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Research Article

SOCIO-DEMOGRAPHIC, OBSTETRIC AND BEHAVIOURALFACTORS ASSOCIATED WITH ABNORMAL VAGINAL DISCHARGE AMONG MARRIED WOMEN IN ALIGARH- A CROSS-SECTIONAL STUDY

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A R T I C L E I N F O

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A B S T R A C T

Background: Vulvovaginal symptoms are one of the commonest reasons for women attending a health facility. The symptoms include a vaginal discharge perceived by the woman to be abnormal, vulval irritation or itching. **Objectives:** To study the factors associated with abnormal vaginal discharge among married women of Aligarh. **Methods:** The data were collected by using a pretested, semi-structured with both open and closed-ended questionnaire from 500 married women of reproductive age group. The collected data were analysed using IBM SPSS 26.0 Proportion, frequencies, and logistic regression were used to interpret the data**. Results:** Based on the symptoms mentioned in the syndromic approach, the prevalence of symptoms of vaginal discharge was found to be 37%. There was a strong association between lower educational status, not using any contraceptive method, not practising good menstrual hygiene, having a history of abortion, having a history of violence, and increased parity. **Conclusions:** The prevalence of symptoms was discovered to be associated with these females' low educational status, high parity, partner history of reproductive tract infections, history of violence, and so on. As a result, there should be a greater emphasis on improving these factors in order to reduce the prevalence.

INTRODUCTION

Vulvovaginal symptoms are one of the commonest reasons for women attending a health facility. The symptoms include a vaginal discharge perceived by the woman to be abnormal, vulval irritation or itching[1].Any illness or dysfunction pertaining to the reproductive system or any illness resulting from reproductive conduct, such as pregnancy, abortion, childbirth, or sexual behaviour, is referred to as reproductive morbidity[2].The physiological causes of excessive VD include changes in hormone levels throughout the menstrual cycle, during pregnancy, as a result of sexual stimulation, and owing to atrophic vaginitis[3].Sexually transmitted infections (STIs) and non-STIs are among the infectious causes of pathology; non-infectious causes include iatrogenic conditions and cancer (vaginal, endometrial, and cervical cancer)[4].The World Health Organisation advises women who experience vaginal discharge to undergo syndromic management, which involves treating any or all of the five common reproductive tract infections: gonorrhoea, trichomoniasis, and chlamydia trachomatis, which are sexually transmitted infections; and candidiasis and bacterial vaginosis, which arise from disruption of the normal bacterial flora of the vagina[5].This illness is well known for producing serious issues with women's reproductive health[6].

People believe STIs are the cause of VD, women avoid seeking treatment because they view VD as something embarrassing and uncomfortable to discuss. In particular, women from South East Asia avoid therapy by remaining silent 6. This study is an attempt to find the prevalence of Vaginal discharge and associated obstetric and behavioural factors in a community based study. Changes of hormonal levels during menstrual cycle, during pregnancy, due to sexual arousal and atrophic vaginitis are the physiological causes for excessive.

MATERIAL AND METHODS

Study design: The study was a community based cross-sectional study.

Study population: Total 500 married women were interviewed.

Inclusion criteria: 1) All the married women in reproductive age group (15-45) residing in the registered areas of UHTC and RHTC for last 6 months.2) All those who had given consent for the interview. 3) Those who were under treatment for RTI/STI.

Exclusion criteria: 1) All unmarried women of reproductive age group.2) All married women beyond the reproductive age

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(15-45 years).3) Those who had not given consent for the interview.4) Women suffering from any other chronic illness Hypertension, DM type II, tuberculosis.

Study area: Field areas registered under the UHTC and RHTC, Department of Community Medicine J.N.M.C.H Aligarh.

Sample size: Sample Size was calculated taking prevalence rate of 47% taken from a study conducted in Etawah (Uttar Pradesh) 20167, absolute allowable error as 5% , confidence level =95% with non-response rate =10%. N came to be 398 rounded off to 500

Sampling method*:* Simple random sampling.

Sampling unit: Registered Household.

Data Collection strategy: A list of all the registered households and eligible couple were collected from the respective study area from the data available at the centre. Required sample of married women of reproductive age group was selected by simple random sampling. Sample was drawn from each village/area was decided in proportion to the population of the village/area –Probability Proportionate to Size sampling. House to house survey was conducted. A pencil was dropped and the precise point noted that was a starting point ,from there we moved in top to bottom direction .If the married women of reproductive age group was not present at the time of visit then we moved to next household. Beginning of the study was done randomly by starting from a point in the first village/Mohalla and every married female in the family lying in the target group was counted as a sample, then moved to the next house. Same process was done in the other area to cover the required sample size.

Study Tool: A preformed and pre tested structured interview schedule was used for the study.

Operational definition: The symptoms mentioned under the WHO syndromic approach were used as the basis of finding the females with RTI8.

Study Period: Study conducted for a duration of 1 year.

Ethical approval: Ethical approval were obtained from the Institutional Ethics Committee, JNMCH, Aligarh.

Consent: Informed verbal consent was taken from each woman and was assured of confidentiality and their identity will not be revealed in any reports.

Data analysis: The collected data were analyzed using IBM SPSS 26.0 Proportion, frequencies, $\chi 2$, and logistic regression were used to interpret the data.

RESULTS

A total of 500 women were studied. A total of 185 women complained of vaginal discharge. Majority of the respondents were Muslims. 50% therespondentswereintheagegroupof31-45years, majority of them belonged to OBC category,46.4% of respondents were illiterate and only 19.4% of their spouse were illiterate , 51 % of them were living in joint family .Majority of the respondents were belonging to lower class(Table 1).

Majority of the participants were having parity>2, good menstrual hygiene was practiced among 64.6% , most of them have not opted for any contraceptive method , history of any type of violence was reported among 15.8 % females and partner history of RTI was found among 8.2 % respondents **(Table1).**

The prevalence of vaginal discharge was found to 37% among all the respondents **(Table 2).**

Symptomatic vaginal discharge was found to be 57.8% in females with age 15-30 years. Majority of the females having the symptoms were illiterate and the relationship of age group (p value < 0.05) and literacy status (p value <0.05) with respect to symptoms of vaginal discharge was found to be statistically significant. No significant association was found between area of residence, husband's literacy status, husband's occupation, social class with respect to symptomatic Vaginal discharge **(Table 3).**

Symptoms of abnormal vaginal discharge was found among 69.1% females having age of marriage less than 18 years. Also, symptoms were present in 66.5% females having >2 parity. 52.9 % of respondents with history of abortion found to have abnormal vaginal discharge. 65.9% females having poor menstrual hygiene were found to have abnormal vaginal discharge. Among 71.9% females not using any contraceptive methods symptoms of Abnormal Vaginal discharge were present. 58.2% respondents having history of any type of violence were found to have abnormal vaginal discharge. Vaginal discharge was found among 78% females having partner history of RTI. The relationship of abnormal vaginal discharge with respect to age of marriage, parity, menstrual hygiene, use of contraceptive methods, any violence history, any history of RTI in partner was found to be statistically significant **(Table 4).**

The odds of having symptomatic vaginal discharge were found to be 26% less in 15-30 years age group. Odds was found to be 1.86 times among illiterate females as compared to literate. Females with parity >2 were found to have 1.76 times higher odds of having abnormal vaginal symptoms. Females with no history of abortion found to have 64% less chance of having abnormal vaginal discharge. Also, there was 66% less chance of abnormal vaginal discharge in females with no history of violence as compared to those having violence history. Among participants using IUCD, odd was found to be 2.64 times. Participants with no history of partner history of RTI found to have 56 % less chance of having abnormal vaginal discharge.

DISCUSSION

In this Study, prevalence rate is higher in the younger age group of 15 – 24 years in present study similar to that of Weiss et al 15 and Geetha Mani et al 16. It may probably be due to younger age at marriage, the immature cervical epithelium is more susceptible to the ascending infections of usage of contraceptive methods, early childbearing and obstetric morbidity related to it. There is a decrease in the prevalence of vaginal discharge with increasing educational status of the woman. A similar trend was observed by Chaudhary et al. and Patel V et al 17, 18.

Vaginal discharge was found to be more prevalent in women belonging to lower class and lower middle class Similar findings can be seen in the study conducted by Chaudhary V etal and Kulkarni et al17, 19. Female literacy status have been found to play important role in the present and absence of

abnormal vaginal discharge, a inverse relationship has been found also shown in studies conducted by Rani V et al 7 and Gupta et al 20.

Females having age at marriage less than 18 years were found to have more abnormal vaginal discharge history, due to early onset of sexual activity which pre disposes to immature cervical epithelium to ascending infections 13. More symptoms were present in females having >2 parity A similar finding in a study by Bhilwar et al21, S. rode 22 and Kafle et al23. This is explained by the fact that females having more children experiences more reproductive exposure. Abortion is an important factor among females having abnormal vaginal discharge, findings are supported by a results shown by S. rode showed that there was 20.5 percent of women reported RTIs/STIs who had abortions/pregnancy wastages. Poor menstrual hygiene were found to have abnormal vaginal discharge due to improper cleaning of private parts and use of clothes in place of sanitary pads during periods the association was strong also found in study conducted by Mani G et al 16. Among females not using any contraceptive methods symptoms of abnormal vaginal discharge were found to be more prevalent, in consonance with this finding similar in a study of Deepa LM et al 24. According to research by Shabnam et al25, women who have experienced recurrent exposure to violence are more likely to experience reproductive morbidity. Respondents with a history of any kind of violence were also more likely to exhibit abnormal vaginal discharge. Vaginal discharge was more common in women with a history of RTI in a partner. Yasmin S. and Mukherjee's study 26 also revealed that women with a history of STI-related husband illness had more symptoms (p less than 0.001).

CONCLUSION AND RECOMMENDATION

The study enlightens the important socio-demographic factors lower age group , female literacy status, lower socio economic class along with obstetric and behavioural factors such as multiparity, poor menstrual hygiene , violence history and partner history of reproductive tract infections which are highly associated with the prevalence of abnormal vaginal symptoms among reproductive age females. So, adequate information is needed to be given to both men and womenregarding the normal and abnormal VD, which will help them to get early treatments for pathological VD. Females should be motivated for their personal especially menstrual hygiene and the beginning should be at grass root level when they are adolescent. More robust policies and programs should be planned to look after the situation as these symptoms can lead to severe morbidity if ignored.

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Conflict of Interest

No conflict of Interest.

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Table1 Socio demographic, obstetric and behavioural Characteristics (Frequency Table)

Characteristics	N (%)
Women's age(years)	
15-30	302 60.4
31-45	198 39.6
Total	500 100
Religion	
Hindu	229 45.8
Muslim	271 54.2
Total	500 100
Caste	
SC	131 26.2
OBC	239 47.4
General	129 26.2
ST	1 0.2
Total	500 100
Type of family	
Nuclear	245 49
Joint	255 51
Total	500 100
Female Education	
High school and above	167 33.4
Below high school	101 20.2
Illiterate	232 46.4
Total	500 100
Spouse Education	
High school and above	260 52
Below high school	143 28.6
Illiterate	97 19.4
Total	500 100
Spouse Occupation	
Unemployed	62 12.4
Unskilled worker	239 47.8
Semiskilled / skilled worker	186 37.2
Professional	13 2.6
Total	500 100
Socio Economic Class	
Upper class	9 1.8
Upper Middle	26 5.2
Middle Class	78 16
Lower Middle	167 33
Lower Class	220 44
Total	500 100
Parity	
<2	225 45
>2	275 55
TOTAL	500 100
Menstrual Hygiene	
Poor	177 35.4
Good	323 64.6
Total	500 100
Contraception Methods	
Barrier method	166 33.2
IUCDS	7 1.4
Oral Pills	7 1.8
Others	32 6
None	288 57.6
Total	500 100
H/o Violence	
YES	79 15.8
No	421 84.2
Total	500 100
H/o RTI/STI in Partner	
YES	41 8.2
No	459 91.8
Total	500 100

Table 2 Prevalence of symptoms of vaginal discharge among married Women

H/O Vaginal discharge	n (%)
Present	185 (37%)
Absent	315 (63%)

*P value <0.05 (significant)

Table 3 Relationship of vaginal discharge with respect to socio demographic characteristics

Characteristics	H/O Vaginal discharge	P Value
Age Group of females (years) 15-30 31-45	 57.8 42.2	0.04*
Area of residents Rural Peri urban	 54.1 45.9	0.16
Education of Female Literate Illiterate	 41.6 58.4	0.001*
Education of Husband Literate Illiterate	 80.5 19.5	0.9
Occupation of Husband Employed Not Employed	 97.8 2.2	0.63
Socio Economic Class Upper class Upper Middle Middle Class Lower Middle Lower Class	 0.5 4.9 15.1 31.9 47.6	0.44

Table 4 Relationship of Vaginal Discharge with respect to obstetric and Behavioural Factors

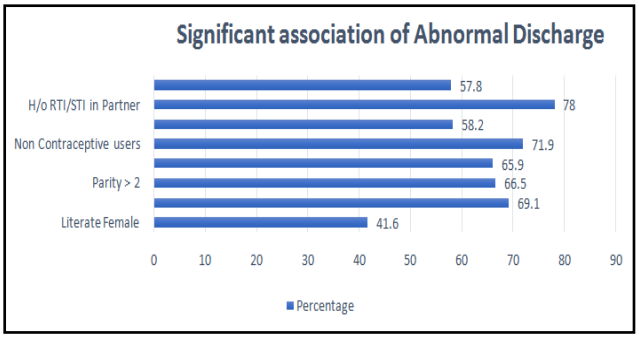
Characteristics	H/o Vaginal discharge	P-Value
Age at Marriage (Years) <18 >18	 31.9 69.1	0.05
Parity <2 >2	 33.5 66.5	0.01
Abortion Yes	 52.9	0.01
No	57.1	
Menstrual Hygiene Poor Good	 65.9 34.1	0.01
Contraception Methods Barrier method IUCDS Oral Pills Others None	 19.5 2.2 1.6 4.9 71.9	0.01
H/o Violence YES No	 58.2 41.8	0.01
H/o RTI/STI in Partner YES No	 78 22	0.01

*P value <0.05 (significant)

Table 5 Logistic regression table

Characteristic	OR (CI)	P-value
Age group 15-30 31-45	0.743 (0.43-1.28)	0.28
Education of Females illiterate literate	1.861 (1.109-3.124)	0.019
Parity >2 <2	1.705 (0.9-3.04)	0.05
Abortion No Yes	0.36 (0.206 -0.61)	0.001
Menstrual Hygiene Good Poor	0.118 (0.193-0.78)	0.01
Violence No Yes	0.349 (0.203- 0.78)	0.001
Contraception IUD Using Not Using	2.64(1.78 -3.89)	0.001
H/o RTI in partner No Yes	0.148 (0.058-0.377)	0.001

Figure Showing significant association between socio-demograsphic, obstetric, behavioral factors and abnormal vaginal discharge.



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