

Original Article**GENITOURINARY PROBLEMS OF FEMALE ORPHAN ADOLESCENTS***Saleha Jahan¹, Rowshan Ara², Irin Hossain³, Ummul Khair Alam⁴, Arifa Islam⁵***ABSTRACT**

Introduction: Genitourinary problems are major health problems affecting millions of people each year, especially among female adolescents. This problem often associated with significant morbidity and mortality.

Objective: The study aimed to find out genitourinary problems of female orphan adolescents.

Methodology: A cross sectional study was conducted from January to December 2017, among 308 female orphan adolescents, which was selected purposively. Data were collected by face to face interviewing by using pretesting questionnaire and checklist which covers demographic characteristics, genital and urinary problems along with menstrual hygiene practices. Data were analyzed by using SPSS 20.0 version.

Results: The study found that mean± SD age of the respondent 11.89 ± .749 years, 62% has menstrual problems followed by 37.6% has painful menstruation, 17.4% has irregular menstrual cycle, 13.1% has headache/vertigo, 11.4% had generalized body ache/leg cramps, 7.4% has polymenorrhea, 4.8% has menorrhagia, 2.8% has oligomenorrhea and 23% has foul smelling vaginal discharge. There is an association between age group of the respondents and their pattern of menstrual cycle (p=0.005), association between foul smelling vaginal discharge and itching of the respondents (p=0.000), association between menstrual hygiene and ways of drying of used cloth, multivariate analysis shows the association between menstrual hygiene and perennial cleaning (p= 0.797), taking bath (p=0.000) and ways of drying of used cloth (0.029) during menstruation. And 40.9% has urinary problems followed by 33.6% has painful micturition, 28.3% has burning sensation during micturition and 4.1% has incomplete voiding of urine.

Conclusion: The study concluded that significant number of respondents suffer from one or more genitourinary problems. Educational level does not comply the knowledge of these adolescents regarding menarche. Many of them are still used to use old cloth during menstruation. Study recommended the prevention of genitourinary problems by improving knowledge of genitourinary tract physiology, reasons, complication, drinking plenty of water, emptying bladder completely as soon as feel the urge and maintain proper perennial hygiene with changing absorbent frequently during menstruation.

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1. Study Physician, RSV study, Projahnmo Research Foundation, Kaliganj, Zakiganj, Sylhet, Bangladesh.
 2. Professor and Head, Department of Population Dynamics, National Institute of Preventive and Social Medicine (NIPSOM), Mohakhali, Dhaka-1212.
 3. Assistant Professor, Department of Occupational and Environmental Health, National Institute of Preventive and Social Medicine (NIPSOM), Mohakhali, Dhaka-1212.
 4. Lecturer, Department of Maternal and Child Health, National Institute of Preventive and Social Medicine (NIPSOM), Mohakhali, Dhaka-1212.
 5. Study Physician, Projahnmo Research Foundation, Kaliganj field office, Zakiganj, Sylhet.

Correspondence:

Dr. Ummul Khair Alam

Moble:01675515367

Email: ummul.hossain@gmail.com

INTRODUCTION

The word 'adolescence' is derived from the Latin word 'adolescere' which means to grow into maturity. The term adolescere was popularized 100 years ago when G. Stanely Hall used it to describe the second decade of life. World Health Organization has defined "Adolescence" as the period between 10-19 years of life. After childhood to before adulthood from ages 10-19 during this period human growth and development occurs. It is the period of critical transition of life for an adolescent's [1]. Most of the adolescent health problems focus on the age between 15-19 years old age group [2]. Genitourinary problems are momentous health problems that affect female population especially adolescents. Lack of abundant knowledge may conduct to several genitourinary problems of female adolescents [3].

Menstruation is an exceptional event to the female [4]. Menstruation is the periodic vaginal bleeding because of shedding of uterine mucosa, menstruation occurs one to two years after development of secondary sexual characteristics, menstruation is one of the sign of puberty. In between 11 to 15 yrs the onset of first menstruation occurs [5]. Menstruation is an important part of female reproductive cycle, but menstrual dysfunction in adolescent girls may affect normal life of adolescents and young adult women [6]. Menstrual problems are common in adolescents and young women, common disorders are dysmenorrhea, menorrhagia, and irregular menstrual cycle [7]. Dysmenorrhea literally means painful menstruation of sufficient magnitude so as to incapacitate day to day activities [8].

Vulnerable group are adolescents because not of their social status but also their health status, in this view menstruation is considered unclean in society. During menstruation good hygienic practices, such as proper cleaning of genital areas and use of sanitary pad are essential. Reproductive age group of women and girls need to use hygienic and soft absorbent like sanitary products which protect them against various infections. Consequences of reproductive tract infections have significant impact on woman's health. Reproductive tract infections become a silent contagion that destroy woman's lives is strongly [9]. Women's who are suffers from RTIs and its complications and this infections are transmitted to offspring of pregnant mother. Incidence of reproductive tract infection is reduces by practices and maintenance of proper menstrual hygiene [5]. Numerous studies have establish role of several factors can basis of genitourinary problems, that are

diet, clothing, menstrual protection, urination habits but it is not clear that only above factors are responsible for that problems. The major factor predisposing to genitourinary problems has been recognized to underprivileged personal hygiene and way of life habit imposition. Hence a lot should be well-informed on the significance of personal hygiene in order to help them to improve their health grade and handle themselves properly. Preventing genitourinary problems is the most effective way of reducing the adverse consequences.

METHODOLOGY

The study was a cross sectional study. The study was conducted over a period of 1 year from January to December 2017. The study was carried out in Ahsania Mohila Mission Orphanage Dhaka, SOS Children's Villages, Dhaka, Bottom lee Home Orphanage, Dhaka and Baghbari Orphanage, Sylhet. The study was conducted among female orphan adolescents willing to participate and menstruating adolescents. Sample size was calculated as 342 considering the prevalence 33% (Pavithran, S., et al, 2015) with 95% confidence interval and 5% allowable error. For convenience, we limited the sample size of this study to 308 respondents. The respondents were selected by purposive sampling. Sampling was continued until the desired respondents were engaged. A semi structured questionnaire was developed in English using the variables according to the specific objectives. The questionnaire was translated into Bangla and it was pretested in another orphanage among the female adolescents with similar characteristics. The questionnaire was finalized after pretesting. At the beginning of the data collection, permission was taken from each authority of the orphanages. A pre-tested semi structured questionnaire was used for data collection. The detail of the study was explained to each eligible respondents and informed written assent from the respondents were obtained. After that data was collected from the respondents through face to face interview privately as much as possible. After data collection, individual questionnaire was edited through checking and rechecking to see whether it was filled completely and consistently. The data was analyzed by using SPSS version 20. No intervention or any other invasive procedure was undertaken in the study. Formal approval of the study was obtained from Institutional Review Board of NIPSOM.

RESULTS

Majority (55.5%) of the respondents was in the age group 13-14 years and rest of the respondents age

group is 15-16 years (44.5%) where mean \pm SD age is 14.39 \pm 1.072 years. 111 (36%) students read in class eight, 71(23.1%) in class seven, 64(20.1%) in class ten and remaining students are in class nine which is about 62(20.8%). Age of the menarche of the

respondents (n=308) where the table shows the mean age of the respondent 11.89 yrs (\pm SD .749 yrs), where the minimum age was 11yrs and maximum age was 13yr and range in 2 yrs (Table 1).

Table 1: Distribution of respondents by socio demographic characteristics

Socio demographics characteristics	Frequency	Percentage
Age		
13 years	79	25.6
14 years	92	29.9
15 years	76	24.7
16 years	61	19.8
Educational level of respondents		
Class vi	71	23.1
Class vii	111	36.0
Class ix	62	20.8
Class x	64	20.1
Age of menarche		
11 years	105	34.1
12 years	132	42.9
13 years	71	23.1

Study shows most of the response (132,37.6%) has painful menstruation, response of irregular menstrual cycle (61,17.4%), response of excessive menstruation (26,7.4%), response of prolonged menstruation (17,4.8%) and response of scanty menstruation (10,2.8%). Of all 82(33.6%) respondents has painful micturition, 69 (28.3%) respondents has burning sensation during micturition, 29(11.9%) respondents has retention of urine (Table 2).

There is an association between respondents and their excessive vaginal discharge with itching ($p=0.004$), and foul smelling vaginal discharge with itching ($p=0.000$) (Table 3).

Table 2: Distribution of respondents by menstrual and urinary problems

Problem	Frequency	Percentage
Menstrual problems		
Painful menstruation	132	37.6
Irregular menstrual cycle	61	17.4
Excessive menstruation	26	7.4
Prolonged menstruation	17	4.8
Scanty menstruation	10	2.8
Urinary problems		
Painful micturition	82	33.6
Burning sensation	69	28.3
Retention of urine	29	11.9

Table 3: Relationship of vaginal itching with vaginal discharge and foul smelling

Attribute		Vaginal Itching Yes	Vaginal Itching No	χ^2 p-value
Excessive vaginal discharge	Yes	70(24.8%)	212(75.2%)	8.351
	No	0(0.0%)	26(100.0%)	0.004
Foul smelling vaginal discharge	Yes	49(75.4%)	16(24.6%)	115.7
	No	21(9.7%)	196(90.3%)	0.000

Study shows there is an association between respondents and their menstrual hygiene with perennial cleaning (p=0.002), taking bath (p=0.000), and ways of drying of used cloth (p=0.000) (Table 4).

Table 4: Association among menstrual hygiene, perennial cleaning, taking bath and ways of drying of used cloth during menstruation

Attribute	Maintenance of hygiene during menstruation		χ^2 p-value
	Yes	No	
Perennial cleaning during menstruation			
Yes	277(91.4%)	26(8.6%)	9.815
No	2(40.0%)	3(60.0%)	0.002
Taking bath during menstruation			
Yes	266(97.8%)	6(2.2%)	134.685
No	13(36.1%)	23(63.9%)	0.000
Ways of drying of used cloth			
In sunlight	86(97.7%)	2(2.3%)	13.15
In dark and damp place	62(80.5%)	15(19.5%)	0.000

To analyze the prediction power of different variables (ways of dryness of cloth, cleaning of perineum, taking bath during menstruation) we did a logistic regression. The found the model was significant and

this can predict the variation of menstrual hygiene from 25%-52% and taking bath during menstruation (p=0.000), were individually significant while controlling the variables in the model (Table 5).

Table 5: Association of maintenance of menstrual hygiene with relevant factors

Attribute	B	df	P value	Odds ratio	95% CI
Ways of dryness of cloth	-1.888	1	0.029	.151	.028-.828
Cleaning the perineum	-.453	1	.797	.636	.020-20.227
Taking bath	-3.604	1	.000	.027	.007-.105

DISCUSSION

The present study revealed that out of 308 respondents, more than half (55.5%) of the respondents age group is 13-14 years, and rest of the respondents age group is 15-16 years (44.5%). Where mean age of the respondents 14.39 years and $SD \pm 1.072$ years. Minimum age was 13 years and maximum age was 16 years. Al-Kotb H et al 2015 reported the mean age of the respondents were 13.6 ± 1.8 years, more than half of them were between 14-15 years, 13% of them had history of genitourinary problems. [3]

In the present study, the mean age of the menarche of the respondent 11.89 year ($\pm SD .749$ year). Kanotra S K et al study reported the mean age of menarche was 14.02 years. Chaturvedi et al reported 13.7 years as the mean age of menarche, which is comparable to the findings of the present study [10].

On studying it was observed that 77.9% had regular menstrual cycles and 22.1% had irregular cycles. In a recently conducted study on adolescent girls in rural area of Bijapur in Karnataka state, by Patil M S on 440 adolescent girls showed comparable results with 92.5% girls having regular cycles and only 7.5% having irregular cycles. Dysmenorrhea (37.6%), was the most common menstrual complaint in the study population. In our study the 7.4% respondents has menorrhagia and 4% respondents had menorrhagia in Pavithran S study [11]. Chung PW et al 2011 reported 47% had menorrhagia in Hong Kong out of 577 adolescent girls. Study shows 2.8% respondents are suffer from oligomenorrhea [7]. Nooh A M 2014 reported a study in Egypt where oligomenorrhea was 6.0% [12] and Rigon et al reported 3.4% had Oligomenorrhea [13].

In this study excessive vaginal discharge was 91.6%. Joshi B N et al had reported that 21.3% had excessive vaginal discharge [2]. Pavithran S et al and Sebanti G *et al* had reported excessive vaginal discharge was 17.2% and 19.35% [11]. Analysis revealed vaginal itching 2.3 times higher among respondents who has excessive vaginal discharge. And there was an association between excessive vaginal discharge and itching ($p=0.004$).

In our study (28.6%) respondents are drying the used cloth by direct sunlight, (27,8.8%) respondents in dark and damp place, (26,8.4%) respondents behind the rack and (24,7.8%) respondents are drying the used cloth in bathroom. Study shows the association between menstrual hygiene and ways of dryness of cloth (where, $p=0.000$). Upashe S P et al and Singhal VK et al reported 45.2% and 7.9% of the respondents dried their washed clothes in sunlight [9].

Study revealed (88.3%) taking bath and (36, 11.7%) respondents does not taking bath during menstruation. In this study finding associated with taking bath during menstruation and menstrual hygiene (where $p=0.000$). In our study 98.4% respondents has cleaning perineum during menstruation. Juyal R et al reported 94% washing their genitalia or perineal area during menstruation. And we found the association between menstrual hygiene and perineal cleaning during menstruation [14].

In our study 40.9% respondents had urinary problems followed by painful micturition 33.6%, burning sensation during micturition 28.3%. Rahman M M reported burning urination was 46.1% [15].

CONCLUSION

The study concluded that significant number of respondents suffer from one or more genitourinary problems. Educational level does not comply the knowledge of these adolescents regarding menarche. Many of them are still used to use old cloth during menstruation.

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