

Reproductive Tract Infections: Prevalence and Health Seeking Behaviour among Women of Reproductive Age Group

Mamta¹, Navdeep Kaur²

¹Nursing Tutor, College of Nursing, AIIMS, Jodhpur, Rajasthan, India

²Lecturer, Silver Oaks College of Nursing, Mohali, Punjab

Abstract: Reproductive tract infections are having large burden on the society. An estimated 340 million new cases of RTIs emerge each year, with 151 million of them occurring in Asia. Without early diagnosis and accurate therapy, their complications severely compromise women's health, fertility, infant health and survival. Present descriptive study was conducted to assess the prevalence of symptoms of RTIs and health seeking behaviour among women of reproductive age group (15-49 years) residing in village Abhipur, Mohali, Punjab. 60 reproductive age women were randomly selected through lottery method and interviewed with help of self structured tool. **Results:** The prevalence of various symptoms of RTIs among the subjects was found to be as high as 45%. Most of the subjects (45%) reported backache whereas the least reported symptom was burning micturition (1%). Most of the respondents (82%) had satisfactory health seeking behaviour. Results revealed that there was statistical significant association between income and health seeking behaviour.

Keywords: Reproductive tract infections (RTIs), Symptoms of RTIs, Women of reproductive age group, Prevalence, Health seeking behaviour

1. Introduction

Reproductive tract infections (RTIs) are one of the most prevalent health morbidities among women throughout the world especially in developing countries. In India alone, about 40 million new cases emerge each year [1]. These are infections of reproductive system and are group of communicable diseases that are transmitted predominantly by sexual contact and caused by a wide range of bacterial, viral, protozoan and fungal agents[2]-[3].

In India and other developing countries these infections rank among top five health conditions. National family Health Survey has also reported that 39.2% women in India have one or more reproductive tract infections whereas prevalence of self-reported RTI symptoms has been found to be 11-18% in various nationally representative studies [4].

A majority of women especially living in rural and slum areas of the country continue to suffer from RTIs. Women because of their shorter reproductive tract are at risk of contracting RTIs [5]. In many cases RTIs remain asymptomatic and make detection and diagnosis very difficult. In some of the other cases despite of availability of health services, symptomatic women bears silence because of shyness and social stigma. A woman with RTIs can represent various symptoms ranging from simple backache to Lower abdominal pain, Genital ulcers, Vulval itching, inguinal swelling, abnormal vaginal discharge, & genital ulcer. RTIs if left untreated or there is delay in treatment can lead to complications like pelvic inflammatory disease (PID), infertility, cervical cancer, and puerperal sepsis, chronic pelvic pain, ectopic pregnancy and pregnancy wastage. In the recent years the appearance of HIV and AIDS has further burdened the existing problem as these infections are closely related to each other [6]-[9].

Women as a part of society need to be healthy. A health mother can give a healthy future to nation. In the previous year's various studies has been done on RTIs and health seeking behaviour of women but most of the studies are form urban and slum areas. So with this background in mind current study has been planed and conducted in rural part of Panjab in order to assess prevalence of symptoms of RTIs and health seeking behaviour of women.

2. Aims & Objectives

2.1 Objectives

- To estimate the prevalence of various symptoms of RTIs among the women of reproductive age.
- To identify the health seeking behaviour of women regarding RTIs.
- To find out the association between the health seeking behaviour score and selected demographic variables

2.2 Assumptions

- Women of reproductive age (15-49 years) will have more chance of contracting RTIs.

2.3 Hypotheses

Ho: There will be no significant association between socio-demographic variables and health seeking behaviour regarding RTIs among women age group 15-49 years.

3. Material and Methods

3.1 Research Approach & Design

The research approach adopted for the present study was descriptive approach because the present study was aimed to

assess the prevalence of various sign & symptoms of RTIs among the women of reproductive age & to identify the health seeking behaviour of women regarding RTIs. A non experimental research design was used to obtain the answer in the present study.

3.2 Research Setting

The study was conducted in Village Abhipur, Mohali, Punjab. It is a rural area with estimated population of 300.

3.3 Population

The population of the current study comprised of women within reproductive age group (15-49 years) residing in village Abhipur, Mohali, Punjab.

4. Sample & Sampling Technique

Sample size for this study was 60 women of reproductive age group (15-49 years) residing in village Abhipur, Distt. Mohali, Punjab. Sample was selected by simple random sampling method (lottery method) after conducting a house to house survey.

4.1 Sampling criteria

Inclusive criteria

- The women (15-49 years) who were available at the time of data collection.
- Those who were willing to share the information, able to understand Hindi, Punjabi.

Exclusion criteria

- The study subject who are not willing to participate in study.

5. Tool Development

Self structured questionnaire on Prevalence of symptoms of RTIs & health seeking behaviour was used to collect the data which consisted of three parts:

Part I: - Socio demographic profile consisted of 9 questions i.e. Age, Religion, Qualification, Income, Marital status, Occupation, Monthly income, Gravida and type of toilet used.

Part II: - Structured RTI prevalence questionnaire consisted of 12 questions to assess prevalence of RTIs. Prevalence was calculated as per the presentation of the various symptoms of RTIs reported by the women.

Part III: - Health seeking behaviour questionnaire consisted of 10 questions. Each correct response was given one mark and incorrect response was given zero mark. Subjects scoring from 6-10 had satisfactory and those scoring from 0-5 had Non-satisfactory health seeking behaviour.

6. Validity & reliability of tool

Content validity of the tool was determined by taking opinion of experts in field of nursing. Tool's reliability was also checked out. Tool was found to be reliable as shown by test-retest method ($r = 0.93$).

7. Ethical considerations

Written permission to conduct the study was taken from the sarpanch of rural community Abhipur, Mohali (Punjab). The ethical considerations took into account the personal and revealing nature of the study, which required that voluntary, informed consent, using the consent form designed for this study, needed to be obtained from the participants. Prior to administering the questionnaires, the aims and objectives of the study were clearly explained to the participants and written informed consent was obtained. Confidentiality and anonymity were ensured throughout the execution of the study.

8. Pilot study

The pilot study was conducted to assess the feasibility of the study and to decide data analysis plan. Administrative permission was granted formally from the sarpanch of the village. The pilot study was conducted on 6 women (15-49 years) of some other village of same area. These 6 women were explained about the pilot study and consent was taken from them. Questionnaire was handed over to them. On an average 35 minutes were taken by each woman to fill the questionnaire. Data was analyzed by statistical tests. The pilot study did not show any major change in the design of questionnaire.

9. Data Collection Procedure

Final data collection was done in April 2012 in village Abhipur, Mohali, Punjab. Prior permission was obtained from authorities before administering tool. Subjects were ensured about the confidentiality of the information they will reveal. After obtaining permission from respondents, they were asked to complete the questionnaire. On an average 30-35 minutes were taken by each subject to fill the questionnaire. After completing the questionnaire, it was collected back and scoring was done to assess prevalence of RTI and health seeking behaviour.

10. Data Analysis

Master sheet was prepared for each section of tool. The descriptive (frequency and percentage) as well as inferential statistics (Chi square Test) was carried out to fulfil the objectives of study.

11. Results

11.1 Demographic Profile of Subjects

Total of 60 subjects were enrolled in the study out of which half of the subjects (51.66%) were from age group 15-25 years followed by 23% from age group 36-45 years, 18% in age group 26-35 years whereas remaining (6.66%) were from age group of 46 & above. As per education, about half of the subjects (52%) had studied up to 10th, and merely 8% respondents were uneducated. Occupation wise, most of the respondents (46%) were non-working, about 13% of respondents were studying and only 10% were working respectively. About 78.33% of the subjects were married and 1/3rd subjects were unmarried. Among married subjects

about 45% were married at the age of 15-20 years. Majority of respondents (81.66%) were Sikhs. 63.33% of the total subjects had monthly income \leq 5000 rupees and only 3.33% had monthly income between 10001- 15000 rupees. The maximum number of subjects (35%) had 1 child, 25% had none, 21.66% had 2 children & only 18.33% had 3 children. Most of respondents (75%) were using Indian type toilet as compared to 18.33% who went for open defecation in the fields. (Table 1)

Table 1: Frequency distribution of subjects as per socio-demographic profile (N=60)

Variables	n(%)
Age(in years)	31 (51.66)
a) 15-25	11(18.33)
b) 26-35	14(23.33)
c) 36-45	4(6.66)
d) 46 & above	
Education	5(8.33)
a) Uneducated	14(23.34)
b) Primary	31(51.67)
c) Metric	10(16.67)
d) 10+2 & Above	
Occupation	
a) Working	6(10.00)
b) Non working	46(76.66)
c) Student	8(13.33)
Marital Status	
a) Unmarried	12(20.00)
b) Married	47(78.33)
c) Widowed	1(1.66)
If Married Then Age At Marriage	
a) 15-20 years	27(45.00)
b) 21-25 years	21(35.00)
Religion	
a) Muslim	11(18.33)
b) Sikh	49(81.66)
Income (Rs)	
a) \leq 5000	38(66.33)
b) 5001-10000	20(33.33)
c) 10001-15000	02(3.33)
Parity	
a) No	15(25.00)
b) First	21(35.00)
c) Second	13(21.66)
d) Third	11(18.33)
Type Of Toilet	
a) Indian	45(75.00)
b) Western	4 (6.67)
c) Open defecation in field	11(18.33)

11.2 Symptom wise prevalence of RTIs

Backache was seen as the most common symptom of RTIs among study subjects. Dysmenorrhoea was found in 42% of respondents and 40% subjects were suffering from lower abdominal pain. Abnormal vaginal discharge and irregular menstrual cycles were present in 22% of women. Lowest prevalence rate was found for excessive bleeding during menses (10%), Dysparanuea (8%), followed by Fever $>$ 39 degree Celsius (7%), sore in genital area (3%) & Burning micturition (1.66%). (Figure 1)

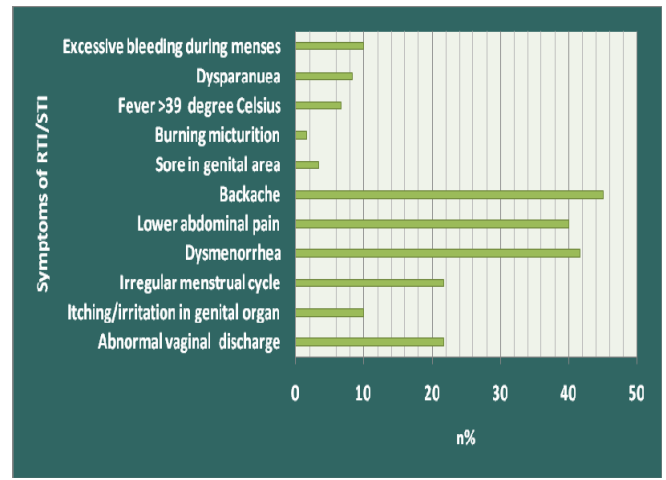


Figure 1: Prevalence of sign and symptoms of RTIs

11.3 Health Seeking Behaviour

Highest health seeking score was 9 out of 10. Overall mean score was 7.3 ± 2.302 . (Table 2) Majority of subjects (82%) were having satisfactory health seeking behaviour whereas only 18% subjects were found to have non- satisfactory health seeking behaviour (Figure 2)

Table 2: Highest score, overall mean, mean %, and S.D of health seeking behaviour scores among subjects (N=60)

Levels of Health Seeking Behavior Score			
Highest score	Mean	Mean%	SD
9	7.3	1.7	2.302

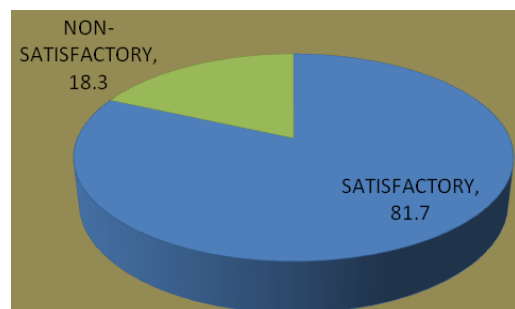


Figure 2: Percentage distributions of subjects as per levels of health seeking behaviour

11.4 Association of health seeking behaviour with selected socio demographic variables

Only income was found to have statistically significant association with the health seeking behaviour ($\chi^2=7.798$, P value=0.020). Other socio-demographic variables i.e. age, education, occupation, marital status, religion, parity had no significant association with health seeking behaviour related to RTIs. (Table 3)

Table 3: Association of socio-demographic variables with levels of health seeking behaviour (N = 60)

Variables	Health Seeking Behaviour		χ^2	Df	P Value
	Satisfactory N (%)	Not Satisfactory N(%)			
Age					
15-25 yrs	23 (38.4)	8 (13.3)	3.659	2	0.160
26-35 yrs	11 (18.3)	0(0.0)			
>35 years	15 (25)	3(5.0)			
Education					
Uneducated	3 (5.0)	2 (3.3)	6.433	3	0.092
Primary	10 (16.6)	4 (6.7)			
Matric	27 (45.0)	4 (6.7)			
+2 & above	9 (15.0)	1 (1.7)			
Occupation					
Working	6 (10)	0 (0.0)	4.099	2	0.129
Non working	34 (56.7)	12 (20.0)			
Student	8 (13.3)	0 (0.0)			
Marital Status					
Unmarried	9 (15.0)	3 (5.0)	0.539	2	0.76
Married	39 (65.0)	8 (13.3)			
Widower	1 (1.7)	0 (0.0)			
Income					
≥ 5000	28 (46.7)	10 (16.6)	7.798	2	0.020*
5001-10,000	20 (33.3)	0 (0.0)			
10,001-15,000	2 (3.3)	0 (0.0)			
Religion					
Sikh	41(68.4)	8 (13.3)	0.719	1	0.396
Muslim	8 (13.3)	3 (5.0)			
Gravida					
NO	11 (18.3)	4 (6.7)	0.834	3	0.841
1 st	19 (31.7)	2 (3.3)			
2 nd	12 (20.0)	1 (1.7)			
3 rd	8(13.3)	3 (5.0)			

*Significant at $P < 0.05$

12. Discussion

Reproductive tract infections are common but neglected health problems among women during their reproductive age. Several studies conducted across the globe especially in Asia show that women suffer from reproductive morbidities for a long time because of the prevailing "culture of silence". Keeping this view in mind the present study was undertaken in rural area of Punjab, India with an objective to assess the prevalence of symptoms of RTIs and health seeking behaviour among women of reproductive age.

In the present study it had been seen that about 2/3rd of the subjects were found symptomatic for RTIs. The most common presentation was backache (45%) whereas the least reported symptom was burning micturition (2%). A study conducted in the district of Agra by Nandan et al also showed that the prevalence of RTIs among women was 49% [10]. One of the study carried out by Philip PS and colleagues also reported that most common RTI symptom among women sufferers were urinary (dysuria 57.8%, frequent urination 53.3%), followed by dyspareunia (26.7%), unusual vaginal discharge (24.4%) and vaginal itching (22.2%) [9].

As per health seeking behaviour is concerned, more than 80% of the subjects were having a satisfactory health seeking behaviour. The similar results were reported in a Nigerian study, where most patients (87.9%) sought medical care

when they experienced symptoms of RTI's [11]. Contrary results were shown by AJ Singh and A Samantha in different parts of the country where about 50% to 59% of the respondents reported satisfactory health seeking behaviour [12]-[13]. The different results of the present study can be due to the different research setting, small sample size. Also the fact that the area where present study was conducted is adopted by the nearby nursing institution and time to time Promotive & preventive campaigns are arranged for the people of that area.

In present study, health seeking behaviour of the women was found to be significantly associated with the income of family, which means that the family having higher income is having satisfactory health seeking behaviour of women as they can spend money on the health concerns. The present results correspond to results of study conducted by Shagun Sabarwal where RTI prevalence showed an increasing trend with the decrease in socioeconomic class. However, contrary results were reported in some of the other studies where Health seeking behaviour was found to be significantly affected by increasing age, sexual history etc [4],[6], [14].

13. Conclusion

The women of reproductive age group have more chance of getting RTIs and associated symptoms because various reasons especially different anatomical structure of female reproductive tract & improper hygienic practices. Current study reported the high prevalence rates of various symptoms related to RTIs. Despite launching of various health programmes especially for the females still the problem is wide spread. There is a need for community based approaches and researches on RTIs and their prevention. It will be a step in the right direction of fostering local, national, and political commitment to the overall reproductive health needs of the average Indian women.

14. Implications of Study

14.1 Nursing education

Nursing teachers should put emphasis on health education and method of imparting education regarding reproductive tract infections during student training period. Students should get opportunity to give health education in an appropriate way during their clinical practice. This will be further helpful in planning education programmes for the community and reproductive aged women.

14.2 Nursing Practice

Nurses can assess the health status of the women and their health seeking behaviour regarding RTIs. On the basis of the results, new strategies and plans can be incorporated into nursing practice which will help in prevention and management of various RTIs.

14.3 Nursing Research

Research should be done to assess the magnitude of RTIs in community and also to find out various innovative methods for effective teaching to improve the knowledge regarding prevention and management of RTIs.

14.4 Nursing Administration

The nurse administrator should co-ordinate her work along with the preventive, creative and rehabilitative aspect of care. This type of study helps the nursing administration to apply the various strategies to enhance the community people for maintenance of positive reproductive health.

15. Recommendations

- Similar study can be conducted with larger sample in different settings to generalize the findings.
- Similar study can be done on nursing students and teachers.
- On the basis of findings of this study, interventional studies can be done to benefit the society.

References

- [1] Balamurugan SS, Bendigeri ND. Community-Based Study of Reproductive Tract Infections among Women of the Reproductive Age Group in the Urban Health Training Centre Area in Hubli, Karnataka. *Indian J Community Med* 2012; 37(1): pp. 34–38.
- [2] Desai GS, Patel RM. Incidence of reproductive tract infections and sexually transmitted diseases in India: levels & differentials. *Journal of family welfare*, pp. 48-60. Available: <http://medind.nic.in/jah/t11/i2/jaht11i2p48.pdf>. [Accessed: Mar. 31, 2014]
- [3] Patel BC, Khan ME. Reproductive health problems of women in rural Uttar Pradesh: Observations from a community survey. *Soc Change* 1996; 26: pp. 245–70
- [4] S Sabarwal, Santhya K.G. Treatment-Seeking for Symptoms of Reproductive Tract Infections among Young Women in India. *International Perspectives on Sexual and Reproductive Health*, 2012, 38 (2): pp. 90–98
- [5] Lipilekha Patnaik. RTI/STI among reproductive age group women in urban slums An Epidemiological study on RTI/STI among women of reproductive age group in urban slums of Brahmapur city, Odisha, India 2012. Available: <https://www.lap-publishing.com/catalog/details/store/ru/book/978-3-8484-4996-5/rti-sti-among-reproductive-age-group-women-in-urban-slums>. [Accessed: Mar. 20, 2014].
- [6] Komal P. Thekdi, Nita K. Patel, K. G. Patel, Pukur I. Thekdi. Health seeking attitude of women regarding reproductive tract infections in a rural area of Surendranagar district. *Int J Res Med Sci*. 2013; 1(4): pp. 552-556
- [7] Bhandari MN and Kannan S, Untreated reproductive morbidities among ever married women of slums of Rajkot City, Gujarat: the role of class, distance, provider attitudes, and perceived quality of care, *Journal of Urban Health*, 2010, 87(2): pp. 254-263
- [8] National AIDS Control Organization (NACO) and MOHFW, National AIDS Control Programme, Phase III (2006-2011): Strategy and Implementation Plan, New Delhi: NACO, 2006.
- [9] Philip PS, Benjamin AI, Sengupta P. Prevalence of symptoms suggestive of reproductive tract infections/sexually transmitted infections in women in an urban area of Ludhiana. *Indian J Sex Transm Dis*. 2013 Jul-Dec; 34(2): pp. 83–88.
- [10] Shrivastava A, Nandan D, Mahrotra A.K, Maheshwari B.B, Mishra S.K. A comparative study of perception of RTI among married women in rural, urban and urban slum areas. *Indian Journal of Community Medicine* 2004; 2: pp. 67-68.
- [11] Kabiru A Rabi, Adeniyi A Adewunmi, Fatimat M Akinlusi and Oluwarotimi I Akinola .Female reproductive tract infections: understandings and care seeking behaviour among women of reproductive age in Lagos, Nigeria. *BMC Women's Health* 2010; 10: pp. 8
- [12] Singh AJ. Vaginal discharge: Its causes and associated symptoms as perceived by rural North Indian women. *Indian J Commun Med* 2007; 32: pp. 22-6
- [13] Samanta A, Ghosh S, Mukherjee.S. Prevalence and health seeking behaviour of RTI/STI's symptomatic: A cross sectional study of a rural community in the Hooghly district of West Bengal. *Indian J Public Health*. 2011; 55(1): 38-41.
- [14] Panda S.C, Sarangi.L, Bebartta. D, Parida. S, Panigrahi O.P. Prevalence of RTI/STI among women of reproductive age in district Sundargarh, Orissa. *Indian journal of practicing Doctor* 2007; 4(1): pp. 1-5

Author Profile

Mamta, received B.Sc and M.Sc Nursing degree in Community health Nursing from National Institute of Nursing Education, PGIMER, Chandigarh in 2006 & 2011 respectively. Additionally she is a postgraduate in M.Sc Applied Psychology, Have PGD in health & family welfare. Currently working as a Nursing Tutor in College of Nursing, AIIMS, Jodhpur.

Navdeep Kaur, received B.Sc and M.Sc Nursing degree in Obstetric & gynaecological Nursing. Currently working as a Lecturer in Silver Oaks College of Nursing, Mohali, Punjab.