

A Study to Assess the Prevalence of Reproductive Tract Infections among Women in Selected Urban Area, Coimbatore

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Abstract : In India 40 million cases of sexually transmitted infection/ reproductive tract infections emerge each year. The great impact is on women and children. So the main objective of this study was to assess the prevalence of reproductive tract infections among women of reproductive age group. Non-experimental descriptive survey design was used. 100 samples were selected using purposive sampling technique. Self-structured questionnaire was used to collect the data. 26% had more than two symptoms of reproductive tract infections. The most frequently reported symptoms included burning micturition (16%), itching of genitalia (19%), pain in lower abdomen (20%), dyspareunia (13%) and spotting of blood after intercourse (10%). There was a significant association found between women with reproductive tract infections and selected demographic variables like age, use of contraceptive devices and menstrual practices. The study reveals that it is important to create community awareness and to ensure proper menstrual hygiene to reduce the increasing trend of reproductive tract infections.

IndexTerms - Prevalence, Reproductive tract infections

I. Introduction:

“AN OUNCE OF PREVENTION IS WORTH A POUND OF CURE.”

-Benjamin Franklin

Reproductive tract infections which include sexually transmitted diseases continue to pose a major cause of morbidity in India, especially among the females in the reproductive age group. WHO has estimated that more than 340 million new cases of curable sexually transmitted infections namely syphilis, gonorrhoea, chlamydia, trachomatis and trichomonas vaginalis occur every year throughout the world in men and women aged 15-49 years with 151 million of new cases occurring in South-East Asia. (D. Kiran Kumar and B. Kamini, 2014)

Reproductive tract infections include endogenous infections, iatrogenic infections and sexually transmitted infections. If left untreated, reproductive tract infections can cause tubal infertility, still births, abortions, neonatal deaths, cervical cancer, low birth weight babies, ectopic pregnancies, recurrent UTIs, pain during coitus, menstrual irregularities chronic pelvic pain and maternal death. The presence of reproductive tract infections (especially ulcer-causing sexually transmitted infections) can promote the acquisition and transmission of the human immunodeficiency virus. Women's reproductive health is largely influenced by the state of their health during infancy, childhood and adolescence moreover, a large number of people suffer in silence due to reproductive tract infections and sexually transmitted infections, which are recognized to be an important health problem in India. (Deepa. R, 2012)

1.2 NEED FOR THE STUDY:

A study was conducted in the year 2016 to assess the prevalence of symptoms of reproductive tract infections among married reproductive age group women in selected rural areas of Hassan, Karnataka India. The main objective of the study was to estimate the prevalence of reproductive tract infection and sexually transmitted infections and to understand various factors on reproductive tract infections and sexually transmitted infections among women. The study showed that 128 among 400 women had one or the other symptoms of reproductive tract infections/ sexually transmitted disease. Prevalence of reproductive tract infections/ sexually transmitted disease was 32%. The most common symptom was vaginal discharge of 81 subjects (63.2%), lower back pain 16 (12.5%), lower abdominal pain 14 (10.9%), genital ulcers 11(8.5 %), dyspareunia/ dysuria 2 (1.5%). (Sreelatha C. Y et al, 2016)

In India 40 million cases of sexually transmitted infection/ reproductive tract infections emerge each year. These reproductive tract infections/ sexually transmitted infections constitute a huge health and economic burden for developing countries and account for 17% of economic losses because of ill health. The greatest impact of RTI/STIs is on women and children. WHO has

recommended a syndromic management of STIs/RTI which is based on signs and symptoms through which a health worker without laboratory support can diagnose .

The study conducted in India in the year 2014 revealed that total cases of syphilis reported was 37,269 of which 18,852 cases were of females and total cases of gonorrhoea were 74,390 of which 50,565 cases were of females. (K. Park, 2017)

STIs such as HSV type 2 and syphilis can increase the risk of HIV acquisition. Over 9, 00,000 pregnant women were infected with syphilis reported that approximately 3, 50,000 adverse birth result including stillbirth in 2012. In some cases, STIs can have serious reproductive health consequences beyond the immediate impact of the infection itself (e.g., infertility or mother-to-child transmission) (WHO Fact Sheet, 2017)

Keeping this in view, the present study has been undertaken to assess the prevalence of reproductive tract infections among reproductive age group 15 – 49 years in selected urban area in Coimbatore.

The study was conducted with the aim to document the prevalence of reproductive tract infections among women of reproductive age group between 15-49 years residing in urban area, Coimbatore.

1.3 STATEMENT OF THE PROBLEM:

A study to assess the prevalence of reproductive tract infections among women in selected urban area, Coimbatore.

1.4 OBJECTIVES

- Assess the prevalence of reproductive tract infections among women.
- Identify the high risk women for reproductive tract infections.
- Associate the selected demographic variables with Reproductive tract infections.

II RESEARCH DESIGN:

Descriptive survey design was used for the study.

III Population and Sample:

3.1 Settings of the study:

The study was conducted in the selected urban area, Gandhimanagar, in Coimbatore.

3.2 Study Population:

Target population: Women in the reproductive age group residing in urban area.

3.3 Sampling Technique:

Those who met inclusion criteria were selected as samples by using **purposive sampling technique**.

3.4 Sample size and its justification:

Using precision formula: $n = Z^2 p (1-p) / d^2$

According to Kamini(2012) $p = 56\%$

$Z = 1.96$, $d = 0.1$, $d(10\%)$

Applying these values, $n = (1.96)^2 0.56 (1 - 0.56)$

$(0.1)(0.1)$

$= (3.84) (0.56) (0.44)$

0.01

$= 0.95$

0.01

$= 95$

Sample size: The sample size was 100 females of reproductive age group.

3.4 Sampling Criteria:

Inclusion criteria:

It includes,

- All the women of reproductive age group from 15 to 49 years of age.
- Married and unmarried women.

Exclusion criteria:

- Mentally challenged females.
- Those who are not willing to participate in the study.

3.4 Tools of data collection:**Section- A****Demographic Variables:**

This section consist of 11 questions regarding age, class, religion, education, type of family, family income, occupational status, place of residence, age at the time of puberty, age of marriage, number of pregnancies and use of contraception's.

Section - B**Assessing the menstrual hygiene:**

This section consists of 7 questions regarding materials used during menstruation. (pads/cloth/tampons/menstrual cups), frequency of changing pad, taking bath during menstruation, sexual activity during menstruation, hand washing before and after perineal care, solution used during perineal care.

Section- C**Screening of reproductive tract infection as per WHO SYNDROMIC APPROACH guidelines-2018**

This section consist of 12 questions regarding abnormal vaginal discharge (white, blood stained, curd like, pungent smelling), burning micturation, itching in genitalia, pain in lower abdomen, genital ulcers, inguinal swelling, dyspareunia, spotting of blood after intercourse, discharge, sores or warts in and around the anus, ulcers and other lesions in and around the mouth and redness of the vulva.

Scoring interpretation:

If participant had experienced at least two symptoms, then they were considered to have reproductive tract infection.

Referral:

Positive cases were referred to nearby health centres for further management.

Health education was given regarding menstrual hygiene to the participants who had menstrual complaints and unhygienic menstrual practice for the purpose of primary prevention of reproductive tract infections.

3.5 Techniques of data collection:

Data was collected by using structured interview schedule from women in reproductive age group residing in urban households in Gandhimanagar, Coimbatore.

3.6 Data and Sources of Data

Participants who met the inclusion criteria were selected for the study. Self-structured questionnaire on demographic variables, menstrual hygiene and questions regarding screening of reproductive tract infections were collected. Positive cases were referred to nearby health centres for further management and women at risk were given health education regarding menstrual hygiene.

3.7 Ethical Approval:

The proposal was submitted to the Institutional Human Ethics Committee for approval of the study. The study was approved on 05.01.2019 and permission was given for the progress of the study.

IV. RESULTS AND DISCUSSION**RESULTS:****Organization of the data:**

4.1 Distribution of the subjects according to demographic profile.

4.2 Distribution of subjects according to their menstrual practices.

4.3 Identification of subjects with reproductive tract infections as per WHO syndromic approach.

4.4 Mean and Standard Deviation

4.5 Association between the selected demographic variables and women with reproductive tract infections.

4.6 Association of menstrual hygiene with reproductive tract infections.

4.1 Distribution of the subjects according to demographic profile.**Table 4.1 Frequency and percentage distribution of demographic variables of women with age, occupational status, educational status, type of family, type of delivery, contraceptive measures and marital status****N = 100**

S.No	Characteristics	Frequency	Percentage
4.1.1	Age in years		
	15 -32	54	54%
	33- 49	46	46%
4.1.2	Occupation		
	Women working	34	34%
	Women not working	66	66%
4.1.3	Education		
	Literate	98	98%
	Illiterate	2	2%
4.1.4	Family		
	Nuclear family	56	56%
	Joint family	44	44%
4.1.5	Type of delivery		
	Normal delivery	62	65.96%
	Caesarian section	32	34.04%
4.1.6	Contraception		
	Yes	22	23.4%
	No	72	76.6%
4.1.7	Married subjects	94	94%
	Unmarried subjects	6	6%

Table 4.1 depicts that half of the reproductive age group women 54 (54%) belonged to the age group 15 – 32 years and 46 (46%) belonged to age group 33-49 years. In occupational status, most of the reproductive age group women 66 (66%) were not working and 34 (34%) were working. In educational qualification, majority of the women 98 (98%) were literate and 2 (2%) were illiterate. Most of the women 56(56%) belonged to nuclear family and 44(44%) belonged to joint family. Most of the women 62 (65.96%) had normal vaginal delivery and 32 (34.04%) had caesarean section. 72 (76.6%) were not using contraceptives and 22 (23.4%) were using contraceptives . Among 100 subjects, 6(6%) were unmarried and 94(94%) were married.

Table 4.2 Distribution of subjects according to their menstrual practices. N = 100

S.No	Characteristics	Frequency	Percentage
4.2.1	Material used during menstruation		
	Sanitary napkin	91	91%
	Cloth	9	9%
	Tampon	0	0%
	Menstrual cup	0	0%
4.2.2	Duration of changing pads		
	4-6 hours	65	65%
	6-8 hours	31	31%
	8-10 hours	3	3%
	10-12 hours	1	1%
4.2.3	Personal hygiene during menstruation		
	Yes	100	100%
	No	0	0%

4.2.4	Engage in sexual activity during menstruation Yes No	100 0	100% 0%
4.2.5	Cleaning techniques Clitoris to anus Anus to clitoris Vagina to anus Anus to vagina	88 6 4 2	88% 6% 4% 2%
4.2.6	Hand washing Yes No	100 0	100% 0%
4.2.7	Solution used for cleaning Soap and water Only water Lotions	51 39 10	51% 39% 10%

Table 4.2. Depict that majority of the women 91(91%) used sanitary napkins and 9(9%) used cloth during menstruation. Most of the women 65 (65%) changed sanitary pad within 4-6 hours, 31(31%) women changed within 6-8 hours, 3(3%) women changed within 8-10 hours and 1 (1%) women changed within 10-12 hours. Regarding personal hygiene, 100 (100%) took bath during menstruation. 100(100%) of the women do not engage in sexual activity during menstruation. Majority of the women 88(88%) cleaned from clitoris to anus, 6(6%) cleaned from anus to clitoris, 4(4%) cleaned from vagina to anus and 2(2%) cleaned from anus to vagina. In hand washing, majority of the reproductive age group women 97(97%) performed hand washing before cleaning the genitalia and 3(3%) did not perform hand washing. Regarding solution used during perineal care half of the reproductive women 51(51%) used soap and water, 39 (39%) used only water and 10 (10%) used lotions. Among 100 women of reproductive age group (15-49years), majority 76(76%) subjects practice poor menstrual hygiene and fall under a risk to develop reproductive tract infections and 24(24%) subjects practice good menstrual hygiene hence fall under no risk group.

Table 4.3 Identification of subjects with reproductive tract infections as per WHO syndromic approach

S.No	Characteristics	Frequency	Percentage
1.	Burning micturation Yes No	16 84	16% 84%
2.	Itching of genitalia Yes No	19 81	19% 81%
3.	Pain in lower abdomen Yes No	20 80	20% 80%
4.	Genital ulcers Yes No	3 97	3% 97%
5.	Inguinal swelling Yes No	2 98	2% 98%
6.	Dyspareunia Yes No	13 87	13% 87%
7.	Discharge, sores or warts in and around anus Yes No	2 98	2% 98%
8.	Ulcers or other lesions in and around the mouth Yes No	0 100	0% 100%
9.	Redness of the vulva Yes No	2 98	2% 98%
10.	Cervical bleeding to touch Yes No	98	2% 98%
11.	Spotting of blood after intercourse Yes No	10 90	10% 90%

12.	Vaginal discharge: Increased amount in a day Yes No	15 85	15% 85%
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Table 4.3, reveals that 16(16%) women had burning micturition and majority of the women 84 (84%) did not have burning micturition. 19(19%) of women had itching in genitalia and 81(81%) had no itching. 20 (20%) had pain in the lower abdomen while 80(80%) had no pain in the lower abdomen. 3 (3%) had genital ulcers while 97(97%) had no genital ulcers. 2(2%) had inguinal swelling and 98 (98%) did not have inguinal swelling. 13(13%) were positive while 87(87%) reported negative for dyspareunia. 2(2%) were positive while 98(98%) were negative for discharge, sores or warts in and around anus.

Table 4.4 Association of selected demographic variables with reproductive tract infections.

N = 100

S.No	Demographic variables	Positive cases	Negative cases	Calculated 't' value	Table value
1.	Age in years 15-32 33-49	19 7	35 39	5.1476*	3.84
2.	Occupation With job Without job	12 14	22 52	2.3128 NS	3.84
3.	Education Literate Illiterate	25 1	73 1	0.611 NS	3.84
4.	Family Nuclear family Joint family	11 15	45 29	2.6733 NS	3.84
5.	Type of delivery Normal delivery Caesarian section	18 8	44 24	0.1715 NS	3.84
6.	Contraception Yes No	2 24	20 48	4.9494*	3.84

(p<0.05) , * = significant, NS = non significant

On association between women with reproductive tract infections and selected demographic variables at p< 0.05 there is a significant association between demographic variables like age and use of contraceptive measures with the symptoms of reproductive tract infections.

Table 4.5 Association of menstrual hygiene with reproductive tract infection.

S.No	Menstrual practices	Positive Subjects	Negative Subjects	χ^2 value	Table value
1	Poor practices	16	60	4.0285*	3.84
	Good practices	10	14		

Significant association was found between menstrual practices and reproductive tract infections at p< 0.05 level.

DISCUSSION:

A total of 100 women approached for this study, the prevalence of reproductive tract infections among women of reproductive age group were found to be 26(26%). Approximately half 49(49%) of the total women had symptoms suggestive of reproductive tract infections, among which one fourth of the total subjects 26(26%) had more than two symptoms of reproductive tract infections and were ruled out to have reproductive tract infections and were referred to nearby health centres for further management while remaining 23(23%) were reported one symptom suggestive of reproductive tract infection and were at a risk to develop reproductive tract infections.

76 subjects were identified to practice poor menstrual hygiene hence are at a risk to develop reproductive tract infections. Health education was given regarding good practices of menstrual hygiene for the purpose of primary prevention. Significant association was found between women with reproductive tract infections and variables like age, contraceptive measures and menstrual practices at p<0.05 level.

Conclusion

A high case load was found based on WHO syndromic approach among 100 subjects 26 (26%) subjects were found to have two symptoms suggestive of reproductive tract infections. The most frequently reported symptoms included burning micturition (16%), itching of genitalia (19%), pain in lower abdomen (20%), dyspareunia (13%) and spotting of blood after intercourse 10(10%). The study revealed that it is important to create community awareness, ensuring proper menstrual hygiene and improving the socio-economic status to all the women of reproductive age group would help to reduce the increasing trend of reproductive tract infections.

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