

A Study on Awareness and Practice regarding Reproductive Tract Infection/Sexually Transmitted infection (RTI/STI) among Mothers attending Immunization Clinic of a Medical College, Kolkata, West Bengal.

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Abstract:

Background: Reproductive tract infection is a global problem including both sexually transmitted infections and non-sexually transmitted infection of reproductive tract. A variety of factors put women at risk of RTIs as well as consequences for women arising from such morbidity. The correct knowledge and awareness of the problem among the women is very important.

Objectives: To assess the socio-demographic profile of mothers attending immunization clinic of Calcutta National Medical College, to find out their awareness about RTI/STI and practices for prevention of RTI/STI, to determine the relationship of different socio-demographic factors with the knowledge score, if any.

Study settings: Immunization clinic of Calcutta National Medical College, Kolkata, India.

Study design: Hospital based observational, descriptive and cross-sectional study.

Study Population: Mothers of under five children attending immunization clinic of CNMC.

Methodology: By systematic random sampling 470 mothers were selected for the study. Data regarding socio-demographic profile, awareness and practice about RTI /STI was collected from mothers and analyzed.

Result: Majority of the study population belonged to the age group of 20-24 years, had education up to middle school level, were housewives, had residence in urban area, were Muslims and came from joint family belonging to lower socio-economic status. A small proportion of women had correct knowledge regarding transmission and prevention of RTI. Though majority of study population had correct knowledge regarding mode of transmission and prevention of HIV, many of them had misconceptions also. The mean knowledge score was significantly higher in 25to29years age group, in women with higher educational status, those coming from higher socio-economic status family and those living in urban area.. Majority of the study subjects had the practice of using sanitary napkin during menstruation. A small proportion of them were regular users of condom.

Key Words: RTI/STI, Mean Knowledge Score.

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I. Introduction

Reproductive tract infections include sexually transmitted diseases (STDs) and other infections that are not sexually transmitted including infections which are caused by inadequate medical procedures such as unsafe abortion and child birth or infections due to the over growth of organisms normally present in the reproductive tract. Women are more likely than men to develop such infections and their consequences are far more devastating and widespread.¹

Sexually transmitted infections are a group of diseases transmitted usually by sexual contact and caused by a wide range of pathogens. STIs constitute an important public health problem because of their health, social and economic consequences. The health consequences occur mainly among women and children such as cervical cancer, pelvic inflammatory disease with resultant infertility, ectopic pregnancy and congenital infections such as Syphilis, Ophthalmia Neonatorum, HIV and Hepatitis-B and also still births and prematurity. The social consequences are the stigma being attached to it and discrimination falls predominantly among women. The economic consequences are the loss of productive life years, affecting the progress and development of the country.²

RTI is a global problem including both sexually transmitted infections and non-sexually transmitted infection of RT. WHO estimate that each year there are over 340 million new cases of STIs in which 75-85% occurs in developing countries. In India alone 40 million cases emerge each year. A broad based study conducted in different parts of India revealed that prevalence of RTIs varies from 19-71%. A variety of factors put women at risk of RTIs as well as consequences for women arising from such morbidity. Such socio-economic, demographic, sexual, medical, behavioral practices, personal hygiene have not been adequately explored in India.³

The correct knowledge and awareness of the problem among the women is more important than tackling the problem. In rural areas lack of awareness and health facility leads to a high incidence of STIs/RTIs. Illiteracy and unhealthy life style, and strong traditional culture and practices put the Indian women at higher risk of acquiring RTIs.⁴With this perspective, the present study was carried out with the objectives—To assess the socio-demographic profile of mothers attending immunization clinic of Calcutta National Medical College, to find out their awareness about RTI/STI and practices for prevention of RTI/STI, to determine the relationship of different socio-demographic factors with the knowledge score, if any.

II. Materials and Methods

This observational, descriptive and cross-sectional study was carried out at the immunization clinic of Calcutta National Medical College on mothers of under five children attending immunization clinic for immunization of their children from March 2018 to April 2018. All the mothers who gave consent to participate in the study were included.

Sample size and sample design— Around 50 mothers with their children less than 5 years of age attend immunization clinic of CNMC daily for immunization of their children. Data collection was done from 9 to 10 mothers daily by interviewing them using a predesigned, pretested semi-structured schedule after obtaining informed consent from them. By systematic random sampling, every fifth mother was selected for data collection. If a mother refused to participate in the study, the next one was included. As the immunization clinic remains closed on Sunday, around 55 to 60 mothers were included in the study every week and total 470 mothers were interviewed in the two months period from March 2018 to April 2018. Data analysis was done using suitable statistical methods.

For assessing knowledge, score was +1 for each correct answer and 0 for wrong answer and when the answer was don't know.

Check List for correct Knowledge with score—

Knowledge of RTI/STI	Correct Answer	Score
How RTI is transmitted?	Poor menstrual hygiene	+1
	Sexual contact	+1
	Use of dirty water for bathing, washing	+1
	Unsafe abortion/child birth	+1
How RTI can be prevented?	Good menstrual hygiene	+1
	Use of condom	+1
	Avoiding multiple sex partner	+1
	Safe abortion/child birth	+1
Can RTI be cured by treatment	Yes	+1
How HIV/AIDS transmitted?	Through infected blood	+1
	By sex with infected person	+1
	Mother to child transmission	+1
How HIV/AIDS can be prevented?	Using condom regularly	+1
	Avoiding repeated use of needles	+1
	Screening of blood before transfusion	+1
	Screening of blood during pregnancy	+1
	Avoiding sex with unknown person	+1

III. Results

According to Table 1, majority of the study population belonged to the age group of 20-24 years (52.4%), where as 16.4% were adolescent mothers. Majority of mothers had education up to middle school level (39.4%), 12.3% being illiterate. Most of them were housewives (95.5%) and had residence in urban area (93.6%). Majority of the study subjects were Muslims (68.3%) and came from joint family (54.7%). Majority of the mothers belonged to socio-economic class IV (43.0%) and V (42.1%) and no one came from class I. Majority of them were married for less than 5 years (77.9%).

From Table 2, it was found that a small proportion of the study population knew that transmission of RTI occurs due to poor menstrual hygiene(8.5%), and also by sexual contact (8.5%). 10.6% mothers told that it was due to use of dirty water for washing and bathing. Majority of the study subjects (86.2%) didn't know the

mode of transmission of RTI. Regarding knowledge about prevention of RTI 8.5% women told to maintain good menstrual hygiene, 7.9% of them suggested use of condom and 8.1% knew that RTI can be prevented by avoiding multiple sex partners. Majority of the study population (86.2%) had no knowledge regarding prevention of RTI. 12.8% of the study subjects knew RTIs can be cured by treatment, whereas 1.5% and 85.7% women answered no and don't know respectively. Though majority of study population had correct knowledge regarding mode of transmission of HIV, by infected blood (67.0%), sexual contact with infected person (71.5%), mother to child transmission (61.9%), many of them had misconceptions also, like by mosquitoes and other insects (38.1%), social contact with infected person, sneezing, coughing (23.6%), sharing common articles with infected persons (24.0%). 28.3% women didn't know how HIV transmission occurs. Regarding prevention of HIV/AIDS, 58.9% study subjects told about use of condom, 55.7% suggested to avoid sex with unknown person. Many of them knew that screening of blood before transfusion (47.4%), avoiding repeated use of needles (47.4%) and screening of blood during pregnancy (43.8%) can prevent HIV transmission. Wrong knowledge regarding prevention like vaccination (33.6%), avoiding social contact with AIDS patients(23.4%) and not sharing of articles used by them (23.6%) were also found to be present. 28.3% of the study subjects had no knowledge about how to prevent HIV/AIDS.

From Table 3 showing the practices for prevention of RTI/STI, it was found that Majority of the study subjects (68.7) had the practice of using sanitary napkin during menstruation, though 21.5% of them were using unused cloth and 9.8% used cloths. Frequency of changing was 2 to 3 times per day by majority of the studied women (85.8%). 31.3% of them were current users of condom, but only 16.2% used condom regularly.

Table4 showed that there were differences in mean knowledge score in different age groups, highest in the age group of 25 to 29 years(9.69+-5.212) and lowest below 20 years(6.93+- 5.166), the difference was statistically significant(p=0.001). Improvement of mean knowledge score was observed with increasing educational status, highest among those who had education higher secondary and above (11.80+-5.070) and lowest among illiterates (5.17+-5.638). The difference was statistically significant (p=0.000). Significant variation(p=0.002) in mean knowledge score was found among study subjects belonging to different socio-economic status, highest among those in class II (11.33+-6.371) and lowest among mothers belonging to socio-economic class V(7.36+-4.943). Mean knowledge score was significantly higher (p=0.000) among study subjects coming from urban area (8.37+-4.348) than those from rural area (4.33+-5.391). There was no significant difference in mean knowledge score among Hindu and Muslim women (p=0.080).

Table1: Distribution of study population according to their Socio Demographic Profile. (n=470)

SOCIO DEMOGRAPHIC PROFILE		NUMBER (PERCENTAGE)
Age (in Years)	Below 20	77 (16.4%)
	20-24	246 (52.4%)
	25-29	119 (25.3%)
	30-34	25 (5.3%)
	Greater than 34	3 (0.6%)
Educational Status	Illiterate	58 (12.3%)
	Primary	103 (21.9%)
	Middle School	185 (39.4%)
	Secondary	83 (17.7%)
	Higher Secondary	30 (6.4%)
	Graduate and above	11 (2.3%)
Occupation	House Wife	449 (95.5%)
	Working Outside	21 (4.5%)
Socio-economic Status (Acc. To Modified B.G. Prasad Scale 2018)	CLASS II	20 (4.3%)
	CLASS III	50 (10.6%)
	CLASS IV	202 (43.0%)
	CLASS V	198 (42.1%)
Religion	Muslim	321 (68.3%)
	Hindu	149 (31.7%)
Residence	Urban	440 (93.6%)
	Rural	30 (6.4%)
Family type	Joint	257 (54.7%)
	Nuclear	213 (45.3%)
Duration of marriage (In years)	Less than 5 years	366 (77.9%)
	5-9 years	70 (14.9%)
	10 years or more	34 (7.2%)

Table2:Distribution of study population according to their knowledge regarding RTI/STI.(n=470)

KNOWLEDGE ABOUT RTI/STI	NUMBER (PERCENTAGE)	
*Transmission of RTI	<i>Poor Menstrual Hygiene:</i>	40 (8.5%)
	<i>Sexual Contact:</i>	40 (8.5%)
	<i>Dirty Water for Bathing and Washing:</i>	50 (10.6%)
	<i>Don't Know</i>	405 (86.2%)
*Prevention of RTI	<i>Good Menstrual Hygiene:</i>	40(8.5%)
	<i>Using Condom:</i>	37 (7.9%)
	<i>Avoiding Multiple Sexual Partners:</i>	38 (8.1%)
	<i>Don't Know</i>	405 (86.2%)
Cure by Treatment	Yes	60 (12.8%)
	No	7 (1.5%)
	Don't Know	403 (85.7%)
*Mode of Transmission of HIV/AIDS	<i>By Infected Blood:</i>	315 (67.0%)
	<i>Sexual Contact: with infected person</i>	337 (71.5%)
	<i>Mother to Child: transmission</i>	291 (61.9%)
	<i>Bite of Mosquito and other Insects:</i>	179 (38.1%)
	<i>By Social contact(Hugging, Holding Hands), Sneezing, coughing :</i>	111 (23.6%)
	<i>Sharing Common Linen, Utensils etc.: with infected person</i>	113 (24.0%)
	<i>Don't Know</i>	133 (28.3%)
	Mode of Prevention of HIV/AIDS*	<i>Using Condom:</i>
<i>Avoiding Repeated Use of Needle:</i>		223 (47.4%)
<i>Screening of Blood before Transfusion:</i>		223 (47.4%)
<i>Screening of Blood During Pregnancy:</i>		206 (43.8%)
<i>Avoiding Sex with Unknown Person:</i>		262 (55.7%)
<i>Vaccination:</i>		158 (33.6%)
<i>Avoiding Social Contact with AIDS Patient:</i>		110 (23.4%)

	Not to share clothes, utensils etc with AIDS patient	111(23.6%)
	Don't know	133(28.3%)

*Multiple response.

Table3: Distribution of study population according to practices regarding prevention of STI/RTI. (n=470)

PRACTICES REGARDING PREVENTION OF RTI/STI		NUMBER (PERCENTAGE)
Type of Material used during Menstruation	Unused Cloth:	101 (21.5%)
	Used Cloth:	46 (9.8%)
	Sanitary Napkin:	323 (68.7%)
Frequency of Changing per day	1 Time 2 Times 3 Times >3 Times	24 (5.1%) 202 (43.0%) 201 (42.8%) 43 (9.1%)
Current use of condom	Condom	147 (31.3%)
Frequency of use of Condom	Regular Irregular Nil	76 (16.2%) 71 (15.1%) 323 (68.7%)

Table4: Association of mean knowledge score with different socio demographic characteristics. (n=470)

SOCIO DEMOGRAPHIC PROFILE		NUMBER (PERCENTAGE)	Knowledge Score MEAN±SD	TEST OF SIGNIFICANCE
Age (in Years)	Below 20	77 (16.4%)	6.93±5.166	ANOVA** Test F-value = 3.729 p-value = 0.001*
	20-24 years	246 (52.3%)	8.06±5.505	
	25-29 years	119 (25.3%)	9.69±5.212	
	30-34 years	25 (5.3%)	7.00±5.568	
	Greater than 34 years	3 (0.6%)	7.36±4.133	
Educational Status	Illiterate	58 (12.3%)	5.17±5.638	ANOVA** Test F-value = 12.332 p-value = 0.000*
	Primary	103 (21.9%)	7.76±4.929	
	Middle School	185 (39.4%)	7.47±5.740	
	Secondary	83 (17.7%)	11.00±4.359	
	Higher Secondary & above	41 (8.7%)	11.80±5.070	
Socio-economic Status	CLASS II	20 (4.3%)	11.33±6.371	ANOVA** Test F-value = 4.931 p-value = 0.002*
	CLASS III	50 (10.6%)	9.14±5.676	
	CLASS IV	202 (43.0%)	8.00±4.692	
	CLASS V	198 (42.1%)	7.36±4.943	
Religion	Muslim	321 (68.3%)	7.07±6.547	ANOVA** Test F-value = 3.071 p-value = 0.080
	Hindu	149 (31.7%)	8.13±5.004	
Residence	Urban	440 (93.6%)	8.37±4.348	ANOVA** Test F-value = 23.544 p-value = 0.000*
	Rural	30 (6.4%)	4.33±5.391	

*Significant difference between the various classes.

**ANOVA test has been done in a generalized manner for comparing groups of two or more means.

IV. Discussion

In the present study, it was found that majority of the study subjects were Muslim housewives of the age group of 20 to 24 years and educational status up to middle school level. Most of them belonged to poor (socio-economic status IV and V) joint families residing in urban area. Though a small proportion of the study population knew that transmission of RTI/STI occurs due to poor menstrual hygiene(8.5%), and also by sexual contact(8.5%)and this type of infection could be prevented maintaining good menstrual hygiene(8.5%), by use of condom(7.9%)and by avoiding multiple sex partners(8.1%), majority of the study population(86.2%) had no knowledge regarding transmission and prevention of RTI. Only 12.8% of the study subjects knew RTIs can be cured by treatment, whereas 1.5% and 85.7% women answered no and don't know respectively. Kamini B et al in their study on women in rural area of Tamil Nadu found that, 39.7% and 25.8% of the study subjects pointed at poor personal hygiene and sexual contact respectively for transmission of RTI. Wrong notions of spread like through food, water also prevailed among 0.4% and 0.2% of women respectively. They also observed that 43.7% and 24.6% of women felt that maintaining a good personal hygiene and adopting safe sexual practices prevents transmission of RTI. 34.6% of women had no idea about the modes of prevention of RTI. In their study 59.4% of women believed that treatment of RTIs are available, where as 40.6% of them responded that RTIs are not curable.⁵ Rizwan S.A. et al in their study among married women in rural Haryana found that 39% of the study subjects did not know the cause of RTI, 31% said it was due to bad blood in the body and according to 19% of them it was a normal process in women. In their study 82% women told RTI is preventable, 42.1% and 15% study subjects said condom use and maintaining hygiene of the genitalia respectively are modes of prevention. According to few women avoiding hot food and permanent contraceptives can prevent RTI. 75% said RTI was treatable.⁶

From the present study it was found that, though majority of study population had correct knowledge regarding mode of transmission of HIV, by infected blood(67.0%), sexual contact with infected person(71.5%), mother to child transmission(61.9%), many of them had misconceptions also, like by mosquitoes and other insects(38.1%), social contact with infected person, sneezing, coughing (23.6%), sharing common articles with infected persons(24.0%)and 28.3% women didn't know how HIV transmission occurs. Regarding prevention of HIV/AIDS, 58.9% study subjects told about use of condom, 55.7% suggested to avoid sex with unknown person, screening of blood before transfusion(47.4%), avoiding repeated use of needles(47.4%) and screening of blood during pregnancy(43.8%.) Wrong knowledge regarding prevention like vaccination(33.6%), avoiding social contact with AIDS patients(23.4%) and not sharing of articles used by them(23.6%) were also found to be present and 28.3% of the study subjects had no knowledge regarding prevention. In a study by Singh et al in a district of Northern India among the women of reproductive age group, 79.1% study subjects said heterosexual relation and 74.1% told homosexual relation cause transmission of HIV infection.⁷ Kotech et al in their study in urban slums of Vadodara city among youths found that, sexual act followed by needles and blood transfusion as the mode of transmission of HIV were the responses by the study subjects⁸

In this study, majority of the study subjects (68.7%) had the practice of using sanitary napkin during menstruation, though 21.5% of them were using unused cloth and 9.8% used cloths. 31.3% of them were current users of condom, but only 16.2% used condom regularly. Kamini B et al in their study on women in rural area of Tamil Nadu found that, majority(49.6%) of women were using sanitary pads available commercially while 35.4% were using fresh pieces of cloth during each period. 15% of them were reusing old cloth.⁵ Narayan KA et al from their study on adolescent girls in South India reported that use of sanitary napkins by adolescent girls was negligible with only 5.2% subjects using it, whereas use of recycled old cloth pieces was more common—more than 70% of the girls doing so.⁹

From this study it was seen that the mean knowledge score was significantly higher in 25 to 29 years age group, (9.69+₋5.212), in women with higher educational status(11.80+₋5.070 in women with education higher secondary and above), those coming from higher socio-economic status family(11.33+₋6.371 in those with socio-economic class II) and study subjects living in urban area(8.37+₋4.348). There was no significant difference in mean knowledge score among Hindu and Muslim women(p=0.080). ThiLan P et al in their study among women in North Rural Vietnam found that mean knowledge score was significantly higher in women aged 20 to 29 years, and in those with higher educational level.¹⁰

V. Conclusion

From this study it can be concluded that the mean knowledge score of the study subjects was related significantly with their age, educational status, socio-economic status and place of residence, no significant association was found between mean knowledge score and religion. Majority of the study subjects had the practice of using sanitary napkin during menstruation. A small proportion of them were regular users of condom.

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