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Reproductive Tract Infection Among Adolescent Girls attending Adolescent Clinic of Bhatar Block in Burdwan District

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Abstract: ***Objectives:****1. To find out the proportion of adolescent girls having Reproductive Tract Infections attending the adolescent clinic.2. To find out the association between the socio-demographic and menstrual variables and Reproductive Tract Infections, if any among the studied subjects.* ***Materials and Methods:Study type:*** *Observational epidemiological, clinic based.* ***Study design:*** *Cross-sectional* ***Study area:*** *The study was carried out in the "Anwesha" clinic , that is the only adolescent clinic situated in Bhatar block. This block is the rural field practice area of Burdwan Medical College, Burdwan.* ***Study period:*** *December 2014 to January 2015* ***Study population:*** *All the adolescent girls (10-19 years) who attended the "Anwesha" clinic during the study period, comprised the study population.* ***Sample size and sampling design:*** *All adolescent girls who attended the clinic were considered for study. Thus, complete enumeration method was followed. Finally it came to 102.* ***Results :*** *48% adolescent girls were suffering from RTIs. Common age group was 10-14 years i.e. 75.5 %, 70.6 % were Muslim and 4.9% were married. RTI was more common among Muslim, those who use non-sanitary napkins during menstruation and belong to lower socio-economic classes.*

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I. Introduction:

Adolescence is the transition period between childhood and adulthood. In terms of age it is a period of life that is expanded from 10 -19 years this includes pubertal development also. This period is very crucial since these are the formative years in the life as major physical, psychological ad behavioral changes take place. Adolescents constitute over 23% of the population.[1]

Today's adolescents are parents of tomorrow. Women's reproductive health is largely influenced by the state of their health during childhood and adolescence.[2]

Adolescent's knowledge regarding reproductive health is very limited. Compared with the boy's, the adolescent girl's health, nutrition and education are more neglected, which has adverse effect on Reproductive health.[3] Menstruation heralds the onset of physiological maturity in girls. It becomes the part and parcel of their lives until menopause. Apart from personal importance, this phenomenon also has social significance. In India, menstruation is surrounded by myths and misconceptions with a long list of "do's" and "don'ts" for women. Hygiene-related practices of women during menstruation are of considerable importance, as it may increase vulnerability to Reproductive Tract Infections (RTI's). Poor menstrual hygiene is one of the major reasons for the high prevalence of RTIs in the country and contributes significantly to female morbidity. Most of the adolescent girls in villages use rags and old clothes during menstruation, increasing susceptibility to RTI's. Adolescents constitute one-fifths of India's population and yet their sexual health needs remain largely unaddressed in the national welfare programs. Poor menstrual hygiene in developing countries has been an insufficiently acknowledged problem. In June 2010, the Government of India proposed a new scheme towards menstrual hygiene by a provision of subsidized sanitary napkins to rural adolescent girls. But there are various other issues like awareness, availability and quality of napkins, regular supply, privacy, piped water supply, proper disposal of napkins, reproductive health education and family support which needs simultaneous attention for promotion of menstrual hygiene.[4] They are the most vulnerable group to develop Reproductive Tract Infections (RTIs) and its complications due to unhygienic practices during menstruation.

Among Reproductive Tract Infections (RTIs) cervicitis, Pelvic Inflammatory Disease (PID), Vaginitis are more common. RTIs which are preventable and treatable, responsible for causing serious consequences of infertility, ectopic pregnancy, pregnancy wastage, low birth weight etc.[5] As the adolescents are important target group for prevention RTIs and assessment of problem is urgently needed.

Present study is an attempt to estimate the proportion of RTI among adolescent girls, attended the adolescent clinic and also to determine the socio-demographic correlates of RTI.

Objectives:

1. To find out the proportion of adolescent girls having Reproductive Tract Infections attending the adolescent clinic.
2. To find out the association between the socio-demographic and menstrual variables and Reproductive Tract Infections, if any among the studied subjects.

II. Materials and Methods:

A clinic based, observational, epidemiological study with Cross-sectional design was conducted in the "Anwesha" clinic, Bhatar, which is the only adolescent clinic situated in Bhatar block. This block is the rural field practice area of Burdwan Medical College, Burdwan. All the adolescent girls (10-19 years) who attended the "Anwesha" clinic during December 2014 to January 2015 , comprised the study population. All adolescent girls (10-19 years) who attended the clinic were considered for study. Thus, complete enumeration method was followed. Finally it came to 102. Those were unwilling to participate in the study, deaf and mute and mentally retarded girls were excluded.

After obtaining informed consent, all adolescent girls in age group 10 – 19 years attended the clinic were interviewed with pre-designed, pre-tested interview schedule. Treatment card was reviewed for confirmation of diagnosis.

Information about socio-demographic characteristics were recorded in part I.

Then they were asked regarding the symptoms of Reproductive Tract Infections e.g. presence of excessive vaginal discharge, lower abdominal pain, low back pain, pain or burning sensation while passing urine and pain during menstruation. Diagnosis of RTI was done on the basis of self-reporting symptoms by the study subjects and also scrutinizing the treatment cards. For socio-economic classification, modified Dr. BG. Prasad's scale 2014 was used.

Before starting the study, permission of Block Medical Officer of Health, Bhatar was taken and lady counselor of "Anwesha" clinic co-operated to collect data.

Data analysis:

Collected data were analysed and presented by descriptive statistics like proportion and inferential statistics like Chi-square test using EPI-INFO- software (3.2)

Study variables: Age, Religion, Caste, Marital status, Education level, Per capita monthly income of the family, Symptoms of RTI, Age of menarche, Use of napkins.

III. Results:

The present study shows that 48% of adolescent girls were suffering from one or more symptoms of Reproductive Tract Infection (RTI). Among them, majority were Hindu (70.6%). Most were unmarried (95.1%) and 4.9% were married. Majority (97.0%) had < Secondary and rest had ≥ Secondary educational level. No one was illiterate. 81.4% were from lower middle socio-economic status.

Major RTI Symptoms were only vaginal discharge (44.9%), vaginal discharge with lower abdominal pain (46.9%), itching over vulva (39.2%), pain during menstruation (39.2%) etc.

Reproductive Tract Infection were more common among the age group 15-19 years (60%), Muslims (56.7%), who having the lower education level i.e. < Secondary (48.5%) , those belonged to lower middle social class (49.4%), married(80%),who having the age of menarche 12-13 years (64.8%) and who use non-sanitary napkins during menstruation (56.3%). Association with socio-economic status and use of non sanitary napkin was found to be statistically significant.

None of them were using any type of contraceptives.

IV. Discussion:

The present study shows that 48% of adolescent girls are suffering from one or more symptoms of Reproductive Tract Infection. Among them 34.7% were Muslim. Reproductive Tract Infection were more common among the age group 15-19 years (60%), those having the age of menarche 10-11 years (64.8 %) and who use non-sanitary napkins during menstruation (52.7%) but the association is statistically not significant.

The proportion of RTI decreased with attainment of higher socio-economic status and also educational status but there is no significant statistical association. Among the study subjects 4.9% were married and none of them were using any type of contraceptives. Main symptoms were vaginal discharge (44.9%), vaginal discharge with lower abdominal pain (46.9%), pain during menstruation (39.2%) and itching over vulva (24.5%).

Similar study by Ram R et al [2] which shows 64% of adolescent girls were suffering from RTI and 35% were with history of excessive vaginal discharge.

Other studies by Dutt R et al [3] and Prashar A et al [4] showed 37% and 36% were suffering from RTI respectively.

Ram R et al [9] found, overall prevalence of RTI 64% in adolescent girl. 35.5% girls were married and highest prevalence in illiterate. Prasad JH et al [6] found RTI more prevalent among married.

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Table1: Socio-demographic profile of study populations (n=102)

Variables	Number	(%)
1. Age group		
10-14	77	(75.5)
15-19	25	(24.5)
2. Religion		
Hindu	72	(70.6)
Muslim	30	(29.4)
3. Marital status		
Married	5	(4.9)
Unmarried	97	(95.1)
4. Educational status		
≤ Secondary	99	(97.0)
>Secondary	3	(3.0)
5. Socio-economic status		
Upper middle	8	(7.8)
Lower middle	83	(81.4)
Lower	11	(10.8)

Table2: RTI Symptoms among study population

RTI symptoms (n=102)	Number	(%)
Present	49	(48)
Absent	53	(52)

Different RTI symptoms (n=49)*	Number	(%)
Only vaginal discharge	22	(44.9)
Vaginal discharge with lower abdominal pain	23	(46.9)
Burning micturition	1	(0.9)
Lower abdominal pain	3	(2.9)
Lower back ache	1	(0.9)
Itching over vulva	25	(24.5)
Pain during menstruation	40	(39.2)

*Multiple Response

Table3: Association between RTI symptoms with socio-demographic and menstrual variables.(n=102)

Variables	**RTI** Number (%)	**Non- RTI** Number (%)	**Statistics** χ^2, d.f. p- value
1. Age group (years)			
10-14	34 (44.2)	43 (55.8)	χ^2 =1.9,d.f.=1, p=0.17
15-19	15 (60.0)	10 (40.0)	
2. Religion			
Hindu	32 (44.5)	40 (55.5)	χ^2 =1.27,d.f.=1, p=0.26
Muslim	17 (56.7)	13 (43.3)	
3. Education			
<Secondary	48 (48.5)	51 (51.5)	χ^2 =0.27,d.f.=1, p=0.61
≥Secondary	1 (33.4)	2 (66.6)	
4. Socio-economic status			
Upper middle	3 (37.5)	5 (62.5)	χ^2=18.88,d.f.=2, p=0.000*
Lower middle	41 (49.4)	42 (50.6)	
Lower	5 (45.5)	6 (54.5)	
5. Marital status			χ^2 =2.15,d.f.=1, p=0.14
Married	4 (80)	1 (20)	
Unmarried	45 (46.4)	52 (53.6)	
6. Age of menarche (years)			χ^2=6.59, d.f.=1, p=0.10
10-11	24 (64.8)	13 (35.2)	
12-13	25 (38.5)	40 (61.5)	
7. Use of napkins			χ^2= 10.02, d.f.=1, p=0.002*
Sanitary	4 (18.2)	18 (81.8)	
Non-sanitary	45 (56.3)	35 (43.7)	

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