

## Women's Sexual and Reproductive Health: A Comparative Study on the Levels of Knowledge and Attitude About Them Among Urban and Rural Women from Selected Areas of Bangladesh

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### ABSTRACT

**Background:** Women's sexual and reproductive health has been a great concern for every woman and it is an integral part of their overall health. Not much studies in this area of research were done and reported from Bangladesh; **Objectives:** In the present study, objectives were therefore to know the levels of knowledge and attitude regarding women's sexual and reproductive health among the Urban and Rural women from selected areas of Bangladesh; **Methodology:** This cross-sectional study was conducted among purposely selected 218 women of reproductive age from Urban (n=109, 20-45 years, Mean  $\pm$  SD: 32.16  $\pm$  8.22 years) and Rural (n=109, 18-40 years, Mean  $\pm$  SD: 30.83  $\pm$  9.23 years) selected areas of Bangladesh. The data were collected by using structured questionnaire organized in three sections i.e. Section-01: Socio-demographic information, Section-02:

**Knowledge levels on components of women's sexual and reproductive health.**

**Section-03: Attitude towards sexual and reproductive health.** The data were analyzed by appropriate by statistical methods i.e. Student's t-test and Chi-squared test, using SPSS programme and the results were presented in three sections accordingly; **Results:** Among Urban women, 94 (86.2%), 11(10.1%) and 4 (3.7%) and Rural women, 65 (59.6%), 32 (29.4%) and 12 (11.0%) were Muslims, Hindus and others respectively ( $p<0.001$ ). Urban women had much higher educational levels compare to rural women respondents ( $p<0.001$ ). And occupations of Urban women were mostly teaching and office jobs, whereas Rural women were mostly house wives and garments factory workers ( $p<0.001$ ). Monthly income of Urban women as well as their family income both were much higher compared to Rural women ( $p<0.001$ ). Majority of respondents belonged to single family [Urban: 73 (66.9%), Rural: 63 (57.8%)] compared to joint family type [Urban: 37 (33.1%), Rural: 46 (42.2%)] ( $p>0.1$ ). About family planning, Urban women showed better knowledge levels than Rural women [Urban: Poor- 03 (2.8%), Moderate-11 (10.1%), Good-73 (66.9%), Very Good-22 (20.2%); Rural: Poor-24 (22.1%), Moderate-82 (75.2%), Good-3 (2.7%), Very Good-0 (0.0%)] ( $p<0.001$ ). On contraception usage, Urban women showed much better knowledge than Rural women [Urban: Poor- 01 (0.9%), Moderate-18 (16.6%), Good-73 (66.9%), Very Good-17 (15.6%); Rural: Poor- 65 (59.6%), Moderate-43 (39.7%), Good-1 (0.5%), Very Good-0 (0.0%)] ( $p<0.001$ ). Knowledge levels on care during pregnancy of Urban women were at higher levels compared to Rural women [Urban: Poor-03 (2.8%), Moderate-16 (14.6%) Good-72 (66.1%), Very Good-18 (16.5%); Rural: Poor-12 (11.1%), Moderate-95 (87.1%) Good-02 (1.8%), Very Good-0 (0.0%)] ( $p<0.001$ ). Levels of Knowledge were also found to much better for Urban compared to Rural women on safe motherhood [Urban: Poor-05 (4.6%), Moderate-11 (10.1%) Good-78 (71.6%), Very Good-15(13.7%); Rural: Poor-29 (26.6%), Moderate-78 (71.6%) Good-02 (1.8%), Very Good0(0.0%)] ( $p<0.001$ ); New born care [Urban: Poor-02 (1.8%), Moderate-22 (20.2%) Good-73 (66.9%), Very Good-12 (11.1%); Rural: Poor-26 (23.8%), Moderate-81 (74.4%) Good-02 (1.8%), Very Good-0 (0.0%)] ( $p<0.001$ ); Abortion [Urban: Poor08 (7.3%), Moderate-41 (37.6%) Good-57 (52.3%), Very Good-3 (2.8%); Rural: Poor-81 (74.4%), Moderate-26 (23.8%) Good-02 (1.8%), Very Good-0(0.0%)] ( $p<0.001$ ) and birth spacing [Urban: Poor-0 (0.0%), Moderate-35 (32.2%) Good-61 (55.9%), Very Good-13 (11.9%); Rural: Poor-27 (24.8%), Moderate-81 (74.3%) Good-01 (0.9%), Very Good-0(0.0%)] ( $p<0.001$ ). Regarding attitude towards sexual and reproductive health, no significant differences were observed between Urban and Rural respondents on importance to avoid pregnancy [Urban: Yes-97 (88.9%), No-12 (11.1%), NA-0 (0.0%); Rural: Yes-95 (87.2%), No-14 (12.8%), NA-0 (0.0%)] ( $p>0.25$ ), Oral contraceptive pills usage [Urban: Yes-65 (59.6%), No-44 (40.4%), NA0 (0.0%); Rural: Yes-60 (55.1%), No-49 (44.9%), NA-0 (0.0%);] ( $p>0.5$ ), IUDs usage to prevent pregnancy [Urban: Yes-3 (2.8%), No-106 (97.2%), NA-0 (0.0%); Rural: Yes-0 (0.0%), No-109 (100%), NA-0 (0.0%)] ( $p>0.1$ ). However, attitude of Urban women were significantly positive compared to Rural respondents towards (i) usage of condoms during sexual intercourse [Urban: Yes-59 (54.1%), No-50 (45.9%), NA-0 (0.0%); Rural: Yes-20 (18.3%), No-89 (81.7%), NA-0 (0.0%)] ( $p<0.001$ ); (ii) unwanted pregnancy [Urban: Yes-6 (5.5%), No-103 (94.5%), NA-0 (0.0%); Rural: Yes-24 (22.1%), No-85 (77.9%), NA-0 (0.0%)] ( $p<0.005$ ) and usage of different contraceptive methods in life time [Urban: Yes-72 (66.1%), No-37 (33.9%), NA-0 (0.0%); Rural: Yes-10 (9.2%), No-99 (90.8%), NA-0 (0.0%)] ( $p<0.001$ ). Significantly large number of respondents, both Urban and Rural, did

**not hear about affordable care act (ACA) introduced by Federal Government of USA in March 2010 [Urban: Yes-01 (0.9%), No-108 (99.1%), NA-0 (0.0%); Rural: Yes-0 (0.0%), No-109 (100%), NA-0 (0.0%)] ( $p>0.5$ ); Conclusions: Our findings clearly suggested that Rural women were far behind compared to Urban women about the levels of knowledge on, and attitude towards, women's sexual and reproductive health. Therefore, national programmes and interventions are needed and be introduced through appropriate agencies to address the challenges in this field for communities in Bangladesh. In addition, greater policy focus should be directed towards women's and empowerment factors for better knowledge and attitude about women's sexual and reproductive health leading to much improved status in this area in Bangladesh.**

## INTRODUCTION

Sexual and reproductive health has been a great concern for every woman and it is an integral part of women's overall health (1). Reproductive ill-health has been a serious apprehension to many as maternal mortality and morbidity are very high in developing countries, especially in Bangladesh compared to developed world. However, Bangladesh has achieved remarkable progress in important aspects of health and family welfare since independence in 1971. But the overall health status of sexual and reproductive health, still remains unsatisfactory (1,2). Access to the health services is determined by a broad range of factors including courage, affordability of care, health providers characteristic as well as individual preference and experiences (2). The insufficient health services available to women and children are evident from high infant and maternal mortality rates (3,4). The common health problems faced by both rural and urban women of Bangladesh are lower abdominal pain accompanied by heavy bleeding, white discharge and irregularity of the menstrual cycle (3,4). The major concern, though, is that they do not discuss these since they do not consider these normal illnesses. Although urban educated women sometimes visit doctors, but women in rural areas are taken to some traditional healers, like Kabiraj/Hakim, who prescribes Tabij and herbal medicines, Pir (saints) or Fakir (religious persons) or Huzur (mullahs), who prescribes Panipora (sanctified water) (4). Family planning helps women to protect from unwanted pregnancies, thereby saving them from high-risk pregnancies or unsafe abortions (5,6,7).

One of the key factors that enable women to be aware of their rights and health status in order to seek appropriate health services is considered to be Health Knowledge. It is very important to study the overall situation and to know the differences between rural and urban Bangladeshi women in order to focus on sexual and reproductive health issues (8,9,10,11). Modern facilities, such as TV, Radio, Newspaper, etc., have played a vital role to ensure the reproductive health of the respondents. Possession of such modern facilities is a very important issue for a society, and a society with enough modern facilities is more developed, while people enjoy their reproductive health. Consequently, mass media such as radio and television can create awareness about issues affecting the daily life, family planning programmes, poverty alleviation programmes, gender issues, human rights issues, etc. (8,9,10,11). The results of studies along these lines could be used as an important guide to assist policymakers and administrators in evaluating and designing the programmes and strategies for improving reproductive health services with a special consideration for rural women. The perspective and experience of women obtained in sexual and reproductive health care can help to shape the next generation of policies and programmers by the institutions and the government

(11,12,13,14). Therefore, the aim and focus of the present cross-sectional study were to explore the comparative levels of knowledge and attitude regarding women's sexual and reproductive health among the Urban and Rural Women of selected areas of Bangladesh.

## METHODOLOGY

**Study design, Respondents & Areas of study:** The cross-sectional study was conducted among purposely selected 218 women of reproductive age (18 - 45 years), 109 respondents selected from Urban community of Dhaka city and Tongi City and rest 109 respondents were selected from Rural community of surrounding areas of Dhaka City and Tongi City of Bangladesh. The areas were also selected purposively to obtain required samples; **Inclusion & Exclusion Criteria:** The study subjects (respondents) purposively selected were those women who sort reproductive health services in the health service facilities like antenatal care, immunization, choice of family planning methods, safe abortions, etc and who were willing to participate and provide required information. Those women not willing to participate and also, physically and mentally retarded and sick were excluded from the study; **Study Period:** The period of study was for 06 months i.e. from February to July 2024; **Data Collection Procedure:** The information/data were collected by using structured questionnaire in three sections. The respondents were selected consecutively and purposively who meet the inclusion and exclusion criteria. The data were then categorized as poor, moderate, Good and Very Good based on scoring i.e. 1-20: Poor, 21-40: Moderate, 41-60: Good,  $\geq 61$ : Very Good and answers to questions as Yes, No and NA (No Answer) respectively. The three questionnaire sections were: **Section-01: Socio Demographic Information of the Respondents (Urban n=109, Rural n=109);** Questions: 1. What is your age and gender? 2. What is your religion? 3. What is your education level? 4. What is your occupation? 5. What is your monthly income (BDT)? 6. What is the monthly income (BDT) of your family? 7. What is the type of your family? **Section-02: Knowledge Level on Components of Reproductive Health (Urban n=109, Rural n=109);** Questions: 1. What is the level of knowledge of family planning? 2. What is the level of knowledge on contraceptive methods used? 3. What is the level of knowledge on care during pregnancy? 4. What is the level of knowledge on safe motherhood? 5. What is the level of knowledge on new born care? 6. What is the level of knowledge on abortion? 7. What is the level of knowledge on birth spacing and family size? **Section-03: Attitude Towards Sexual and Reproductive Health (Urban n=109, Rural n=109);** Questions: 1. Is it important to you to avoid/prevent pregnancy? 2. Do you use condoms during sexual intercourse? 3. Do you use oral contraceptive pills/oral contraception to prevent pregnancy? 4. Did you use IUDs to prevent pregnancy? 5. Are you concerned about an unwanted pregnancy? 6. Do you used more than one/different contraceptive methods in your life time? 7. Have you heard about affordable care act (ACA) for access to sexual and reproductive health care by expanding private insurance more affordable? (15); **Statistical Analysis:** Statistical analyses of data were done by appropriate statistical methods using Statistical Package for Social Sciences (SPSS) and the results are presented in three sections accordingly.

## RESULTS

The distributions of respondents were evaluated by calculating as 'Poor', 'Moderate', 'Good' and 'Very Good'. For some questions, distributions of respondents were evaluated and calculated based on 'Yes', 'No', 'No Answer (NA)'. The findings were recorded in three sections as per research protocol/methodology and presented with statistical analyses in the respective tables below.

**Section-01: Socio Demographic Information of the Respondents Q.1:****What is your age and gender?**

Respondents	(a) Age (Years)	(b) Gender: Male (M), Female (F)	Total
A. Urban (n=109)			
	Range: 20 – 45 years	M = 0, F = 109	109
	Mean $\pm$ SD: 32.16 $\pm$ 8.22		
B. Rural (n=109)			
	Range: 18 – 40 years		
	Mean $\pm$ SD: 30.83 $\pm$ 9.23	M = 0, F = 109	109
Student's t-test (Urban vs Rural):	t = 0.126	df = 216	p > 0.1

**Q.2: What is your religion?**

Respondents	(a) Muslim	(b) Hindu	(c) Others	Total
A. Urban (n=109)				
Number:	94	11	4	109
Percentage (%):	86.2	10.1	3.7	100
B. Rural (n=109)				
Number:	65	32	12	109
Percentage (%):	59.6	29.4	11.0	100
Total (A+B):	149 (72.9)	43(19.7)	16(7.4)	218 (100)
Chi-squared test (Urban vs Rural):	$\chi^2 = 25.91$ df = 2 p < 0.001			

**Q.3: What is your education level?**

Respondents	(a) Schooling No	(b) Primary	(c) SSC	(d) HSC	(e) Graduate	(f) PG	Total
A. Urban (n=109)							
Number:	2	5	4	15	62	21	109
Percentage (%):	1.8	4.6	3.6	13.8	56.9	19.3	100
B. Rural (n=109)							
Number:	4	28	52	24	01	00	109
Percentage (%):	3.6	25.7	47.7	22.1	0.9	00	100
Total (A+B):	6 (2.8)	33(15.1)	56(25.7)	39(17.9)	63(28.8)	21(9.6)	218 (100)
Chi-squared test (Urban vs Rural):	$\chi^2 = 139.97$ df = 5 p < 0.001						

**Q.4: What is your Occupation?**

Respondents	(a) House Wife	(b) NGO Jobs	(c) Teacher	(d) Worker Garments	(e) Others	Total
A. Urban (n=109)						
Number:	18	1	27	17	46	109
Percentage (%):	16.3	0.9	24.8	15.7	42.3	100
B. Rural (n=109)						

Number:	38	0	1	65	5	109
Percentage (%):	34.8	0.0	1.0	59.6	4.6	100
Total (A+B):	56 (25.7)	1(0.5)	28(12.8)	82(37.6)	51(23.4)	218 (100)
Chi-squared test (Urban vs Rural): $\chi^2 = 93.32$ df = 4 p < 0.001						

#### Q.5: What is your monthly income (BDT)?

Respondents	(a) LI ( $\leq 5500$ )	(b) LMI (5501-20500)	(c) UMI (20501-65500)	(d) HI ( $\geq 65501$ )	Total
A. Urban (n=109)					
Number:	17	12	65	15	109
Percentage (%):	15.6	11.0	59.6	13.8	100
B. Rural (n=109)					
Number:	38	64	7	0	109
Percentage (%):	34.8	58.7	6.5	0.00	100
Total (A+B):	55 (25.2)	76(34.9)	72(33.1)	15(6.8)	218 (100)
Chi-squared test (Urban vs Rural): $\chi^2 = 105$ df = 3 p < 0.001					

#### Q.6: What is your monthly family income (BDT)?

Respondents	(a) LI ( $\leq 5500$ )	(b) LMI (5501-20500)	(c) UMI (20501-65500)	(d) HI ( $\geq 65501$ )	Total
A. Urban (n=109)					
Number:	0	6	60	43	109
Percentage (%):	0.00	5.5	55.1	39.4	100
B. Rural (n=109)					
Number:	3	50	50	6	109
Percentage (%):	2.8	45.8	45.9	5.5	100
Total (A+B):	3 (1.4)	56(25.6)	110(50.5)	49(22.5)	218 (100)
Chi-squared test (Urban vs Rural): $\chi^2 = 71.48$ df = 3 p < 0.001					

#### Q.7: What is the type of your family?

Respondents	(a) Single family	(b) Join family	Total
A. Urban (n=109)			
Number:	73	36	109
Percentage (%):	66.9	33.1	100
B. Rural (n=109)			
Number:	63	46	109
Percentage (%):	57.8	42.2	100
Total (A+B):	136 (62.4)	82(37.6)	218 (100)
Chi-squared test (Urban vs Rural): $\chi^2 = 1.95$ , df = 1, <b>p &gt; 0.1</b>			

**Section-02: Knowledge Level on Components of Reproductive Health (n=120)****Q.1: What is the Level of Knowledge of Family planning?**

Respondents	( a) Poor	( b) Moderate	( c) Good	( d) Very Good	Total
A. Urban (n = 109)					
Number	3	11	73	22	109
Percentage	2.8	10.1	66.9	20.2	100
B. Rural (n = 109)					
Number	24	82	3	0	109
Percentage	22.1	75.2	2.7	0	100
Total (A+B):	27(12.4 )	93(42.6)	76(34.9)	22(10.1)	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 155.91$	df = 3		<b><i>p &lt; 0.001</i></b>

**Q.2: What is the Level of Knowledge on contraceptive methods used?**

Respondents	( a) Poor	( b) Moderate	( c) Good	( d) Very Good	Total
A. Urban (n = 109)					
Number	1	18	73	17	109
Percentage	0.9	16.6	66.9	15.6	100
B. Rural (n = 109)					
Number	65	43	1	0	109
Percentage	59.6	39.5	0.9	0	100
Total (A+B):	66(30.3 )	61(27.9)	74(33.9)	70(7.9 )	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 159.32$	df = 3		<b><i>p &lt; 0.001</i></b>

**Q.3: What is the Level of Knowledge on care during pregnancy?**

Respondents	( a) Poor	( b) Moderate	( c) Good	( d) Very Good	Total
A. Urban (n = 109)					
Number	3	16	72	18	109
Percentage	2.8	14.6	66.1	16.5	100
B. Rural (n = 109)					
Number	12	95	2	0	109
Percentage	11.1	87.1	1.8	0	100
Total (A+B):	15(6.9 )	111(50.9)	74(33.9)	18(8.3 )	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 154.83$	df = 3		<b><i>p &lt; 0.001</i></b>

**Q.4: What is the Level of Knowledge on safe motherhood?**

Respondents	( a) Poor	( b) Moderate	( c) Good	( d) Very Good	Total
A. Urban (n = 109)					
Number	5	11	78	15	109
Percentage	4.6	10.1	71.6	13.7	100
B. Rural (n = 109)					
Number	29	78	2	0	109
Percentage	26.6	71.6	1.8	0	100
Total (A+B):	34(15.6 )	89(40.8)	18(36.7)	15(6.9 )	218(100)

Chi-squared test (Urban vs Rural):		$\chi^2 = 154.58$	df = 3		<b><i>p &lt; 0.001</i></b>
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### Q.5: What is the Level of Knowledge on new born care?

Respondents	( a) Poor	( b) Moderate	( c) Good	( d) Very Good	Total
A. Urban (n = 109)					
Number	2	22	73	12	109
Percentage	1.8	20.2	66.9	11.1	100
B. Rural (n = 109)					
Number	26	81	2	0	109
Percentage	23.8	74.4	1.8	0	100
Total (A+B):	28(12.8)	103(47.2)	75(34.4)	12(5.6)	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 133.18$	df = 3		<b><i>p &lt; 0.001</i></b>

### Q.6: What is the Level of Knowledge on abortion?

Respondents	( a) Poor	( b) Moderate	( c) Good	( d) Very Good	Total
A. Urban (n = 109)					
Number	8	41	57	3	109
Percentage	7.3	37.6	52.3	2.8	100
B. Rural (n = 109)					
Number	81	26	2	0	109
Percentage	74.4	23.8	1.8	0	100
Total (A+B):	89(40.8)	67(30.8)	59(24.1)	3(1.3)	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 146.42$	df = 3		<b><i>p &lt; 0.001</i></b>

### Q.7: What is the Level of Knowledge on birth spacing?

Respondents	(a) Poor	(b) Moderate	(c) Good	(d) Very Good	Total
A. Urban (n = 109)					
Number	0	35	61	13	109
Percentage	0	32.2	55.9	11.9	100
B. Rural (n = 109)					
Number	27	81	1	0	109
Percentage	24.8	74.3	0.9	0	100
Total (A+B):	27(12.5)	106(53.2)	62(28.4)	13(5.9)	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 141.35$	df = 3		<b><i>p &lt; 0.001</i></b>

## Section-03: Attitude Towards Sextual and Reproductive Health

### Q.1: Is it important to you to avoid/prevent pregnancy?

Respondents	(a) Yes	(b) No:	(c) NA	Total
A. Urban (n = 109)				
Number	97	12	0	109
Percentage	88.9	11.1	0	100
B. Rural (n = 109)				
Number	95	14	0	109



Percentage	87.2	12.8	0	100
Total (A+B):	192(88.1)	26(11.9)	0(0.00)	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 0.16$	df = 2	$p > 0.25$

### Q.2: Do you use condoms during sexual intercourse?

Respondents	(a) Yes	(b) No:	(c) NA	Total
A. Urban (n = 109)				
Number	59	50	0	109
Percentage	54.1	45.9	0	100
B. Rural (n = 109)				
Number	20	89	0	109
Percentage	18.3	81.7	0	100
Total (A+B):	79(36.2)	139(63.8)	0(0.00)	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 30.18$	df = 2	$p < 0.001$

### Q.3: Do you use oral contraceptive pills/oral contraception to prevent pregnancy?

Respondents	(a) Yes	(b) No:	(c) NA	Total
A. Urban (n = 109)				
Number	65	44	0	109
Percentage	59.6	40.4	0	100
B. Rural (n = 109)				
Number	60	49	0	109
Percentage	55.1	44.9	0	100
Total (A+B):	125(57.3)	93(42.7)	0(0.00)	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 1.45$	df = 2	$p > 0.5$

### Q.4: Did you use IUDs to prevent pregnancy?

Respondents	(a) Yes	(b) No:	(c) NA	Total
A. Urban (n = 109)				
Number	3	106	0	109
Percentage	2.8	97.2	0	100
B. Rural (n = 109)				
Number	0	109	0	109
Percentage	0	100	0	100
Total (A+B):	3(1.4)	215(98.6)	0(0.00)	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 3.04$	df = 2	$p > 0.1$

### Q.5: Are you concerned about an unwanted pregnancy?

Respondents	(a) Yes	(b) No:	(c) NA	Total
A. Urban (n = 109)				
Number	6	103	0	109
Percentage	5.5	94.5	0	100
B. Rural (n = 109)				

Number	24	85	0	109
Percentage	22.1	77.9	0	100
Total (A+B):	30(13.8)	188(86.2)	0(0.00)	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 12.52$	df = 2	<b><math>P &lt; 0.005</math></b>

#### Q.6: Did you used more than one/different contraceptive methods in your life time?

Respondents	(a) Yes	(b) No:	(c) NA	Total
A. Urban (n = 109)				
Number	72	37	0	109
Percentage	66.1	33.9	0	100
B. Rural (n = 109)				
Number	10	99	0	109
Percentage	9.2	90.8	0	100
Total (A+B):	82(37.6)	136(62.4)	0(0.00)	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 75.14$	df = 2	<b><math>P &lt; 0.001</math></b>

#### Q.7: Have you heard about affordable care act (ACA) for access to sexual and reproductive health care by expanding private insurance more affordable?

Respondents	(a) Yes	(b) No:	(c) NA	Total
A. Urban (n = 109)				
Number	1	108	0	109
Percentage	0.9	99.1	0	100
B. Rural (n = 109)				
Number	0	109	0	109
Percentage	0	100	0	100
Total (A+B):	1(0.4)	217(99.6)	0(0.00)	218(100)
Chi-squared test (Urban vs Rural):		$\chi^2 = 1.03$	df = 2	$p > 0.5$

## DISCUSSION

One of the key factors that enable women to be aware of their rights and health status in order to seek appropriate health services is considered to be Health Knowledge. It is very important to study the overall situation and to know the differences between rural and urban Bangladeshi women in order to focus on sexual and reproductive health issues (8,9,10,11). The aim of the present study was to explore the comparative level of knowledge and attitude regarding sexual and reproductive health among the urban and rural women from selected area of Bangladesh. We selected reproductive are matched 109 Women from urban and 109 women from rural area of Bangladesh. (Urban, Age range: 20-45 years, mean  $\pm$  SD: 32.16  $\pm$  8.22 year; Rural, Age range: 18-40 years, mean  $\pm$  SD: 30.83  $\pm$  9.23 year) ( $P > 0.1$ ) (Table section:01, Q.1) Among urban women, 94 (83.2%), 11 (10.1%) and 4 (3.7%) were Muslim, Hindu and others respectively. Among rural women, 65 (59.6%), 32 (29.4%) and 12 (11.0%) were Muslim, Hindu and others respectively which were significantly different from those of urban women ( $P < 0.001$ ) (Table section:01, Q.2). Significantly large proportion of urban women had higher qualification i.e. graduate (62, 56.9%) and Postgraduate (PG) (21, 19.3%) compared to rural women i.e. graduate (01, 0.9%) and postgraduate (PG) (0, 0.0%) respectively ( $p < 0.001$ ) (Table1/Section:01, Q.3). Significantly larger proportion of urban women had teaching

occupation (27, 24.8%) and other official jobs (46, 42.3%), whereas majority of rural women were housewives (38, 34.8%) and garments factory workers (65, 59.6%) respectively ( $p < 0.001$ ) (Table-1/Section:01, Q.4). Monthly income (BDT), personal and family, of urban women both were significantly higher compared to rural women ( $P < 0.001$ ) (Table-1/Section:01, Q.5). (Table-1/Section:01, Q.6) Our study population were similar to other studies reported although the results were a bit different but comparable with some other reported studies (1,8,11).

Health knowledge is considered as one of the key factors that enable women to be aware of their rights and reproductive health status in order to seek health services. We studied the knowledge level on components of reproductive health in our both urban and rural respondents and the results are presented in Table-2 (Section-02). The levels of knowledge on family planning (Table-2, Q.1), contraceptive methods used (Table-2, Q.2), care during pregnancy (Table-2, Q.3), safe motherhood (Table-2, Q.4), new born care (Table-2, Q.5), abortion (Table-2, Q.6) and birth spacing (Table-2, Q.7) were significantly much higher in case of urban compared to rural women ( $p < 0.001$ ). Interestingly, our findings of levels of knowledge on family planning, care during pregnancy, safe motherhood, new born care and birth spacing for urban compared to rural respondents were comparable to the reported results by Haque et al (8). However, we observed significantly higher knowledge levels also on contraceptive methods used and abortion in our urban compared to rural women ( $P < 0.001$ ) contrary to nonsignificant findings ( $P > 0.05$ ) reported by Haque et al (8). In fact, we found levels of knowledge in 'Very Good' category for urban respondents 3 to 22 (2.78 -20.2%), were as for rural women levels of knowledge in 'Very Good' category were 0 (0.0%) (Table-2/Section-2). These results were comparable with some of the reported studies from Nepal and other countries (8,11,12,13,14). However, we observed that poor knowledge on reproductive health was more among rural women. And urban women more knowledgeable about reproductive health. Thus overall knowledge on reproductive health was found to be better than rural women in the present study. As stated in Table-3 (Section-3), attitude towards sexual and reproductive health was much interesting and some of them were contradictory between urban and rural women respondents. A very high percentage of respondents, urban ( $n=97$ , 88.9%) and rural ( $n=95$ , 87.2%) said 'Yes' that it was important to them to prevent/avoid pregnancy ( $p > 0.25$ ) (Table3, Q.1). A high percentage of urban women ( $n=59$ , 54.1%) used condoms, whereas very minority of rural women ( $n=20$ , 18.3%) used condoms during intercourse ( $p < 0.001$ ) (Table-3, Q.2). Condoms are not only used as contraceptive but are effective in reducing the risk of transmission of sexually transmitted diseases (STDs). It was interesting to note that large number of both urban and rural women were using oral contraceptive pills (Urban:  $n=65$ , 59.6%; Rural:  $n=60$ , 55.1%) and also not using contraceptive pills to prevent pregnancy (Urban:  $n=44$ , 40.4%; Rural:  $n=59$ , 54.9%) ( $p > 0.5$ ) (Table-3, Q.3). Fedarixsen et al reported that some women use contraception for other reason not related to preventing pregnancy such as managing a medical condition or preventing STIs (11). In our study, very few respondents (Urban:  $n=3$ , 2.8%; Rural:  $n=0$ , 0.0%) did use IUDs ( $p > 0.1$ ) (Table-3, Q.4). These findings were comparable with some reports that 28% women of ages 36-49 years might have used an IUD compare to all women of reproductive age 23% (11). Significant proportion of our respondents were not concerned about unwanted pregnancy i.e. 94.5% Urban ( $n=103$ ) and 77.9% Rural ( $n=85$ ) ( $p < 0.005$ ) as stated in (Table-3, Q.5). Contraceptive switching is common and it is important that women have access to the full range of contraceptive methods without costsharing, so they can find the contraceptive method

that works best for them if they want to use contraception. Also, women's contraceptive needs can change over their reproductive lifespan, what works when they are in their twenties may not be what is best for them in their thirties or forties. Shared-decision making with a provider can allow a patient to communicate their values and preferences for contraception and the provider can share their medical knowledge to help the patient find a contraceptive method that is most consistent with their preferences (16). Regarding use of different contraceptive methods, high percentage of urban women responded positively (Yes: n=72, 66.1%; No: n=37, 33.9%), were as rural women responded Negatively (Yes: n=10, 9.2%; No: n=99, 90.8%) (Table-3, Q.6). Fedariksen et al reported that while many women try and use multiple contraceptive methods throughout their lives for various reasons, nearly one in five women (18%) say they are not currently using their preferred method of birth control. This share is higher among uninsured and low-income women who may not have affordable access to the full range of contraceptive methods or be aware of public programs that provide those services. The primary reason women say they are not using their preferred method of contraception is because they cannot afford it (11).

Affordable care act (ACA) is an insurance policy enacted in march 2010 by Federal Government of USA (17). The ACA requires that most private plans cover contraceptive services which include patient education and counseling for contraceptive services and all of the 18 FDA-approved methods of contraception without cost sharing. This provision has drastically reduced cost-sharing for contraception among women with employer or individual insurance plans (17). The majority of privately insured women report that their insurance covers the full cost of their contraceptive care (64%), but one in five (21%) women say their insurance only covered part of the cost and they paid the rest. There are a number of reasons that women could be responsible for some or all of those payments. For example, a woman could be using a brandname contraceptive that is not in her plan's formulary or she is unaware of or not offered a generic alternative. Some women paying out-of-pocket could also be receiving care out-of-network or still be enrolled in a grandfathered health insurance plan (which is exempt from the requirement). Among our respondents, no differences were observed urban and rural women that they did not hear about the ACA. As stated in Table-3 (Q.7) (Yes: Urban, n=1, 0.9% and Rural, n=0, 0.0%; No: Urban, n=108, 99.1% and Rural, n=109, 100%).

In a camp-based cross-sectional survey conducted in November 2019 to January 2020, Zakaria et al reported that health communication interventions significantly influence positive changes in women's sexual and reproductive health (18). Accordingly, they recommended strengthening of communication interventions using behavioral change theories and strategic communication approaches, as it is difficult to change their socioeconomic status in existing settings. However, the relationship between women empowerment and fertility in terms of reproductive health status in Bangladeshis not appropriately studied and known. In an extensive review study, Chowdhury et al reported a negative association between women's empowerment and the control of fertility and reproductive health. They recommended that greater policy focus should be directed toward women empowerment factors to improve the fertility situation and reproductive health status in Bangladesh and other countries (19). In 2022, Ahmed et al reported their participatory research study findings with adolescent girls and women in three isolated rural communities of Bangladesh (20). They observed that norms of privacy and silence, local beliefs and a culture of shame led to belief that human body is 'natural' and does not require formal sexual and reproductive health care. Instead, their

respondents sought out traditional healers and used herbal plants as natural remedies. Their participants reported that they were restricted in performing religious prayers, cooking and food consumption during menstruation. Because sanitary protection was expensive, women used old cloths to soak up menstrual blood and used them repeatedly without washing with soap or drying in the open air, due to shame and the fear of evil spirits. The local incidence of child marriage was high, which also limited women's agency and voice. Contraceptive use was irregular and inappropriate; none of participants or their husband's used contraceptives, resulting in unwanted pregnancy often followed by unsafe abortion (20).

In conclusions, we would like to recommend that national programmes and interventions through appropriate government agencies are needed in Bangladesh and should be introduced that engage with women's experience in the sociocultural contexts of the communities in Bangladesh. In addition, greater policy focus should be directed toward women empowerment factors to improve the fertility situation and women's sexual and reproductive health status in Bangladesh.

### ACKNOWLEDGEMENTS

The authors would like to appreciate the authorities of Impulse Hospital, Dhaka, Bangladesh for providing permission to use their facilities. The authors would like to convey their special thanks to the participating respondents without whom the study would not have been possible. Also, the authors thank Mr. Mehrab Hossain, IT Programmer, Impulse Hospital, ImHS&RCLtd, Tejgaon, Dhaka, Bangladesh for computer composing the manuscript.

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