Research Article

High Risk Behavior, Knowledge and Attitudes of Adolescent Health: A Study from Rajshahi City Corporation Area of Bangladesh.

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Abstract

Background: Adolescence is one of the most dynamic stages of human growth and development. It is an important issue in Bangladesh as well as in the world. Reproductive health of adolescents is strongly affected by socio-demographic factors. The purpose of this study was to establish the factors that influence on high-risk behavior, knowledge and attitudes of adolescent, which were regarded as determinants.

Data and Methods: Socio-demographic, health related behavior was collected from 1084 adolescence girls in Rajshahi City Corporation (RCC) area, Bangladesh. Bivariate analysis has been used to show the association between the reproductive health knowledge with some socio-demographic and health related characteristics. In multivariate analysis, binary logistic regression analysis was used to determine the effects of the various factors to reproductive health knowledge among female adolescent.

Findings: Education is an important determinant of adolescent health. Most the respondent is secondary level of education, which was 64.2%. The study result shows that 37.6% adolescent girl has knowledge about adolescent health care. It also shown that very few numbers of adolescent have idea about abortion, reproductive health knowledge about pregnancy avoids method and family planning method but maximum respondent heard about idea about sex, marriage and knowledge about HIV/AIDS. Logistic regression analysis findings specify that respondent in the age group 15-19 years is more expected to in turn ever having accomplished knowledge about adolescent health. Sexual violence is directly related to the duration of marriage. Married respondents have 0.221 (27.9%) times lower experienced to knowledge about adolescent health than that of the unmarried respondents.

Conclusion: This study needs to strengthen public-private sector partnership and stakeholder participation, active involvement of adolescents in their reproductive health matters. Respondent educational qualification has positively significant effect on knowledge about adolescent reproductive health. Age of respondents, Idea about pregnancy, Idea about abortion, Physical problem during menstruation, knowledge about pregnancy has also significant effect on knowledge about adolescent reproductive health. The most effective interventions are probably structural changes to improve people daily life with families and peers and access to improve education.

Keywords: High risk behavior, Knowledge, Attitudes and Adolescent health, Bangladesh.

Introduction

Bangladesh is a beautiful country which is located in South Asia. It comprises a 147,570 square kilometers area with a population of around 142.32 million people with density 1015 persons per square kilometer and Average annual growth rate is 1.2%, sex ratio is 100.3 [1]. Reproductive health is an important component of adolescent girl's health. It is a "state of complete physical, mental and social well-being and not merely the absence of disease or Infirmity" (UNPF 98). Adolescents aged 10–19 years constitute the largest growing segment of the world population. Glob-

ally, one in every 5 is an adolescent [1]. In south Asian countries, current healthcare systems scarcely address the health needs of adolescents. Furthermore, they are inadequately informed about the symptoms and consequences of reproductive health conditions (Bangladesh Economy review 2014) [1]. Although a large number of adolescents suffer from reproductive health problems, a vast majority of them do not seek healthcare for these conditions [2, 3]. Although Bangladesh has achieved some progress towards several targets of the Millennium Development Goals (MDGs) (Bangladesh Planning Commission 2013), but the birth rate among adolescents is still high, 118 per 1,000 women (MDG 5) (NIPORT 2013) [4, 5]. According to the 2011 National Demographic surveillance Report, about 25% of married adolescents had given birth by the age of 19 (NIPORT 2018) [6]. Although the current prevalence of HIV among the general population in Bangladesh is still below an epidemic level (MDG 6) (MHFW 2017, adolescents and youths are often considered to be vulnerable to acquiring HIV infection due to higher risk sexual behavior for adolescent health (MHFW 2017 and Gazi et al.) [7].

As estimated by the national program on HIV in Bangladesh, only 17.7% of adolescents have comprehensive knowledge of HIV transmission and prevention methods [8]. The heterogeneity of the healthcare system infrastructure across rural and urban settings of Bangladesh must also be considered when addressing RH problems for adolescents. National-level community-based surveys in Bangladesh revealed that there are variations in choices and utilization of specific types of health-care services by population groups found that youth health care seeking from existing healthcare facilities for RH conditions was considerably lower compared to healthcare-seeking for other general health problems in Bangladesh [9, 10]. Bangladesh's Strategic Plan for Health, Population and Nutrition Sector Development Programmed 2011–2016, has prioritized safe motherhood, family planning, menstrual regulation, and care for post-abortion complications and management of sexually transmitted infections (STI), with specific guidelines laid out in the National Reproductive Health Strategy [6]. Both Directorate General of Health Services and Directorate General of Family Planning implement reproductive health services through their programs on maternal, neo-natal, and child health (MNCH), reproductive and sexual health, including family planning [11]. Married women are the main beneficiaries for these services.

To understand the situation for the population of female adolescents, the purpose of this study was to explore the supposed reproductive health problems, high risk behaviors, knowledge about available services and barriers to reach services among a group of adolescents in order to improve their reproductive health.

Data and Methods
Simple random sample survey was conducted among 1084 female adolescents aged 10-19 years during June to December 2018. Out off 8 wards were selected from 3o wards under the RCC area as a study area. Records with missing information on adolescent age excluded from all analyses, and those with missing information on specific outcomes also were excluded. All data analysis was performed using state 13. Binary logistic regression analysis was used and the Odds ratios (ORs) with their associated 95% confidence intervals (CI) was calculated and a p-value <0.05 was considered

statically significant, indicating that a difference in risk exists Cox (1958) is the pioneer of logistic regression model. Subsequently, this model has developed by Wolker and Duncun (1967) and Cox (1970) [12]. More recently, Lee (1980) and Fox (1984) have further modified this model [13].

Results and Discussion
Adolescents and youth in Bangladesh are particularly vulnerable to health risks, especially in the area of reproductive health. This is due to their lack of access to information and services and societal pressure to perform as adults notwithstanding the physical, mental, and emotional changes they are undergoing. Socio-demographic and high risk related characteristics have played important roles to increase the reproductive health knowledge. Table 1 represents the Socio-demographic, attitudes and high risk related characteristics which would be supportive to identify the real position of reproductive health knowledge. The logistic regression analysis was applied to explore the special effects of explanation factors on adolescent reproductive health knowledge in table 2. Our data were drawn from table 1 represent that the socio-demographic variables such as respondent education and occupation, place of residence, respondent guardian occupation, age at marriage, seen about romance and adult movies and access to mass media have significant effect of reproductive health knowledge. The health related and high-risk behavior variables such as knowledge about marriage of blood relative, septic abortion, management of menstruation period, role of baby born, idea about HIV/AIDS and physical change of adolescent period have significant effect on reproductive health knowledge.

Education is called the prime mover of civilization and human development. Although equal opportunity of education of men and women is delineated as a fundamental state policy of Bangladesh, the educational status for adolescents is truncated, particularly for girls. The state of female adolescent education in Bangladesh can best be summarized as follows (Microfinance Opportunities [Internet] [14].

- Only 23 percent of 15–19 years old women have had seven or more years of schooling (however, young women in Bangladesh today are more than three times as likely to achieve this level of education than previous generations).
- Only 49 girls are enrolled for every 100 boys enrolled in secondary school.
- Only 5 percent of women ages 18–19 have had 10 or more years of education.
- If a young woman has fewer than seven years of schooling, she is twice as likely to be married by the age of 18.

In this study it is observed that educational qualification 6.8% Primary, 57.6% secondary, 18.8% higher secondary and 16.7% higher study and the P<=.00; The odds ratios and confidence interval (CI) for education qualification has 1.05 (.48 - 2.31) secondary, 1.26 (.54 - 2.95) higher secondary and 2.88 (1.16- 7.12) higher study. From this study result we depicted that higher secondary and higher study has 1.26 and 2.88 times better knowledge to compare reference category at primary education.

Early marriage is customary for female adolescents in Bangladesh. Almost all of these marriages are arranged by their parents [15].

Although the average age at first marriage is 18 years for females and 27 years for males, rural females tend to marry even earlier. Approximately 75 percent of the girls are married before the age of 16, and only 5 percent are married after 18 years, which is the legal age of marriage for females in Bangladesh Alam MR 2012 and BBS 2011) [16]. According to the 1991 census, about one-half of the females in the 15–19-year-old age group are married compared with only 5 percent of males in this age group. By age 24, approximately 87 percent of the females are married compared with 31 percent of the males (BBS 2011) [11]. In this study only 15.4% are married and these are divided into two categories early (10-14) years 19.2% and rest of them are (15-19) years are late marriage. The odds ratios for age at marriage 1.59 (.61 – 4.17) that means the respondent who late married are 1.59-time higher knowledge about reproductive health to compare reference category.

Occupation is an essential precondition for the elimination of world poverty and upholding of human rights (Alam MR 2010). A large majority of the respondents 86.4% student, 12.7 housewife, 0.9% others and p<=.00, the odds ratios and CI for housewife .98 (.61 – 1.57) and others .54 (.11 – 2.91) that implies that housewife and others adolescent are .98 and .54 tome lower knowledge about reproductive health to compare to reference category. In demography, residence means the type of community ranging from the rural to the urban in which people live (UNDP 2018) [17]. In Bangladesh, a large number of adolescent and young women migrate from rural areas to participate in wage labor. Most of them live in city slum areas. It is observed that 15.8% respondent lives in slum area and rest of them urban area and p<=.017. The odds ratios and CI for slum .91 (.56 - 1.46) which implies that slum respondent 0.91 times lower knowledge about reproductive health to compare reference category. Respondent guardian occupation 36.1% business, 1.8%service,6.1% farmer, 16.0% labor and p<.09, The relationship between guardian occupation and reproductive health knowledge is mixed. Service category is more likely higher (1.52 time) than reference category and farmer and labor are lower knowledge of reproductive health.

The maintenance of hygiene during menstruation is a vital aspect of Adolescent RH. Although almost 70 percent of the adolescent girls in the FPAB study were aware of the need for maintaining some cleanliness during the menstrual period, these girls noted that they came to understand only after two to three years of the onset of menstruation that a clean pad or cloth is important [16, 18]. In this study it is observed that the management of menstruation period 35.8% used pieces of pads during menstruation period, while others did not use anything. The odds ratios and CI for not use anything .28 (.19 - .39) that implies that the adolescent who don't use any thing in menstruation period are .28 times lower knowledge about their reproductive health knowledge to compare the reference category. Septic abortion is one of the leading causes of death among those who want to end a pregnancy that is unplanned and, in many cases, is a consequence of a sexual union outside of marriage or within a marriage that has yet to be recognized by family members. In some cases, the pregnancy happens accidentally as a result of sexual violence. Whatever the circumstances, these adolescents usually choose the path of clandestine abortion either self-induced or induced by untrained individuals. It is observed that septic abortion only 57.9% doctor, 9.4% nurse and

rest of them are others. The odds ratios and CI for septic abortion for Nurse .34 (.19 - .59) and others .14 (.09 - .23) that means the respondent who are abortion to nurse and others are 0.34 and 0.14 time little knowledge about reproductive health to compare reference category.

The risk of contacting STIs including HIV/AIDS is a major public health concern for adolescents. Since the sexual habits of unmarried girls and boys of this age group are changing rapidly, knowledge of STIs is crucial (HKI/Bangladesh, IPHN, NIO and INFS. 1999). A comprehensive study conducted among adolescents reported that only 13 to 14 percent of them were aware of syphilis and gonorrhea. About one-half of the adolescents could not correctly identify a single STI symptom and more than one-half of the adolescents could not correctly identify a mode of STI transmission.44 Although social customs usually discourage premarital or extra-marital sexual relationships, the scant evidence from small-scale, in-depth qualitative studies indicate that such relationships are more frequent than commonly believed (BBS 2011 and WHO 2012) [16, 19].

The study depicted that 92.4% respondent idea about HIV/AIDS and others have no idea about it and the odds ratios and CI for no idea about HIV/AIDS .24 (.11-.43) that means the respondent who have no idea about HIV/AIDS is 0.24-time lower knowledge to reference categories. Mobile phone/cell phone itself is an index of modernity. Respondents having mobile phone are, in general, indicative of higher socio-economic status. The study reveals that the respondent used mobile phone have higher reproductive health knowledge than that of others in this category and the odds ratios and CI .54 (.36 - .80) same results.

Policy Implication and Recommendation

Investments in the health, education and employment of young people, particularly adolescent girls, are among the most cost-effective development expenditures in terms of the social returns they generate. (UNFPA,2010) [20]. The socio-economic and demographic factors that are found to effect on adolescent's reproductive health may have important for policy implications. The findings of the present study may help planners and policy makers to take appropriate decision to adolescent reproductive health care [21-27].

The following recommendations can state for policy implication:
- The respondents are educated but the knowledge about adolescent health care is not so high. So have to add adolescent health care at adolescent health care more at S.S.C and H.S.C level.
- To increase the opportunity to discuss about reproductive health care with doctor.
- Parents have to build up strong and liberal relation with their children thus they can express their feelings with their parents.
- Awareness must be created through the public media as well as community leaders so that adolescent gets much knowledge about reproductive health service.
- To expand girl social participants, schooling and economic opportunities, understanding that these are basic entitlements.
- Government should take proper step to enhance awareness through open seminar and various programs.

Conclusion

The National Reproductive Health Strategy of Bangladesh prioritizes on safe motherhood, family planning, menstrual regulation, care for post-abortion complications, and man-agreement of HIV/AIDS. Overall, the study presented here demonstrates that high risk behavior, attitudes and knowledge of female adolescents, while the vast majority o f the female adolescents opted for self-care. These findings emphasize the need for improved accessibility to relevant information on RH issues. Existing health facilities should be made more adolescent-friendly to improve educational facilities, create awareness of reproductive health status of the female adolescents. Finally concluded that to meet the challenges of ARH needs and to achieve success for basic human rights-clients rights and reproductive rights are a compelling rationale for offering reproductive health education and services to adolescents.

Table1: Association of various socio-demographic, attitudes and health related high risk characteristics results according to Reproductive health knowledge

Characteristics	Reproductive health knowledge			P values
Socio-demographic and Health related characteristics				
Respondent's educational qualification	Total %	Yes	No	P
Primary	74 (6.8)	19 (4.4)	55 (8.4)	0.000
Secondary	624 (57.7)	172 (40.0)	452 (69.3)	
Higher secondary	203 (18.8)	106 (24.7)	97 (14.9)	
Higher Education	181 (16.7)	133 (30.9)	48 (7.4)	
Age at marriage				
Early marriage	33 (19.8)	13 (13.0)	20 (29.9)	0.007
late marriage	134 (80.2)	87 (87.0)	47 (70.1)	
Guardian Occupation				
Business	391 (36.1)	172 (40.0)	219 (33.6)	0.000
Service	452(41.8)	186 (43.3)	266 (40.8)	
Farmer	66 (6.1)	11 (2.6)	55 (8.4)	
Labour	173 (16.0)	61 (14.2)	112 (17.2)	
Place of residence				
Slum	171 (15.8)	54 (12.6)	117 (17.9)	0.017
Urban	911 (84.2)	376 (87.4)	535 (82.1)	
Respondents Occupation				
Students	934 (86.3)	356 (82.8)	578 (88.7)	0.023
Housewife	138 (12.8)	69 (16.1)	69 (10.6)	
Others	10 (.9)	5 (1.2)	5 (.8)	
Access to mass media				
Yes	460 (42.7)	275 (64.4)	185 (28.5)	0.000
No	617 (57.3)	152 (35.6)	465 (71.5)	
Management of menstruation period				
Yes	321 (35.9)	129 (32.4)	192 (38.7)	0.051
No	573 (64.1)	269 (67.6)	304 (61.3)	
Characteristics	Reproductive health knowledge			P values
Physical change in adolescent period				
Yes	744 (70.9)	355 (85.5)	389 (61.3)	0.000
No	306 (29.1)	60 (14.5)	246 (38.7)	

High risk characteristics				
Respondent idea about HIV/AIDS				
Yes	994 (92.1)	407 (95.1)		0.003
No	85 (7.9)	21 (4.9)		
Septic abortion				
Doctor	602	351 (84.2)	251 (40.3)	0.000
Nurse	98	38 (9.1)	60 (9.6)	
Others	339	28 (6.7)	311 (49.9)	
Role of baby born				
Fathers	516 (48.3)	303 (70.6)	213 (33.3)	0.000
Mothers	23 (2.2)	8 (1.9)	15 (2.4)	
Both	326 (30.1)	95 (22.1)	231 (36.2)	
Don't know	203 (19.01)	23 (5.4)	180 (28.2)	
Romance and adult movies				
Yes	256	23(6.3)	233(33.3)	.000
No	808	342(93.7)	466(66.7)	
Idea about contraceptive methods				
Yes				
No				
Sexual harassment				
Yes	82 (8.0)	31 (7.6)	51 (8.3)	0.711
No	940 (92)	375 (92.4)	565 (91.7)	

Table 2: The results of logistic regression analysis for the effects of variables on Knowledge about Reproductive Health among female adolescent.

Characteristics	Knowledge about reproductive health			
	Odds Ratios	Std. Error (β)	P Values	95% CI
Age at marriage				
Early *	1			
Late	2.32	0.87	0.000	(1.36 - 3.93)
Respondents education				
Primary*	1			
Secondary	1.05	1.54	0.190	(.48 - 2.31)
Higher secondary	1.26	1.97	0.540	(.54 - 2.95)
Higher Education	2.88	0.76	0.002	(1.16- 7.12)
Respondent occupation				
Students*	1			
Housewife	0.98	1.36	0.170	(.61 - 1.57)
Others	0.54	2.11	0.240	(.11- 2.91)
Place of residence				
Urban*	1			
Slum	0.91	1.06	0.130	(.56 - 1.46)

Management of Menstruation				
Yes*	1			
No	0.28	0.11	0.003	(.19 - .39)
Guardian's occupation				
Business*	1			
Service	1.52	1.24	0.077	(.76 – 1.98)
Farmer	0.23		0.120	(.11 - .50)
Labour	0.43		0.480	(.64 - 1.62)
Access to mass media				
Yes*	1			
No	0.54	0.11	0.001	(.36 - .80)
Respondent idea about HIV/AIDS				
Yes*	1			.24 (.11-.43)
No	0.24	0.21	0.000	(.11-.43)
Septic abortion				
Doctors*	1			
Nurses	0.34	0.19	0.000	(.19 - .59)
Others	0.14	0.09	0.001	(.09 - .23)

*reference category

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