

Nursing Intervention on Improvement Personal Hygienic Practices among Pruritus Vulvae Women

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Abstract Background: The precise incidence is unknown, many women often face a condition called pruritus vulvae, which can be basically the itching caused in vulva. While this may start with mild itching, if left untreated it can affect the health to a great extent. **Aim:** our target for the current study was to evaluate the impact of nursing intervention on improving personal hygienic practices among pruritus vulvae women. **Subjects and Methods:** The study was carried out at the outpatient (gynecological clinic) at two governmental hospitals located in Port Said city using a quasi-experimental research design. The study subjects consisted of 293 women with pruritus vulvae who attended at the outpatient gynecological clinic was recruited with this study in line with the inclusion and exclusion criteria. The tools were used contains; A Structured interviewing schedule, evaluation form and follow up record were designed. **Results** indicates more than three quarters (76.1%) of women complained of itching in the external genitalia that has been frequent within just half (48.8%) of women and continuous in 33.8% of women. women follow inadequate hygienic practice traditional method (sitz bath) were much more likely (58.2% vs. 11.5%) to own primary/ preparatory school compared to other women follow adequate hygienic. Majority of women improved in knowledge and personal hygienic practices that revealed at the post (82% & 83.6%) and follow-up phases of the programs (66% & 87.2% respectively). Also, more than two third of women (68.3%) more like to reached complete improving from their complains. Meanwhile, surprising enough as much as 21.8% studied women faced recurrence of symptoms at follow up phase post two months. **Conclusion:** women's receive program show an improvement of their knowledge and personal hygienic practices and so on complete improvement from their clinical features of pruritus vulva. **Recommendation:** Do and encourage continuous awareness and counseling improvement programs aiming to increase knowledge and personal hygienic practices of women's.

Keywords: Pruritus vulvae, nursing interventions, personal hygienic practices

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1. Introduction

Itchy vulva is status which outer skin of vagina gets an itching sensation, which may be persistent. This itching of vulva may be common for all the women, but if it lasts for long and/or if it remains persistent, it could be distressing [1]. Pruritus vulvae or itchy vulva may have serious ill effects on all around health, as it is likely to be troublesome to truly have a sound sleep in night which commonly found in skin disorders [2,3]. Emotional distress very important roles in developing and controlling of disturbing symptom. Symptom of various another disorders, pruritus completed cure was depending on primary illness controlling [2].

Adult allergic irritant females contacted dermatitis accounts about 50% of chronic vulvovaginal pruritus [4]. Increasing risk of sensitization: as a result of differences in structure, occlusion, and hydration and susceptibility to friction, vulval skin seem to be more permeable than

expose skins [5]. The predominant symptom is itch, but burning and pain which could also be present, in case fissures occurred. Clinical examinations show erythema and swelling and in chronic lichenification is often present [6,7].

High rates of contact sensitivities were observed in other recent study on patients presented by vulval pruritus and within 44% of tested cases [7]. Allergens didn't fit in with European standard series. 47% of cases (lichen sclerosus) have positive patch tests [8]. Managing consists in removal of irritants and allergens and applications of topical steroids pre skin returns to normalities [7].

Pruritus is frequent symptom in many dermatological diseases. Changing estrogens degree contribute to hydration changing, collagen levels, and glycosaminoglycan concentrations, vulvovaginal pH and microflora composition [9].

PH levels are likely to fluctuate from childhood to adult women and eventually cause pruritus. Also, pH rising might be activating proteinase-activated receptor-2 (PAR-2) and would well-known itch mediator. Because of

estrogens reducing where vaginal pH might rise in menopause [10].

Other specific but not infectious led to pruritus vulvae are post-menopausal mucosal atrophy, lichen sclerosus et atrophicus, and psoriasis [11].

Personal hygienic practice refers to activities and attitudes and adding to upkeep of prosperity and personal wellbeing and advance human improvement. Far away from health maintenance. Also, personal hygienic is mainly mainstay of health, and social consideration implies it is a vital part of modern human life [12].

So, nurse plays an important role in managing pruritus vulva through educating the women about vaginal health to change their personal hygienic practices such as utilization of anything stopping that sensitizing the vulval skin [12,13]. Patient counseling and education is considered a significant line of management of pruritus vulva including the nature of the disease, causes, signs and symptoms of pruritus vulva and vaginal hygienic techniques [14].

1.1. Significance of the Problem

Information type about reproductive complains is much better obtained through community-based self-reporting surveys in hospitals [15].

Throughout few last years observed an increase in publications quantities on woman pruritus [7]. Diseases might be a top impact on life qualities. So, outmost important to recognize them as an early and to deal with them adequately for promote the knowledge and hygienic practices.

2. Aim of the Study

2.1. This Study Was Aimed to

Evaluating the nursing intervention impacts on improvement personal hygienic practices among pruritus vulvae women

2.2. Study Objectives

1. Assess of clinical features and quality of life in pruritus vulvae women's.
2. Assess knowledge and personal hygienic practice of pruritus vulvae women's.
3. Develop nursing interventions on knowledge and personal hygienic practices of pruritus vulvae women's.
4. Implement nursing interventions on knowledge and personal hygienic practices of pruritus vulvae women's.
5. Determine the effect of nursing interventions on knowledge and personal hygienic practices of pruritus vulva women's.
6. Evaluate the response of women have pruritus vulvae to the personal hygienic practices program

2.3. Research Hypothesis

Knowledge and practices of women regarding pruritus vulvae improve after implementation the current program.

3. Methods

Study Design: A quasi-experimental research design used with pre-post and follow up assessments.

Setting: our investigation operated in most out-patients gynecology clinics at two governmental hospitals located in Port Said where affiliated to comprehensive health insurance system as:

1. Alhayat Portfouad Hospital which contain fifteen clinic (as gynecology clinic, pediatric clinic, medical surgical clinic, injection clinic, brain and nervous clinic, urology clinic, orthopedic clinic, ear and nose clinic, dermatology clinic, speech clinic, audiology clinic, surgery clinic, replacement clinic, rheumatology clinic, physical therapy).
2. Specialized Women and Obstetrics Hospital which contain three clinics (as gynecology clinic, family planning clinic and antenatal clinic).

Study Sample: The subjects consist of all women who attended the above mentioned settings "six months according to:

1. Having an absolute specific diagnosis of pruritus vulvae.
2. Age ≤ 45 years

The exclusion criteria for the studied sample

- pregnancy
- Genital lice histories
- Vulval intraepithelial neoplasia and vulval carcinoma
- Frequent wetness and irritation around vulva.
- Some psychiatric illnesses could be with recurrent vulval pruritus.
- Post reaching menopause, vulval skin became thin and dry.
- Lower oestrogen level throughout breast feeding
- Diabetes histories

Collecting Data: Three tools use to collect the necessary data.

1-A Structured interviewing schedule: It was adopted from Lambert, [7] and modified by researcher in English language to collect the necessary data. It included four sections.

- **First section:** It contains data about:
 1. Socio-demographic information's
 2. Medical histories such diabetes mellitus, hypertension, anemia, heart disease and others, arthritis/rheumatism, hepatitis C and prescription medications.
 3. Menstrual history as age of menarche, regularity or menstruation, interval and duration of menstruation.
 4. Clinical features of pruritus vulvae as site of infection, pattern of infection and characteristics of discharge (as color, odor, amount).
- **Second section:** It contains data about impairment of quality of life of affected women's as feel pain during sexual intercourse, insomnia, affect my daily activities, cause nervousness, redness and swelling of external genitalia and abrasions at external genitalia. Women's were asked to describing four levels of symptom intensity throughout the last 24 h e.g. 0 = none, 1 = mild, 2 = moderate and 3 = severe/intense [16].
- **Third section:** It contains women's knowledge about pruritus vulvae and developed by researcher based on a review of literature in English language

to collect the necessary data. It included eight items such as definition of pruritus vulvae, incidence, causes, diagnosis, symptoms, prevention, management and complication of pruritus vulvae.

Scoring system

Applied knowledge scored 2 or 1 and not 0 and scores summed-up and converted as ratio, and $\pm M$ and SD computed. Knowledge considered satisfactory if percentage $\leq 60\%$ and unsatisfactory $>60\%$.

2.- Evaluation form: It was developed based on Abd-Elmoneen, Youness, Abbas and Arief [17] in English language to collect the necessary data about women's personal hygienic practices which contain five items as technique of perineal care (Traditional method or Front to back), frequency of perineal care per day, wearing cotton clothes, changing under wear regularly or not and keeping perineal care & dry or not [17].

Scoring system

Concerning, personal hygienic practice regarding technique of perineal care. The adequate steps, if start from front to back perineal area was assigned a score of '1' and inadequate the steps of perineal care, if start from back to front or use sitz bath was assigned a score of '0'. These scores were converted into a percent score, and means and standard deviations were computed. Personal hygienic practice was considered satisfactory if the percent score was 60% or more and unsatisfactory less than 60%.

3- Follow up record: It was developed by researcher in English language evaluating women response who has pruritus vulva to personal hygienic practices program. The follow up took time of 2 months later.

Scoring system

The satisfied items were scored 1, and not satisfied scored 0. The items were summed-up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into a percent, means and standard deviations were computed. Then, follow up record was satisfactory if the percent score was 60% or more and unsatisfactory less than 60%

3.1. Procedure

A review of national and international related literature of the current study using text books, articles and scientific journals was carried out.

- Before conducting the study an official letter from the Faculty of Nursing to the responsible authorities of the study setting to acquire the permission for data collection after explaining the purpose of the study.

- This study was carried out during the period from the first of May 2019 to the end of October 2019 at previous mentioned setting.

- All the study participants were interviewed by the researcher in face-to-face interview to explain the purpose of the study. Women informed that the completion of the study is completely voluntary. Completion of the study implied the women's consent to participate in the study (oral consent).

Tools validity reviewed by 7 experts of Obstetrics and Gynecological Nursing for exam validities; modifications depending on judgment.

Tools reliability: throughout Cronbach's Alpha Coefficient Test (every item consisted relatively homogeneous as

indicated by high reliability, knowledge = (0.789), practice = (0.863)).

Pilot study conducted on ten females (10%) to test feasibility of tools and time required to applied. Simple modification on some items in interviews questionnaire and observation sheet

3.2. Assessment Phase

Each woman was interviewed individually to collect the personal and demographic data, obstetrical history, menstrual history, medical history, current complains history of pruritus vulvae, impairment of quality of life of affected patients and assessment of symptoms of vulvar pruritus (such as pain, vulvar erythema and vulvar itching), character of vaginal discharge (color, amount and odor) and her personal hygienic practices of perineal care.

3.3. Planning phase

After determining objectives of the program, the content was selected after careful study of the women with pruritus vulvae needs. The subject materials were organized according to priority of the need.

3.4. Implementation of the Intervention Phase

Implementation of this system was carried out at the previous mentioned settings. This system sessions contained 5 subsequent visits. First session includes welcome, identification involving the researcher and women's, pretest, definition of terms related to pruritus vulvae. Second session includes risk factors, causes and diagnosis of pruritus vulvae. Third session includes prevention of pruritus and complication. Fourth session presents training about perineal care and health education for the management of pruritus vulvae including: Daily change of underwear, drying underwear under the sun, rinse and dry the genital area from front to back after each voiding & defecation, Use loose cotton underwear and Don't douche (douching can kill normal bacteria flora that control fungus) [18]. Fifth session represents is concerned with end of this system and post test. The full total time of sessions were 3-5 hours, each session takes 45 minutes. Teaching continued for 7 days for six months. The number of women's in each session was 5 women's. The session started 12 pm and end at 3-5pm. It was probably the most suitable time for the women's after they've completed their examination. Various ways of teaching were used as lectures, group discussions, demonstrations, redemonstration and role playing. Suitable teaching aids were prepared and used during program implementation such as for example data show, slides, pictures and videos about self care. CD (compact disc) self explanatory was used, it was presented with to the women's. Handout developed by the researchers given to the women's in Arabic language containing health advice about the disease and its management, illustrating this through pictures.

3.5. Evaluation and Follow Up Phase

After 5 days from completing the educational program. All women were re-interviewed at the clinic but the

women who were didn't able to return to the clinic followed by phone calls. Women were reassessed for potency of education programs (Post-test) and continued follow up assessment of women's after two months to assess also potency of education programs, their improvement conditions and recurrence of pruritus vulvae.

3.6. Ethical Considerations

Official permission obtained from Faculty of Nursing to responsible authorities setting to acquire permission for data collection. Ethical concerning consideration, desire to explained pre participation and totally voluntary and oral consent for every woman. The patients were submitted to the interview and the diagnosis and classification of pruritus vulvae was done by the on duty physician. Patient's privacy was considered during collection of data. Finally, follow up assessment of women's after two months to assess women's knowledge, hygienic practice, improvement conditions and recurrence of pruritus vulvae.

3.7. Statistical Analysis

After collection of the information, it absolutely was revised, coded and fed to statistical software SPSS version 16. The statistical analysis used considered all tests to be two tailed with alpha error = 0.05. Microsoft office Excel software was used to make the needed graphs. After data coding the next data manipulations were done. After data manipulation was done all numeric data were expressed in the shape of range (minimum to maximum), mean and standard deviation (SD). Categorical data were expressed in the shape of frequencies and percentages. Scoring of practice regarding pruritus vulvae. The sum total scores of practice expressed by percentages as follow, satisfactory 60% or more and unsatisfactory if less than 60%. Score two was handed for correct answer, the score one was handed for incomplete answer, and the score zero was handed for incorrect answer before and after implementation of the program. Paired sample t-test was used to determine whether the mean difference between two pre and post test is zero.

4. Results

Table 1 illustrates the distribution of the studied sample according to their socio-demographic characteristics. It revealed that women age ranged between 19-45years with a mean age of 30.4 ± 6.5 years with the greatest percentage (50.5%) was ranged between 25-34 years of age. Concerning the level of education, over fifty percent (55.6%) of women had primary or preparatory amount of education, while 21.5% had university amount of education. The majority (70%) of women was housewives, and their income was sufficient for a lot of them (65.9%). As regards family size, it absolutely was discovered that great majority of family size (83.9%) were ranged between 2-5 members.

Table 2 shows distribution of women according to their menstrual history. The age of menarche was 9-20 years with almost three fifths of women (58.7%) had their age of menarche between 12-14 years. The rhythm of the

menstruation was regular among the great majority of women (92.2%), and the interval of menstruation ranged between 22-28 days in 79.9%, although it ranged between 14-21 days among only 11.6%. Are you aware that duration of menstruation, it ranged between 1-5 days in over fifty percent of women (51.2%) of women and more than 5 days in 47.4%.

Table 1. Distribution of the studied women according to their socio-demographic characteristics (n=293)

Socio-demographic characteristics	Studied women (n=293)	
	No.	%
Age (years)		
19-24	60	20.4
25-34	148	50.5
35-45	85	29.1
Min-Max	19-45	
Mean±SD	30.4±6.5	
Level of education		
Illiterate	29	9.9
Primary/ preparatory school	163	55.6
Secondary education/ technical school	38	13
University	63	21.5
Occupation		
House wives	205	70
Working	88	30
Family income		
In sufficient	90	30.7
Sufficient	193	65.9
Sufficient and saving	10	3.4
Family size		
2-5 members	246	83.9
6 or more	47	16.1

Table 2. Distribution of the studied women according to their menstrual history

Menstrual history	Studied women (n=293)	
	No.	%
Age of menarche (years)		
9-12	96	32.8
>12-14	172	58.7
> 14-20	25	8.5
Min-Max	9.0-20.0	
Mean±SD	12.3±1.5	
Regularity of menstruation		
Regular	270	92.2
Irregular	23	7.8
Interval between menstrual periods (days)		
< 14	0	0.0
14-21	34	11.6
22-28	234	79.9
>28	25	8.5
Duration of menstruation		
Less than 3days	4	1.4
3-5	150	51.2
More than 5 days	139	47.4

Table 3. Distribution of the studied women according to their clinical features of pruritus vulva and its impact on women's quality of life

Clinical Features Of Pruritus Vulva	Studied women (n=293)	
	No.	%
Site of itching		
External genitalia	223	76.1
Inside vagina	21	7.2
Both	49	16.7
Pattern of itching		
Frequency attach of itching	143	48.8
Continuous	99	33.8
Attaches on separated occasions	51	17.4
Amount of vaginal discharge		
Little	231	79
Moderate	62	21
Odor of the discharge		
Non-offensive	275	94
Offensive	18	6
Discharge color		
Colorless	131	44.7
Whitish	115	39.3
Yellowish	47	16
# The impact of itching on quality of life		
Feel pain during sexual intercourse	38	12.9
Insomnia	43	14.7
Affect my daily activities	31	10.6
Cause nervousness	72	24.6
Redness and swelling of external genitalia	59	20.1
Abrasions at external genitalia	50	17.1

#more than one.

Table 3 illustrates distribution of the studied women according with their clinical options that come with

pruritus vulva and its affect women's standard of living. It shows that more than three quarters (76.1%) of women complained of itching in the external genitalia that has been frequent within just half (48.8%) of women and continuous in 33.8% of women. Regarding amount of vaginal discharge more than three quarters (79%) of women have little discharge compared to less than one quarter (21%) have moderate discharge. Great majority of women's have non-offensive discharge in vulva (94%) and less than half of them (44.7%) have colorless discharge. Meanwhile, almost one quarter (24.6%) of the studied subjects complained of nervousness and significantly less than one quarter (20.1%) subjected to redness and swelling of external genitalia. A sizable proportion endured abrasions at external genitalia, insomnia, dyspareunia and affect of the activities (17.1%, 14.7%, 12.9% and 10.6% respectively).

Table 4 shows a substantial relationship between personal characteristics of the studied women and their personal hygienic practice regarding technique of perineal care for treatment of pruritus vulva. Where the women follow inadequate hygienic practice traditional method (sitz bath) were much more likely (58.2% vs. 11.5%) to own primary/ preparatory school, were house wives (54.3% vs. 69.8%), and married (88.8% vs. 78.7%) in addition to they hadn't enough monthly income (72% vs. 34.4%) compared to other women follow adequate hygienic (Front to back), respectively.

Figure 1 describes women's source of knowledge about pruritus vulvae. It's reveals that, relatives was the origin of information for about half of women (49.8%). However, a top percentage obtained their information from the mother and neighbors or media (21.8%, 9.9% and 8.5% respectively).

Table 4. The relations between personal characteristics of the studied women and their personal hygienic practice regarding technique of perineal care for treatment of pruritus vulva

Personal characteristics	Personal hygienic practice regarding technique of perineal care (n=293)				Significance
	Adequate (n=61) Front to back		Inadequate (n=232) Traditional method		
	No.	%	No.	%	
Age (years)					
19-24	8	13.1	35	15.1	X ² =0.24 P=0.885
25-34	27	44.3	105	45.2	
35-45	26	42.6	92	39.6	
Level of education					
Illiterate	5	8.2	37	15.9	X ² =34.13 P<0.0001*
Primary/ preparatory school	7	11.5	135	58.2	
Secondary education/ technical school	31	50.8	28	12.1	
University	18	29.5	32	13.8	
Occupation					
House wives	37	69.8	126	54.3	X ² =1.14 P=0.565
Working	24	30.2	106	45.6	
Marital status					
Single	2	3.3	16	6.9	MCP<0.0008*
Married	48	78.7	206	88.8	
Divorced/widow	11	18	10	4.3	
Family income					
In sufficient	21	34.4	167	72	X ² =39.95 P<0.0001*
Sufficient	2	3.3	11	4.7	
Sufficient and saving	38	62.3	54	23.3	

X²: Chi-Square test, MCP: Monte Carlo test, *Significance at p<0.05.

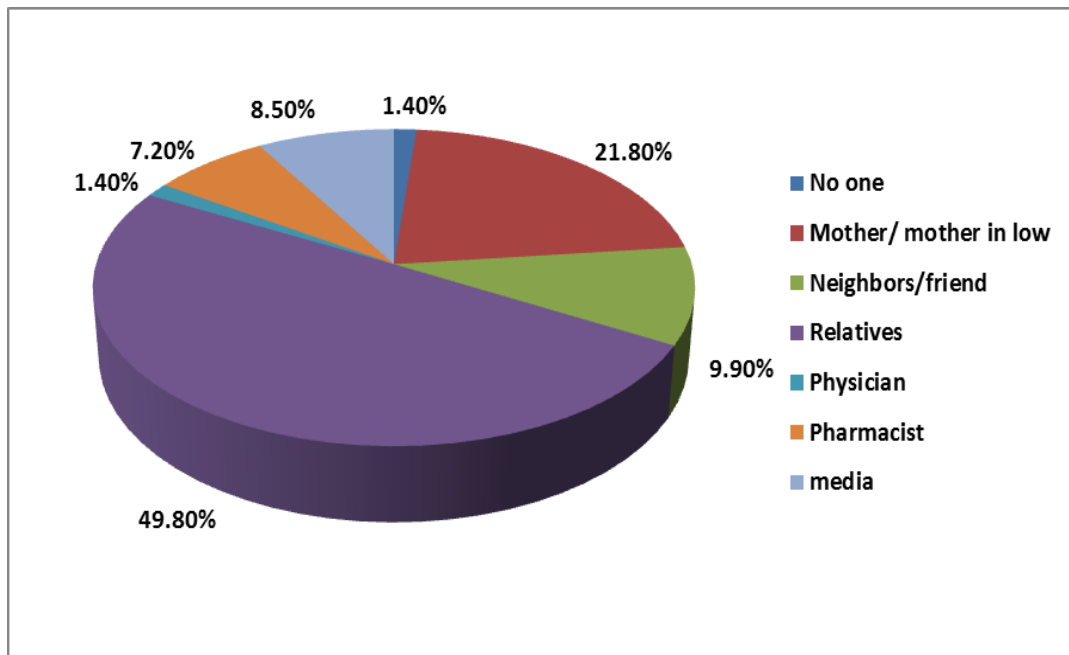


Figure 1. Women's source of knowledge about pruritus vulvae (n=293)

Table 5. Distribution of women's according to satisfactory knowledge about pruritus vulvae throughout the program phases

Areas of knowledge	Satisfactory knowledge of women's (n=293)						P-value 1	P-value 2
	Before		After		Follow up			
	No.	%	No.	%	No.	%		
Definition of pruritus vulvae	0	0.0	195	66.7	163	55.6	<0.0001*	0.001*
Incidence of women with pruritus vulvae	0	0.0	250	85.2	195	66.7	<0.0001*	<0.0001*
Etiology and risk factors of pruritus vulvae	33	11.3	243	83	163	55.6	<0.0001*	0.022*
Symptoms of pruritus vulvae	43	14.8	282	96.3	206	70.4	<0.0001*	0.001*
Diagnosis of pruritus vulvae	10	3.4	163	55.6	152	51.9	<0.0001*	0.007*
Management of women with pruritus vulvae	0	0.0	250	85.2	195	66.7	<0.0001*	<0.0001*
Nursing intervention for prevention pruritus vulvae	19	6.5	260	88.9	228	77.8	0.001*	0.001*
Complications of pruritus vulvae	11	3.8	282	96.3	250	85.2	<0.0001*	<0.0001*

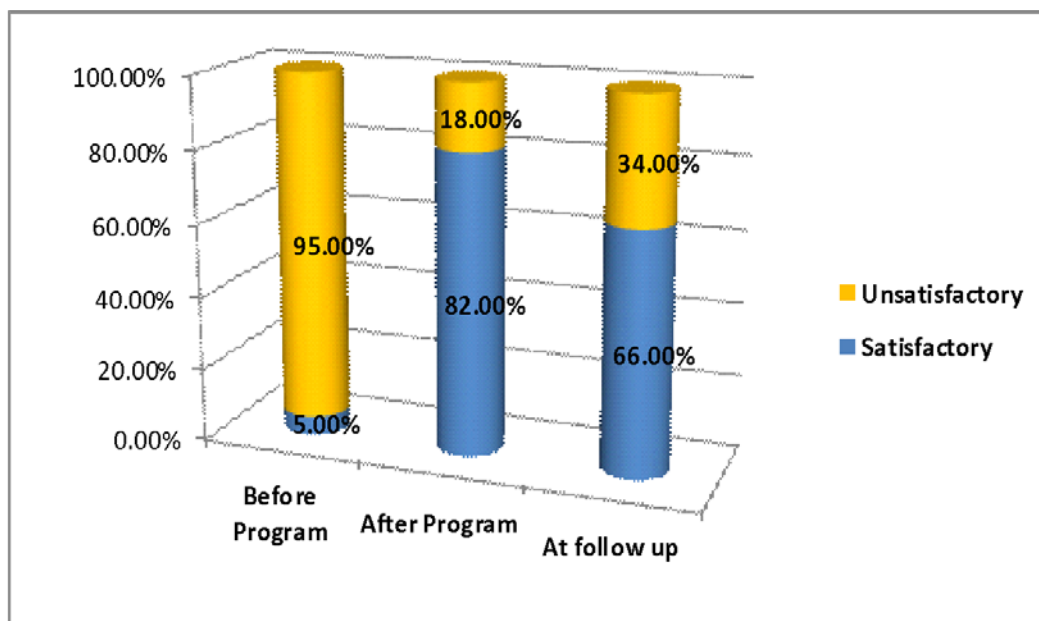


Figure 2. Women's total Knowledge about pruritus vulvae throughout the program phases (n=293)

Table 6. Personal hygienic practices of women's throughout the program phases

Variables	Personal hygienic practices of women's (n=293)						P-value 1	P-value 2
	Before		After		Follow up			
	No.	%	No.	%	No.	%		
Do technique of perineal care								
NO	199	68	50	17	41	14	0.00*	0.00*
YES	94	32	243	83	252	86	0.00*	0.00*
NO. of perineal care/day								
Once	182	62	15	5	12	4	0.00*	0.00*
Twice	73	25	41	14	50	17	0.00*	0.00*
≥ 3 times	38	13	237	81	231	79	0.00*	0.00*
Wearing cotton clothes								
Yes	106	36	255	87	267	91	0.00*	0.00*
No	187	64	38	13	26	9	0.00*	0.00*
Change under wear regularly								
Yes	106	36	255	87	267	91	0.00*	0.00*
No	187	64	38	13	26	9	0.00*	0.00*
Keeping perineal area dry & clean								
Yes	111	38	234	80	261	89	0.00*	0.00*
No	182	62	59	20	32	11	0.00*	0.00*

*significant at P≤0.05.

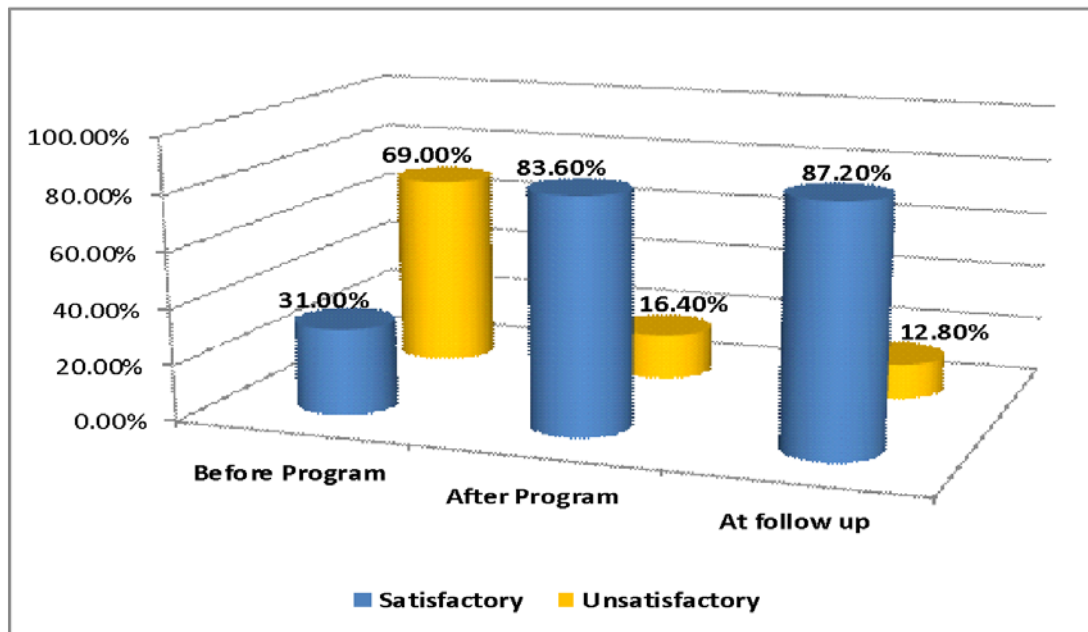


Figure 3. Women's total personal hygienic practices about pruritus vulvae throughout the program phases (n=293)

Table 5 illustrates distribution of women's in accordance with satisfactory knowledge about pruritus vulvae through the entire program phases. It's evident that majority of women improved at post and follow-up phases in area of knowledge regarding complication (96.3% & 85.2%), symptoms (96.3% & 70.4%) and nursing intervention for prevention pruritus vulvae (88.9% & 77.8%) and the knowledge score with statistically significant higher than the pre- program levels (P≤0.05).

Figure 2 shows women's total knowledge about pruritus vulvae throughout the program phases. It's evident that improving revealed at post and follow-up

phases 82% & 66% respectively and this percent was still higher than pre- program levels 5%. Despite 34% of participated had unsatisfactory knowledge at follow-up.

Table 6 presented personal hygienic practices of women's throughout the program phases. It's evident that improving revealed at post and follow-up stages of personal hygienic practices regarding wearing cotton clothes (87% & 91%), change under wear regularly (87% & 91%) and keeping perineal area dry & clean (80% & 89%). The practice score was statistically significant higher than the pre- program levels (P≤0.05).

Figure 3 shows women's total personal hygienic practices about pruritus vulvae throughout the program phases. It's evident that improving revealed at post and follow-up phase 83.6% & 87.2% respectively and this percent was still higher than pre- program levels 31%. Only, 12.8% of women had unsatisfactory personal hygienic practices at follow-up.

Table 7 shows response of females have pruritus vulva to the personal hygienic practices program after two months. More than two third of women (68.3%) were significantly more likely to reach complete improvement. Meanwhile, surprising enough as much as 21.8% studied women did face recurrence of symptoms at follow up phase after two months.

Table 7. Distribution of the studied women have pruritus vulva according to their response to the personal hygienic practices program

Variables	Studied women (n=293)	
	No.	%
Improvement at follow up after 2 months		
Complete improvement	200	68.3
Still have some discharge.	78	26.7
Not Improved	15	5.0
Recurrence of pruritus vulvae at follow up after 2 months		
Recurrent	64	21.8
Not recurrent	229	78.2

5. Discussion

Vulva hygiene has key role in preventing vulva infections; Nurses played critical roles in preventing situations might lead to gynecological infections and in finding out wrong hygiene practices. Nurses could undertake health educator roles and mentor by proper approaches in identifying and resolving gynecologic problems. Education provide to women by nurses and trainers whose relevant experience and knowledge might ensure proper hygiene practices [19]. Our target of the current study was to evaluating the nursing intervention impacts on improvement personal hygienic practices among pruritus vulvae women.

The current study was framed on the light of the study hypothesis stated that pruritus vulvae women who receive educational program improve their knowledge and practices regarding prevention of pruritus vulvae than before educational program.

The current study results revealed women's amount of vaginal discharge more than three quarters of women have little discharge compared to less than one quarter have moderate discharge. Great majority of women's have non-offensive discharge in vulva and less than half of them have colorless discharge. This result in the same line with Ünsal [20] who mentioned that several studies involving different levels of society report about the prevalence of abnormal vaginal discharge as 12.1 to 30%. Controversy, Hamed [21] found more than two fifths (45.0%) of patients had white cheese like discharge, and 21.0% had soreness and ulcerations. Gray discharge with a fish like odor denoting trichomonus infection (4.8% case group) and warts in 8.8%.

The difference between the above mentioned studies and the present one might be due to the fact that, there is differences in emotional and environmental factor or difference due to women's neglect of their complaints or shame to speak about menstruation with a strange person.

The current study results indicated women with pruritus vulva reported that their site of itching was mainly in the vulva or both in the vulva and vagina. This is due to the fact that, vulva is considered the first line of defense to protect the genital tract from infection. Contaminants often collect in the vulvar folds, and increased moisture; sweating, menses, and hormonal fluctuations influence vulvar microbial growth and species balance, potentially resulting in odor and vulva infection.

This finding is relatively just like Cohen et al. [2] who mentioned that vaginal itching involve the area containing the external genital organ (vulva) as well as the vagina. Moreover, for most women the itching was continuous or too frequent and bothering all women and cause stress. This finding was expected since pruritus vulva ensures that the microorganism is present. This finding will follow Kofman [22] who found that pruritus vulva is aggravated by emotional stress and that women are apt to be sensitive in regards to the condition. Many are self-conscious about their appearance, constantly worry and tend to withdraw, believing that itching carries a stigma. Bahadoran et al. [23] also stated that in civilized societies, uninhibited touching and scratching the vulva isn't acceptable to numerous people.

Disturbance of sleep and household activities this is due to the fact that itching also bothered women in the current study. In agreement with this Garcia-Borreguero et al. [24] mentioned that itching which often reaches its peak during the night is very bad, and disturbs sleep. Also, Bahadoran et al. [23] stated that the itching is a mix of warmth, weariness and insufficient distraction can lead to the women being a lot more conscious of the discomfort. This might prevent sleep and so affect her proper functioning throughout the day. Additionally, Kofman [22] pointed out that pruritus vulvae may persist over a lengthy period, interfering with the individual's ability to transport out household activities, work or get out socially.

Additionally, women in today's study suffered from scratching the vulva and pain during intercourse. This is due to the fact, that pruritus vulva usually affects middle-aged women in this study because of unhealthy practices. Scratches of the vulva might be as a result of itch scratch cycle, meaning scratching causes more itching, this cause more scratching, etc.... So, scratching will make the itch worse [24]. In this respect, Bahadoran et al. [23] stated that if the vulval tissues are scratched and damaged, their healing process will soon be delayed because of warmth and insufficient moisture that really help the growth of the microorganisms. Meanwhile, itching is another reason behind difficulty with intercourse; if the woman's symptom and reaction to it by scratching make her feel "dirty" she may begin to prevent her previous spontaneous and relax method of sexual activity. As well, if the vulval skin is irritated and damaged, intercourse is likely to hurt. This simple problem may thus become a sophisticated one demanding both medical and nursing skills and knowledge of a very special kinds.

The current study revealed that women's source of knowledge about reproductive problems from relatives was the origin of information for almost half of them. However, a top percentage obtained their information from the mother and neighbors or media. This is due to the fact that, often viewed pruritus vulva as a taboo complaint or embarrassing in cultures and traditions. This finding is in line with the analysis of Galloway et al. [25], by which women claimed that mother, sister or mother in law were persons to be notified because they're more knowledgeable and gives them honest and confidential advice. Similarly, Ekezie [26] stated that nearly all the younger women preferred seeking advice from their family members (70.0%) and friends (40.7%), while only 12.7% preferred advice from doctors.

Concerning pruritus vulvae women follow inadequate hygienic practice were more likely to have primary level of education, were house wives and hadn't enough monthly income. This is due to the fact that, women's not educated enough and have poor knowledge about reproductive problems. In addition to that, low standard of living and they're housewives. This finding in agreement with Prusty & Unisa [27] had also made an evaluative study on married women in India and revealed that women having university education have a higher chance to change their hygienic practice than women with no education and poor women are less likely to change hygienic practice than rich women.

Moreover, Sargent [28] Females majorities by reproductive morbidity had not sought appropriate cares except for infertilities as these were prevalent or because these were unaware that the situation might be curable. Finally, the present study finding showed that the vast majority of women had poor knowledge about pruritus vulvae at preprogram phase compared to more than two third had good knowledge in the areas of complication, symptoms and nursing intervention for prevention pruritus vulvae at post and follow up phases of program. This may be attributed to insufficient education related to pruritus vulvae and because it was one of the most information that helped them alleviate their complaints. Therefore we recommended continuous perform educational classes for many women about the proper personal hygienic practices to improve their health and avoid recurrent of pruitus vulvae.

Also, the findings of this study have highlighted that there is high statistical significant difference toward improvement of women's personal hygienic practices before, after implemented program and follow-up health education. Wearing cotton clothes, change under wear regularly and keeping perineal area dry & clean were the most common improved practice items. This due to the fact that, women follow unhygienic practices of vaginal health which improved through health education and desire of them to change their practice. Therefore we recommended implement the present health education program for all women attend out patients gynecology clinics.

Similar result was shown in Baraia et al. [12] study who evaluates the impact of personal hygienic practices program for women diagnosed with pruritus vulvae on their response to the protocol of management in Ismailia City, Egypt, which reported women receiving personal

hygienic practices program show an improvement of their personal hygienic practices and response to pruritus vulvae and had less recurrence than those who did not receive the program.

The current study revealed that great majority of the studied women wear cotton underwear, change it frequently and keeping perineal area dry and clean after the program phase compared to preprogram phase. This is due to the fact that, Cotton underwear is recommended permanently personal hygiene because it's less allergic, absorbs vaginal secretion and prevents irritation. It is also boiled and properly cleaned. In same line Garcia-Borreguero et al. [24] advised women to make use of suitable fitting cotton underwear and to avoid tight jeans, to permit some air to get to the vulva, and overcome sweetness.

Also the current study revealed response of the studied women have pruritus vulva to the personal hygienic practices program after two months. More than two third of women were significantly more likely to reach complete improvement. Meanwhile, surprising enough as less than one quarter of studied women did face recurrence of symptoms at the follow up phase after two months due to the fact that they were not committed to adequate hygiene practices.

In this, respect Hainer & Gibson [29] reported an evidence females compile to treatments protocols and instruction of personal hygienic practices expose less than infection recurrence. Calgary [30] add that women diagnosed with pruritus vulva most not only receive medical treatments but also educating about behavioral risk factors impact.

Therefore, the present program help women learn skills by having them observer and talk with healthcare provider. The researcher prepared place, materials and time table to implement the program. Learning booklet included information about causes, its preventions and important instructions and coping issues. The booklet prepared in Arabic language and used as a handout for participated patients.

6. Conclusion

Based on the findings of today's study, it can be concluded that the women showed an improvement of their knowledge and personal hygienic practices that positively respond to health education program that provided about management of pruritus vulva. So, it can be concluded that, nurse plays an important role in education the women about proper personal hygienic practices which mainly effect on their genital health and reduce recurrence of pruritus vulva.

7. Recommendations

Based on the outcomes of today's study, it could be recommended that. Educational programs toward pruitus vulvae should be implemented by the nurses, not merely for women's to boost awareness and develop the skills and manage the pruitus vulvae.

Meanwhile, conducting periodical educational classes for many women and women who low social class about

the proper personal hygienic practices to improve their health and avoid recurrent of pruitus vulvae are strongly recommended.

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