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Risk Factors and Quality of Life in Women Diagnosed with Vaginal Infection

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Abstract

Vaginal infections (VI) are a global health problem for women at reproductive age. These infections threat the women's health and have negative impacts on their quality of life (QOL). Aim of the study: Assess the risk factors and quality of life in women diagnosed with vaginal infections. Subjects and methods: Research design: was cross sectional design. Setting: was conducted among women attend obstetric and gynecological outpatient clinics at Zagazig University hospitals. The study sample included all accessible of women aged 20-45 years. Tool of data collection: Two tools were used: first: A structured interviewing questionnaire and the second tool quality of life measuring scale. Results revealed that the vaginal douching is the main risk factor, (92,2)% studied women were using vaginal douching, followed by history of previous vaginal infection(80,9%). And the infected women with vaginal infection were most likely to have effect on emotional well-being and role limitation due to physical problem with a mean ± SD (62.1±11.5 and 59.3±16.8 respectively).As well as mean of Physical functioning (pf) for these studied women (51.7±17.4).Conclusion: The study finding concluded that bacterial and fungal infections are the most common cause of infectious vaginitis. Besides, risk factors associated with vaginal infection include: previous vaginal infection, pregnancy, use of oral contraceptive, recent antibiotics/steroid, and STDs, in addition to there are a relationship between vaginal infection and quality of life in infected women with vaginal infection. The study also revealed that the disease has a strong impact on patient's usual daily activities. Recommendation: This study recommended that Design an educational programs for women about vaginal infection, symptoms of each type, risk factors, complication & how mange it and effect of vaginal infection on quality of life on large sample. Further research is recommended to study the effect of an educational program for the management of vaginal infection

Keywords: vaginal infection, Quality of life-women, hospital, risk factors.

Introduction

Vaginal Infections (VI) are a global health problem for women at reproductive age. These infections threat the women's health and have negative impacts on their quality of life (Qol). Because of the personal nature of vaginal infections, they are often avoided. Despite the fact that the symptoms have a severe influence on the quality of life for the women who encounter them, vaginal infections have historically been a relatively underexplored subject and may have been seen as a minor problem (Abdelnaem, 2019). Vaginitis is a general term that refers to inflammation of the vaginal wall. It is caused by an alteration in the natural vaginal defensive mechanisms such as vaginal flora (lactobacilli), vaginal pH, and vaginal squamous epithelial

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layer. It's also marked by vaginal symptoms like discharge, odor, itching, irritation, or burning. Vaginitis affects the majority of women at some point in their life.Making it the most prevalent gynecologic diagnosis (Soni, 2017). There are two major types of vaginitis: Whether infectious or non-infectious vaginitis. For non-infectious vaginitis, it can be caused by a variety of factors such as: sensitivities to underclothes, feminine hygiene products, and vaginal douches, spermicidal and occupational exposure. Irritation from tampons, sanitary napkins, and panty liners, hormonal factors as hypoestrogenism and iatrogenic reasons as in intra uterine device (IUD), pessaries, and using chemical products. Finally, traumatic by foreign body inserted into the vagina, and contact dermatitis of the vulva caused by friction from pants, restricted presses jeans etc. While infectious vaginitis, which accounts for 90% of all vaginal infections in women of reproductive age, is caused by one or more of the organisms listed below: by Candida albicans (C. albicans) as yeast, Bacterial vaginosis (BV) caused by Gardnerellavaginalis (G. vaginalis) as bacteria, and Trichomonasvaginalis (T. vaginalis) as protozoa (Aduloju,.2019). Some predisposing factors for vaginitis include: hormonal change (pregnancy, contraception, menopause), diabetes, long term using of antibiotics and corticosteroids, frequent douching, tight-fitting nylon pants, obesity; lack of physical activity high intake of sugar, carbohydrates, cola, and alcohol; low intake of dairy products; low vitamin C; stress; sleep disorders (Petrova et al., 2015). In women of reproductive age, bacterial vaginosis is the most common cause of vaginitis. It is a condition that happens when the vaginal microbiological flora is disrupted due to a decrease in the lactic acid bacteria that normally dominate the vaginal environment. At the same time, an overpopulation of anaerobe bacteria emerges. The underlying cause of this vaginal shift is this alteration in vaginal flora is still a mystery. In addition to Bacterialvaginosis has a negative impact on women's sex lives, and it is usual for them to be hesitant to be intimate. (Farage, 2016), Quality of life (Qol):(WHO) defined: it a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity. The concept of health related quality of life was initially developed and operational zed with adult illness populations, and refers to the specific impact of an illness or injury, medical treatment, or health care policy on an individual's quality of life (Drotar. 2014). As well as Health related quality of life (HRQOL) indicates magnitude of impact exerted by a disease or medical condition upon everyday physical, emotional, mental and contextual well-being of a person thus it stands for the subjective perception (Ali et al. 2017). Eight important measures of HRQOL contain the following domains: physical functioning, emotional functioning, social functioning, energy (fatigue role), body pain, role limitation due to physical problem, role limitation due to emotional problem, general health (Karimi et al. 2016), QOL has conceptualization principles which include QOL is multidimensional and is influenced by personal and environmental factors and their interaction. As well as QOL has the same component for all people who are enhanced by self-determination, resources, purpose in life and a sense of belongingness (Karimi et al., 2016). The primary role of the nurse in managing vaginal infections is to provide health education in order to modify the health behaviors and to prevent the occurrence as well as recurrence of vaginal infections (Sobel, 2016).

The Significance of study

Vaginal infection is recognized as a major public health problem that causes a variety of problems for women at all ages. Because of the intimate nature of vaginal infections, they tend to remain a taboo subject Vaginal infections have historically been a relatively underexplored subject and have perhaps been regarded as a relatively minor problem despite the fact that the symptoms have a negative impact on the quality of life for the women who experience these symptoms **(Abdelnaem, 2019).** This study aimed to evaluate risk factors and quality of life that are associated with vaginal infections among women in Zagazig in Egypt.

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Aim of the Work

The aim of this study was to

Assess the risk factors and quality of life among women diagnosed with vaginal infections**.**

Research Questions

1-What are women levels of knowledge about vaginal infection?
2-what are risk factors for vaginal infection?
3-what is the quality of life among women diagnosed with vaginal infection?

Research objectives

- To identify risk factors about vaginal infection.
- To assess quality of life among women diagnosed with vaginal infections.

Subjects and Methods

Research design:

Cross-sectional study was used in this study.

Research setting

The study was conducted in the obstetrics and gynecology department, Zagazig University Hospitals, Sharkia Governorate, Egypt. The reasons for choosing this setting, it's the main teaching hospital in Zagazig and it is the referral hospital for all cities in Al sharkia, where women attending for receiving reproductive health services with minimal or even free cost. Furthermore it covers a wide range of population with different socio-demographic and obstetrical characteristics as well as the rate of attendance was high. It's composed of five floors; the first floor contains reception and administrative offices. The second floor includes postnatal care unit. Third floor includes high risk care unit and composed of big examination room, three rooms, ten beds and intensive care unit. Additionally, there is one room for nursing staff, a bathroom and an educational hall; the services are running by 15 physicians, ten nurses & two workers. The fourth floor contains Neonatal Intensive Care Unit, the delivery examination room and cardiotocograph (CTG) examination room and the fifth floor involves three operations rooms for normal vaginal delivery and caesarian section.

Sampling

Sample type: A purposive sample was used.

Sample size: was calculated according to flow rates for six months period from August 2020 to January 2021.

Inclusion criteria

Age: reproductive age (20-45) years

Women were suffering from vaginal infection symptoms and willing to participate.

Exclusion criteria: women were having chronic disease as D.M, cancer, and hypertension.

Tools of data collection will include

Tool1

A structured interviewing questionnaire was used that will be developed by the researcher based on relevant literature, aim of the study and the data needed to be collected, it was written in simple Arabic language to suit the women level of understanding and It was divided into two parts.

Part (I)

Personal Characteristics: It was used to assess socio-demographic characteristic. Such as age, occupation, level of education ,marital status ,body mass index, menstrual history ,contraceptive history ,obstetrical history ,life style and culture habits ,

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Part (II): Knowledge of women regarding vaginal infection, it consists of
Section (1) knowledge about risk factors:
Contraceptive methods, culture habits, medical condition, douching, multiple sexual partners, medications use (antibiotic, steroid), pregnancy history of vaginal infection, life style, culture habits and menstruation

Section (2) knowledge about characteristics of vaginal discharges**:** It was used to assess vaginal infection characteristics such as odor of Infection, color, consistency, time of vaginal discharges frequency, behavior, treatment and symptoms of vaginal discharges.

Scoring System: Each item was assigned: a score (2) was given when the answer was completely correct, a score (1) was given when the answer was incompletely correct and a score (0) was given when the answer was don't know. The total score for the knowledge of women was calculated by the addition of the total score of all sections, the women total knowledge score was ranged from (30-65) and classified as the following:
-Poor knowledge when total score was 0 to less than (30)
-Average knowledge when total score was 50% to less than 75 %(35-45)
-Good knowledge when total score was 75% to100 %(50-65)

2-Tool2
The second tool: quality of life measuring scale
Quality of life (SF-36)
It contains 36 questions, including (2) general question, (34) Questions divided into eight domains: physical functioning, role limitation due to physical problem, role limitation due to emotional problem, energy/fatigue, emotional wellbeing, social functioning, body pain and general health. The HRQOL scores are calculated according to an algorithm 36 that considers the number of answered questions in each of the domains and standardizes the scores of all domains from zero to 100, with zero being the worst possible health condition and poor quality of life and 100 being the best health condition and excellent quality of life. The algorithm inverts the score values for questions to calculate the final score.

- Physical functioning (4items)
- Role limitation due to physical problem (10items)
- Role limitation due to emotional problem (3items)
- Energy/fatigue (9items)
- Emotional wellbeing (1item)
- Social functioning (5items)
- Body pain (2items)
- General health (2items)

Scoring system
Regarding system high score 100

- Good quality of life =100-75
- Fair=75-50
- Poor quality of life =less than 50

Administrative and Ethical consideration
An official permission letter was obtained from the dean of the Faculty of Nursing and hospital administration for data collection in Zagazig University Hospital. All ethical issues were taken into consideration during all phases of the study: The researcher maintained anonymity and confidentiality of the subject .The inclusion in the study was totally voluntary. The aim of the study was explain to every woman before participation and an oral consent was obtained.

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Women were notified that they can withdraw at any stage of the research: also they were assured that the information obtained during the study will be confidential and used for the research purpose only.

Field study of this work

Data collection took a period of six months from August 2020 till January 2021. The data were collected at three days of the week (Saturday, Monday, and Wednesday) from 9:30 am to 12:00 pm. The women were interviewed to fill the sheet after complete explanation of the purpose of the study and greeted her and asked for participation. Throughout the interview, relative information was recorded in the designed sheet depending upon the response of the participant. The time needed for finishing each interview ranged between 20-30 minutes according to women physical and mental readiness and desire of women to complete the sheet with me and after finishing the sheet, thank her about participation

Pilot study

Was carried out on 15 infected women with vaginal infection, it was done to test the study tools in terms of clarity and feasibility, and the time required to be conducted and to assess the degree of the studied women understanding of the questionnaire and acceptance to be involved in the study, to find out the possible problems and obstacles that might face the researcher and interfere with collection of data, and to estimate the time needed for data collection. Based on the results of the pilot study, all required modifications were done by adding or omission of some questions and changing the typing of some questions to be simpler and easier, the participant not included in the study.

Validity and reliability

Tools were reviewed by five experts in the field of Obstetrics and Gynecological Nursing to test its content validity. Modifications were done accordingly based on their judgment. Reliability was done by Cronbach's Alpha, the present study showed overall reliability of quality of life inventory (total) Alph Cronbach (.739 good **c**onsistency).

Statistical Analysis

Data entry and statistical analysis were done using SPSS 22.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations and medians for quantitative variables. The Cronbach alpha coefficient was calculated to assess the reliability of the developed tools through their internal consistency. Quantitative continuous data were compared using the non-parametric Mann-Whitney or Kruskal-Wallis tests. The Spearman rank correlation was used for assessment of the interrelationships among quantitative variables and ranked ones. Statistical significance was considered at p-value <0.05.

Significant of the study

- When p <0.05, it is statistically significant.
- When p>0.05, it is statistically insignificant

Results

Table 1 describes the demographic characteristics of studied women. The age ranged between 21 and 44 years, and the highest percentage of women 91, 3% were 21 years old with a mean±SD of 26.25 ± 4.0. As regards the educational level , more than two fifth 42,6%of women post graduated, as well as nearly one quarter 21,7%had basic primary–preparatory level of education .The same table also shows two third 67%of women were housewives ,and also the most women were married and had sufficient income 81,7% and 81,7%respectively. **Table (2):** Pertaining the risk factors for vaginal infection, the vaginal douching is the main risk factor,

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92,2% studied women were using vaginal douching, followed by previous vaginal infection80,9%, while four fifth 83.5% of studied women had used recent antibiotic. Meanwhile nearly one third of studied women had oral contraceptive methods and had used intra uterine devices Iud32, 1% and 33% respectively. As well as only, 9% had sexually transmitted diseases. **Table (3):** This table shows characteristics of vaginal discharges of studied women .Most of studied women 90.4% had non-offensive vaginal discharges, as well as four fifth had white color of vaginal discharges and thick white consistency of vaginal discharges 81, 7%, 80,0%respectively, however more than half of them 55.7% had heavy amount of vaginal discharges, and more than three quarter 76.5 %of studied women had discharges after 8-12 days of menstruation. **Table (4):** Clarified characteristics of vaginal discharges of studied women, this table presents that the majority of studied women had dysuria and burning sensation98.3%and 94,8% respectively, as well as most of studied women had vaginal soreness and dyspareunia89,6% and 85,8% respectively. 70% of studied women had itching/pruritus in genital area. However the majority of studied women hadn't take treatment for vaginal discharges and for any illness 96,5% and 91,3%respectively.Meanwhile four fifth 80% of studied women were sexually active and vaginal discharges bothering them and affect sexual relation. **Table (5):** This table clarifies that there was statistically significant relation between their bleeding between periods and physical functioning at p=.045. In addition to there was statistically significant relation between their dyspareunia and general heath at p=.047. **Table (6):** This table shows matrix correlation of HRQOL domains and their vaginal discharge characteristics. There was non-significant negative correlation between social functioning and their odor of the vaginal discharges fishy and the consistency of the vaginal discharges mucoid and the amount of vaginal discharges at p=-.217 and p=-.334 and p=-.190 respectively, and there was non-significant negative correlation between social functioning and dyspareunia at (p=-.188).

Discussion

The reproductive tract infection RTI or genital tract infection GTI is a global health problem which affects men, women, families and communities. Female alone have an estimated incidence of vaginitis of ten–twenty five percent. Vaginitis is one of the most prevalent infections among RTIs, especially among women. These infections threat the woman's health and may have severe consequences such as infertility, ectopic pregnancy, chronic pelvic pain, abortion and an increased risk of HIV transmission, and have many risk factors contributing to it, therefore, proper prevention and treatment of this infection are of great importance Parsapure, 2016. Vaginal Infections are a global health problem for women at reproductive age. These infections threat the women's health and have negative impacts on their quality of life QOL. Because of the personal nature of vaginal infections, they are often avoided. Despite the fact that the symptoms have a severe influence on the quality of life for the women who encounter them, vaginal infections have historically been a relatively underexplored subject and may have been seen as a bad problem Abdelnaem, 2019. Vaginal infection is an important women's health problem associated with a tendency of increasing prevalence worldwide. Early recognition of vaginal infections, initiating appropriate treatment and taking necessary precautions are essential in protecting and improving women's health. Nurses have the responsibility to educate patients related to various aspects about vaginal infection and keep themselves free from it Youness, 2017.Therefore, this present study aimed to assess the risk factors and quality of life in women diagnosed with vaginal infection, this aim is achieved through across-sectional design that answered the research questions about risk factors and quality of life among women diagnosed with vaginal infection. The finding of current study will be discussed under main five sections such as personal characteristics of women, knowledge about infection, quality of life among women with vaginal infection, relation between vaginal infection and quality of life .And final section reflected correlation between vaginal infection and quality of life. Women's socio-

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demographic characteristics play a great role in demonstrating risk factors associated with vaginal infections Chung, 2012. The present study showed that women age ranged between twenty –forty four years, the majority of the studied women had age twenty one years old and with a mean±SD 26.25 ± 4.0. This finding agrees partially with Hayat, 2015 who studied "Prevalence of Vaginal Infection and Associated Risk Health Behaviors among Women in Ismailia City, with a mean 27.97 ± 5.450. This study described that infection occurs at all ages especially at the age range from twenty to forty four years old which is similar to that reported with Bahram et al. 2009 who describe the difficulty in distinguishing for the age distribution patterns of vaginal infections due to various behavioral, physiological and immunological variable interactions. This indicates that vaginal infections affect women of all age. On the other hand, this is not accordance with Youness et al. 2018 study who studied "Effectiveness of planned educational program on vaginitis and its preventive measures on female knowledge, the mean age of studied women was 19.2±0.53 years. This variation may be due to difference in research design. The current study reported that more than half of studied women were married. These findings disagree with the study conducted by Abd El-Salam ,2018 who studied "The efficacy of learning package regarding vaginal infection and associated risk health behaviors among female", illustrated that seventy three percent were unmarried, this clarified that vaginal infection affect married and unmarried women. The current study reported that more than half of studied women were post graduated studies, and twenty five percent were secondary schooling, as well as two third housewives. In addition to most of them had sufficient income .This observation in the present study is partially similar to the study conducted by Hayat, 2015 illustrated that half of them secondary education with highest percentage being house wives, and one quarter of the women had low satisfactory socio- economic. The present study showed that the most common hazardous risk factor for vaginal infection was using vaginal douching: this study revealed that the highest percentages of studied women were using vaginal douches followed by history of vaginal infection and using antibiotic a lot; this study showed that the prevalence of previous vaginal infection was more than eighty percent. The findings of the current study in contrast with the study conducted by Youness et al., 2018 in Al-Fayoum University which revealed that the prevalence of previous vaginal infection "was seventy six percent was the main risk factor. Moreover, the finding of the current study in contrast with the study conducted by Khedr et al.,2015 in Mansoura University which revealed that the prevalence previous of vaginal infection among girls in the camp was fifty three percent was the main risk factor. This may be due to difference in sample size. As regarding characteristics of vaginal discharges of studied women, Candida signs are the most commonly reported symptoms of studied women followed by bacterial vaginosis signs, this study clarified that eighty percent of these women had non-offensive vaginal discharges, in addition to most of them had white color of vaginal discharges and thick white consistency of vaginal discharges respectively Candida signs, as well as more than half of them had heavy amount of vaginal discharges. The findings of the present study are partially in the line with the study conducted by Hamed, 2015 who studied "The impact of genital hygiene practices on the occurrence of vaginal infection and the development of a nursing fact sheet a prevention massage for vulnerable women" revealed that the white cheese like discharge was the most common Candida signs sixty five percent and four point eight percent from bacterial vaginosis. Also, the findings of the current study partially correspond with Emam et al., 2015who studied "Effect of vaginal discharge on women's quality of life" showed that, about forty eight percent thick white cheese like discharge Candida signs and nine point eight percent bacterial vaginosis. On the other hand, the findings of the current study are disagreed with Khedr NF et al., 2015 who revealed that, thirty two percent suffer from candidiasis signs and five point eight percent suffer from bacterial vaginosis. This may be due to variation in sample selection criteria. Regarding quality of life, this study showed that the infected women with vaginal infection were most likely to have effect on emotional well-being and role limitation due to physical problem with a mean ± SD

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62.1±11.5 and 59.3±16.8 respectively, as well as mean of Physical functioning (PF) for these studied women 51.7±17.4. The findings of the current study disagree with the results conducted by Mendling et al., 2011, who reported a stronger impact on mental health than on physical health using SF36, albeit to a somewhat lesser extent .These results come in agreement with Annosfie, 2017'How Vaginal Infections Impact Women's Everyday Life Women's Lived Experiences of Bacterial Vaginosis and Recurrent Vulvovaginal Candidiasis, according to this study, showed matrix correlation of HRQOL domains and their vaginal discharge characteristics. There was non-significant negative correlation between social functioning and their fishy odor of the vaginal discharges and the mucoid consistency of the vaginal discharges and the amount of vaginal discharges at p=-.217 and p=-.334 and p=-.190 respectively .In addition to there was non-significant negative correlation between their role limitation due to emotional health and frequency of vaginal discharges five-eight times at p=-.247among studied women. And there was non-significant negative correlation between social functioning and dyspareunia at p=-.188. The findings of the current study in agreement with Sameer et al., 2014 who studied "Impairment of quality of life in symptomatic reproductive tract infection and sexually transmitted infection" showed that, there was a significant difference between the domains as well as the total QOL score before 33.4±3.45 and after 56.07±3.31 intervention. So, QOL measures give more direct measure of the impact of the disease on daily life and this is more relevant in RTI/STIs where the condition is distressing physically, psychologically and treatment seeking is hindered by numerous factors which are predominantly social. Finally, these results emphasize the need to enhance health education efforts to improve women knowledge about vaginal infection in all age group partially at gynecological outpatient clinics as well as enhance early recognition of vaginal infection to take necessary precautions in protecting from it and encourage women to seek medical advice and take prescribed treatment, this will reflect on improving their quality of life.

Results

Table (1): Distribution of studied women (n=115) according to demographic characteristics

Demographic characteristics	Frequency	Percent
Age:		
21-	105	91.3
31-	7	6.1
≥40	3	2.6
Mean±SD	26.25± 4.0	
Rang	(21– 44)	
Marital status:		
Single	12	10.4
Married	94	81.7
Divorced	8	7.0
Widow	1	0.9
Education:		
Not read & write	5	4.3
Read/write	7	6.1
Basic[primary-preparatory]	25	21.7
Intermediate-secondary	29	25.2
University/postgraduate	49	42.6
Work:		
Working	38	33.0
Not Working/house wife	77	67.0

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Income:		
Sufficient	94	81.7
Insufficient	21	18.3
Mean±SD	30.92±4.42	

Table (2): Risk factors and medication use for infectious vaginitis among studied women(115)

Risk factors for infectious vaginitis	Frequency	Percent
Using vaginal douching		
Yes	106	92.2
No	9	7.8
Previous vaginal infection	93	80.9
STDS	1	0.9
Oral contraceptive use	37	32,1
Recent antibiotic use	96	83.5
Pregnancy	6	5,2
IUD	38	33

Table (3): Distribution of studied women (115) according to characteristics of vaginal discharges

Characteristics of vaginal discharges	Frequency	Percent
The odor of the vaginal discharges		
Non- offensive	104	90.4
Offensive	4	3.5
Fishy	7	6.1
The color of the vaginal discharges:		
Clear	13	11.3
White	94	81.7
Yellow	6	5.2
Brown	1	0.9
Green	1	0.9
The consistency of the vaginal discharges		
Thin	9	7.8
Thick white	92	80.0
Mucoid	14	`12.2
The amount of vaginal discharges		
Slight	51	44.3
Heavy	64	55.7
It occur after 8-16days of menstruation:		
Yes:	88	76.5
No:	27	23.5

Table (4): Distribution of studied women (115) according to characteristics of vaginal discharges

Characteristics of vaginalis charges	Frequency	Percent
Symptoms appear with vaginalis charges@		
Itching/pruritusingenital area	81	70.0
Vaginal Soreness	103	89.6

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Dyspareunia	98	85.2
Dysuria	113	98.3
Burning Sensation	109	94.8
vaginaldryness	64	55.7
Lower abdominal pain	38	33.0
Abnormal vaginal bleeding	17	14.8
Taking any treatment for vaginaldischarges Yes No	4 111	3.5 96.5
Currently taking treatment for any illness Yes No	10 105	8.7 91.3
Sexually active		
Yes	92	80.0
No	23	20.0
Vaginaldischarges bothering you and affects exualrelation Yes No	92 23	80.0 20.0

Table (5): Relations between participants' HRQOL domains related tovaginal infection and their Current gynecological and menstrual cycle complain

Current gynecological and menstrual cycle Complain	PF	RLPH	RLEH	E/F	EWB	SF	BP	GH
Heavy prolonged periods								
Yes	60	62	40	55	68	37	45	50
No	55	62	40	55	64	37	45	50
P –value	.498	.444	.699	.887	.614	.938	.432	.667
Bleeding between periods								
Yes	40	62	40	55	64	37	45	50
No	60	50	40	55	64	50	45	50
P –value	.045*	.084	.928	.540	.894	.256	.893	.935
Pelvic pain and pressure								
Yes	60	62	40	55	64	37	45	50
No	30	50	40	60	72	50	45	50
P –value	.210	.223	.886	.117	.115	.085	.562	.696
Low back pain								
Yes	60	62	40	55	64	37	45	50
No	60	50	0	60	68	50	77	50
P –value	.556	.486	.315	.370	.627	.481	.104	.779
Pain during intercourse								
Yes	60	62	40	55	64	37	45	50
No	57	62	40	55	66	37	45	55
P –value	.796	.516	.384	.435	.512	.095	.643	.047*
Current pregnancy								
Yes	50	50	0	50	64	37	45	50
No	60	62	40	55	64	50	45	50

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P –value	.386	.209	.165	.865	.768	.643	.714	.833
Sexually active								
Yes	60	62	40	55	64	37	45	50
No	50	62	40	55	68	37	45	50
P –value	.160	.883	.192	.227	.181	.155	.443	.444

Table (6): Correlation matrix of HRQOL domains scores and their vaginal discharge characteristics

Vaginal discharge characteristics	PF	RLPH	RLEH	E/F	EWB	SF	BP	GH
The odor of the vaginal	-.134	-.032	.177	.082	.022	-.217*	-.008	-.047
The color of the vaginaldischarges	-.106	-.043	.174	.060	.023	-.161	-.059	-.119
The consistency of thevaginal	-.122	-.157	.015	-.028	-.067	-	-.004	-.004
The amount of vaginaldischarges	-.112	-.011	.165	.043	-.021	-.190*	-.148	.105
Frequency of vaginal discharges[5-8times]	.006	.058	-.247**	.137	.093	-.209	-.161	-.075
Vaginal soreness	-	-.043	.124	-.021	-.127	-.175	-.021	.087
Dyspareunia	.110	-.005	-.043	-.150	-.087	-.188*	.059	-.051
Lower abdominal pain	-	-.006	-.444**	.124	.053	-.124	-	.076
Vaginaldryness	-	-.090	-.354**	.139	-.088	-.075	-	.132

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