

Knowledge and Self-care Practices of Women Regarding Abnormal Vaginal Discharge.

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Abstract:

Background: Abnormal vaginal discharge is not a disease for itself but it is a symptom of other diseases as reproductive tract infections and sexual transmitted diseases, and if it isn't treated well it may lead to massive complications **Objective:** To explore the knowledge and self-care practices of women regarding abnormal vaginal discharge. **Design:** A descriptive exploratory research design was developed. **Setting:** The study was conducted at the gynecological outpatient clinic affiliated to Damanhour Medical National Institute in El-Beheira governorate. **Subjects:** A convenience sample of 200 women was selected. **Tools:** three tools were used for data collection. **The first tool:** Socio-demographic characteristics and clinical data structured interview schedule, **The second tool:** women's knowledge about abnormal vaginal discharge. **The third tool:** women's self-care practices regarding abnormal vaginal discharge. **Results:** Findings of the present study revealed that the women had unsatisfactory knowledge and self-care practices regarding vaginal discharge. In addition, there was a significant statistical relation between socio-demographic characteristics and women's total score of knowledge and self-care practices. **Conclusion:** The study concluded that women demonstrated unsatisfactory knowledge and self-care practices regarding abnormal vaginal discharge. **Recommendations:** Health care provider should prepare and apply health programs to increase the community awareness about vaginal discharge characteristics and early medical checkup that will improve hygienic practices and therefore decrease abnormal vaginal discharge.

Key words: Knowledge, self-care practices, abnormal vaginal discharge.

Introduction

Vaginal discharge is a common gynecological state among women during their childbearing years and frequently requires care. It derives from physiological secretion of cervical and Bartholin's glands as well as from desquamation of vaginal epithelial cells resulting from bacterial action in the vagina which make the acidic media of the vagina (Patil & Thakur, 2016). On the other hand, abnormal vaginal discharge is not a disease for itself, but it is

a warning sign and an indicator of other diseases such as reproductive tract infections and sexual transmitted diseases (Zaher et al., 2017).

Abnormal vaginal discharge characterized by change in color, consistency, volume or odor, and may be associated with symptoms such as itching, soreness, dysuria, pelvic pain, intermenstrual bleeding or post-coital bleeding (Sim et al., 2020).

The WHO in 2020 estimated that more than 340 million new patients of sexual transmitted infections (STIs) occur annually worldwide, 75%-85% of them in developing countries (Zaher et al., 2017).

Causes of vaginal discharge are divided into physiological or pathological causes. Physiological causes are due to sexual stimulation, pregnancy and cyclical alteration in cervical mucus, while pathological causes are due to genital tract malignancy, fistula, allergic reactions, atrophic vaginitis during menopause and reproductive tract infection (Ilankoon et al., 2017)

Unfortunately in many parts of the world, there is culture of silence, so many women become ashamed to seek medical advice and ask about their condition. Hence, most of them ignore their condition until their complain become intolerable and hinder their daily life. This may be due to modesty from exposing the genital area or feeling shame to be examined by male doctor (Sinan et al., 2020).

Finally, the nurse has a vital role in taking health educator mission to increase women's awareness of reproductive tract infection in terms of causes, signs, complications, and unhealthy behavior in addition, the nurse responsible for correct misunderstanding and myths regarding this problem as women's misunderstanding may lead to health deviation and increased incidence of this problem (Gweda et al., 2021).

The aim of the study is to:

Explore the level of knowledge and self-care practices of women regarding abnormal vaginal discharge.

Research question:

What are the level of knowledge and self-care practices of women regarding abnormal vaginal discharge?

Materials and Method

Materials: Research design:

A descriptive exploratory research design was used in this study

Settings:

The study was conducted in the gynecological outpatient clinic affiliated to Damanhour Medical National Institute in El-Beheira governorate, this setting was purposefully selected because it represents the main health sector that provides maternity care in Damanhour city and its adjacent provisions

Subjects:

A convenience sample of 200 women was attended to the previously mentioned setting allocated according to the turnover rate in this setting and the sample size of women was estimated by using the Epi-Info 7 program.

• Inclusion criteria:

- Age from 20 - 45 year.
- Married women
- Not pregnant women
- Had recent abnormal vaginal discharge or from 6 months or less .
- Free from any medical disease as Diabetes Mellitus

Tools: Three tools were developed by the researcher to collect data based on the current review of literature (Zaher et al., 2017)

Tool(I): Socio-demographic characteristics and clinical data structured interview schedule: which included three parts Part I: Socio-demographic characteristic, part II: Reproductive history and part III: Abnormal vaginal discharge characteristics

Tool(II): Women's knowledge about abnormal vaginal discharge : This tool comprised 19 items to assess women's knowledge regarding abnormal vaginal discharge including questions about definition and characteristic of normal and abnormal vaginal discharge as well as,

causes, types, mode of transmission and prophylactic measures of abnormal vaginal discharge. The total score calculated and ranged from (19: 57) each knowledge item was given a score; correct and complete answer (3), correct but incomplete answer (2), and incorrect answer or don't know (1). The total score calculated and classified as follows: Satisfactory ($\geq 50\%$) from (29:57) and Unsatisfactory ($< 50\%$) (from 19: <29)

Tool (III): Women's self-care practices regarding abnormal vaginal discharge:

used to assess women's self-care practices during abnormal vaginal discharge through simulated cards (this method was selected because there is no private place to allow the women to demonstrate self-care steps on the doll) which include steps of self-care practices clarified with pictures and allow the women to choose card according to their performance . This tool comprised (12) items each item was given a score on a three-point likert scale (Completely done (3) ,Incompletely done (2) ,Not done (1) . therefore ,the total score calculated and ranged from (12:36) and classified as follows: Satisfactory ($\geq 50\%$) (from 18: 36) and Unsatisfactory ($< 50\%$) (from 12: <18).

Method:

An approval from Scientific Research Ethical Committee, Faculty of Nursing-Alexandria University was obtained

An official letter obtained from the vice-dean of the graduate studies Faculty of Nursing, Alexandria University to the responsible authorities of the previously mentioned setting to take permission to collect data after explaining the purpose of the study

Tools were developed by the researchers after reviewing the recent relevant literature. It was validated by juries of (5) experts in the field. Their suggestions and recommendations were taken into consideration

Cronbach Alpha Coefficient was used to ascertain the reliability of the result, it was

(0. 851) for tool II and (0. 854) for tool III, which indicated an accepted reliability of the tools after translation into Arabic language.

A pilot study was carried out on 20 women (excluded from the study subjects) to test the feasibility of the study as well as to ascertain the clarity, feasibility and applicability of the tools and to identify obstacles that might interfere with the process of data collection. After the pilot study, tools were revised and necessary modifications were done accordingly.

- The data was collected individually by the researcher in total privacy in the selected setting using tool I, II and III after brief explanation of the purpose of the study and obtained their oral consent.

- After the collection of socio-demographic data and knowledge regarding vaginal discharge by using tool I and II respectively brief explanation about how to use simulated card was provided to the women to collect self-care practices by using tool III.

- The structured interview time took approximately 20- 30 minutes for each women the data was collected over a period of three months.

- **Statistical analysis:** The collected data was categorized, coded, computerized, tabulated and analyzed using Statistical Package for Social Sciences (SPSS) version 20 program.

- **Ethical considerations:** An informed oral consent was obtained from each study subject after explanation of the study purpose. Anonymity and privacy of the study subjects, confidentiality of the collected data, and the subject's right to withdraw at any time were maintained.

Results:

Table (1) shows the socio-demographic characteristics of the studied women. The mean age of the women was 31.40 ± 6.99 years, nearly two fifths (38%) of the women were illiterate or just read & write, about two thirds (66%) of them were housewives,

more than half (57%) of women perceived their family income as not enough, more than half (58%) of them were living in crowded houses and more than two thirds (69%) of women were urban residents.

Table (2) represents women's knowledge regarding abnormal vaginal discharge and it reveals that slightly more than one half (50.5%) of them mentioned that discharge was physiological. Moreover, the color of normal vaginal discharge elucidated that the main (52%) of women reported the color as colorless transparent. In addition, the normal consistency of vaginal discharge displayed that almost one-half (49%) of women agreed that it was liquid but with bubbles and (66.5%) of women thought that normal vaginal discharge had no odour. Furthermore, More than two-fifths (40.5%) of women thought that the color and consistency of vaginal discharge never change over the month. Finally, it was discovered that (28.5%) of women said red, stained with blood was the abnormal colour

Table (3) illustrates the self-care practices of women regarding vaginal discharge. When assessing the correct and complete step that the women performed, it was observed that more than three fifths (76.5%) of women wash the vaginal area well from front to back by using warm water. On the other hand when assessing step that was done but incomplete it was equipment preparation. Furthermore, the steps which not done during women performance was include most of self-care practices steps as showed in the table (3).

Table (4) showed the relationship between women's total score of knowledge and their socio-demographic characteristics. Generally speaking, there was a positive statistically significant relation between women's total score of knowledge and their educational level ($p=0.045$), occupation ($P=0.027$), perceived monthly income ($P=0.001$), house crowding index ($P=0.001$), current place of residence ($P=0.043$). On the other hand, there was no statistically significant relation between

women's total score of knowledge with their age ($P=0.799$) and religion ($p=0.237$).

Table (5) reveal the Correlation between total score of knowledge and total score of self-care practices of women regarding vaginal discharge which expounded that there was a significant correlation between the total score of women's knowledge with total score of self-care practices regarding vaginal discharge ($r=0.179$).

Figure (1) demonstrated the number and percent distribution of the women according to their total score of knowledge regarding vaginal discharge. It was revealed that slightly more than half (51%) of women had unsatisfactory knowledge, while nearly less than half (49%) of them had satisfactory knowledge regarding vaginal discharge.

Figure (2) revealed the number and percent distribution of women according to their level of self-care practices regarding vaginal discharge. It was observed that nearly three fifths (58%) of women attained unsatisfactory self-care practices, compared to more than two fifths (42%) of them attained satisfactory self-care practices.

Discussion

AVD is a global health issue and one of the most important reproductive health problem which commonly seen at women in reproductive age (**Abdelnaem et al., 2019**). One of the main causes of AVD are lack of knowledge and performing incorrect self-care practices which affect women's quality of life (**Rao et al., 2020**)

The results of the current study demonstrated that more than half of the women tended to have unsatisfactory knowledge, compared to nearly less than half of them were had satisfactory knowledge regarding vaginal discharge, this may be due to insufficient basic information gained from their life and academic study about reproductive health also unsatisfactory knowledge might be due

to the fact that mothers themselves suffer from lack of awareness secondary to neglect reproductive health knowledge, lack of mass media awareness regarding reproductive problems in addition the women depend on their mothers as main source of information

The present finding fits with a study of **Abd El-Salam et al.,(2018)** which assured in their study that the most of the female students had unsatisfactory knowledge about genital tract infection

Contrariwise, the current finding does not fit with an Indian study of **Roy et al., (2021)** compare Knowledge and Attitude regarding Reproductive Health between Adolescent Girls of Urban and Rural Schools and the level of knowledge was excellent to both groups. The current study also doesn't correspond with the study of **Şatroğlu et al., (2012)** in Istanbul, Turkey who found that the majority of the studied group had enabled to differentiate between the normal and the abnormal vaginal discharge.

On assessing total score of self-care practices of women regarding vaginal discharge It was observed that highest percent of women attained unsatisfactory self-care practices this may be due to feeling shame to discuss how to perform care with others, culture of silence, lack of communication between females and their mother and lack of mother knowledge about reproductive issues all of these can lead to unhealthy practices and inability of women to perform self- care practices correctly.

The present study is in a harmony with a study carried out in Tanta of **Gweda et al., (2021)** which represented that the majority of female students had unsatisfactory self-care practices regarding vaginal discharge

In the contrary there were two studies against the present findings, the first study of **ELbndary et al., (2018)** which carried out in Port Said that found that the majority of women had satisfactory seeking care behavior regarding vaginal discharge and

the second study of **Bano R et al., (2015)** which reported that most of study subjects had satisfactory practice of genital hygiene, The difference between the current study and two other contradicting studies may be due to the majority of the subjects attained higher educational level than present study.

On assessing correlation between total score of knowledge and total score of self-care practices of women regarding vaginal discharge, It was found that there was a positive significant correlation between the total score of women's knowledge with total score of self-care practices regarding vaginal discharge ,this may be due to knowledge is an important factor to increase women awareness , allow her to follow good hygienic practice and demonstrate steps of perineal care effectively and therefore decrease her susceptibility to have AVD and reproductive infection , So the women who had satisfactory level of knowledge will have satisfactory self-care practices and the result will be satisfactory which is enhance reproductive health and wellbeing.

The present finding was in line with a study of **Abdelnaem et al., (2019)** that discovered that there is a significant correlation between total knowledge and their practices when implementation self-care guideline and it was effective in improving the knowledge, practices for students with vaginal infection.

In addition, the aforementioned explanation is relatively supported by a study of **Kartikasari et al., (2020)** which Shown that there is a significant correlation between the poor level of knowledge and complaining of abnormal vaginal discharge

In contrast, the current finding doesn't conform to a study of **Shah et al., (2019)** who found that there is no association between total score of knowledge and total score of practices of adolescent girls.

Conclusion:

Based on the results of the current study, it was concluded that women demonstrated

unsatisfactory knowledge and self-care practices regarding AVD. Their lack of knowledge about AVD was statistically significant associated with their socio-demographic characteristics such as lower educational level, housewives women, urban residence, as well as crowded houses and inadequate income.

The study also presented that women's unsatisfactory self-care practices about AVD was statistically significant associated with socio- demographic characteristics such as their old age, lower educational level, poverty and crowded houses.

Recommendations

- Female education about abnormal vaginal discharge should be extensively encouraged by educational authorities and included in the school curriculum to help the female gaining the skills, information and self-confidence that they need to be a reproductive healthy woman.
- Health care provider should prepare and apply health programs to increase the community awareness and perform early medical checkup that will improve self- care practices regarding vaginal discharge.

Table (1): Number and percent distribution of the women according to their socio-demographic characteristics.

| Socio-demographic characteristics | No (200) | Percent % |
|-----------------------------------|--------------|-----------|
| Age (years): | | |
| 20- | 77 | 38.5 |
| 30 - | 96 | 48.0 |
| 40 to 45 | 27 | 13.5 |
| Min. – Max. | 20.0 – 45.0 | |
| Mean ± SD. | 31.40 ± 6.99 | |
| Education level: | | |
| - Illiterate / Read& write | 76 | 38.0 |
| - Basic | 67 | 33.5 |
| - Secondary or its equivalent | 33 | 16.5 |
| - University & more | 24 | 12.0 |
| Occupation: | | |
| - Housewife | 132 | 66.0 |
| - Employee | 23 | 11.5 |
| - Worker | 45 | 22.5 |
| Religion: | | |
| - Muslim | 183 | 91.5 |
| - Christian | 17 | 08.5 |
| Family income/month: | | |
| - Not enough | 114 | 57.0 |
| - Just Enough | 76 | 38.0 |
| - More than enough | 10 | 05.0 |
| Crowding index: | | |
| - Un-crowded (<2) | 64 | 42.0 |
| - Crowded (>2) | 136 | 58.0 |
| Current residence: | | |
| - Rural | 62 | 31.0 |
| - Urban | 138 | 69.0 |

SD: Standard deviation.

Table (2): Number and percent distribution of the women according to their knowledge regarding vaginal discharge.

| Women's knowledge regarding vaginal discharge | No. (200) | % |
|--|------------------|----------|
| Types: | | |
| - Physiological | 101 | 50.5 |
| - Abnormal (pathological) | 51 | 25.5 |
| - Both of them | 48 | 24.0 |
| Color of normal vaginal discharge: | | |
| - Yellow | 59 | 29.5 |
| - Green | 3 | 01.5 |
| - Gray | 2 | 01.0 |
| - White cheese | 32 | 16.0 |
| - Colorless transparent | 104 | 52.0 |
| Normal consistency of normal vaginal discharge: | | |
| - Thick like Cheese | 44 | 22.0 |
| - It is liquid but with bubbles | 98 | 49.0 |
| - Liquid | 58 | 29.0 |
| Odor of normal vaginal discharge: | | |
| - Fishy odor | 7 | 03.5 |
| - A musty odor like cheese | 60 | 30.0 |
| - Odorless | 133 | 66.5 |
| Color and consistency of vaginal discharge change over month: | | |
| - Never change | 81 | 40.5 |
| - Increase at the time of ovulation | 70 | 35.0 |
| - Increase with sexual arousal | 25 | 12.5 |
| - Changes throughout the month | 24 | 12.0 |
| Color of abnormal vaginal discharge: # | | |
| - Yellow | 49 | 24.5 |
| - Green | 36 | 18.0 |
| - Red, stained with blood | 57 | 28.5 |
| - Gray | 15 | 07.5 |
| - White Cheese | 37 | 18.5 |
| - Brown | 18 | 09.0 |
| - Colorless transparent | 1 | 00.5 |

#: More than one answer

Table (3): Self-care practices of women regarding vaginal discharge.

| Self-care practices regarding vaginal discharge | Not done | | Done but Incomplete | | Correct & complete | |
|---|------------------|----------|----------------------------|----------|-------------------------------|----------|
| | No. (200) | % | No. (200) | % | No. (200) | % |
| Pre vaginal care steps: | | | | | | |
| 1-Hand washing with water and and soap | 125 | 62.5 | 12 | 6.0 | 63 | 31.5 |
| 2-prepare equipment (hot, worm or cold water, gloves, towel, soap, antiseptic solution, vaginal wash, others) | 72 | 36.0 | 118 | 59.0 | 10 | 05.0 |
| During vaginal care steps: | | | | | | |
| 3-If there is hair in the pubic area, it is removed monthly | 174 | 87.0 | 6 | 3.0 | 20 | 10.0 |
| 4-Use the right hand to wash and the left hand to open the vaginal area. | 181 | 90.5 | 8 | 4.0 | 11 | 05.5 |
| 5-I wash the vaginal area well from front to back by using worm water | 20 | 10.0 | 27 | 13.5 | 153 | 76.5 |

| | | | | | | |
|---|-----|------|----|------|----|------|
| 6-Repeat cleaning and washing this area several times if needed in the same direction | 169 | 84.5 | 15 | 7.5 | 16 | 08.0 |
| 7-I wash the inner aspect of the thighs from the inside to outside. | 192 | 96.0 | 5 | 2.5 | 3 | 01.5 |
| 8-I wash the anus from front to back | 124 | 62.0 | 54 | 27.0 | 22 | 11.0 |
| 9-Rinse the pubic area completely from front to back with warm water. | 102 | 51.0 | 64 | 32.0 | 34 | 17.0 |
| 10-I dry from front to back with a clean cotton towel | 85 | 42.5 | 57 | 28.5 | 58 | 29.0 |
| Post vaginal care steps: | | | | | | |
| 11-Hand washing with water and soap after finishing | 151 | 75.5 | 15 | 7.5 | 34 | 17.0 |
| 12-Post care of equipment | 179 | 89.5 | 13 | 6.5 | 8 | 04.0 |

Table (4): Relationship between women total score of knowledge regarding vaginal discharge and their socio-demographic characteristics.

| Part one: socio-demographic data | Overall women's knowledge regarding vaginal discharge | | | | χ^2 | p |
|------------------------------------|---|------|--------------------------|------|----------|--------|
| | Satisfactory (n = 98) | | Unsatisfactory (n = 102) | | | |
| | No. (98) | % | No. (102) | % | | |
| Age (years): | | | | | | |
| - 20- | 40 | 40.8 | 37 | 36.3 | 0.449 | 0.799 |
| - 30- | 45 | 45.9 | 51 | 50.0 | | |
| - 40 : 45 | 13 | 13.3 | 14 | 13.7 | | |
| Education level: | | | | | 11.357* | 0.045* |
| - Illiterate / Read& write | 29 | 29.6 | 47 | 46.0 | | |
| - Basic | 33 | 32.6 | 35 | 34.3 | | |
| - Secondary or its equivalent | 20 | 20.4 | 13 | 12.7 | | |
| - University & more | 17 | 17.3 | 7 | 06.9 | | |
| Occupation: | | | | | 7.256* | 0.027* |
| - Housewife | 63 | 64.3 | 69 | 67.6 | | |
| - Employee | 17 | 17.3 | 6 | 05.9 | | |
| - Worker | 18 | 18.4 | 27 | 26.5 | | |
| Religion: | | | | | 1.397 | 0.237 |
| - Muslim | 92 | 93.9 | 91 | 89.2 | | |
| - Christian | 6 | 06.1 | 11 | 10.8 | | |
| Monthly Income: | | | | | 13.908* | 0.001* |
| - Not enough | 47 | 48.0 | 67 | 65.7 | | |
| - Just enough | 41 | 41.8 | 35 | 34.3 | | |
| - More than Enough | 10 | 10.2 | 0 | 00.0 | | |
| House crowding index: | | | | | 14.735* | 0.001* |
| - Un-Crowded (>2) | 18 | 18.4 | 17 | 16.7 | | |
| - Crowded (<2) | 80 | 81.7 | 85 | 83.3 | | |
| Current place of residence: | | | | | 4.099* | 0.043* |
| - Rural | 37 | 37.8 | 25 | 24.5 | | |
| - Urban | 61 | 62.2 | 77 | 75.5 | | |

χ^2 : Chi square test MC: Monte Carlo

*: Statistically significant at $p \leq 0.05$

Table (5) Correlation between total score of knowledge and total score of self-care practices of women regarding vaginal discharge.

Table (XIII): Correlation between level of knowledge and self-care practices (n = 200)

| | % of Knowledge | |
|--------------------------|----------------|--------|
| | r | P |
| % of self-care practices | 0.179* | 0.011* |

r: Pearson coefficient

*: Statistically significant at $p \leq 0.05$

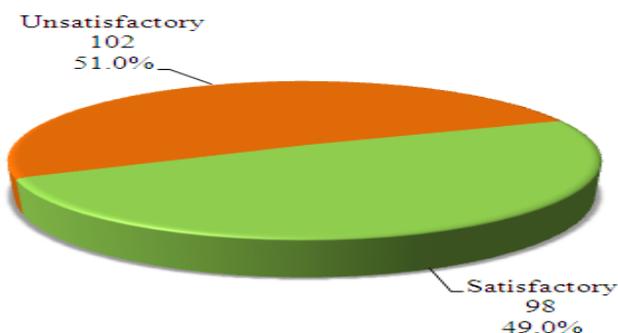


Figure (1): Number and percent distribution of the women according to their knowledge regarding vaginal discharge.

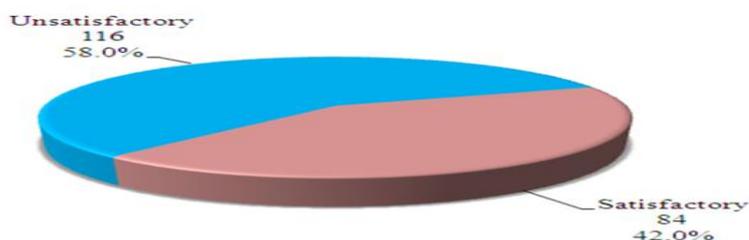


Figure (2): Number and percent distribution of the women according to their self-care practices regarding vaginal discharge.

References:

- Abd El-Salam, A. A., Eldeeb, A. M. E., & Frahat, F. Z. (2018). The efficacy of learning package regarding vaginal infection and associated risk health behaviors among female university students. *The Malaysian Journal of Nursing*, 9(4), 84-94.
- Abdelnaem, S. A., Mohasib, S., & Mohamed, H. (2019). Effect of self-care guidelines on knowledge and quality of life among faculty of nursing students with vaginal infection. *Obstetrics & Gynecology International Journal*, 10(1), 15-29.
- Bano, R., & Sabhan, F. (2015). Study of Knowledge and Practice of University Females Regarding Reproductive Health and Hygiene in Hail, Saudi Arabia. *International Journal of Women's Health and Reproduction Sciences*, 3, 31-39. <https://doi.org/10.15296/ijwhr.2015.06>.
- ELbndary, H. A., Rashed, R. M., Abdelati, I. H., & Ali, M. R. (2018). Knowledge, Attitude and Seeking Care Behaviors of Women about Leucorrhoea.

- Port Said Scientific Journal of Nursing*, 5(2), 185-205
- <https://doi.org/10.21608/pssjn.2018.34528>.
 - Gweda, H. A., Ahmed, M. H., & El-Agamy, M. A. E.-H. (2021). Effect of Instructional Guidelines on Students' Self Care Practices Regarding Vaginal Discharge at Secondary Schools in Tanta City. *Tanta Scientific Nursing Journal*, 20(1), 8-46. <https://doi.org/10.21608/tsnj.2021.168848>.
 - Ilankoon, M. P. S., Goonewardena, C. S. E., Fernandopulle, R. C., & Perera, P. P. R. (2017). Women's knowledge and experience of abnormal vaginal discharge living in estates in Colombo District, Sri Lanka. *ternational Journal of Women's Health and Reproduction Science*, 5, 90-96. <https://doi.org/10.15296/ijwhr.2017.17>.
 - Kartikasari, R., Nur, Y. S., & Susanto, N. (2020). Knowledge as Factor Increase Frequency of Vaginal Discharge in District Demak. *Jurnal Kesehatan Masyarakat Maritim*, 3(2), 147-154. <https://doi.org/10.30597/jkmm.v3i2.9389>
 - Patil, S. P., & Thakur, S. (2016). A Study Of Abnormal Vaginal Discharge Among Married Women Of Reproductive Age Group Attending Urban Health Centre. *National Journal of Integrated Research in Medicine*, 7(2), 66-72.
 - Rao, V. L., & Mahmood, T. (2020). Vaginal discharge. *Obstetrics, Gynaecology & Reproductive Medicine*, 30(1), 11-18. <https://doi.org/https://doi.org/10.1016/j.ogrm.2019.10.004>.
 - Roy, S., Pandit, L., Kundu, P., & Nandi, K. (2021). Comparison of Knowledge and Attitude regarding Reproductive Health between Adolescent Girls of Urban and Rural Schools in West Bengal. *Trends in Nursing Administration and Education*, 10(2), 6-16.
 - Şatiroğlu, N., Hıdıroğlu, S., & Karavuş, M. (2012). Vajinal Akıntı Hakkındaki Bilgi, Tutum ve Davranışları Saptamaya Yönelik Niteliksel Bir Çalışma. *TAF Preventive Medicine Bulletin*, 11(5), 545-558.
 - Shah, S. K., Shrestha, S., Maharjan, P. L., Karki, K., Upadhyay, A., Subedi, S., & Gurung, M. (2019). Knowledge and practice of genital health and hygiene among adolescent girls of Lalitpur Metropolitan City, Nepal. *American Journal of Public Health Research*, 7(4), 151-156. <https://doi.org/10.12691/ajphr-7-4-4>.
 - Sim, M., Logan, S., & Goh, L. H. (2020). Vaginal discharge: evaluation and management in primary care. *Singapore medical journal*, 61(6), 297-301. <https://doi.org/10.11622/smedj.2020088>
 - Sinan, O., Kaplan, S., Sahin, S., & Peksoy, S. (2020). Assessment of the effectiveness of genital infection awareness training provided to women based on the IMB model. *Nigerian journal of clinical practice*, 23(3), 408-415. https://doi.org/10.4103/njcp.njcp_205_18.
 - Zaher, E. H., Khedr, N. F. H., & Elmashad, H. (2017). Awareness of women regarding vaginal discharge. *Journal of Nursing and Health Science* 6, 1-12. <https://doi.org/10.9790/1959-0601010112>.