows : Regarding to "Overall Parts Before Intervention" of redistribution under/upper cut off point (1.5), between the two independent groups, results of association coefficient reported a non significant levels at P>0.05, In addition to that, an odds ratio represents that the study group are illustrated low responding due to pre intervention compared with control group, and that recorded the ratio (1.375 : 1)

.

Table (7): Association of the Studied Periods According to Overall Assessment Before/After Instructional Intervention with Combative Significant

Groups	Resp.	No. and Percents	Overall After Implementation		Total	C.S. P-value
			Failure	Pass		
Overall Before Intervention	Under	No.	1	21	22	Mc Nemar test P=0.000 HS
		% Before Intervention	4.5%	95.5%	100%	
		% After Implementation	50.0%	75.0%	73%	
	Upper	No.	1	7	8	
		% Before Intervention	12.5%	87.5%	100%	
		% After Implementation	50.0%	25.0%	27%	
Total		No.	2	28	30	Odds Ratio 3.003 Under/Pass
		% Before Intervention	7%	93%	100%	
		% After Implementation	100%	100%	100%	

Highly Significant at P=0.0001, C.S: Comparative Significant, %:percent, P: probability level, No.: Number

Table (7) illustrated with regarding to "Overall Parts Before/After Instructional Intervention" of redistribution under/upper cut off points (1.5), and (2.00) respectively, results of association coefficient reported a highly significant levels at P<0.01, In addition to that, an odds ratio represents that the instructional intervention are increasing responding due to pre intervention three times, and that recorded the ratio (3.003 : 1) for (Post : Pre) respectively.

Table (8): Association of the Studied Groups According to Overall Assessment by Post Instructional Side with Comparison Significant

Groups	No. and Percents	Grand Mean of Score of Post Instructional Side		C.S. P-value
		Under	Upper	
Study	No.	2	28	F.E.P.T. P=0.000 HS
	%Groups	6.7%	93.3%	
	%.G.M.S. of Post Instructional Side	7.4%	84.8%	
Control	No.	25	5	Odds Ratio 71.43 Upper/Under Study/Control
	%Groups	83.3%	16.7%	
	%.G.M.S. of Post Instructional Side	92.6%	15.2%	

HS: High Significant at P=0.0001, C.S: comparative Significant , No.: Number, %:percent, P: probability level

Table (8), illustrated and testing redistribution's effectiveness among different items of post instructional side, the results shows that a meaningful relationship are accounted with highly significant at P<0.01, in positively site for the study group, since most of their studied individuals (93.3%) had good assessment, while most of controlled group's individuals (83.3%) had bad assessment. In addition to that, an odds ratio represents that post instructional side are increasing 71.43 times in the study group comparing with controlled group .

Discussion:

A: Women's related PID information: The results of table (1) has indicated that there has been a non significant different at P>0.05 between the studied groups, which indicating that the different groups having the similar information related to PID .

1.Previous Infection with PID: With respect to women's previous infection with pelvic inflammatory diseases, most women's answered (Yes), and they are accounted (90%) %), and (86.7%) in the study and control groups respectively. Mostly uneducated women have lack of awareness about any type of infection and consider it as a normal condition even they have vaginal discharge they do not visit the specialist either they are of low socio economic , they are far from the medical services and facilities, or they managed poorly during labor by attendant midwife, also infected episiotomy incision, or they have poor personal hygiene. A Study stated that Acute pelvic pain is defined as the pain which lasting for less than 3 months, while chronic pelvic pain generally lasts longer than 3 to 6 months, and patients with cyclic episodic pain classified as having recurrent pelvic pain rather than acute or chronic pain[3] .

2.Partner's Exposure to STIs: The study results shows that the highest percentage who are affected with "Chlamydia", accounted (46.7%), and (53.3%), at study and control group respectively. Most women harbor their infections from their husband, especially if they have extra relations, or more than one wife, or they have infections and they neglect to treat it frequently**.** The people who have STIs in previous 3-12 months are at greater risk re-infection, and PID is known as a long-term consequence of many STDs as well as of bacterial vaginosis (BV), pelvic surgery, and other gynecologic procedures that cross cervix to the upper genital tract [4,5]

3.Previous Suffering from Urinary Tract Infection , incontinence, and burning in urination: The results shows that most women answered (Yes), and they are accounted (90%), at each group. In addition to "suffering incontinence, and burning in urination ", the highest percentage of them answered (Yes), and they are accounted (73.3%), and (90%) in the study and control groups respectively. The approximate of urinary tract and reproductive opening can effect each other if there is an infection in one of them, especially when there is vaginal infections and vaginal discharge which can contaminate the urinary orifice and cause infection, and burning sensation while urinate. Either women or men if they have infections they do not follow the proper heath practices during their sex relations by using condom or abstain from sex unless they get treated, urinary incontinence is often an everyday annoyance and because of this can lead to emotional distress, and if the incontinence left untreated, complications can occur including: Candida infection , and urinary tract infection [6].

4.Women's Suffering Lower Abdominal and Back Pain: The result shows that most of women answered (Yes), and they are accounted (100%), and (96.7%) in the study and control groups respectively. In addition to that, "If the answer is yes, did the pain before period or after ?", most women answered (Before, and Before and After), and they are accounted (85.3%), and (93.3%) in the study and control groups respectively. Pelvic inflammatory disease is an infection of female reproductive organs, and the most common signs and symptoms occurring in (90%) of patients, include lower back pain , bilateral lower abdominal pain, pelvic pain, tenderness especially when walking and having coitus, with mucopurulant cervical discharge, irregular menstrual cycles with abnormal bleeding (longer or heavier periods and spotting between), yellow-green vaginal discharge, chills, nausea, diarrhea , vomiting, pain during urination and pain during sex [7,8,9,10].

5.Vaginal Discharge characteristics: The current study results depicted with regard to women's " vaginal discharges color "most women in the studied groups answered (white, white and yellow), and they are accounted (80%), and (90%) in the study and control groups respectively. Regarding to the item " vaginal discharges if accompanied with bleeding ", most women answered (NO), and they are accounted (96.7%), and (90%) in the study and control groups respectively. women's " suffering from irritation, itching, and vaginal pain ", most of them answered (Yes), and they are accounted (96.7%), and (90%) in the study and control groups respectively. With respect to the item " bad smell in the vaginal discharges ", most women are answered (Yes), and they are accounted (83.3%), and (90%) in the study and control groups respectively. Most study and control sample having abnormal vaginal discharge with bad smell , having pain, itching and irritation, this may be caused due to many factors either in men or women, or in both of them together. A study reported that Green, yellow, gray and white, thick, cottage-cheese like discharge, usually with odor, itching and pain are signs of infection [11].

The summary statistics for main parts, as well as overall assessment for pre instructional intervention in the studied groups. The results in Table (3) shows that in relative to knowledge related to pelvic inflammatory disease, part, and in light of grand mean of score (GMS) and relative sufficiency (RS%) indicators, the results of preceding indicators given failure assessment in both groups.

B: Women's Personal Hygiene: The study results in table (2) presents personal hygiene variables at the studied groups,

and comparisons significant, the results has indicated that there has been a non significant different at P>0.05 between the studied groups.

1. Caring for Prenial area: The study results in Table (2): With respect to the item "Did you use special chemical disinfectant solutions, and irrigations ? ", the highest percentage of women answered (Yes), and they are accounted (66.7%) at each group. In addition to that, "If the answer is yes what are the types ?", the highest percentage of women using "Herbal Soap", accounted (53%), and (36.7%), in the study and control groups respectively. Relative to the item "How many times washing daily ?", women who answered (1- 2) times, accounted (46.7%), and (43.3%) in the study and control groups respectively. In addition to that, the item "Do you wash the region from front to the back?", women who answered (Yes), accounted (80%), and (63.3%) in the study and control groups respectively. With relative to the item "Did you leave the region dry ?", the women who answered (Yes), accounted (50%), and (56.7%) in the study and control groups respectively. In addition to that, the item "Did you use healthy tissue for drying the area ?", women who answered (yes), accounted (50%), and (60%) in the study and control groups respectively. Study sample present different answers regarding women's hygiene and perennial care, some of them using disinfectant, but did they use it in the proper way, other using herbal soap, but did this convenient for the care ,some of them using tissue to dry the area , while the remaining other not do so , and this wetness encourage the microorganism to grow and ascend from lower genital tract to the upper. Hay, (2006) stated that patients should be advised to avoid using local irritants, like perfumed soaps and shower gels, and to be wary of feminine hygiene products such as wipes, powders, and sprays, which may upset the vaginal flora or cause allergic reactions [12]. Astudy found that vaginal douching at least monthly may potentially increase the risk of PID by promoting the ascending of lower genital tract infections to the upper genital tract, by changing vaginal environment and increase the susceptibility to infections that precede PID [13]. The current study results also agree with that cleansing after each urination or defecation can be a contributor to anus-genital irritation. Washing with drying soap after each urination or bowel movement may irritate. The anus-genital area should be cleansed no more than once or twice daily [14].

2. Women's Underwear caring: The study results in Table (2) : regarding to the item "Did you change your underwear daily ?" most women answered (Yes), and they are accounted (100%), and (90%) in the study and control groups respectively. In addition to that, the item "Did you expose your underwear to the sun ?", women answered (Yes), accounted (76.7%), and (707%) in the study and control groups respectively. Relative to the item "Did you wear cotton cloths?", women who answered (Yes), accounted (60%), and (50%) in the study and control groups respectively. Some times every one need to change more than one time daily, because of some discharge , or if the women kept the area dry after each voiding and urination, it is preferable to change wet cloth each time when become damp, also the type of the under wear if it is made of cotton or not , this will keep the area more heated and damp , not allowing for ventilation of the area especially if it is worn for a long period , all these factors effect on the region and increase infection severity. stated that the vagina produces its own cleaning and self-care secretions, a naturally moist environment. The under wear clothing the women wear should

allow these secretions to evaporate, and if there's no air circulate to the vagina, bacteria and fungi can collect and grown in moist and dark folds. This is a common cause of vaginal yeast infections, and wear cotton underpants or underpants with cotton crotch lining will lessen bacterial activity, especially after working or participating in strenuous activities that cause a lot of sweat [15].

3. Healthy Practices During Intercourse and menstrual periods: The study results in Table (2) : consuming item, "Did you and your husband follow the healthy practices during intercourse ? ", most women answered (No), and they are accounted (96.7%), and (93.3%) in the study and control groups respectively**,** with the item "How many times change the sanitary pads in the menstrual period during the day ?", women's whom had answered (1-2) times, are accounted (60%), and (70%) for the study and control groups respectively. The healthy practices, especially personal hygiene before and after the sexual relation and cleaning the secretions frequently after finishing, using condom if they have any type of infection drying the perennial area. Also the change of sanitary pads it's very important to be changed every time soaked with blood not just two times also the area need to be dry more than other times, because the blood and shedding of endometrial tissue will be good growth media for microorganism , so that frequent cleaning and changing of sanitary pad so important. A study stated that the only way to prevent the infection is abstaining from sex. However, if a woman has sexual intercourse with only one partner, the risk of pelvic inflammatory disease is very low [16]. Astudy stated that Sanitary napkins can be uncomfortable due to chafing, especially in the summer, a woman should not wear any one of these for more than 6 hours [14].

The summary statistics for main parts, as well as overall assessment for pre instructional intervention in the studied groups. The result shows table (3) that in relative " Personal Hygiene " part, and in light of grand mean of score (GMS) and relative sufficiency (RS%) indicators, the results of preceding indicators given pass assessment in the both groups.

The summary statistics for the results in Table (4) shows that an overall of pre instructional parts, no significant different are accounted between the study and control groups. The results in table (5) has indicated that study group are accounted a better responding compared with controlled group and they are accounted pass assessment (93.33%), while controlled group are accounted (46.67%). The results in table (6) for odds ratio represents that the study group are illustrated low responding due to pre intervention compared with control group, and that recorded the ratio (1.375 : 1). Table (7) results of association coefficient reported a highly significant levels at $P<0.01$, In addition to that, an odds ratio represents that the instructional intervention are increasing responding due to pre intervention three times, and that recorded the ratio (3.003 : 1) for (Post : Pre) respectively. Table (8) results in positively site for the study group, since most of their studied individuals (93.3%) had good assessment, while most of controlled group's individuals (83.3%) had bad assessment. In addition to that, an odds ratio represents that post instructional side are increasing 71.43 times in the study group comparing with controlled group.

Recommendations

1. Initiates instructional and educational programs by Ministry of Health for women who complain from pelvic inflammatory disease;
2. Increase women's awareness through distribution of instructional booklets in hospitals, clinics , and centers.

References:

1. Shibley K. **:** Your Guide to Pelvic Inflammatory Disease (PID). **Women's Health,** © 2012 Feb. Web MD; http://www.webmd.com

2. Marie **: Pelvic Inflammatory Disease-PID-A Serious Bacterial STD in Women**. Jun.2012; 3.Howard FM. **: Pelvic pain diagnosis and management**, Philadelphia: Lippincott Williams & Wilkins; 2000, http://turner-white.com

4. Evans C.; Das C.; Kinghorn G. et al. **:A** retrospective study of recurrent Chlamydia infection in men and women; is there a role for targeted screening for those at risk? **US National Library of Medicine National and Institutes of Health Journal Int j STD AIDs**, 2009; 20 (3) : 188-92 ,http://www.ncbi.nlm.nih.gov

5. Boskey **:Pelvic inflammatory disease (PID)**, May 21,2014, Medical Review Board, http://www.std.about.com

6.DuBeau; Brubaker; Schamder; and Sokol **:** Clinical Presentation and Diagnosis of Urinary Incontinence, 2008; **Search the world's digital library,** http://ar.scribd.com

7. Noruitz E. and Schorge J. **: Obstetrics and Gyneclogy at a Glance,/1st Ed., Blackwell Science,** USA: 2001, pp:16-21, http://lib.pt.cu.ed.

8. Smith K. and Ness R. **:** Hospitalization for pelvic inflammatory disease. **Bulletin, Sexually Transmitted Diseases,** 2007, 34(2):108-112, http://www.medicalgeek

9. Quinn and Ejlak **:** Women's Sexual and Reproductive Health: A Literature Review, ©2008 **Women Health Victoria**, http://www.whv.org.au

10.Hughes **: Causes for Lower Back Pain & Lower Abdominal Pain**, 2011, http://www.livestrong.com

11.Drdesouza **:**Vaginal discharge-do I have to worry, GP Services, **Women Health** 1,617 comments, 2012, http://www.drtanandpartners.com

12. Hay P. **:** National guideline for the management of bacterial vaginosis. Clinical effectiveness Group. **British Association for sexual Health and HIV**.2006, http://www.bashh.org

13. Ness R.B.; Soper D.E.; Holley R.L., e al. **:** Douching and endometritis: Results from the PID evaluation and clinical health (PEACH)study. US National Library of Medicine National and Institutes of Health **Journal Sexually Transmitted Diseases**; 2001Apr.,28(4),240-245,

14. Fader M.; Cottenden A.; Getiliffe K., et al. **:**Absorbent products for light urinary incontinence in women. US National Library of Medicine National and Institutes of Health **Journal Coherence Data Base Syst Rev** 2007, 18 (2) : CD001406 , http://www.ncbi.nlm.nih.gov

15.Downey **:** Feminine Personal Hygiene Tips. 2014 © **Demond Media,** http://www.livestrong.com

16.Soper E**. :** Pelvic Inflammatory Disease. , 2013; **Mark Manual Home Health Handbook,** http://www.marckmanuals.com