

Prevalence of reproductive tract infections and its determinants among rural women in Raichur, India

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ABSTRACT

Background: Reproductive tract infections (RTIs) are the major cause of morbidity among women especially in rural India.

Objectives: To estimate the prevalence of reproductive tract infections among rural women aged 15-49 years in Raichur district of Karnataka and to analyse the influence of socio-economic and socio-demographic factors related to RTIs.

Materials and Methods: A community-based cross sectional study was conducted among 380 women of 15-49 years in Singanodi village of Raichur district of Karnataka. Women were interviewed using a structured questionnaire. Variables included were socio-demographic and socio-economic characteristics, symptoms of RTIs, treatment taken for RTIs, etc.

Results: The prevalence of RTIs among the study

population was 58.9%. The most common symptom was vaginal discharge (27%) followed by abdominal pain (20%) and dyspareunia which constituted 19% of the symptomatic women. The prevalence of RTIs was more among women aged 25 years and above (72%) compared to those below 25 years (42%). Married women (56.8%) had a higher prevalence compared to unmarried women. Illiteracy, parity of the order 3, IUD usage was associated with higher prevalence of RTI and this was statistically significant ($P=0.0001$).

Conclusion: The high prevalence of RTIs was observed in the present study. Age, marital status and IUD use were associated with reproductive tract infections. Illiteracy and unawareness about menstrual hygiene were the reasons for higher prevalence of RTIs in our study.

Keywords: Prevalence, RTIs, rural, women

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INTRODUCTION

Almost two decades after the call for universal access to reproductive health at the fourth International Conference on Population and Development in Cairo (1994), and close to fifteen years after the introduction of Reproductive and Child Health Program (RCH) by the Government of India (1997), reproductive tract infections (RTIs) continued to be a major cause of acute illness, cancer, infertility, long-term disability, and death with

severe medical and psychological consequences for millions of men, women, and infants.¹ Reproductive tract infections represent a major public health problem in developing countries.¹ RTIs still carry social stigma especially among rural community in India and hence many rural women may not seek treatment at health centres.

In India, the prevalence of self-reported STI/RTI in the population aged 15 to 49 years was found to be between 21.9% to 92%.² Women are at a greater risk

of RTIs than men because of the physiological, cultural, social, and economic factors.^{2,3} Also, women are less likely to seek treatment, even for symptomatic infections, because of the stigma associated with RTIs.³

Hence this study was conducted to know the prevalence of RTIs and its associated factors among rural women in Raichur district of Karnataka.

MATERIALS AND METHODS

This study was conducted with the objective of assessing the prevalence of various RTIs among rural women in the reproductive age group of 15-49 years in rural field practice area of Navodaya Medical College, Raichur, Karnataka. It was a cross sectional study conducted between June 2013 and December 2013. The sample size calculated was 380, assuming the prevalence of RTIs as 50% and allowable error as 10%. Using stratified random sampling, 380 women of reproductive age group were selected for the study. Women were explained the purpose of the study. A pre-tested questionnaire was used and data related to various symptoms of RTIs, women's knowledge and attitude was collected by interview method.

The questionnaire included social and demographic characteristics, symptoms of RTIs/STIs, obstetric history and contraceptive practices. Prevalence of RTIs was assessed based on the prevalence of symptoms like vaginal discharge, genital ulcer, abdominal pain, burning micturition and menstrual pain.

Data was entered in excel spread sheet and analysed using SPSS software. Prevalence of RTIs was expressed as proportion with 95% confidence limits. Association of RTIs with other socio-demographic characteristics was tested with chi square test. A 'p' value of less than 0.05 was taken as significant.

RESULTS

In the present study, majority of the women (55.8%) were in the age group of 20-24 years. Mean age of the study sample was 23 ± 3.3 years, 338 (88.9%) women were Hindus, 36 were Muslims and 41.8% were illiterate.

Table 1: Prevalence of RTI Symptoms among the women in study population

Symptom	Number	Percentage
Vaginal Discharge	102	27%
Genital ulcer	58	15.3%
Abdominal pain	76	20%
Burning micturition	18	4.7%
Dyspareunia	73	19.2%
Inguinal swelling	55	14.5%

The total number of symptomatic women were 224 and hence the prevalence of RTIs among study population was 58.9%. Table 1 shows the prevalence of various symptoms among study population. The most common symptom was vaginal discharge (27%) followed by abdominal pain (20%) and dyspareunia which constituted 19% of the symptomatic women.

Table 2: Association of socio-demographic characteristics and Reproductive Tract Infections

	Symptomatic	Non- Symptomatic	Total	P-value
Age group (years)				
<25	70(42.1%)	96(57.9%)	166(100%)	Chi square 32.8 P=0.0001
25-35	85(66.9%)	45(33.1%)	127(100%)	
>35	69(79.3%)	16(20.7%)	87(100%)	
Marital status				
Married	165(56.8%)	125(43.2%)	290(100%)	Chi square 53.1 P=0.0001
Unmarried	2(13.3%)	13(86.4%)	15(100%)	
Divorced/widowed	57(76%)	18(24%)	75(100%)	
Education				
Illiterate	132(83%)	27(17%)	159(100%)	Chi square 68.8 P=0.0001
Primary	27(41.5%)	38(58.5%)	65(100%)	
Secondary	55(42.3%)	75(57.7%)	130(100%)	
Graduate & above	10(38.4%)	16(61.6%)	26(100%)	

	Symptomatic	Non- Symptomatic	Total	P-value
Occupation				
Housewife	13(28.8%)	32(71.2%)	45(100%)	Chi square -56.24 P=0.0001
Unskilled labour	180(72%)	70(28%)	250(100%)	
Skilled labour	22(45.8%)	26(54.2%)	48(100%)	
Others	9(24.3%)	28(75.7%)	37(100%)	
Parity				
1-2	57(44.5%)	71(55.5%)	128(100%)	Chi square 25.9 P=0.0001
3-4	137(71.3%)	55(28.7%)	192(100%)	
>4	30(50%)	30(50%)	60(100%)	
Contraceptive Use				
Condom	9(31%)	20(69%)	29(100%)	Chi square 23.2 P=0.0001
IUD	32(65.3%)	17(34.5%)	49(100%)	
Sterilization	9(60%)	6(40%)	15(100%)	
OCP	11(32.3%)	23(67.7%)	34(100%)	
None	163(64.4%)	90(35.6%)	253(100%)	

Table 2 shows association of RTI with socio-demographic features. The prevalence of RTI was more among women aged 25 years and above (72%) compared to those below 25 years (42.1%). Married women (56.8%) had higher prevalence compared to unmarried women. Illiteracy, parity of the order 3, IUD usage were associated with higher prevalence of RTI and this was statistically significant ($P=0.0001$).

DISCUSSION

Reproductive tract infections have been the major cause of morbidity among sexually active women especially in rural India and urban slums. The prevalence of RTIs in the present study was 58.9%. This prevalence is high, probably due to most of the women in our study were illiterate and unaware of menstrual hygiene. Many studies have reported a prevalence of RTIs ranging from 21.9% to 92%² in India. Also, the prevalence of RTIs is known to vary between urban, rural, and urban underprivileged population.^{4,5,6} Similar findings have been shown in other community-based studies in developing countries.^{2,4,7} The prevalence of RTIs was found to be 49%⁴ in a rural area of the district of Agra whereas 70% of the women studied in a rural area of Haryana were found to be suffering from RTIs. Comparatively, low prevalence was observed by studies conducted in slum and rural areas of Chandigarh (21.6%, 17.7%). Srivastava *et al*⁶ reported a RTIs prevalence of 45.22% among urban slum dwellers which is slightly lower than that found

in our study which could be attributed to differences in reporting.

The most common symptom was vaginal discharge (27%) followed by abdominal pain (20%) and dyspareunia which constituted 19% of the symptomatic women. Various studies have reported that the most common symptom of RTI among women was found to be white discharge per vagina.^{2,4,5,6,8,9,10,11}

We also explored the relation between various socio-demographic factors and the prevalence of RTI. Maximum prevalence was found in the age group of 25-34 years - a period of maximum sexual and reproductive activity. A similar observation was made in this age group in a study conducted in Agra.⁴ Married women had higher prevalence (56.8%) compared to unmarried women. This finding was similar to results found in a study conducted by Savitha *et al*.⁷ Similarly higher parity and use of IUDs were associated with higher prevalence of RTIs. This is true because during insertion of IUD bacteria may be introduced into the uterus. Recent work has been focused on pelvic inflammatory disease (PID) as being caused by organisms ascending the IUD tail from the lower genital tract to uterus and tubes.^{5,8}

CONCLUSION

The high prevalence of RTIs was observed in the present study. The most common symptom was vaginal discharge followed by abdominal pain and

dyspareunia. Prevalence was more among the age group of 25-34 years. Married women, IUD users suffered more often from reproductive tract infections. Illiteracy and unawareness about menstrual hygiene were the reasons for higher prevalence of RTIs in our study.

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