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Assessment of Pregnant Women's knowledge about Vaginal Yeast Infection in Woman's Health Hospital, Assuit University

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Abstract:
Background: Vaginal yeast infection is uncomfortable for the mother and can pass to the fetus during delivery, leading to maternal and neonatal complications. Vaginitis is more common and the risk of recurrence is higher during pregnancy. **Aim:** To assess woman's knowledge of vaginal yeast infection among pregnant women. **Methods:** Descriptive cross sectional design was used in this study. **Setting:** This study conducted at the out patient's antenatal clinics of Woman's Health Hospital, Assuit University. **Sample:** A sample of 370 pregnant women was included in the study. **Tool** a structured interviewing questionnaire used to assess women's knowledge about yeast infection during pregnancy, **part I** consist from demographic, obstetrical and family planning data, **part II** to assess women's knowledge about yeast infection. **Results:** The current study findings illustrated that more than half (56.5%) of the studied women had moderate level of knowledge about vaginal yeast infection. **Conclusion**: More than two third of the studied pregnant women had moderate and poor level of knowledge regarding yeast infection. **Recommendations:** Guidance and health education are important for pregnant women, to improve their knowledge regarding yeast infection.

Keywords: Pregnant Women, & Vaginal Yeast Infection.

Introduction:
Vulvovaginal candidiasis (VVC), also known as a yeast infection, is a common gynecologic illness that affects three out of every four women at some point in their lives.

Over 40% of impacted women will experience two or more VVC episodes. in the life **(Sasani, et al ,2021)** . Most episodes of symptomatic vulvovaginal candidiasis (VVC) occur during the second and third trimesters of pregnancy**. (Disha, 2021)**

An inflammation of the vagina caused by opportunistic yeast of the genus candida, primarily candida albicans, is referred to as a vaginal yeast infection. **(Abd-Rabo et al., 2022)**. It is also called yeast vaginitis or vaginal candidiasis, which is a common problem in women. Yeast infections are common in pregnancy and can cause extensive inflammation, which could contribute to adverse perinatal outcomes. Vaginal infections have been linked to major pregnancy outcomes and complications, including low birth weight, premature delivery, post-hysterectomy infection, and rupture of the membrane,and increase chance to miscarriage **(Christopher et al., 2022)**.

Vaginal inflammation, or vaginaitis, is characterized by a range of symptoms, including burning, irritation, itching in the vulovagina, abnormal discharge from the vagina, and dyspareunia. Because pregnancy is related with physiological changes, vaginal infections are more likely to occur during pregnancy. Pregnancy outcomes are negatively impacted by vaginal infections, which are also linked to a higher risk of perinatal and neonatal morbidity. **(Rahatgaonkar,etal.2022)**

Vaginal yeast infections can cause burning, itchiness, and discomfort, redness and swelling in the vulva and vagina; pain or burning sensation during urination or sexual intercourse; vaginal soreness and rash; as well as thick, white, odorless, cottage cheese-like vaginal discharge.

Untreated Candidiasis may result in widespread redness; swelling and itching that may lead to tears, or sores. It may also lead to preterm birth and low birth weight as well as it can pass to the fetal mouth or diaper area during delivery.
(Johnson, 2021; Mayo Clinic Staff, 2021)

Vaginitis is more common and the risk of recurrence is higher during pregnancy. This may be due to higher level of estrogen in pregnancy which increases the yeast cells' adherence to the vaginal mucosa, increasing a woman's risk of developing a yeast infection. Women with vaginitis during pregnancy have the chance of having an early labor and delivery**. (Yadav, et al .2022)**

Nurses and midwives must have an evidence-based education that enables them to meet changing health-care needs, working both on their own and in teams with other professionals along the entire continuum of

health and illness. In addition, their work needs to be systematically evaluated to show its efficiency and effectiveness, and they need to be involved in decision-making for health policy, for which preparation must begin in the initial education program. **(Wakefield, 2021) .**

The nurse's main responsibility in treating vaginal infections is to educate patients about health issues, help them change harmful habits, and stop infections from happening in the first place and from coming back, all of which will enhance their quality of life**. (Rashad, et al 2022)**

Significance of the study

Vaginal infection, which has a worldwide distribution and constitutes a health problem due to its high incidence and health consequences. These infections have increased in recent years, since they went from having a prevalence of less than 5-10 % to 7-20% of cases per year. **(Abdelaziz, et al 2021)**

Vaginitis is very common, especially in developing countries such as Egypt **(Abbas, et al. 2016)**. Pregnant females were more common 60% **(Hassan et al 2020)** .Vulvovaginal candidiasis (VVC) is affecting 3 out of 4 women in their lifetimes.More than 40% of affected women will have 2 or more VVC episodes. **(Sasani, et al, 2021)**.

Vaginal candidiasis is a common issue for expectant mothers. 94% of pregnant women were unaware that candidemiasis was a disease, and 83% of respondents thought there was no strong reason to treat the condition, and 86% did not think it had any major clinical significance**. (Foessleitner, et al. (2021).**

Vaginal yeast infection is uncomfortable for the mother and can pass to the fetus during delivery, leading to a higher risk of maternal and neonatal complications **(Bellefonds, 2021)**.

Aim of the study:

To assess of Pregnant Women's knowledge about Vaginal Yeast Infection.

Research Question:

What is the level of women knowledge about vaginal yeast infection during pregnancy ?

Subject and Method:

Technical design:

Research design: Descriptive cross sectional design was used for conducting this study.

Setting: The study was conducted at the out patient's antenatal clinics of Woman's Health Hospital, Assuit University.

Subjects: Sample Type: A convenience sample was recruited for this study.

Sample size: A sample of 370 pregnant women was included in the study. This was calculated based Herbert Arkin equation as following.

$$n = \frac{p(1-p)}{(SE \div t) + [p(1-p) \div N]}$$

N (population) = 11252
t = 1.96
SE =0.05
P =0.50
n= 370 pregnant women

Tool of data collection:

The following instruments were used to collect data:

Tool: - A structured interviewing questionnaire. This tool was designed and utilized by the researcher based on literature review and consulting expertise in this area, it was structured to include the following parts:

Part (1): Sociodemographic traits including age, education level, occupation, and place of residence.

Part (2): Obstetrical characteristics such as, number of gravidity, parity, abortions and No. of living children, complications related to previous deliveries & its mode. In addition to duration of current pregnancy, presence of current pregnancy complication.

Part (3): Family planning history as type of previous contraceptive method used , duration of use, cause of termination, and complications while using.

Part (4): knowledge about vaginal yeast infection data:

It involved (5 open ended questions) related to definition, causes, types, signs and symptoms, and characters of vaginal discharge, there answer evaluated by the researcher. Also women asked for their sources of knowledge .

Scoring system:

Three points were awarded for a correct and complete answer to each question, two points for a correct and incomplete answer, and one point for an incorrect and don't know. The knowledge total was 15, which was computed and categorized as follows:

- Good knowledge if the score was > 75%(11 points)
- Moderate knowledge If the score between 50-75% (7-11 points)
- Poor knowledge if the score < 50% (7 points) **(Abdelnaem, 2019)**

Tools Validity:

A panel of three experts from the Department of Obstetrics and Gynecological Nursing at the Faculty of Nursing, Assiut University, examined the study's instruments to ensure that they accurately measured the intended outcomes and tested the instruments' content validity. The tools were altered in accordance with the panel's recommendations about sentence structure, topic appropriateness, and item order.

Tools Reliability:

Reliability the researcher used for instruments to assess the instruments' internal consistency. To

evaluate reliability, the Cranach's alpha test was employed. Reliability items devoid of scale and analyses found in the SPSS program were used to measure it.It was reported as 0.721.

Operational design:

The design included a description of the technique, filing work, and preparatory phase for the pilot research.

Preparatory phase:

The researcher created the current tools after evaluating relevant national and international studies in the literature. This was carried out by consulting a textbook, papers, and important publications. The instruments were created using this literature and a standard scale, and obstetric and gynecological specialists validated them.

Pilot study:

Following questionnaire preparation,10% (37) of pregnant women participated in a pre-test to confirm the results. Tool clarity and the approximate amount of time required to collect data from the women under study. Since there were no significant changes made to the study instruments, the women who were part of the pilot study were also included in the overall study sample.

Field work:

The study's data gathering period was approximately six months, commencing in early January 2023 and ending in early June 2023. It included the following:

Procedures:

- An official letters from the Dean of Faculty of Nursing, Assuit University directed to the responsible authorities of Woman's Health Hospital to take their permission to collect data after explaining the purpose of the study.
- The researcher explained nature and purpose of the study to each pregnant woman, and obtained her informed consent to participate in the study.
- The study took place 3 days per week from 9 to1 pm.
- The researcher interviewed the women at separate room of antenatal outpatients' clinics.
- After obtaining woman's informed consent, the researcher asked women about data in the questionnaire as socoi-demographic characteristics, obstetric characteristics, and family planning history. In addition to asked women about questions regarding knowledge about vaginal yeast infection, and knowledge about self-care practices to prevent vaginal yeast infection .
- Also the researcher asked the pregnant women to fill practices of self-care that if she performed her answered done and not done if not performed.
- The answers after that were evaluated by the researcher based on model answer to determine its competence and correction.
- The average time for interviewing of each woman was about 20-25 minutes depending on the response of women.
- The researcher provided women by guided instruction according to their needs.
- After finishing, the researcher provided the women with a Arabic bourchore about vaginal yeast infection that covered all items included in the questionnaire (definition, causes, sings, risk factors of vaginal infection and practices for prevention yeast infection).

Administrative design:

- The director of Assuit University's Woman's Health Hospital granted formal authorization.
- Additionally, the Assuit University Faculty of Nursing's ethics committee has approved it.
- Each pregnant participant gave their informed oral consent before to being included in the study sample and after being given a concise and understandable description of the study's purpose.
- A concise and straightforward explanation of the study's purpose and anticipated results was provided.
- -Every participant was made aware of her freedom to leave the study whenever she pleased. .
- The complete sample had no discomfort or injury as a result of the study's nature.
- Privacy and confidentiality were taken into account with reference to the information gathered

Ethical consideration:

For each recruited subject the following issues will be considered:

1. The faculty of nursing's Ethics Committee will approve the research proposal .
2. The study would adhere to standard ethical guidelines for clinical research. .
3. After outlining the nature and goals of the study, mothers who are ready to participate will give their oral consent
4. Anonymity and confidentiality will be guaranteed.
5. Mother is free to decline participation in the study or to leave at any moment, for any reason.
6. Mothers privacy will be considered during the collection of data.

Statistical analysis:

The Statistical Package for Social Sciences (SPSS) version 26 was used to arrange, classify, code, tabulate, and analyze the data that had been gathered. Numbers, percentages, averages, standard deviation, and other statistical measures were utilized to portray the data in tables and figures. The Pearson test was employed to determine whether two qualitative variables were related. For statistical significance, a P-value of < 0.05 was used.

Results:

Table (1): Distribution of the studied women according to their personal data

Personal data	N (370)	%
Mother's Age		
▪ <25 years old	140	37.8
▪ 25-35 years	196	**53.0**
▪ More than 35 years	34	9.2
Mean±SD	**27.37±5.79**	
Educational level of mother:		
▪ Illiterate	28	7.6
▪ Read and write	54	14.5
▪ Preparatory	31	8.4
▪ Secondary	189	**51.1**
▪ University	68	18.4
Mother's occupation:		
House wife	253	**68.4**
▪ Employed	117	31.6
Residence:		
▪ Rural	188	**50.8**
▪ Urban	182	49.2

Table (2): Distribution of the studied women according to their obstetrical history

Obstetrical history	N (370)	%
No. of gravidity:		
▪ Primi gravida	40	10.8
▪ 2 – 4	317	**85.7**
▪ Grand multi gravida	13	3.5
No. of parity:		
▪ Non	46	12.5
▪ 1 – 4	281	**75.9**
▪ Grand multi parity	43	11.6
No. of abortion:		
▪ Non	303	81.9
▪ 1 – 2	67	18.1
Complications related to previous deliveries:		
▪ Present	75	20.3
▪ Absent	295	**79.7**
Type of complication:	N(75)	
▪ Post-partum hemorrhage	17	22.7
▪ Puerperal sepsis	30	**40.0**
▪ Perineal tears	28	37.3
No. of living children:	(n=330)	
▪ Non	7	2.2
▪ 1- 2 child	221	**66.9**
▪ 3 or more child	102	30.9

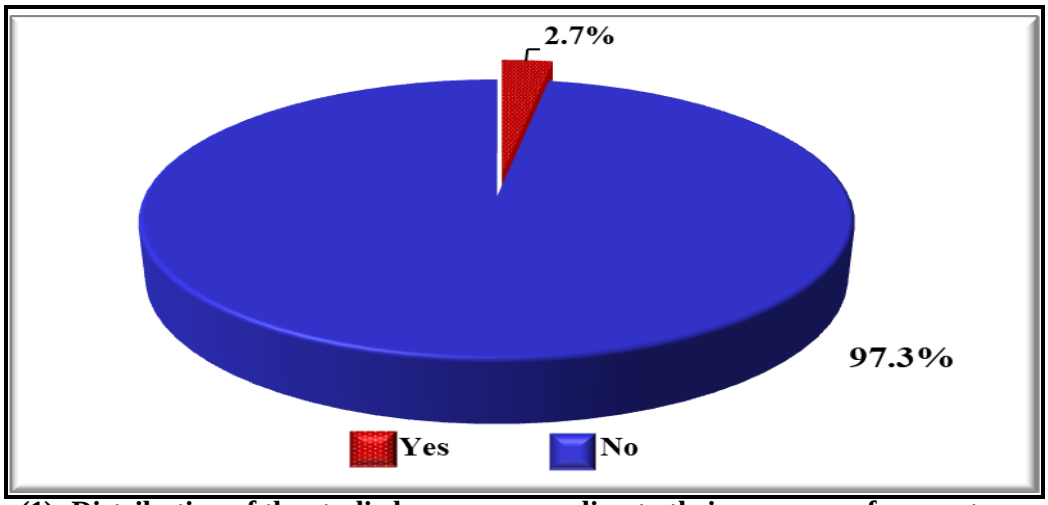

Figure (1): Distribution of the studied women according to their presence of current pregnancy complications (N=370)

Table (3): Distribution of the studied women according to their family planning history

Family planning history	N (370)	%
Type of previous contraceptive method		
▪ Not used	135	36.5
▪ Pills	144	**38.9**
▪ IUDs	71	19.2
▪ Norplant	6	1.6
▪ Depo-prevera	14	3.8
Duration of use		
▪ < 2 years	46	19.5
▪ 2-4 years	183	**77.9**
▪ > 4 years	6	2.6
Duration of use (Mean ±SD):	**2.29±0.93**	
Cause of termination:		
▪ Pregnant while using	16	6.8
▪ Wanted pregnancy	145	**61.7**
▪ Side effects	73	31.1
▪ Presence of complications	1	0.4
Complications while using:		
▪ Non	100	**42.6**
▪ Pregnancy	15	6.4
▪ Vaginal bleeding	16	6.8
▪ Pallor	10	4.3
▪ Infection	34	14.5
▪ Weight gain	51	21.6
▪ Weight loss	1	0.4
▪ Irregular bleeding	6	2.6
▪ Spotting	2	0.8

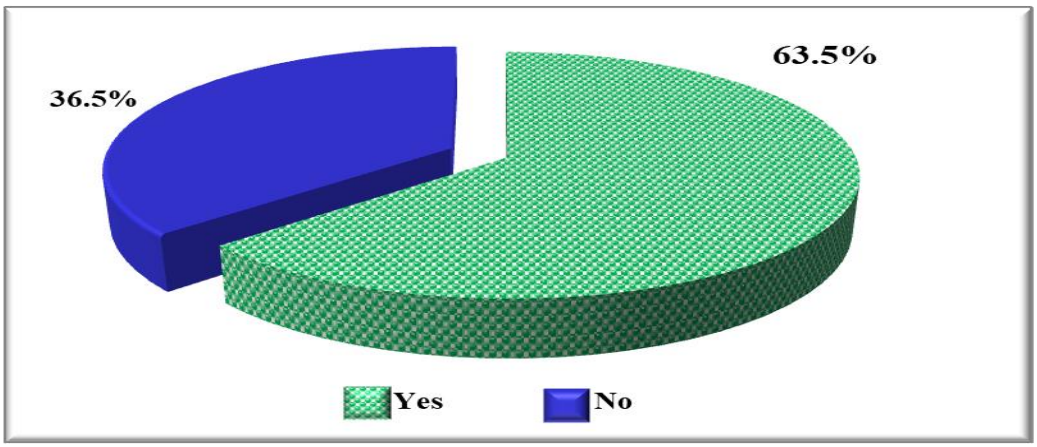

Figure (2): Distribution of the studied women according to their previous using of contraceptive method (N=370)

Table (4): Distribution of the studied women according to their knowledge about yeast infection

Knowledge about yeast infection	N (370)	%
Definition of yeast infection:		
▪ Correct and complete answer	36	9.7
▪ Correct and incomplete answer	219	**59.2**
▪ Incorrect /don't know	115	31.1
Causes of yeast infection		
▪ Correct and complete answer	27	7.3
▪ Correct and incomplete answer	215	**58.1**
▪ Incorrect /don't know	128	34.6
Types of yeast infection:		
▪ Correct and complete answer	5	1.4
▪ Correct and incomplete answer	55	14.8
▪ Incorrect /don't know	310	**83.8**

Knowledge about yeast infection	N (370)	%
Signs and symptoms of yeast infection:		
▪ Correct and complete answer	43	11.6
▪ Correct and incomplete answer	230	**62.2**
▪ Incorrect /don't know	97	26.2
Characters of vaginal discharge:		
▪ Correct and complete answer	56	15.1
▪ Correct and incomplete answer	263	**71.1**
▪ Incorrect /don't know	51	13.8

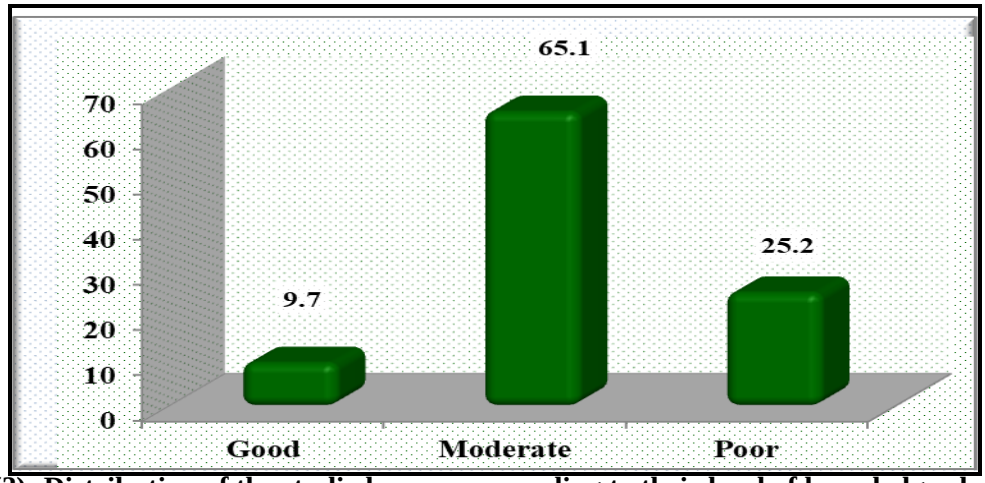

Figure (3): Distribution of the studied women according to their level of knowledge about yeast infection (N=370)

Table (5): Distribution of the studied women according to their source of knowledge about yeast infection during pregnancy

Items	N (370)	%
Antenatal clinics:	367	**99.2**
Relatives:	260	**70.3**
Television:	237	**64.1**
Social Media:	65	17.6
Friends:	29	7.8
Newspaper:	2	0.5

More than one answer is allowed

Table (6): Relationship between the studied women's level of knowledge about yeast infection and their personal data (N=370)

Personal data	Level of knowledge about yeast infection						P-value
	Good (119)		Moderate (209)		Poor (42)		
	N	%	N	%	N	%	
Mother's age							
▪ <25 years old	44	37.0	82	39.2	14	33.3	
▪ 25-35 years	71	59.6	104	49.8	21	50.0	**0.049***
▪ More than 35 years	4	3.4	23	11.0	7	16.7	
Educational level of mother:							
▪ Illiterate	3	2.5	16	7.7	9	21.4	
▪ Read and write	4	3.4	31	14.8	19	45.3	
▪ Preparatory	9	7.6	18	8.6	4	9.5	**0.001****
▪ Secondary	63	52.9	116	55.5	10	23.8	
▪ University	40	33.6	28	13.4	0	0.0	
Mother's occupation:							
▪ House wife	67	56.3	152	72.7	34	81.0	**0.002****
▪ Employed	52	43.7	57	27.3	8	19.0	
Residence:							
▪ Rural	42	35.3	117	56.0	29	69.0	**0.001****
▪ Urban	77	64.7	92	44.0	13	31.0	

Table (7): Relationship between the studied women's level of knowledge about yeast infection and their obstetrical history (N=370)

Obstetrical history	Level of knowledge about yeast infection						P-value
	Good (119)		Moderate (209)		Poor (42)		
	N	%	N	%	N	%	
No. of gravidity:							
▪ Non	11	9.3	23	11.0	6	14.3	0.083
▪ 1 – 4	107	89.9	178	85.2	32	76.2	
▪ Grand multi	1	0.8	8	3.8	4	9.5	
No. of parity:							
▪ Non	14	11.8	25	12.0	7	16.7	
▪ 1 – 4	88	73.9	161	77.0	32	76.2	0.681
▪ Grand multi	17	14.3	23	11.0	3	7.1	
No. of abortion:							
▪ Non	97	81.5	171	81.8	35	83.3	0.965
▪ 1 – 2	22	18.5	38	18.2	7	16.7	
No. of living children:							
▪ Non or pgda	14	11.8	26	12.4	7	16.7	
▪ ≤ 2 child	82	68.9	123	58.9	16	38.1	**0.009****
▪ >2 child	23	19.3	60	28.7	19	45.2	
Duration of Current pregnancy							
▪ First trimester	0	0.0	7	3.3	0	0.0	
▪ Second trimester	7	5.9	19	9.1	3	7.8	**0.048***
▪ Third trimester	112	94.1	183	87.6	39	93.2	
Current pregnancy complications:							0.274
▪ Yes	1	0.8	8	3.8	1	2.4	
▪ No	118	99.2	201	96.2	41	97.6	

Table (1): This data, with a mean and SD of 27.37±5.79, shows that 53.0% of the women under study were in the 25–35 age range. 51.1% of the women in the study had only completed their secondary education. Additionally, 68.4% of them were housewives. In terms of where they lived, 50.8% of them were in rural areas.

Table (2): This table represent that most of women were multigravida (85.7%). Regarding to parity, this table show that 75.9% were multipara. And most of women in the study (81.9%) had not previously aborted. Regarding to complications related to previous deliveries, it was observed that 79.7% of women hadn't any complications. Regarding to number of living children, 66.9% of women had 1-2 child. Regarding to type of current pregnancy complications majority of women (97.3%) had normal pregnancy.

Figure (1): This figure clarifies that the great majority of women (97.3%) experienced no pregnancy-related complications at the time of the interview.

Table (3): Regarding to type of previous contraceptive method, it was observed that the most common method used is pills (38.9%) followed by IUD (19.2 %). Regarding to duration of use, this table show that 77.9 % used from 2-4 years. Regarding to cause of termination, 61.7% of women wanted pregnancy. Regarding to Complications while using, 42.6% of women had no complication.

Figure (2): This figure clarifies that most of the women (63.5%) were used contraceptive method.

Table (4): Regarding to definition of yeast infection, it was observed that more than one half (59.%) of women had correct and incomplete answer. Regarding to causes of yeast infection, it was observed that more than one half (58.1%) of women had correct and incomplete answer. Regarding to types of yeast infection, it was observed that the majority (83.8%) of women had Incorrect /don't know answer. Regarding to signs & symptoms of yeast infection, it was observed that 62.2%of them had correct and incomplete answer. Regarding to characters of vaginal discharge, it was observed that of 71.1% of women aknowledge about the abnormal vaginal discharge which indicate infection.

Figure (3): This figure clarifies that two thirds (65.1%) of the women had amoderate level of knowledge regarding to yeast infection, while only 9.7% of them had agood knowledge level.

Table (5): Regarding source of knowledge about yeast infection, it was observed that 99.2 %, 70.3%, and 64.1 of the women gained their knowledge from antenatal clinics, relatives and television respevctively.

Table (6): This table shows that all of the mother's occupation, place of living, and total women's knowledge level had highly statistically significant relationships (P-value <0.01). Additionally, there was a statistically significant correlation (P-value <0.05) between the age of the mother and the overall knowledge level of women.

Table (7): This table shows that, at P-value <0.01, there was a very statistically significant relationship between the total number of live children and the women's knowledge level. Additionally, there was a statistically significant correlation (P-value <0.05) between the total knowledge level of women and their current weeks of gestation. However, at P-value >0.05, there was no statistically significant correlation found between women's awareness and gravidity, parity, abortion, or current pregnancy problems.

Discussion

Vaginal yeast infection refers to irritation of the vagina due to presences of opportunistic yeast of the genus candida, mostly candida albicans **(Abd-Rabo et al., 2022)**. It is also called yeast vaginitis or vaginal candidiasis, which is a common problem in women. Yeast infections are common in pregnancy and can cause extensive inflammation, which could contribute to adverse perinatal outcomes. Vaginal infections have been associated with serious pregnancy outcomes and complication such as rupture of membrane, preterm delivery, post hysterectomy infection, low birth weight and miscarriage **(Christopher et al., 2022)**.

This study aimed to assess woman's knowledge about vaginal yeast infection among pregnant women.

A sample of 370 pregnant women was included in the study. With a mean and SD of 27.37±5.79 years, the age group of 25–35 years comprised more than half (53.0%) of the women under study. Of them, 51.1 % were at least secondary school educated. Additionally, 68.4% of them were housewives. 50.8% of women reported living in rural areas.

The present study showed that most of the studied pregnant women had moderate knowledge regarding yeast infection.

Concerning previous using of contraceptive method, the current investigation makes clear that less than two thirds of the women previously used contraceptive method, while more than one third of them not used any of contraceptive method.

This finding agreed with **(Eshak, 2020)**, who implemented their study to ascertain the frequency of misconceptions regarding contemporary contraceptives and their correlation with women's past and present use of contraceptives in Minia, Upper Egypt, and discovered that over half of the women in the study employed family planning techniques.

Regarding to type of previous contraceptive method, it was observed that the most commonly used contraceptive method is oral contraceptive pills, two fifths of the studied women followed by IUD which used by about one fifths of the studied women . this may be back to ability of women to stop pills when she want without need to interference from obstetrician, and free of IUD from any hormone that make them to feel safety when used.

Previous research supported the findings of **(Abdelkarim et al., 2022)**, who used their study in Alexandria, Egypt, to develop a questionnaire survey intended to identify women's knowledge gaps about contraception and made it clear that over one-third of the women in the study took pills.

As regard duration of use, present study reports that more than three quarters of them used for duration extend from 2-4 years. Similar finding demonstrated by **(Farrag et al., 2020)**, who carried out their study to assess family planning practice among rural female and to determine the associated factors, and demonstrated that more than three quarters of them used method for 2-5 years.

Regarding to cause of termination the current investigation reveals that over three-fifths of the women terminated method because they wanted to get pregnant, the majority of the studied women terminated method for getting pregnant. This was consistent with the findings of **(Abdelkarim et al., 2022)**. The majority of the studied women terminated method for getting pregnant. Also **(Ibrahim et al., 2022),** who implemented their research to determine how educational initiatives affect the knowledge, attitudes, and intentions of childbearing women use Intra uterine contraceptive device (IUCD) as emergency contraceptive (EC) method, and ensured that most of the women in the study terminated method for getting pregnant.

Concerning complications while using different family planning methods, more than two fifths of women had no complication., that was agreed with **(Abdelkarim et al., 2022),** who demonstrated that almost one-third of women had no complication while using contraception method. Also **(Ibrahim et al., 2022),** showed that over a third of the research women had no complication while using contraception method.

Concerning women's knowledge level about vaginal yeast infection for prevention yeast infection during pregnancy, present study illustrates that slightly less than one third of the studied women had good level of knowledge about yeast infection, and that ensured the need of the studied women to support by counseling and educational program to improve their knowledge.

Near to previous findings, **(Abdelmoneam et al., 2023)**, who applied their study in Egypt to explore the knowledge regarding vaginal infection , and reported that less than half of the women in the study a satisfactory knowledge about vaginal infection . This agreement back to similar setting and sample and explored that there was a vital need to increase

women's knowledge about genital infection and its prevention.

Regarding to definition and causes of yeast infection, the current analysis reveals that over half of the women under investigation provided both correct and incomplete answer .

Near to previous findings**, (Said et al., 2019),** who conducted research in Egypt to assess the Education intervention guideline on vulvovaginity-related knowledge and self-care practices for women, and found that two-fifths of the women identified the defintion of vulvovaginities. And more than one third of them knew correctly causes of vulvovaginities. This may be due to low educational levels that affect on their ability to gain information, and this weakness in women's information regarding vaginal infection wanted to be better through continuous educational program.

Regarding to types of yeast infection, it was observed that the majority of women had Incorrect /don't know answer. Regarding to signs & symptoms of yeast infection, it was observed that more than three fifths of them had correct and incomplete answer.

In a similar vein, **(Ray et al. 2022)** conducted a study to evaluate teenage girls' knowledge about vaginal candidiasis in a few chosen Pune City metropolitan neighborhoods. They found that most of the girls provided correct and incomplete answers related types and signs & symptoms of Candidiasis. Also **(Malfasari et al., 2019)**, They conducted their research to evaluate female university students' understanding of vulvovaginal candidiasis, and showed that most of the studied women had a correct and incomplete answers regarding signs and symptoms of Candidiasis, similarity may be back to lack of exposure of the studied sample in both study to information regarding vaginal Candidiasis.

Regarding source of knowledge about yeast infection, it was observed that the vast majority, more than two thirds, more than three fifths, and less than one fifth of the women in the study learned their information from antenatal clinics, relatives, television and mass media respectively.

In agreement with previous findings, **(Youness & Omar, 2017)**, who conducted a study in Egypt to evaluate the impact of a planned educational program on vaginitis and its preventive measures on the knowledge of teenage female nursing students. They made it clear that less than one-sixth of the studied women learned about vaginitis from the media, while two thirds of the women received their information from family and relatives.

On the other side **(Abdelnaem et al., 2019),** who reported that nearly two fifths and one half of the studied students gained their knowledge from mass media and friends & relatives.

As regard relationship between the studied women's level of knowledge about yeast infection and their personal data, According to the current study, there is a highly statistically significant association (P-value <0.01) between the educational attainment, occupation, and residency of mothers and the overall knowledge level of women. Additionally, there was a statistically significant correlation (P-value <0.05) between the age of the mother and the knowledge level of women.

On the same line, **(Youness & Omar, 2017)**, they demonstrated that there was a highly significant statistical link (P-value <0.01) between the overall knowledge level of students and their educational background and place of residence.

Said et al., 2019, demonstrated that there were a statistically significant correlation (P-value <0.05) between the mother's work and the overall knowledge and educational level of women. Furthermore, no statistically significant relationships were found between the mother's age and place of residence and the total knowledge level of women (P-value >0.05). This examines the evident contribution that schooling makes to women's knowledge acquisition.

Other finding reported by **(Kamath et al., 2017)** He explained that, at P-value >0.05, there was no statistically significant relationship between the mother's age and the overall knowledge level of women.

Ultimately, the results of this study demonstrated that the majority of the pregnant subjects had only mediocre to low awareness of yeast infections.

The results of this study also demonstrated the necessity of focusing more on women's genital health by educating them about the value of early screening, preventing recurrent infections, taking prescribed medications, and abstaining from unhygienic behaviors that have been linked to vaginal health.

Conclusion

The present study's findings lead to the following conclusions:

More than two third of the studied pregnant women had moderate and poor level of knowledge regarding yeast infection.

Recommendations

In light of the current study's findings, it was suggested that:

- Guidance and health education are important for pregnant women and femal to improve their knowledge regarding yeast infection and educate about abnormal vaginal discharge should be extensively encouraged by educational authorities and included in the premarital to help the femal

gaining the skills, information and self-confidence that they need to be a reproductive healthy woman.
- Nurses should provide all pregnant women with instruction about yeast infection to improve their knowledge.
- Replication of the present study on larger samples with more specified criteria and different settings to study factors & sources of women's knowledge regarding vaginal infection.

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