



CODEN [USA]: IAJPBB

ISSN: 2349-7750

## INDO AMERICAN JOURNAL OF PHARMACEUTICAL SCIENCES

SJIF Impact Factor: 7.187

<http://doi.org/10.5281/zenodo.3997005>
Available online at: <http://www.iajps.com>

Research Article

### KNOWLEDGE, ATTITUDE, PERCEPTION OF WOMEN TOWARDS VAGINAL DISCHARGE

Hayat M Saleh Al-jumah <sup>1</sup>, Fatimah Abdulmajeed Al-Thonayan <sup>2</sup>, Esra Hassan Almasskin <sup>2</sup>,  
Alawyah Adnan Alshkhouri <sup>2</sup>, Ahlam Sulaiman Alhussain <sup>2</sup>, Zainab Bader Al-Khalaf <sup>3</sup>, Wala'a  
Naji Alabadi <sup>2</sup>, Etedal Mohammed Mukhtar Hawsawi <sup>2</sup>, Lujain Eid Alenzy <sup>2</sup>, Munirah Rashed  
Aldawsari <sup>2</sup>

<sup>1</sup>Obstetrics consultant, Head of department in QCH.

<sup>2</sup>Medical Student, Alfarabi College of Medicine, Alfarabi Colleges, Riyadh, Saudi Arabia.

<sup>3</sup>Medical student, Al Maarefa University- Riyadh, Saudi Arabia.

Article Received: June 2020

Accepted: July 2020

Published: August 2020

**Abstract:**

**Background:** Vaginal discharge is one of the most common complaints and reasons of gynecological consolation among women especially during reproductive age. Also, it represents a major problem for many women that affect their quality of life and cause anxiety and discomfort. **Objective:** This study aimed to determine the prevalence and risk factors of abnormal vaginal discharge among women in reproductive age as well as analyzing the knowledge, attitude, perception of women toward vaginal discharge in Saudi Arabia. **Methods:** A descriptive cross-sectional study was conducted in different regions of Saudi Arabia from the period of 1 April to 30 July 2020. The study population included all females who are sexually or non-sexually active complaining of vaginal discharge. Pre-testing of the questionnaire on 20 respondents, after which necessary changes were made, and the questionnaire was re-administered. Data was compiled and analyzed using statistical package for the social sciences (SPSS, version 16) and results were analyzed with frequencies and Chi-squared test as appropriate. P value was considered significant if <0.05. **Results:** a total of 4433 cases presented with abnormal vaginal discharge were examined during the period of study. Regarding knowledge, participants said that vaginal discharge usually smells in 23.9% of the participants and it was transparent in 66.4%, brownish in 0.6%, yellowish in 5.6% and whitish in 27.4%. 45.5% use daily towels, 41.4% use lotion for sensitive area, 91% wear cotton underwear, 26.2% use bath salts, and 70.3% use blades to remove hair in pubic region. 26.9% of participants think that all vaginal discharge is caused by a problem, 66.4% think that normal discharge color is transparent, 23.9% think that normal vaginal discharge has color, and 64.2% think that the time of vaginal discharge is usually before and after menstruation. There was a significant correlation between hygiene and presence of abnormal discharge as we found that the type of underwear usually used, the way to dry the area, using sprays or scented wipes for the area, using popular mixtures to take care of the area, using a lotion for the sensitive area and the way used in pubic hair removal affects directly the presence of abnormal vaginal discharge with P value = 0.001. **Conclusion:** The term vaginal discharge is used by public to describe any genital discomfort. Diagnosis of any disorder must be verified by physical and laboratory examination to differentiate abnormal from physiologic discharge and to determine diagnosis and treatment. Our findings show that it is important to orient the public females about sexual health and vaginal discharge. Efforts and medical awareness campaigns and conferences for women and girls to increase their knowledge of vaginal discharge should be carried out in Saudi Arabia.

**Key Words:** vaginal discharge, abnormal vaginal discharge, KAP of vaginal discharge, knowledge and attitude about vaginal discharge

**Corresponding author:**

**Fatimah Abdulmajeed Al-Thonayan,**  
Medical Student, Alfarabi College of Medicine,  
Alfarabi Colleges, Riyadh, Saudi Arabia.  
E-mail: [Fatimah.tt5@gmail.com](mailto:Fatimah.tt5@gmail.com).

QR code



Please cite this article in press Fatimah Abdulmajeed Al-Thonayan *et al*, **Knowledge, Attitude, Perception Of Women Towards Vaginal Discharge.**, *Indo Am. J. P. Sci*, 2020; 07(08).

**INTRODUCTION:**

Vaginal discharge is one of the most common complaints and reasons of gynecological consolation among women especially during reproductive age [1, 2]. Also, it represents a major problem for many women that affect their quality of life and cause anxiety and discomfort [3]. Vaginal discharge is fluid or mucus that comes out of the vagina under the influence of estrogen. It is made by the skin cells of the vagina and cervix [4].

Vaginal discharge may be either physiological or pathological. Physiological discharge is usually white or clear, thick and slightly odor. It contains bacteria and mucus that helps to protect the vagina against infections and provide lubrication[4]. Also, it varies in the amount, consistency and from one woman to another due to the hormonal fluctuation throughout the life time of female, such as during pregnancy, near ovulation, and in the week before the menstrual period[4,5]. A vaginal discharge that is heavier and thicker than usual and grey/white or yellow/green in color, mixed with blood, with a foul odor is considered to be a pathological vaginal discharge. It may be associated with itching, redness, Pain with intercourse or urination and Abdominal or pelvic pain [2, 3]. There are many causes of abnormal vaginal discharge most commonly are: bacterial vaginosis, candidiasis, Trichomonas vaginalis and foreign body such as, a forgotten tampon or condom [4, 5].

Moreover, many pathologies may contribute to abnormal vaginal Discharge like : vaginitis, cervicitis or cervical atopy[5]. In addition, Women who practice certain habits such as those who use douches and Feminine hygiene "sprays, powders, or rinses" every day, Bubble baths or other scented bath products, and Tight or restrictive synthetic clothing are more likely to develop Abnormal vaginal discharge. Therefore, explanation of the health practices and behaviors are very important which mainly affected by age and culture [3, 4].

Unfortunately, many women with abnormal vaginal discharge bear the problem silently and don't seek advice and treatment which may cause a significant impact on their reproductive ability, mental health and ability to work and to perform routine physical activities. The reason behind that is being shame and feeling embarrassed. Recently, studies show increase in the prevalence of reproductive tract infection and its complications among women due to Poor access to health care, poor knowledge and awareness [3].

There are a large number of pathogens that cause vaginal and cervical infection, therefore, diagnosing and identifying the infectious source of vaginal discharge is challenging [1]. A routine

gynecological history and examination as well as testing of the obtained vaginal specimen are the most accurate way of diagnosing and determining the cause of abnormal vaginal discharge[5]. Effective treatment of vaginal discharge is based on identification of causative organism and targeting the therapy against it [2]. Some condition like pregnancy make the management really challenging, so extra caution must be exhibited when managing pregnant women with pathological vaginal discharge [5].

A prospective study was conducted to analyze the knowledge, attitude and perception of women towards vaginal discharge reported that there was a direct relationship between knowledge attitude and perception about symptoms of VD and educational status of the patients was observed [6].

As far as we know, this is the first research of its type in the region; a previous case report done in 2012 about neglected intra-cervix bizarre foreign body in Jeddah, King Abdulaziz University reported that; women present with chronic recurrent vaginal discharge and infertility. She was treated empirically with antibiotic, but the symptoms did not resolve. On vaginal examination found that foreign body was inserted 13 years ago that cause the recurrent vaginal discharge and infertility [7]. In another research done in 2003, A Study talked about trichomoniasis among women with vaginal discharge in Jeddah city. The vaginal discharge were collected from women aged between 15-50 show prevalence rate of 0.7% were positive. The vaginal consistency was significant and other accompanied symptoms were insignificant [8].

**Objective:**

This study aimed to determine the prevalence and risk factors of abnormal vaginal discharge among women in reproductive age as well as analyzing the knowledge, attitude, perception of women toward vaginal discharge in Saudi Arabia.

**METHODOLOGY:**

A descriptive cross-sectional study was conducted in different regions of Saudi Arabia from the period of 1 April to 30 July 2020.

The study population included all females who are sexually or non-sexually active complaining of vaginal discharge.

Data was collected by random sampling technique by using an online pre-designed self-administered questionnaire distributed to target population via social media network. Information about the aim of study was given and questionnaire was answered voluntarily by each participant. Sociodemographic

and clinical data was obtained from participants after by filling out the questionnaire.

The structured questionnaire includes sociodemographic characters of participants such as (age, marital status, educational level, working status and financial status), as well as questions about the presence of vaginal discharge, its color, odor, viscosity, duration and its relationship to menstruation. Also there were questions about pregnancy status and if there is abnormal vaginal discharge during pregnancy. Questionnaire also includes questions about participant seeking medical behaviors and questions about diagnoses, treatment received and recurrence of infection.

The study was initially piloted on 20 respondents before the beginning of the study period to determine the applicability and adequacy of the questionnaire, further additional modifications were done after testing, and the questionnaire were re-administered.

Data was compiled and analyzed by using statistical package for the social sciences (SPSS, version 16) and results were analyzed with frequencies and Chi-squared test as appropriate. P value was considered statistically significant at <0.05.

Data were calculated by using sample size equation through the following formula ( $N = (Z\alpha)^2 \times ([p(1-p)]/d^2)$ )

Where:

n = estimated sample size.

Z $\alpha$  at 5% level of significance = 1.96

d = level of precision and is estimated to be 0.05

p = High awareness levels in two previous studies (30%).

Actual sample size = (Primary sample size  $\times$  design effect (estimated to be 1.5) considering target population less than 1000, and study power 95%.

#### **Ethical Consideration:**

An ethical approval was obtained from King Fahd Medical City to conduct this study. The questionnaire contains a brief introduction to explain the aim of the study to the participant women. Participants were informed that participation is completely voluntary. No names were recorded on the questionnaires. All questionnaires were kept safe.

#### **RESULTS:**

**(Table 1):** illustrate sociodemographic characteristics of the studied population as 44.8% of participants were 25 years or less, 26.3% were 26-35 years, 24.9% 36- 50 and only 4% 51 years or more. Regarding education; 75.5% of participants were highly educated (university or higher). 57.4% were married (2.3% of them married twice and 0.1% married three times), 3% widowed or divorced and 39.6% were single.

**(Table 2):** shows that; a total of 4433 cases presented with abnormal vaginal discharge were examined during the period of study. Regarding the age of menarche, 40.5% of participants had their first period at the age of 13-14 years, 38.5% at the age of 11-12 years, 14.2% at the age of 15-19% and 6.8% at the age of 8-10. 69.9% of the participants didn't seek the medical treatment. We found that vaginal discharge usually smells in 23.9% of the participants and it was transparent in 66.4%, brownish in 0.6%, yellowish in 5.6% and whitish in 27.4%.

Regarding knowledge and attitude about vaginal discharge; 45.5% use daily towels, 41.4% use lotion for sensitive area, 91% wear cotton underwear, 26.2% use bath salts, and 70.3% use blades to remove hair in pubic region. 26.9% of participants think that all vaginal discharge is caused by a problem, 66.4% think that normal discharge color is transparent, 23.9% think that normal vaginal discharge has color, and 64.2% think that the time of vaginal discharge is usually before and after menstruation.

**(Table 3):** There was a significant correlation between hygiene and presence of abnormal discharge as we found that the type of underwear usually used, the way to dry the area, using sprays or scented wipes for the area, using popular mixtures to take care of the area, using a lotion for the sensitive area and the way used in pubic hair removal affects directly the presence of abnormal vaginal discharge with P value = 0.001. We also found a statistically significant correlation between abnormal vaginal discharge and regularity of menstruation

**Table (1): Sociodemographic characteristics of the studied population (N=4433)**

	Frequency	Percent
<b>Age:</b>		
25 or less	1988	44.8
26 – 35	1164	26.3
36 – 50	1104	24.9
51 or more	177	4.0
<b>Educational level:</b>		
Uneducated	7	.2
Primary	23	.5
Intermediate	71	1.6
Secondary	984	22.2
University or higher	3348	75.5
<b>The standard of living:</b>		
Weak	40	.9
Average	1586	35.8
very good	1897	42.8
Excellent	910	20.5
<b>Social status:</b>		
Singles	1756	39.6
Married	2546	57.4
Divorced or widowed	131	3.0

**(N=2677)**

	Frequency	Percent
<b>how many times have you married:</b>		
1	2603	97.2
2	62	2.3
3	4	.1
4	3	.1
5	3	.1
6	2	.1
<b>do you have children:</b>		
Yes	2204	82.3
No	473	17.7
<b>is there another wife with the husband:</b>		
Yes	114	4.3
No	2563	95.7
<b>(N=2218)</b>		
<b>how many children:</b>		
1	431	19.4
2	499	22.5
3	472	21.3
4	331	14.9
5	248	11.2
6	127	5.7
7	64	2.9
8	33	1.5
9	8	.4
10	3	.1
11	2	.1

(N=4433)		
How old were you at the beginning of your period:		
8-10	298	6.8
11-12	1707	38.50
13-14	1799	40.50
15-19	629	14.2
Are menstruation regular:		
Yes	2678	60.4
No	527	11.9
Sometimes	1228	27.7
Have you ever used special pills to regulate your period:		
Yes	1012	22.8
No	3280	74.0
Sometimes	141	3.2
Do you use a lotion for the sensitive area:		
Yes	1837	41.4
No	2596	58.6
Do you use daily towels:		
Yes	2016	45.5
No	2417	54.5
Have you ever used sprays or scented wipes for the area:		
Yes	1049	23.7
No	3384	76.3
What kind of underwear do you usually wear:		
Polyster	199	4.5
cotton	4034	91.0
nylon	25	.6
Other than that	175	3.9
Have you ever used bath salts:		
Yes	1161	26.2
No	3272	73.8
Have you been using popular mixtures to take care of the area:		
Yes	737	16.6
No	3696	83.4
What is the water temperature while washing the area:		
cool	273	6.2
warm	3949	89.1
Hot	211	4.8
What is the method used to dry the area:		
I do not dry	323	7.3
Tissue paper	3572	80.6
Towel (paper)	352	7.9
Other than that	186	4.2
What is the method used to remove pubic hair:		
Blades	3117	70.3
Wax	409	9.2
Laser	907	20.5
Do you have any vaginal discharge:		
Yes	3249	73.3
No	1184	26.7
Do you think all vaginal discharge is caused by a problem:		
Yes	1194	26.9
No	3239	73.1
What do you think is the natural color of vaginal discharge:		

white	1216	27.4
yellow	247	5.6
brown	25	.6
transparent	2945	66.4
Are natural vaginal discharge smell:		
Yes	1060	23.9
No	3373	76.1
Usually, what is the time of vaginal discharge:		
After menstruation	679	15.3
Before menstruation	908	20.5
Before and after menstruation	2846	64.2
Do you have any changes in secretions:		
Odor	331	7.5
the color	600	13.5
Color and smell	1048	23.6
There are no changes	2454	55.4
Do these secretions accompany any of the following:		
Lower abdominal pain	610	13.8
Lower back pain	714	16.1
Itching	1256	28.3
redness	282	6.4
Burning during urination	557	12.6
None of the above	2547	57.4
Do these vaginal discharge affect your daily activity:		
Yes	732	16.5
No	3701	83.5
What is the degree of activity you do during the day:		
light	657	14.8
Average	3447	77.8
Intense	329	7.4
Have you ever used contraceptives:		
Yes	1490	33.6
No	2943	66.4
If yes , mention it:		
Pills	1096	73.6
IUD	398	26.7
Patches	64	4.2
Others	430	28.9
Have you ever had a Pap smear:		
Yes	1245	28.1
No	3188	71.9
Have you ever been diagnosed with cervical cancer:		
Yes	23	.5
No	4410	99.5
Has a family member ever been diagnosed with cervical cancer:		
Yes	151	3.4
No	4282	96.6
Have you ever been diagnosed with PCOS:		
Yes	645	14.5
No	3788	85.5
Have you ever been diagnosed with hypothyroidism or increased thyroid activity:		
Idle	287	6.5
Activity	87	2.0
The diagnosis was not made	4059	91.6
Do you suffer from diabetes:		
Yes	157	3.5
No	4276	96.5

Do you suffer from hormone disorder:		
Yes	671	15.1
No	3762	84.9
Have you been diagnosed with a sexually transmitted infection:		
Yes	147	3.3
No	4286	96.7
Do you follow a diet:		
Yes	937	21.1
No	3496	78.9
Have you gone to the doctor with a complaint of strange secretions before:		
Yes	1333	30.1
No	3100	70.0
If yes , were you diagnosed:		
Yes	1239	92.9
No	94	7.1
Did you receive any treatment for this:		
Yes	1242	93.2
No	91	6.8
Have you improved with treatment:		
Yes	1120	90.2
No	122	9.8
Was the complaint repeated again after the treatment ended:		



color of vaginal discharge	yellow	0	2	6	52	187	247
		0.0%	8.7%	8.5%	5.3%	5.6%	5.6%
	brouwn	0	0	1	4	20	25
		0.0%	0.0%	1.4%	0.4%	0.6%	0.6%
	transparent	6	10	47	624	2258	2945
		85.7%	43.5%	66.2%	63.4%	67.4%	66.4%

		Marital Stauas			Total (N=4433)	P value
		Singles (N=1756)	Married (N=2546)	Divorced or widowed (N=131)		
Are menstruation regular	Yes	880	1715	83	2678	0.0001
		50.1%	67.4%	63.4%	60.4%	
	No	262	256	9	527	
		14.9%	10.1%	6.9%	11.9%	
Sometimes	614	575	39	1228		
	35.0%	22.6%	29.8%	27.7%		
Have you ever used special pills to regulate your period	Yes	306	662	44	1012	0.0001
		17.4%	26.0%	33.6%	22.8%	
	No	1420	1779	81	3280	
		80.9%	69.9%	61.8%	74.0%	
Sometimes	30	105	6	141		
	1.7%	4.1%	4.6%	3.2%		
Do you use a lotion for the sensitive area	Yes	580	1191	66	1837	0.0001
		33.0%	46.8%	50.4%	41.4%	
	No	1176	1355	65	2596	
		67.0%	53.2%	49.6%	58.6%	
Do you use daily towels	Yes	791	1162	63	2016	0.771
		45.0%	45.6%	48.1%	45.5%	
	No	965	1384	68	2417	
		55.0%	54.4%	51.9%	54.5%	
Have you ever used sprays or scented wipes for the area	Yes	311	703	35	1049	0.0001
		17.7%	27.6%	26.7%	23.7%	
	No	1445	1843	96	3384	
		82.3%	72.4%	73.3%	76.3%	
Have you been using popular mixtures to take care of the area	Yes	153	548	36	737	0.0001
		8.7%	21.5%	27.5%	16.6%	
	No	1603	1998	95	3696	

		91.3%	78.5%	72.5%	83.4%	
What is the method used to remove pubic hair	Blades	1328	1692	97	3117	0.0001
		75.6%	66.5%	74.0%	70.3%	
	wax	55	344	10	409	
		3.1%	13.5%	7.6%	9.2%	
	Laser	373	510	24	907	
21.2%		20.0%	18.3%	20.5%		
Do you have any vaginal discharge	Yes	1445	1702	102	3249	0.0001
		82.3%	66.8%	77.9%	73.3%	
	No	311	844	29	1184	
		17.7%	33.2%	22.1%	26.7%	
Do you think all vaginal discharge is caused by a problem	Yes	391	762	41	1194	0.0001
		22.3%	29.9%	31.3%	26.9%	
	No	1365	1784	90	3239	
		77.7%	70.1%	68.7%	73.1%	
What do you think is the natural color of vaginal discharge	white	533	648	35	1216	0.02
		30.4%	25.5%	26.7%	27.4%	
	yellow	86	151	10	247	
		4.9%	5.9%	7.6%	5.6%	
	brown	11	13	1	25	
		0.6%	0.5%	0.8%	0.6%	
	transparent	1126	1734	85	2945	
64.1%		68.1%	64.9%	66.4%		
Are natural vaginal discharge smell	Yes	560	467	33	1060	0.0001
		31.9%	18.3%	25.2%	23.9%	
	No	1196	2079	98	3373	
		68.1%	81.7%	74.8%	76.1%	
Do you have any changes in exudate	Odor	124	188	19	331	0.004
		7.1%	7.4%	14.5%	7.5%	
	the color	241	349	10	600	
		13.7%	13.7%	7.6%	13.5%	
	Color and smell	433	575	40	1048	
		24.7%	22.6%	30.5%	23.6%	
	There are no changes	958	1434	62	2454	
		54.6%	56.3%	47.3%	55.4%	

### DISCUSSION:

Vaginal discharge is a common health problem among women in the reproductive age group. Vaginal discharge can be either physiological or pathological in origin and it is difficult to know what proportion of discharges belong to either category. Vaginal discharge can also be asymptomatic or symptomatic, whether it is; it's usually neglected by women making the diagnosis more difficult.

This study aimed to determine the prevalence and risk factors of abnormal vaginal discharge among women in reproductive age as well as analyzing the knowledge, attitude, perception of women toward vaginal discharge in Saudi Arabia.

A total of 4433 cases presented with abnormal vaginal discharge were examined during the period of study. The majority of patients (44.8%) were less than 25 years. This is in contrast with the results found by Swetha Venugopal. *et al.* [9]. They reported that, among the 100 cases with abnormal vaginal discharge, majority of the patients were in the age group 26–35 years (34%) because they belong to the sexually active age group. Another study by Indira Guntoory. *et al* found that, the prevalence of vaginal discharge 28.99% [102]. Its prevalence was found to be more in the younger age group, illiterate, women belonging to lower socioeconomic status and those who were married at less than 18 years of age. In another study, the peak age of vaginal discharge and *G. vaginalis* was 25-34

years [11], similar to the findings of Chowdhury *et al.*[12] No statistically significant association was found between age and infection which is also like the results of Swetha Venugopal. *et al.* [9] who also found no statistically significant correlation between age and vaginal discharge. This is in contrast to other studies that showed marked increase in the prevalence of bacterial vaginosis with increasing age.[13]

In our study only 0.2% of the participants were none educated and 60.4% of them were still married or was married. This is unlike Joharah M. Al Quaiz's [11], the non-educated women were 34% and the married women were 93%.

In our study the prevalence of vaginal discharge was 73.3% which is a high prevalence than the results found in another similar study in in Cairo and Mania cities in Egypt, they found that the prevalence of vaginal discharge was 3.1% [14].

In another study done in Srilanka, more than half of the study participants reported experiencing excessive vaginal discharge in the present study [15]. It was found that 24.6% had presented with vaginal discharge in a similar community [16]. Oliveira *et al.* stated that out of women who complained about abnormal vaginal discharge, less than 25% had pathological discharge [17]. In contrast, another study stated that from 6% who were not reporting excessive vaginal discharge, the physician found moderate or substantial discharge [18]. Although vaginal discharge was reported to be an indication to vaginal infection and it was emphasized in Zurayk's that discharge itself is not a good predictor but highlighted the necessity to elicit further information on characteristics of the discharge and the women's perception of its abnormality [18]. But, in contrast, it is stated that vaginal discharge is a good predictor to diagnose reproductive tract infections [19]. Therefore seeking the characteristics of the discharge is very important to detect the presence of vaginal infection or not. Thus we asked the participants if the discharge smells or has color or not. We found that vaginal discharge usually smells in 23.9% of the participants and it was transparent in 66.4%, brownish in 0.6%, yellowish in 5.6% and whitish in 27.4%.

In a study conducted in poor urban communities in Mumbai, India it was found that majority of women believe that vaginal discharge is an unavoidable and a natural consequence of womanhood [20]. In our study 73.1% of the participants thought that vaginal discharge is normally exist and 26.9% thought it is caused by problem. In another study among women living in the estate community, women delayed treatment thinking that any type of vaginal discharge is normal [15].

In our study, 69.9% of the participants didn't seek the medical treatment. It also has been reported in another study that women have not taken treatment from a medical practitioner due to feeling uncomfortable in discussing the condition with a male doctor. Similar results were reported from other studies where women were reluctant to seek treatment because of cultural inhibitions and feeling ashamed in consulting a male doctor [21, 22]. In contrast, women in United States reported that most women consulted medical advice within one week of onset of symptoms and especially, over half of these women were comfortable in consulting male health care providers which is also refers to the culture of the women [23].

Regarding the age of menarche, 40.5% of our participants had their first period at the age of 13-14 years, 38.5% at the age of 11-12 years, 14.2% at the age of 15-19% and 6.8% at the age of 8-10. In another study shows a significant decline in the age of menarche among Saudi women over the past 20 years (13.05 years now compared to 13.22 years of age 20 years ago) and this is within the expected range as a decline of about 4 months per decade is expected [24].

However, the age at menarche in Saudi Arabia is still greater than in the North American countries and most European countries [25, 26] but is comparable to that found in most Asian studies [27]. This may reflect genetic factors in addition to environmental factors. It was thought that age of menarche may affect the hormonal regularity in the female and thus affects the presence and characters of the vaginal discharge [28], and we also found a statistically significant correlation between abnormal vaginal discharge and regularity of menstruation.

In our study we detected a significant correlation between hygiene and presence of abnormal discharge as we found that the type of underwear usually used, the way to dry the area, using sprays or scented wipes for the area, using popular mixtures to take care of the area, using a lotion for the sensitive area and the way used in pubic hair removal affects directly the presence of abnormal vaginal discharge with P value = 0.001.

### CONCLUSION:

The term vaginal discharge is used by public to describe any genital discomfort. Diagnosis of any disorder must be verified by physical and laboratory examination to differentiate abnormal from physiologic discharge and to determine diagnosis and treatment. Our findings show that it is important to orient the public females about sexual health and vaginal discharge. Efforts and medical awareness campaigns and conferences for women and girls to

increase their knowledge of vaginal discharge should be carried out in Saudi Arabia.

#### Limitations:

For convenience, the researcher has chosen the population.

Shortage of time and resources are important limitations

#### Service:

The researcher hopes to increase the Raise of awareness and knowledge of mothers about puberty signs among their children.

#### REFERENCES:

1. Sivaranjini, R et al. "Spectrum of vaginal discharge in a tertiary care setting." *Tropical parasitology* vol. 3,2 (2013): 135-9. doi:10.4103/2229-5070.122140
2. Meena, Veena, and Charu Lata Bansal. "Study to Evaluate Targeted Management and Syndromic Management in Women Presenting with Abnormal Vaginal Discharge." *Journal of obstetrics and gynaecology of India* vol. 66,Suppl 1 (2016): 534-40. doi:10.1007/s13224-016-0879-x
3. Khedr, N. F., M. Elmashad, H. A., & Al-Wehedy, 2. (2015). Vaginal Secretions among Students in the Egyptian Universities: Prevalence, Knowledge and Practices. *World Journal of Nursing Sciences*, 68-75. doi:10.5829/idosi.wjns.2015.1.3.11147
4. Sobel, J. D., MD. (2019, June 20). Vaginal discharge in adult women (Beyond theBasics). Retrieved June 26, 2020.
5. Rice, A., Elwerdany, M., Hadoura, E., & Mahmood, T. (2016). Vaginal discharge. *Obstetrics, Gynaecology & Reproductive Medicine*, 26(11), 317-323. doi:10.1016/j.ogrm.2016.08.002
6. Varghese, Shiny & Kour, Gagandeep & Chacko, Joffi & Rathi, Juhi & Dhar, Tapasya. (2017). Knowledge, attitude and practices of women towards vaginal discharge. *International Journal of Advances in Medicine*. 4. 188. 10.18203/2349-3933.ijam20170109.
7. Alzanbagi, Najia A et al. "Trichomoniasis among women with vaginal discharge in Jeddah city, Saudi Arabia." *Journal of the Egyptian Society of Parasitology* vol. 35,3 (2005): 1071-80.
8. Abduljabbar, Hassan S, and Majd A Sbenati. "Neglected intra-cervical bizarre foreign object." *Saudi medical journal* vol. 33,12 (2012): 1343-5.
9. Swetha Venugopal. Et al. Epidemiology and clinico-investigative study of organisms causing vaginal discharge. *Indian J Sex Transm Dis AIDS*. 2017 Jan-Jun; 38(1): 69–75.
10. Indira Guntoory. et al. Prevalence and sociodemographic correlates of vaginal discharge among married women of reproductive age group at a teaching hospital. October 2017 with 24 Reads.
11. Joharah M. Al Quaiz. Patients with Vaginal Discharge: A Survey in a University Primary Care Clinic in Riyadh City. Joharah M. Al Quaiz. Published Online:1 May 2000
12. Chowdhury MN, Jabbar FA, Cambal AM. "Isolation of Gardnerella vaginalis from high vaginal swabs" . *Trop Geogr Med*. 1985; 37:328–33.
13. Moi H. "Prevalence of bacterial vaginosis and its association with genital infections, inflammations and contraceptive methods in women attending sexually transmitted disease and primary health clinics" . *Int J Sex Transmit Dis AIDS*. 1990; 1:86-94.
14. Atef Hussein HUSSEIN, Prevalence, Clinical Criteria and Sociodemographic Predictors of Trichomonas vaginalis Infection in Suspected Egyptian Women, Using Direct Diagnostic Techniques, *Iran J Parasitol*. 2015 Jul-Sep; 10(3): 432–440.
15. Mudiyansele Prasanthi Sumudrika Ilankoon. Et al. Women's Knowledge and Experience of Abnormal Vaginal Discharge Living in Estates in Colombo District, Sri Lanka. *International Journal of Women's Health and Reproduction Sciences* Vol. 5, No. 2, April 2017, 90–96.
16. Chaudhary V, Kumar R, Agrawal VK, Singh A, Narula R, Sharma M. Prevalence and determinants of vaginal discharge among women of reproductive age group in tertiary care hospital of Northern India. *Natl J Community Med*. 2012;3(4):661-665.
17. Oliveira FA, Pflieger V, Lang K, Heukelbach J, Miralles I, Fraga F, et al. Sexually transmitted infections, bacterial vaginosis, and candidiasis in women of reproductive age in rural Northeast Brazil: a population-based study. *Mem Inst Oswaldo Cruz*. 2007;102(6):751-756. doi:10.1590/S0074- 02762007000600015.
18. Zurayk H, Khattab H, Younis N, Kamal O, el-Helw M. Comparing women's reports with medical diagnoses of reproductive morbidity conditions in rural Egypt. *Stud Fam Plann*. 1995;26(1):14-21.
19. Rabi K, Adewunmi A, Akinlusi FM, Akinola OI. Female reproductive tract infections: understandings and care seeking behaviour among women of reproductive age in Lagos, Nigeria. *BMC Womens Health*. 2010;10:8. doi:10.1186/1472-6874-10-8.
20. Kostick KM, Schensul SL, Jadhav K, Singh R, Bavadekar A, Saggurti N. Treatment seeking, vaginal discharge and psychosocial distress among women in urban Mumbai. *Cult Med*

- Psychiatry. 2010;34(3):529-547. doi:10.1007/s11013-010-9185-8.
21. Bhatti LI, Fikree FF. Health-seeking behavior of Karachi women with reproductive tract infections. *Social Science Med* 2002;54(1):105-117.
  22. Malta M, Bastos F, Strathdee S, Cunningham S, Pilotto J, Kerrigan D. Knowledge, perceived stigma, and care-seeking experiences for sexually transmitted infections: a qualitative study from the perspective of public clinic attendees in Rio de Janeiro, Brazil. *BMC Public Health*. 2007;7:18.
  23. Payne SC, Cromer PR, Stanek MK, Palmer AA. Evidence of African-American women's frustrations with chronic recurrent bacterial vaginosis. *J Am Acad Nurse Pract*. 2010; 22(2):101-108. doi:10.1111/j.1745-7599.2009.00474.x.
  24. Tanner JM. A history of the study of human growth. Cambridge, England: Cambridge University Press; 1981. [Google Scholar]
  25. Chumlea W, Schubert CM, Roche AF, et al. Age at menarche and racial comparisons in U. S. girls. *Paediatr*. 2003;111(1):110-113. [PubMed] [Google Scholar]
  26. Whincup PH, Gilg JA, Odoki K, Taylor SJC, Cook DG. Age of menarche in contemporary British teen ages: Survey of girls born between 1982 and 1986. *BMJ*. 2001;322(7294):1095-1096.
  27. Ayatollahi SMT, Dowlatabadi E, Ayatollahi SAR. Age at menarche in Iran. *Ann Hum Biol*. 2002;29(4):355-362.
  28. Zainab A. Babay. Et al. Age at menarche and the reproductive performance of Saudi women, *Ann Saudi Med*. 2004 Sep-Oct; 24(5): 354-356.