

Impact of Socioeconomic and Demographic Factors on Reproductive Tract Infections during Reproductive Age Group (18–45 Years)

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ABSTRACT

Introduction: The aims of this study were to identify the prevalence of reproductive tract infection (RTI) in married women of reproductive age group (18–45 years), to analyze the impact of socioeconomic and demographic factors on RTIs, to treat the underlying cause.

Materials and methods: A total of 500 women were examined; out of those, 300 women were found to have RTIs and were enrolled for further study and evaluation. Appropriate antibiotics were given to them and then followed.

Results: The study results showed a high prevalence of RTI (60%). The highest prevalence was found among the age group between 26 years and 29 years, followed by 30–33 years and 34–37 years. The most affected women were from rural population (80%), low socioeconomic group (63.4%), and illiterate (59%).

Conclusion: The present study showed a high prevalence of RTI. It needs a further deep study on their literacy and economic factors to evaluate and analyze the impact of these factors on RTIs.

Keywords: Demographic, Reproductive tract infection, Socioeconomic.

Journal of South Asian Federation of Obstetrics and Gynaecology (2019); 10.5005/jp-journals-10006-1699

INTRODUCTION

Reproductive tract infections/sexually transmitted infections (STIs) and nonsexually transmitted infections have become a global threat to the health of the population. Genital tract infection can lead to pelvic inflammatory diseases, infertility, and ectopic pregnancy, and viral infections are liable to cause vulval and cervical cancer.¹ Reproductive tract infections affect both women and men. Research shows that women are more susceptible than men. In India, self-reported morbidity varies between 39% and 84%.^{2,3} About 490 million cases of RTI occur throughout the world, of which 79 million cases occur in India annually.⁴ Reproductive tract infections/STIs are the major reproductive health problems in India. A variety of organisms are involved in causing RTI. The risk of transmission of HIV infection is associated with infections leading to a genital ulcer. In developing countries, RTIs are responsible for psychological and emotional disturbances as well as social and economic stigmas.^{5,6} In many cases, RTIs remain asymptomatic, this causes difficulty in detection and delay in diagnosis and treatment.

Obstetric complications include repeated pregnancy losses intrauterine fetal death, neonatal eye, and throat infection, septicemia.

Majority of complications can be prevented if the women approach to healthcare provider at the earliest.

The aims and objectives:

- To identify, the prevalence RTI among married women of reproductive age group (18–45 years), both pregnant and nonpregnant.
- To observe and analyze the influence of socioeconomic, sociodemographic variables on RTI.
- To evaluate and assess its effect on routine life.
- To treat the underlying cause.

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How to cite this article: Sawant V, Jaiswal S, Desai M. Impact of Socioeconomic and Demographic Factors on Reproductive Tract Infections during Reproductive Age Group (18–45 Years). *J South Asian Feder Obst Gynae* 2019;11(4):246–248.

Source of support: Nil

Conflict of interest: None

MATERIALS AND METHODS

This study was undertaken in teaching, tertiary care Hospital, Kolhapur, Maharashtra. The women of the reproductive age group (18–49 years) attending Obst Gyne OPD for various complaints were enrolled in the study. About 500 patients coming for Obst Gyne OPD for any other check-up and treatment between Feb 2017 and Aug 2017 were included in the study. It was an observational study. All married women between the age group of 18–45 years coming for obstetrics and gynecology complaints were asked detailed history, sometimes by asking a leading question. Complaints related to RTIs and STIs were noted.

All women were interviewed about their socioeconomic and sociodemographic, obstetric history, menstrual history, present and previous RTI symptoms. Their general physical examination and other systemic exam were carried out. In OPD per speculum examination was done, any discharge in the vagina noted, its color, amount, the foul smell was evaluated. By doing per vaginal exam,

any tenderness in the vaginal walls and fornices, any palpable mass was noted. The women who were suspected of having infection clinically, wet mount; gram staining of vaginal discharge was carried. In all women, urine routine microscopic examination was done. Also, their serum VDRL test was done. The complete history of each patient was then analyzed.

Statistical Analysis

Graphs are prepared in MS Excel 2007.

All the qualitative variables are compared by using the Chi-square test. Probability value ($p < 0.05$) is considered statistically significant. Graphpad quickcalcs software is used for analysis.

OBSERVATIONS AND RESULTS

A total of 500 patients were interviewed and undergone a clinical evaluation, laboratory investigations.

Amongst those 300 patients were diagnosed as having RTI clinically. The present study showed a 60% prevalence of RTI. Those patients only were included in the study and further evaluated. The majority of the age group involved was between the age of 26 years and 29 years, which was contributing about 32%, followed by the age group of 30–33 years, which was about 28%. The less affected (2%) group was between the age of 18 years and 21 years (Table 1).

By Chi-square test incidence of RTI is significantly more in age groups between 26 years and 29 years, 30 years and 33 years, and 34 years and 37 years, respectively.

Among the study, population 80% were residing in a rural area shows a significantly higher incidence of RTI in rural populations as compared to the urban population. Regarding literacy, the study population suffering from RTI was 59% illiterate, that means illiterate women due to lack of knowledge related to genital hygiene suffer from RTI (Tables 2 and 3).

Further, there is a significantly higher incidence of RTI among low socioeconomic groups 63.4%.

The predominant clinical feature was lower backache (26.6%), vaginal discharge (23.3%), and pain in the lower abdomen (21.6%). While the incidence of itching around the vaginal area, burning micturition was 13.3% and 8.3%, respectively. Dyspareunia was found in 45 women.

Patients were treated with appropriate antibiotics. After completion of treatment for RTI/STI, they were followed and found that their symptoms were relieved (Table 4).

Table 1: Prevalence of reproductive tract infection

Total number of cases	No. of RTI cases	Prevalence of RTI
500	300	60%

Table 2: Age-wise distribution of reproductive tract infection cases

Age GP	(%)	No. of cases
18–21	2	6
22–25	10	30
26–29	32	96
30–33	28	84
34–37	18	54
38–41	5	15
42–45	5	15
Total	100	300

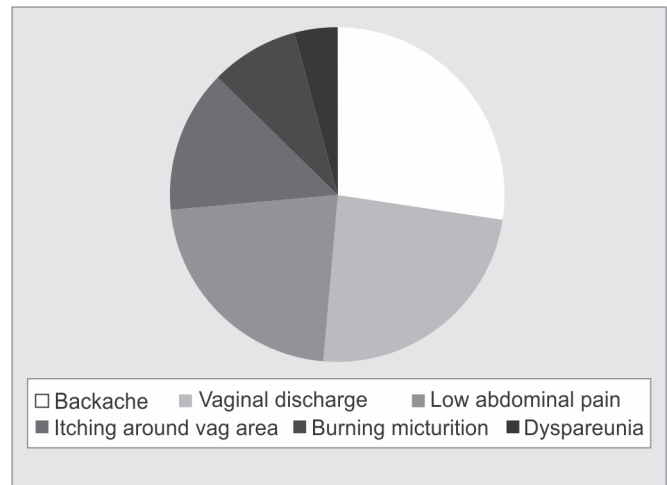
($p < 0.0001$)

Table 3: Socioeconomic and demographic data

Variable	No. of cases	(%)	
Residence			
Rural	240	80	($p < 0.0001$)
Urban	60	20	
Literacy			
Literate	122	41	($p = 0.0012$)
Illiterate	178	59	
Occupation			
Housework	240	80	($p < 0.0001$)
Job/Business	60	20	
Monthly income			
<10,000	190	63.4	($p < 0.0001$)
>10,000	110	36.6	

Table 4: Clinical symptoms

	(%)	No. of cases
Backache	26.66666667	80
Vaginal discharge	23.33333333	70
Low abdominal pain	21.66666667	65
Itching around vaginal area	13.33333333	40
Burning micturition	8.33333333	25
Dyspareunia	4	12



DISCUSSION

The present study shows that the prevalence of RTI is about 60% (300/500) in patients attending Obst Gynae OPD. Out of these, 53.41% were having symptoms suggestive of RTI, while 46.6% were asymptomatic. This reflects that the women having complaints of genital infections had kept the history hidden from family members; majority of women gave a history of symptoms suggestive of RTI, after asking a leading question. Those who gave the history of symptoms suggestive of RTIs were having disease progressed to a nonbearing extent. Previous community-based studies show a prevalence between 15% and 80%.^{7–11} Ramia et al. study result showed a prevalence of RTI (28.2%).¹² Our study shows that the highest prevalence of *C. albicans* was 41% in pregnant women.¹³

The present study objective was to observe the influence of socioeconomic status on RTI. Our study showed that 63.3 of patients with RTI had monthly income of <10,000, and 36.6% of patients with RTI had monthly income >10,000. One study by Dameru showed that low-income socioeconomic status as a risk factor for RTI.^{9,14}

The present study revealed that 59% of patients were illiterate, and 41% were literate. This shows that literacy does not have any influence on RTI. On the contrary, Dameru reported that women with informal education had more RTI. Similarity, one study conducted by Kafle et al.¹⁵ shows a similar result as that of Dameru.

In the present study, 11.2% of patients were having a history of previous abortion.

Regarding symptoms, 53.3% of patients were symptomatic, while 46.6% were asymptomatic. Among the symptoms, 50% were having backache, which they were thinking nonspecific. Different types of vaginal discharge were present in 43.7% of patients, while 40.6% were having pain in lower abdomen. Itching of vulva and around vagina was present in 25% cases, and burning micturition was compliant in 15.6% cases. No one was having genital ulceration or inguinal swelling. One study in Nigeria reported 57.7% of women had vaginal discharge, vulval itching, and pain in lower abdomen.¹⁶

The study states that women during the reproductive age group must be educated regarding genital hygiene, especially during menses. Awareness must be created among women by giving health talks related to RTI. The confidence should be build up to come forward and tell any minor complaints also to healthcare provider so that the conditions are diagnosed early, and treatment can be given at earlier stage, due to which morbidity due to genital infection in the form poor general health, hesitation in talking about genital complaints and overall ill effect of RTI on their life can be minimized.

This study was hospital-based so, it has limitations. Further community-based studies should be extended to all levels of residential areas like slum areas in urban, working women who work as laborers to women who are on higher post, women staying in villages.

CONCLUSION

Above study shows that socioeconomic status and literacy play an important role in developing RTI/STI. Basic awareness related to RTI should be created among these populations. The most common symptom was backache and vaginal discharge. Health education talks and training of personnel and genital hygiene need to be carried out among rural areas, low socioeconomic groups, and illiterate populations.

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