High Risk Behavior and Knowledge among Female Adolescent: A Study on Rajshahi City of Bangladesh

Mohammad Zahidul Islam

Lecturer, Department of Population Science, Jatiya Kabi Kazi Nazrul Islam University, Mymensingh, **BANGLADESH**

*Corresponding Email: zahid100779@gmail.com

ABSTRACT

The purpose of this study was to realize the situation of adolescent girls' health in Bangladesh. For this, I conducted a community-based cross-sectional study at 8 wards in Rajshahi City Corporation area, Bangladesh. I interviewed a total of 1084 adolescent girls aged 10-19 years through a structured questionnaire. I have also used the univariate, bivariate and logistic regression analyses for the investigation of various socio-economic, demographic, health connected female adolescents' behavior and related knowledge variables. The study result shows that 37.6% adolescent girl knows teenager health care. It is also shown that very few numbers of adolescent has an idea about abortion, reproductive health, acquaintance about pregnancy avoiding and family planning method but maximum respondent heard about the idea about sex, marriage and HIV/AIDS. The study reveals that there is a significant association between knowledge about adolescent health care and the idea about abortion and HIV/AIDS. Sexual violence is directly related to the duration of the marriage. Age of respondents, Idea about pregnancy, Idea about abortion, Physical problem during menstruation, and knowledge about pregnancy method also has a significant effect on knowledge about adolescent health. We recommend for improved accessibility to the relevant information on reproductive health issues. The study also suggested to make the existing health facilities more adolescent-friendly.

Key Words: Behavior, Knowledge, Female Adolescent, Logistic Regression Analysis, Rajshahi City Corporation, Bangladesh

Source of Support: None, **No Conflict of Interest:** Declared

INTRODUCTION

Locating at South Asia Bangladesh is showing its beauty. With around 142.32 million inhabitants it comprises 147,570 square kilometers area with the density, average annual growth rate and sex ratio of 1015 persons per square kilometer, 1.2% and 100.3 respectively (Economic survey 2014). Reproductive health is a component of female adolescents' health. It is a "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (Alam, 2012). With one-five of the adolescents aged 10–19 years it constitutes the largest growing segment of the world population (UNPF, 1998). In South Asian countries, current healthcare

systems barely address the health needs of adolescents. Furthermore, they are poorly informed about the symptoms and effects of reproductive health conditions (Mishra and Mukhopadhyay, 2012). Although a huge number of adolescents suffer from reproductive health problems, a majority of them do not search for healthcare for these conditions (Kulkarni and Durge, 2011). Although Bangladesh has the achievement in some progress towards several targets of the Millennium Development Goals (MDGs) (Bangladesh Planning Commission, 2013), the birth rate among adolescents is still high, 118 per 1,000 women (MDG 5) (NIPRT, 2013). According to the 2011 National Demographic Surveillance Report, approximately one-fourth of married adolescents had given birth by the age of 19 (NIPRT, 2013). Although the current prevalence of HIV among the common people in Bangladesh is still below an epidemic level (MDG 6) (Ministry of Health and Family Welfare, 2011), adolescents and youths are often considered to be vulnerable to acquiring HIV infection due to higher risk sexual behavior for (Gazi et al., 2009 and Sarma et al., 2013]. As estimated by the national program on HIV in Bangladesh, only 17.7% of adolescents comprehensively know the HIV transmission and prevention methods (Ministry of Health and Family Welfare, 2009). The heterogeneity of the system of healthcare infrastructure across rural and urban settings of Bangladesh must also be considered when addressing RH problems for adolescents. In Bangladesh national-level community-based surveys revealed that there are variations in choices and utilization of specific types of healthcare services by population groups (Cockcroft et al., 2007). Moore et al. (2006) found that youth health care seeking from existing healthcare facilities for RH conditions was considerably lower compared to healthcare-seeking for other common health problems in Bangladesh (Moore et al., 2006). With specific guidelines laid out in the National Reproductive Health Strategy, Bangladesh's Strategic Plan for Health, Population and Nutrition Sector Development Program 2011–2016 has prioritized safe motherhood, family planning, menstrual regulation, and care for post-abortion complications and management of sexually transmitted infections (STI) (Ministry of Health and Family Welfare, 2011). Both the Directorate General of Health Services, and Family Planning implement reproductive health services through their programs on maternal, neo-natal, and child health (MNCH), reproductive and sexual health, including family planning (NIPRT, 2009). The main beneficiaries of these services are married women.

To realize the situation for the population of female adolescents, we explored the high-risk behavior, knowledge and attitudes of these adolescents for selected reproductive health in Rajshahi City corporation area of Bangladesh.

MATERIALS AND METHODS

Data were collected from 1084 female adolescents aged 10-19 years. Face to face interview was conducted from June to December 2015 among the eight wards of Rajshahi City Corporation area, Bangladesh. The study used simple random sampling technique to interviewing the respondents through a structured questionnaire. In this study, the respondents are divided into two groups and these were early adolescent <=14 years of age and late adolescent > 15 years of age. Records with missing information on adolescent excluded from all analyses and those with missing information on specific outcomes also were excluded. For more accurate data collection I used Bengali version of the questionnaire and converted the responses to English for data entry. I also analyze the data with stata 13 and SPSS for windows version16. I calculated the odds ratios (ORs) with their associated confidence intervals (CI) and considered a p-value <0.05 statically significant, indicating that a difference in risk exists. In this study, I have used univariate, bivariate and logistic regression analyses for the investigation of various interrelated variables.

RESULTS

Table 1 presented the distribution of socio-demographic, attitudes and high-risk characteristics results according to adolescent. Among the adolescent of 1084 female, 406(37.45%) of which were

early adolescent of age 10-14 years and rest of them were late adolescent of age 15-19 years. Of the records identified various socio-demographic variables adolescent educational qualification 6.8% Primary, 57.6% secondary, 18.8% higher secondary and 16.7% higher study and the P<=.00; respondent occupation 86.4% student, 12.7 housewife, .9% others and p<=.00; marital status 16.51% married, 83.4% unmarried and p<=.00; place of residence 15.8% slum, 84.2% urban and p<=.041; respondent guardian occupation 36.1% business, 41.8% service, 6.1% farmer, 16.0% labor and p<.09. Attitudes related characteristics for adolescent information to cloth/pad use menstruation period 35.8% yes, 64.2% no and p<.00; avoid pregnancy 92.3% contraceptive and 7.7% natural and p<=.00; sexual harassment 8.0% yes, 92% no and p<.01; ought about abortion 57.9% doctor, 9.4% nurse, .1 kobiraj, 32.5% others and p<=.02. Knowledge about reproductive health outcome characteristics to concept about abortion 58.2% yes, 41.8% no and the p<.=00, knowledge of marriageable age 1.4% under 18 years, 90.9% above 18 years and 7.7% don't know and p<=.00; physical problem to time of menstruation 89.1% yes, 10.9% no and the p<.08; marriage between relative blood connection 12.9% yes, 87.1% no and the p<=.00.

Table 1: Distribution of socio-demographic, attitudes and high risk characteristics results according to adolescent

Characteristics		Total	Early adolescent	Late adolescent	Chi-square/ level of significant
Respondents educational qualification	Primary	74	74(18.2)	0	277.41/Pr=.00
	Secondary	625	324(79.8)	301(44.4)	
	Higher secondary	204	8(2.0)	196(28.9)	
	Higher Education	181	0	181(26.7)	
Marital Status	Married	178	12(3.2)	166(23.6)	74.23/Pr=.00
	Unmarried	899	362(96.8)	537(76.3)	
	Widow	1		1(.1)	
Guardian Occupation	Business	391	120(31.8)	271(38.3)	6.48/Pr=0.90
	Service	453	162(43.1)	291(41.0)	
	Farmer	66	22(5.9)	44(6.3)	
	Labour	174	72(19.2)	102(14.4)	
Respondent occupation	Students	936	368(97.9)	568(80.3)	65.01/Pr=.00
	Housewife	138	8(2.1)	130(18.4)	
	Service	9	0	9(1.3)	
Place of residence	Slum	171	71(18.9)	100(14.1)	4.18/Pr=.41
	Urban	913	305(81.1)	608(85.9)	
Age at marriage	Early marriage	33	4(80.0)	29(17.9)	11.79/Pr=.00
	Late marriage	134	1(20.0)	133(82.1)	
Knowledge					
Knowledge about the marriage of same blood group	yes	137	67(18.3)	70(10.1)	16.25/Pr=.00
	No	919	299(81.7)	620(89.9)	
Knowledge about marriageable age	Under 18 years	15	9(2.6)	6(.9)	61.59/Pr=.00
	Above 18 years	962	286(81.3)	676(95.8)	
	Don't know	81	57(16.1)	24(3.3)	
Menstruation condition	Yes	911	216(59.5)	695(98.3)	285.38/Pr=.00
	No	159	147(40.5)	12(1.7)	
What things use in menstruation	Yes	321	96(46.2)	225(32.7)	12.57/Pr=.00
	No	575	112(53.9)	463(67.3)	
Physical problem	Yes	796	698(99.3)	98(50.8)	98.12/Pr=.00

during menstruation	No	100	5(.7)	95(41.2)	
Gynecological problem during menstruation	Yes	678	619(97.5)	59(22.6)	113/Pr=.00
	No	218	16(2.5)	202(77.4)	
Reproductive knowledge	Yes	426	57(15.2)	369(52.5)	142.27/Pr=.00
	No	652	318(84.8)	334(47.5)	
Knowledge of different pregnancy avoid method	Contraceptive use	775	168(86.2)	607(94.1)	13.27/Pr=.00
	Natural	65	27(13.9)	38(5.9)	
High-risk characteristics					
Sexual harassment	Yes	82	17(5.0)	65(9.5)	6.51/Pr=.01
	No	1024	326(95.0)	616(90.5)	
Respondent idea about abortion	Yes	612	79(22.1)	533(76.8)	289.70/Pr=.00
	No	439	278(77.9)	161(23.2)	
Respondent idea about HIV/AIDS	Yes	996	314(84.0)	682(96.5)	52.81/Pr=.00
	No	85	60(16.0)	25(3.5)	
Romance and adult movies	Yes	256	23(6.3)	233(33.3)	95.89/Pr=.00
	No	808	342(93.7)	466(66.7)	
By whom abortion ought to	Doctor	603	87(24.7)	516(74.9)	310/Pr=.00
	Nurse	98	25(7.1)	73(10.6)	
	Kobiraj	1	1(.3)	0	
	Others	339	239(67.9)	100(14.5)	

Table 2 shows the knowledge about reproductive health and sexual harassment for adolescent in logistic regression analysis. When the knowledge about reproductive health (0"no" and 1"yes") is dependent variable and the independent variables had significantly higher risk of age of respondent (odds ratios 2.32 and 95% CI 1.36 to 3.93), respondent educational qualification of higher education (odds ratios 2.88 and 95% CI 1.16 to 7.12), respondent idea about HIV/AIDS (odds ratios 3.08 and 95% CI 2.11 to 4.50), knowledge about avoid pregnancy (odds ratios 2.22 and 95% CI 1.15 to 4.31). In addition, the independent variables had significant lower risk of menstruation start (odds ratios 0.28 and 95% CI 0.19 to0.39), physical change in adolescent period (odds ratios 0.43 and 95% CI 0.26 to 0.70), respondent use cell phone and mobile (odds ratios 0.54 and 95% CI 0.36 to 0.80). The independent variables had an insignificant higher risk to respondent educational qualification at secondary (odds ratios 1.05 and 95% CI 0.48 to 2.31), and higher secondary (odds ratios 1.26 and 95% CI 0.54 to 2.95). Also, variables had an insignificant lower risk to the respondent occupation at housewife (odds ratios 0.98 and 95% CI 0.61 to 1.57) and others (odds ratios 0.54 and 95% CI 0.11 to 2.91).

When the dependent variable sexual harassment of logistic regression analysis the table 2 reveals that the independent variable had significantly higher risk to the age of respondent (odds ratios 5.35 and 95% CI 2.56 to 11.16), the respondent idea about HIV/AIDS (odds ratios 1.12 and 95% CI 1.07 to 1.92). whereas the independent variables had significant lower risk to respondent occupation (odds ratios 0.28 and 95% CI 0.16 -0.48), start of menstruation age (odds ratios 0.65 and 95% CI 0.45 to 0.93), physical change in adolescent period (odds ratios 0.44 and 95% CI 0.25 to 0.76), use mobile phone (odds ratios 0.29 and 95% CI 0.19 to 0.44). .In addition, variables had insignificant lower risk to respondent education at secondary (odds ratios 0.77 and 95% CI 0.29 o 1.72), higher secondary (odds ratios 0.97 and 95% CI 0.38 to 2.49) and higher education (odds ratios 0.57 and 95% CI 0.21 to 1.53), knowledge about avoid pregnancy (odds ratios 0.56 and 95% CI 0.25 to 1.27).

Table 2: Knowledge about Reproductive Health and Sexual harassment among female adolescent of logistic regression analysis

Characteristics		Knowledge about reproductive health		Sexual harassment	
		Odds Ratios	95% CI	Odds Ratios	95% CI
Age of respondent	Early	1		1	
	Late	2.32	(1.36 - 3.93)	5.35	(2.56 - 11.16)
Respondents education	Primary	1		1	
	Secondary	1.05	(.48 - 2.31)	0.77	(.29 - 1.72)
	Higher secondary	1.26	(.54 - 2.95)	0.97	(.38 - 2.49)
	Higher Education	2.88	(1.16- 7.12)	0.57	(.21 - 1.53)
Respondent occupation	Students	1		1	
	Housewife	0.98	(.61 - 1.57)	0.28	(.16 - .48)
	Others	0.54	(.11- 2.91)	0.42	(.073 - 2.50)
Place of residence	Urban	1		1	
	Slum	0.91	(.56 - 1.46)	0.8	(.47 - 1.37)
Menstruation condition	Early	1		1	
	Late	0.28	(.19 - .39)	0.65	(.45 - .93)
Physical change in adolescent period	Yes	1		1	
	No	0.43	(.26 - .70)	0.44	(.25 - .76)
Use Mobile phone	Yes	1		1	
	No	0.54	(.36 - .80)	0.29	(.19 - .44)
Respondent idea about HIV/AIDS	Yes	1		1	
	No	3.08	(2.11 - 4.50)	1.12	(1.07 - 1.92)
Knowledge about avoid pregnancy	Contraceptive use	1		1	
	Natural	2.22	(1.15 - 4.31)	0.56	(.25 - 1.27)

DISCUSSION

Adolescents constitute an important socio-demographic group of Bangladesh because of their sheer numbers of the population, and their present and future significance to the country.

The aim of this study was to explore the perceived reproductive health problems, health-seeking behaviors, knowledge about available services and barriers to reach services among a group of adolescents to improve reproductive health service delivery. During the last 2/3 decades, several studies have reported an association between reproductive health knowledge and age of adolescent. In this study respondent education and occupation, knowledge about marriageable age, the physical problem during menstruation period, marital status, sexual harassment, the idea about abortion and HIV/AIDS have a significant effect on adolescent. On the other hand, place of residence and guardian occupations have an insignificant effect on adolescent.

In logistic regression analysis, the study identified that the odds ratios of having 2.32 time higher knowledge about reproductive health in reference category of age respondent age. Respondent educational qualification has 1.05, 1.26 and 2.88 time higher knowledge about primary education. Housewife and others category of respondent occupation has poor knowledge. This result suggests that increased age and a higher level of education have the positive effect on knowledge about reproductive health. Slum respondents have 0.91 times lower knowledge than urban respondents. The adolescents who start late menstruation have 0.43 time lower knowledge than early start menstruation. The respondents who don't use a mobile phone and no idea about HIV/AIDS have respectively 0.54 and 0.38 times lower knowledge about reference category. The respondents who use a natural method to avoid pregnancy have 2.22 time higher knowledge contraceptive use.

In sexual harassment, the study recognized that the odds ratios for respondent age have 5.35 time higher annoyance than early age of the respondent. The sexual harassment has decreased to increased educational level. The study result reveals that student has the highest sexual harassment than others (0.42) and a minimum is for housewife (0.28). Slum respondents have (0.80) time lower annoyance than urban. The respondents who start late menstruation and don't be changed physically in the adolescent period have 0.65 and 0.44 lower harassment than the reference category. In Bangladesh, mobile phone users are usually middle class and upper class. The respondents who don't use mobile phone have 0.29 time lower sexual harassment than who use mobile. Respondents don't know idea about HIV/AIDS has 1.12 time higher harassment than reference category. The interesting part of the study has shown that the respondents who use natural method have 0.56 time lower harassment than the reference category.

CONCLUSION

The National Reproductive Health Strategy of Bangladesh prioritizes on safe motherhood, family planning, menstrual regulation, and man-agreement of HIV/AIDS. Overall, the study presented here demonstrates that high-risk behavior and knowledge of female adolescents, while the vast majority of the female adolescents opted for self-care. These findings emphasize the need for improved accessibility to relevant information on reproductive health issues. Existing health facilities should be made more adolescent-friendly to improve educational facilities, create awareness of reproductive health status of the female adolescents.

REFERENCES

Alam M.R. (2012) Determinants of fertility behavior among adolescent's reproductive women in Bangladesh. *Middle East Journal of Nursing*. Volume No.6, Issue-1.

Bangladesh Planning Commission (2013) Millennium Development Goals: Bangladesh Progress Report 2012. Dhaka.

Cockcroft A, Andersson N, Milne D, Hossain MZ, Karim E (2007) What did the public think of health services reform in Bangladesh? Three national community-based surveys 1999 – 2003. Health Res Policy Syst, 5: 1.

Gazi R, Khan SI, Haseen F, Sarma H, Islam MA, Wirtz AL, Rahman M (2009) Young Clients of Hotel-Based Sex Workers in Bangladesh: Vulnerability to HIV, Risk Perceptions, and Expressed Needs for Interventions. Int J Sex Health, 21(3):167– 182.

Kulkarni MV, Durge PM (2011) Reproductive health morbidities among adolescent girls: Breaking the silence. Ethno Med, 5 (3):165– 168.

Ministry of Health and Family Welfare (2009) National AIDs/STD Program in Bangladesh. Dhaka, Bangladesh.

Ministry of Health and Family Welfare (2011) Strategic Plan for Health, Population & Nutrition Sector Development Program 2012 –2016. Dhaka, Bangladesh.

Mishra SK, Mukhopadhyay S (2012) Socioeconomic Correlates of Reproductive Morbidity Among Adolescent Girls in Sikkim. India Asia Pac J Public Health, 24(1):136– 150.

Moore A, Haseen F, Aboud F, Khan MSH, Rahman APMS, Bhuiya I, Rob U, Larson CP (2006) Rapid assessment of young people's perspective on government, NGO, and Private health services. Dhaka: Icddrb.

National Institute of Population Research and Training: Bangladesh Demographic and Health Survey 2007. Dhaka: National Institute of Population Research and Training; 2009.

NIPRT (2013) Bangladesh Demographic & Health Survey 2011. Dhaka. National Institute of Population Research and Training.

Sarma H, Islam MA, Gazi R (2013) Impact of training of teachers on their ability, skills, and confidence to teach HIV/AIDS in classroom: a qualitative assessment. BMC Public Health, 13: 990.

UNPF (1998) Nations Population Fund: The State of the World Population 1998 Repor t. New York: United Nations Population Fund.

--0--

Manuscript Submission Date: **13 April 2020 /** Revised Submission Date: **28 May 2020**
Date of Acceptance: **10 June 2020**