

A Study to Assess the Prevalence of Reproductive Tract Infection based on Syndromic Approach and Health-Seeking Behaviour among the Women of Reproductive Age Group in Selected Rural Areas of Kamrup District, Assam

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Abstract: Introduction: Reproductive tract infection (RTI) is defined as the infection of the genital tract. RTIs are presently ignored as a significant health issue which can cause serious complications ranging from pelvic inflammatory disease, preterm labour, miscarriage, infertility and even death. Aim: To estimate the prevalence and health-seeking behaviour related to reproductive tract infection among women of reproductive age group in selected rural areas of Kamrup district, Assam. Method: The study was conducted on 220 samples selected by purposive sampling technique at North Guwahati PHC and Baranghati PHC from March 2022 to April 2022. Non-experimental quantitative research approach and descriptive research design was adopted. House-to-house survey was done and data was collected using interview schedule. The samples who had at least three symptoms were considered as having RTI. Result: The prevalence of reproductive tract infection among women of reproductive age group in selected rural areas of Kamrup district, Assam is 11.4%. The most common symptom is vulval itching i.e., 33(15%). The majority (15%) of women had vulval itching followed by (12.3%) backache. The study estimates that 43 women (19.5%) sought healthcare treatment for any of the symptoms of RTI and 6 (2.7%) women use home remedies to combat the problem. Conclusion: The prevalence of reproductive tract infection was high in selected rural areas of Kamrup district, Assam. There is association between frequency of changing cloth/pad per day with the prevalence of RTI among women of reproductive age group. There is a need to educate women more on reproductive hygiene.

Keywords: Prevalence, Reproductive Tract Infection, Syndromic approach, Health-seeking behaviour, Reproductive age group

1. Introduction

“We cannot confront the massive challenges of poverty, hunger, disease and environmental destruction unless we address issues of population and reproductive health”

- Thoraya Obaid

Reproductive Tract Infections are a hidden epidemic leading to enormous health consequences. Reproductive tract infection (RTI) is defined as the infection of the reproductive or genital tract. A woman with RTI can represent various symptoms like backache to lower abdominal pain, genital ulcers, vulvar itching, inguinal swelling, and abnormal vaginal discharge. RTIs are presently ignored as a significant health issue though it disturbs the social wellbeing of women during their most productive age. In India, every fifth rural women have at least any one type of symptom of RTI. Less than half the women reporting any symptom related to RTI seek help. If RTI is left untreated, women may suffer from serious complications such as pelvic inflammatory disease, preterm labour, miscarriage, stillbirth, infertility, genital cancer and even death. The research was conducted to estimate the prevalence of reproductive tract infection among women of reproductive age group and various health-seeking behaviours adopted by women in rural areas to combat infections, to understand the fatality of the problem.

2. Literature Survey

Balakrishnan S, Carolin A, et al. (2022) conducted a Community-Based Cross-Sectional Study on the Prevalence of Reproductive Tract Infections Based on the Syndromic Management Approach Among Rural Women in Kancheepuram District, Tamil Nadu. This study was conducted in the rural field practice area of Chettinad Hospital. The sample size was 330 chosen by multistage random sampling. Data was collected using a standardized questionnaire and was analyzed in SPSS version 20. The study findings shows that the prevalence of RTI was found to be 50.3%, with the majority (61.3%) of women in the age group of 28-37 years, 52.85% among females living with spouses, and 57.9% from the Hindu community. The prevalence was high among the lower-middle-class and nuclear families. The commonest symptom is vulval itching with 74.09%, and the least is boils with 0.9%. A significant association was noted between RTI and menstrual hygiene practices and socioeconomic status ($p < 0.05$). The study concluded that the prevalence was high among rural females, and the main reason behind it was the stigma and the lack of awareness.

Doley P, Yadav G, et al. (2020) conducted a study on “to assess the knowledge, health seeking behaviour and barriers for treatment of reproductive tract infections among married women of reproductive age in Delhi”. Sample size of 270 was calculated using prevalence of RTI symptoms as 42%,

Volume 12 Issue 4, April 2023

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confidence interval of 95%, and relative precision as 15% and non-response error as 10%. Sampling unit was a household which was selected using systematic random sampling. Data was collected using a semi-structured questionnaire to assess the health seeking behaviour of women. The study estimated that out of 81 women having symptoms almost 30% did not seek treatment and out of 70% who did seek almost 30% did not take complete treatment. About 54.3% sought treatment from government doctors, 21.05% from private and almost one fourth from chemists. The main barrier for not seeking treatment is that they were embarrassed to go to a doctor (45.8%) and did not consider it an important health problem (20.8%). The study concluded that there is an urgent need to overcome these barriers especially with reference to Government health facilities to promote utilization of Government health care facilities and completion of treatment.

3. Methods/Approach

The present study was carried out in rural areas under Abhaypur PHC, North Guwahati and Baranghati PHC from March 2022 to April 2022. For collection of samples for the study, the 12 blocks under Joint Director of Health Service, Amingaon (Rural) were listed down. Out of those 12 blocks, 2 blocks i.e. North Guwahati block and Baranghati block were selected using random lottery method. Then, the complete list of villages in the study area was obtained along with population of females in reproductive age group i.e. 15 to 49 years. From each selected villages, 10% of women in reproductive age group who fulfilled the inclusion criteria were then selected for the study. Women of reproductive age group i.e. 15 to 49 years, both unmarried and ever-married women were included while pregnant women were excluded from the study. Total 220 samples were collected from selected rural areas of Kamrup district, Assam. Non-experimental quantitative research approach and descriptive research design was adopted. House-to-house survey was done and data was collected using interview schedule. Three tools were used. Tool I to seek information regarding socio-demographic and clinical characteristics of the sample. Tool II consisted of a list of symptoms to assess the prevalence of reproductive tract infection. The samples who had at least three symptoms were considered as having RTI. Tool III was used to assess the health seeking behaviour regarding reproductive tract infection. Data collected during this study was analysed and appropriate test were applied to test the significance of observations.

4. Results

Table 1 shows the frequency and percentage distribution of prevalence of Reproductive Tract Infection based on syndromic approach among the women of reproductive age group, N=220

Prevalence of Reproductive Tract Infection	Frequency		Percentage	
	Yes	No	F	%
Yes	25	11.4		
No	195	88.6		
Symptoms of Reproductive Tract Infection	Present		Absent	
	F	%	F	%
Abnormal vaginal discharge	24	10.9	196	89.1
Backache	27	12.3	193	87.7

Vulval itching	33	15	187	85
Low abdominal pain	27	12.3	193	87.7
Inguinal swelling	3	1.4	217	98.6
Genital ulcer or rash	6	2.7	214	97.3
Dysuria	18	8.2	202	91.8

Table 2 shows the frequency and percentage distribution of health seeking behaviour for the symptoms of Reproductive Tract Infection among the women of reproductive age group, N=220

Women seeking healthcare treatment for any symptoms of RTI	Frequency	Percentage
a. Yes	43	19.5
b. No	177	80.5
Type of medicine	(n=43)	
a. Allopathic medicine	39	90.7
b. Indian system of medicine	4	9.3
Type of healthcare institution	(n=43)	
a. Government	39	90.7
b. Private	4	9.3
Compliance to the treatment	(n=43)	
a. Yes	43	100%
b. No	0	0

Table 3 shows the frequency and percentage distribution of use of home remedy for the symptoms of Reproductive Tract Infection among the women of reproductive age group, N=220

Use of home remedy	Frequency	Percentage
a) Yes	6	2.7
b) No	214	97.3
If yes, what type of home remedy	(n=6)	
a) Vaginal wash with salt water	3	50
b) Ingestion of apanijita flower with milk	1	17
c) Application of mustard oil in and around vagina	2	33

Table 4 shows association between prevalence of reproductive tract infection among women of reproductive age group with selected demographic variables, N=220

Demographic variables	Prevalence		χ^2 value	df	p value
	Yes	No			
Age in years					
a) 15-25 years	10	59	0.978	2	0.613 ^{NS}
b) 26-35 years	7	64			
c) 36-49 years	8	72			
Educational status					
a) No formal education	0	3	0.606	5	0.988 ^{NS}
b) Primary	1	10			
c) Middle school	5	34			
d) High school	5	42			
e) Higher secondary	9	65			
f) Graduate and above	5	41			
Occupation					
a) Government employee	0	4	2.882	4	0.578 ^{NS}
b) Private employee	2	5			
c) Self employed	2	11			
d) Agricultural worker	2	15			
e) Homemaker	19	160			
Monthly income of family					
a) < Rs 10,000	16	105	3.372	4	0.498 ^{NS}
b) Rs 11,000- 20,000	7	48			
c) Rs 21,000- 30,000	2	21			
d) Rs 31,000- 40,000	0	13			

e) Above Rs 40,000	0	8			
Marital status					
a) Married	16	12	1.647	3	0.649 ^{NS}
b) Unmarried	9	59			
c) Widow	0	8			
d) Divorce	0	3			

*p<0.05 level of significance NS-Non significant

Table 5 shows association between prevalence of reproductive tract infection among women of reproductive age group with selected clinical variables, N=220

Demographic variables	Prevalence		χ^2 value	Df	p value
	Yes	No			
Parity					
a) None	13	81	3.29	3	0.462 ^{NS}
b) Para 1	7	48			
c) Para 2	3	56			
d) Para 3 and above	2	10			
Place of delivery					
a) Government	8	80	0.047	3	0.812 ^{NS}
b) Private	2	23			
c) Semi-government	0	0			
d) Home	1	12			
History of abortion					
a) Yes	17	96	3.143	1	0.042 ^{NS}
b) No	8	99			
Contraceptive use					
a) Natural method	0	1	11.053	5	0.068 ^{NS}
b) Barrier method	4	6			
c) Intrauterine device	0	12			
d) Chemical method	1	11			
e) Terminal method	1	9			
f) No use	19	156			
Menstrual hygiene practices					
a) Use of sanitary pads	13	88	0.424	2	0.809 ^{NS}
b) Use of cloths	9	81			
c) Both	3	26			
Frequency of changing pad/cloth per day					
a) Less than 4 times a day	13	131	5.994	2	0.033*
b) Minimum 4 times a day	5	41			
c) When wet	7	23			
Takes bath during menstruation					
a) Yes	25	195	NA	NA	NA
b) No	-	-			

*p<0.05 level of significance NS-Non significant

Table 6 shows association between health-seeking behaviour among women of reproductive age group with selected demographic variables, N=220

Demographic variables	Health seeking behaviour		χ^2 value	Df	p value
	Yes	No			
Age in years					
a) 15-25 years	16	53	2.077	2	0.354 ^{NS}
b) 26-35 years	10	61			
c) 36-49 years	17	63			
Educational status					
a) No formal education	0	3	1.158	5	0.949 ^{NS}
b) Primary	2	9			
c) Middle school	8	31			
d) High school	8	39			
e) Higher secondary	16	58			
f) Graduate and above	9	37			
Occupation					

a) Government employee	0	4	8.056	4	0.090 ^{NS}
b) Private employee	4	3			
c) Self employed	3	10			
d) Agricultural worker	2	15			
e) Homemaker	34	145			
Monthly income of family					
a) < Rs 10,000	27	94	4.494	4	0.343 ^{NS}
b) Rs 11,000- 20,000	12	43			
c) Rs 21,000- 30,000	3	20			
d) Rs 31,000- 40,000	1	12			
e) Above Rs 40,000	0	8			
Marital status					
a) Married	28	113	2.954	3	0.399 ^{NS}
b) Unmarried	15	53			
c) Widow	0	8			
d) Divorce	0	3			

*p<0.05 level of significance NS-Non significant

5. Discussion

The first objective was “To assess the prevalence of reproductive tract infection based on syndromic approach among the women of reproductive age group”

The study findings shows that the prevalence of RTI in selected rural areas of Kamrup district, Assam is 11.4%. The majority (15%) of women had itching around vaginal area, (12.3%) had backache, (12.3%) had low abdominal pain, (10.9%) had vaginal discharge, (8.2%) had painful or burning urination, (2.7%) had genital ulcer or rash and (1.4%) had inguinal swelling.

Comparative finding has been reported in a study conducted by Chaudhary N, Kalyan R et al. (2019) on Prevalence of reproductive tract infections in women attending a tertiary care center in Northern India with special focus on associated risk factors. The study estimates the prevalence of reproductive tract infections in women attending our centre reported 9.7%. The most common presentation was genital discharge (52.8%) followed by lower abdominal pain (45.2%).

The second objective was “To assess the health seeking behaviour related to reproductive tract infection among the women of reproductive age group.”

In this present study, 19.5% of women (i.e., 43 women) sought healthcare treatment for the symptoms of RTI. Out of those 43 women, 39 (90.7%) sought allopathic medicine while 4 (9.3%) of them sought Indian system of medicine. 41 (95.4%) out of 43 went to government institution and other 2 (4.6%) went to private institution. All 43 women who sought healthcare were compliant to the treatment. Among the symptomatic women, 6 (2.7%) of them used home remedy to control and cure RTI symptoms.

The present study is supported by a study conducted by Surya B, Shivasakthimani R, Muthathal et al. (2021) on cross-sectional study on health-seeking behavior in relation to reproductive tract infection among ever-married rural women in Kancheepuram district, Tamil Nadu. The study findings revealed that among the females who presented with the any one of the symptoms of RTI, only half of them, that is, 60.8% received the treatment and majority (43.6%)

of them who received treatment followed home remedies for their relief. Most of the participants followed home remedies (43.6%) as major treatment option, whereas general hospitals are given least preference in their choice of place of treatment with 19.8% due to the lack of awareness about the health care facilities available at the primary care level.

The third objective was “To find association between the prevalence of reproductive tract infection based on syndromic approach among women of reproductive age group with sociodemographic variables and clinical variables.”

The present study findings revealed that there is association between the prevalence of RTI with the clinical variable i.e., the frequency of changing pad/cloth per day by women. Similar to this study, Sawant V, Jaiswal S, Desai M (2018) conducted a study on Impact of socioeconomic and demographic factors on reproductive tract infections during reproductive age group (18-45) years. The most affected women were from rural population (80%), using cloth during menstruation (43%).

The fourth objective was “To find association between health seeking behaviour related to reproductive tract infection among women of reproductive age group with socio demographic variables.”

The present study findings revealed that there is no association between health seeking behaviour related to reproductive tract infection among women of reproductive age group with socio demographic variables.

Similar to this study,

Mitchell A , Padhi B et al. (2019) conducted a research study on “Frequency and determinants of health care utilization for symptomatic reproductive tract infections in rural Indian women of reproductive age group: A cross-sectional study”. The study result showed that there was no association between RTI health care seeking with demographic variables, belief about whether symptoms can be treated, or poverty.

6. Conclusion

After conducting the study, the following conclusions can be drawn from the study findings – The prevalence of RTI based on symptoms among women of reproductive age group in selected rural areas of Kamrup district, Assam is 11.4%. The most prevalent RTI symptom is vulval itching (15%). The study revealed that only 43 women sought healthcare treatment for the symptoms of RTI. And also, the findings shows that there is association between prevalence of RTI and frequency of changing pad/cloth per day by women.

7. Future Scope

- 1) A comparative study can be done between urban and rural area
- 2) An awareness or teaching program regarding reproductive tract infection can be conducted for the samples

- 3) A similar study can be done to assess the knowledge and attitude of women towards reproductive tract infection
- 4) A similar study can be done using laboratory test to assess the prevalence of different types of reproductive tract infection such as gonorrhoea, chlamydia, syphilis etc.
- 5) A similar study can be replicated using a large sample size
- 6) A similar type of study can be conducted by using alternative sampling technique
- 7) A similar study can be conducted for both men and women in reproductive age group

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