Correlation between knowledge and practice of rural and urban women regarding reproductive health interventions in selected district of Tripura, India.

Maitri Chaudhuri[1*], Dilip Kumar Das[2], Debanjit Das[3]

[1]Nurses Training Institute, Agartala Government Medical College and Govinda Ballav Panth Hospital, Agartala, West Tripura, 799006, India
[2]Department of Bio-Chemistry, Agartala Government Medical College and Govinda Ballav Panth Hospital, Agartala, West Tripura, 799006, India
[3]Intern, AIIMS Bhubaneswar, Odisha, India

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Abstract

Background: A woman's reproductive system external icon is a delicate and complex system in the body, steps to be taken to protect it from infections and injury, and prevent problems-including some long-term health problems. Materials and Methods: A Community-Based descriptive Study in selected districts of Tripura was conducted from March'21 to July'2021. The study sample comprised 200 rural and urban women aged 18-45 years residing in the existence of Tripura. A purposive sampling technique was used to accomplish the aim and objectives of the present study. Results: The Chi-square statistic is 7.244 (df=6), p-value .026729 at a significance level of 0.05 determined a wide gap in practice of reproductive health interventions between rural and urban women aged 18-45 years. The value of R is 0.9634, R2, the coefficient of determination, is 0.9281, P-Value is < .00001 at p < .05 indicate a significant strong positive correlation between knowledge and practice scores. Conclusions: The significant comparison between practice of reproductive health interventions between rural and urban women determined that, a round the clock comprehensive service in rural areas will fill the gap.

Keywords: Rural women, Urban women, Good, Very good, Excellent.

Introduction

Good sexual and reproductive health is a state of complete physical, mental and social well-being in all matters related to the reproductive system. It is important for women's general health and physical wellbeing. To maintain one's sexual and reproductive health, people need access to accurate information and a safe, effective, affordable and acceptable contraception method of their choice. Every individual has the right to make their own choices about their sexual and reproductive health [1]. Different life stages are associated with specific women's sexual and reproductive health issues, including menstruation, fertility, cervical screening, contraception, pregnancy, sexually transmissible infections, chronic health problems and menopause [2]. A woman's reproductive system external icon is a delicate and complex system in the body, steps to be taken to protect it from infections and injury, and prevent problems-including some long-term health problems (Reproductive Health 2019) [3]. Regular prenatal care is an important part of every pregnancy. Pregnancy and childbirth services include: Planning and preparing for pregnancy, including information about proper diet, prenatal vitamins, review of pre-existing medical conditions and medicines used, Prenatal care, delivery, postpartum care, High-risk pregnancy care (maternal-fetal medicine), Breastfeeding and nursing [4]. An important part of the gynaecological exam and well-woman visit is counselling and education about sexual and reproductive health care, including discussions about contraception, sexual history or relationships, and sexually transmitted infections (STIs) [5]. The aim of this study was to compare the knowledge and practice of reproductive health interventions among rural and urban women aged 18 to 45 years residing in the existence of Tripura. The objectives of the present study include the assessment of the level of knowledge and practice regarding reproductive health interventions among rural and urban women aged 18 to 45 years residing in the existence of Tripura. To compare the practice scores regarding reproductive health interventions among rural and urban women aged 18 to 45 years residing in the existence of Tripura.

Materials and Methods

Research design

Based on the objectives of the study which focused on the correlation between knowledge and practice score as well as

comparison in practice of rural and urban women regarding reproductive health interventions a community based descriptive approach was thought to be most appropriate.

Research hypothesis

H1: There is a comparison between practice scores of reproductive health interventions among the rural and urban women aged 18 to 45 years residing in the existence of Tripura at a significance level of 0.05.

Independent variable

The independent variable in this study was reproductive health interventions provided for women aged 18 to 45 years residing in the existence of Tripura.

Dependent variable

The dependent variable in this study is the knowledge and practice score of rural and urban women regarding reproductive health interventions.

Data collection technique

Is used on the basis of objectives, we have decided to derive the information directly from the rural and urban women aged 18 to 45 years. Since the present study aimed to obtain objective information as far as possible, it was necessary to conduct the investigation with the help of a structured interview schedule.

Development of the tool

The tool was developed based on related literature, relevant to the sample subjects and the present study design. The item for the tool was also drawn from the Consultation with nursing experts, discussion with colleagues, and investigators personal experience. To ensure the content validity of the tool it was validated by 5(five) nursing (PhD in Nursing) experts in different field of nursing specialization. Experts were requested to judge the items of the standardized tool for relatedness and meaningfulness.

Description of the tool

A Structured Interview Schedule was developed to assess the back ground data and socio-demographic status of the rural and urban women aged 18 to 45 years residing in the existence of Tripura. The Structured Interview Schedule consists of three sections. Section I Composed of four items seeking the information on personal background data of the reproductive aged 18 – 45years women, i.e. age, gravida, parity, number of living children of the study participants. Section II composed of six items seeking the information of socio-economic status of the study participants, i.e., caste, education, occupation, type of house, type of family, number of family members. Section III Composed of 22 items of data related to knowledge of Reproductive Health interventions divided into six Parts such as: five dichotomous types of items seeking information regarding assessment of knowledge of ante-natal care, three items seeking information regarding knowledge of safe delivery, two items seeking regarding knowledge of post – natal services, seven items seeking information regarding knowledge of new born care, three items regarding knowledge of child health care, two items seeking information regarding knowledge of family planning services. Section IV Composed of 45 items seeking information related to the practice of reproductive health interventions by the rural and urban women aged 18 – 45years which are divided into five parts.

Development of scoring key

A scoring key was prepared according to the nature of statement listed in the structured interview schedule. As the number of statements raised in each area, a weighted scoring key (scheme) was developed by the investigators in consultation with the experts and practicing nurses working in the field of MCH. The knowledge items were graded depends on scores as Good (0-7), Very Good (8-15) and Excellent (16-22) and the gradation of practice items includes Good (0-15), Very Good (16-30) and Excellent (31-45).

The Spearman Brown formula (Stephanie 2016) [6] was used to measure the reliability for split-half tests and score was 0.72 for knowledge items and 0.76 for practice items. Spearman brown prophecy = 2*r / (1+r).

The study setting

Community-Based Study in all 8 district of Tripura. Population: In the present study population comprised of all rural and urban women in aged 18 – 45 years residing in the existence of Tripura. The Sample and sample size: 200 Rural and urban women aged 18 – 45 years.

Sampling technique

Purposive sampling technique was used for accomplishing the aim and objectives of the present study.

Data collection procedure

The study period was from March' 2021 to July' 2021. Data were collected using a structured interview scheduled by face to face interview of each participant. Written informed consent was obtained from each sample subjects for their participation. The nature of the study was fully explained to them in their local languages.

Plan for data analysis

After collection, data were checked thoroughly for consistency and completeness, and all analysis was done by appropriate statistical methods using online statistical calculator (Statistical Package for Social Sciences software).

Both descriptive and inferential statistics are used to analyse the data.

1. The socio demographic information related to the study participants was analyzed in relation to caste, occupation, educational, type of house, type of family, family members. The responses of study participants were summarized in frequencies and percentages.
2. Chi-square test was carried out to seek comparison between the practice scores regarding reproductive health interventions among rural and urban women aged 18 to 45 years residing in the existence of Tripura.

***Table 1**. Frequency and percentage distribution of the rural and urban women according to their Back ground information N=200.*

Sl. No.	Variables	Categories	Frequency	
			Values	Percentage
1	Age	18-27 27-36 36-45	97 89 14	48.5 44.5 7
2	Gravida	Gravida-0 Gravida -1 Gravid-2 Gravid-3	0 55 111 34	0 27.5 55.5 17
3	Parity	Parity-0 Parity-1 Parity-2 Above parity-2	55 111 34 0	27.5 55.5 17
4	Number of living children	0 1 2 and above	55 111 34	27.5 55.5 17

***Table 2.** Frequency and percentage distribution of the rural and urban women according to their Socio-Demographic.*

Sl. No.	Social demographic variables (instead of economic in wherever written)	Socio economic categories	Frequency	
			Values	Percentage
1	Caste	UR OBC SC ST Minority	29 35 62 49 25	14.5 17.5 31 24.5 12.5
2	Occupation	Laborer Caste occupation Business Independent profession Cultivation Service	05 00 26 149 07 13	2.5 00 13 74.5 3.5 6.5
3	Education	Illiterate Primary Middle High school Graduate and above	10 38 76 66 10	5 19 38 33 5
4	Type of house	Kutccha house Mixed house Pucca house	78 49 73	39 24.5 36.5
5	Types of family	Nuclear joint	80 120	40 60
6	Family members	Below 5 Above 5	114 86	57 43

Characteristics N=200.

***Table 3.** Frequency and percentage distribution of the rural and urban women aged 18 – 45 years representing knowledge score on reproductive health interventions according to the scoring criteria. N=100(Rural),100(Urban), Knowledge items=22.*

Criteria	Knowledge level	Frequency			
		values		Percentage	
		Rural	Urban	Rural	Urban
Good	0-7	44	59	44	59
Very good	8-15	35	22	35	22
Excellent	16-22	21	19	21	19

3. The Pearson correlation coefficient was used to measure the strength of a linear association between two variables, where the value r = 1 means a perfect positive correlation.

Results

Total 200 study sample were interviewed. Result of the study was depicted in the form of tables and figures. Data presented in Table 1 revealed that, majority 97(48.5%) participants were in the age group 18 to 27 years and majority 111(55.5%) were having one living child.

Table 2 depicted majority 62(31%) were belongs to scheduled caste, 149(74.5%) are engaged in independent profession, 76(38%) undergone middle level education. 78(39%) participants type of house is kutccha, 120(60%) were belongs

Table 4. *Frequency and percentage distribution of the rural women aged 18 – 45 years representing practice score of reproductive health interventions according to the scoring criteria. N=100(Rural),100(Urban), Practice items=45.*

Practice items	Practice level	Frequency			
		Values		percentage	
		Rural	Urban	Rural	Urban
Good	0-15	61	42	61	42
Very good	16-30	23	35	23	35
Excellent	31-45	16	23	16	23

Table 5. *Comparison between practice score among rural and urban women aged 18 – 45 years on reproductive health interventions according to the scoring criteria. N=200, Practice items=45.*

Group	Category 1(Good)	Category2 (Very Good)	Category 3 (Excellent)	*Row Totals*	Chi-Square	df	P value At 0.05
Urban	61 (51.50) [1.75]	23 (29.00) [1.24]	16 (19.50) [0.63]	**100**	7.244	**6**	.026729
Rural	42 (51.50) [1.75]	35 (29.00) [1.24]	23 (19.50) [0.63]	**100**			
Column Totals	103	58	39	**200 (Grand Total)**			

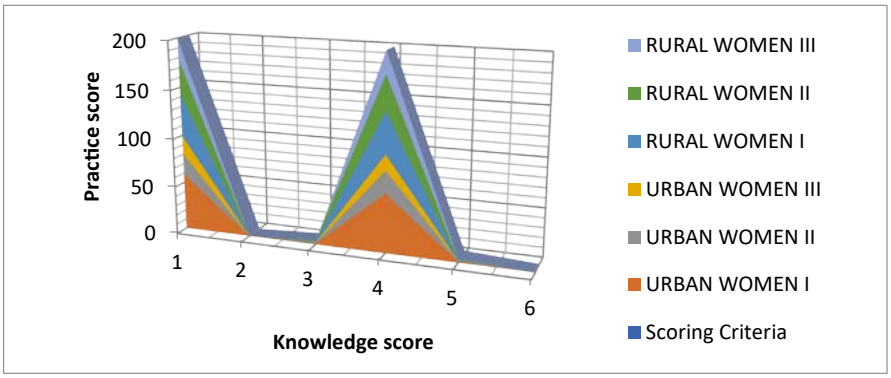

Figure 1: *The area chart represents the correlation between knowledge and practice score of rural and urban women.*

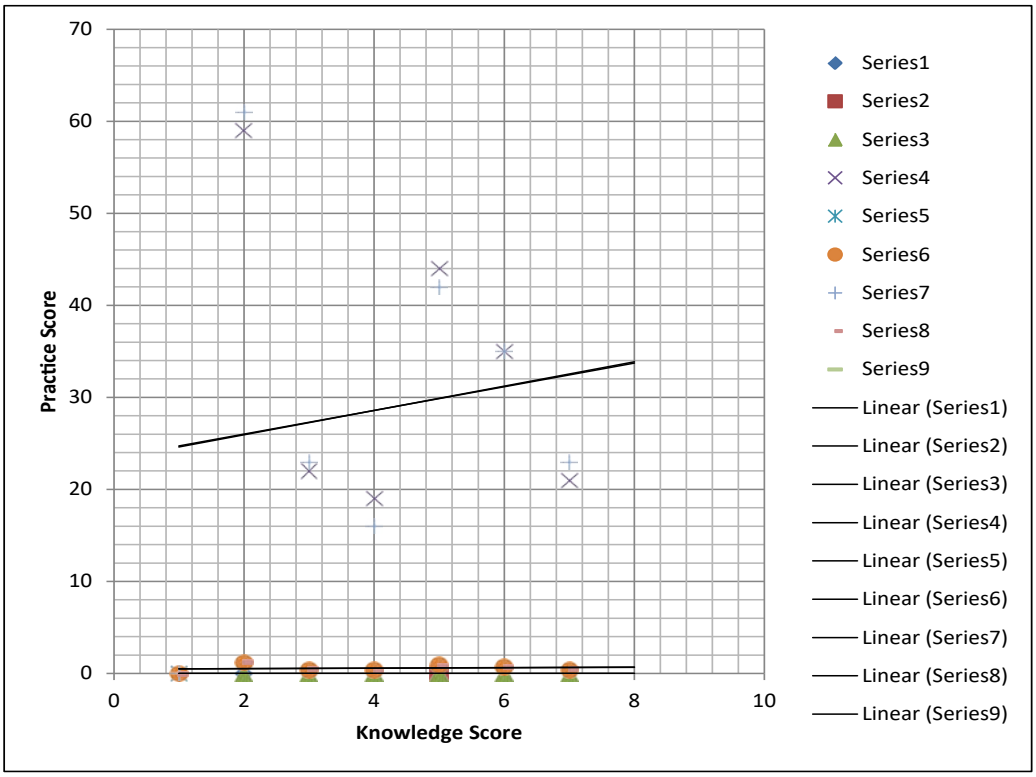

Figure 2: *The Scattered diagram showing the correlation between knowledge and practice score of rural and urban women.*

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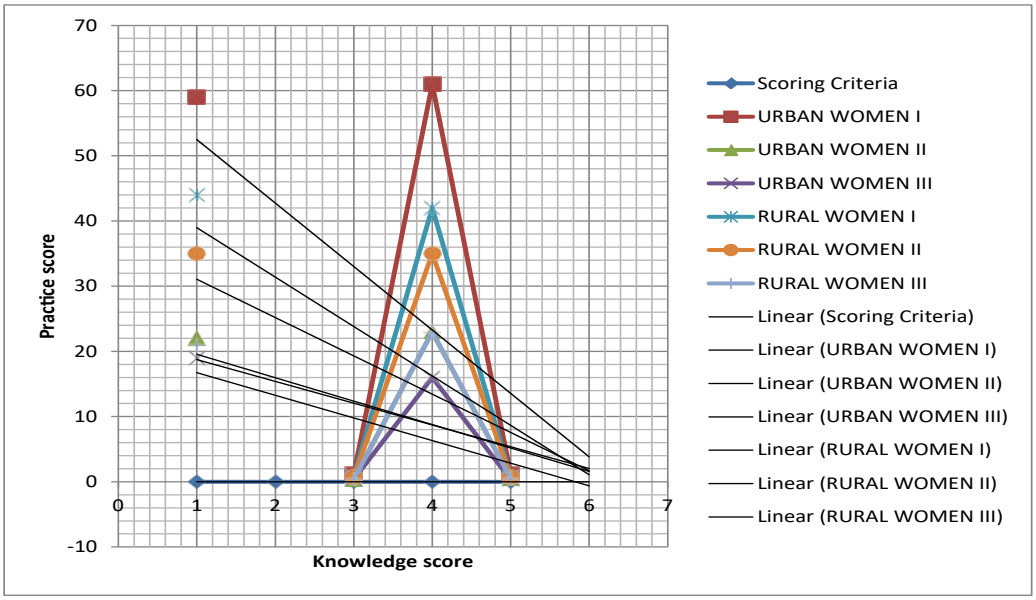

Figure 3: *The line graph showing the correlation between knowledge and practice score of rural and urban women.*

Table 6. *Correlation of knowledge and practice scores between rural and urban women on reproductive health interventions according to the scoring criteria N=200, Knowledge items=22.*

Scoring Criteria	URBAN WOMEN			RURAL WOMEN			Mean value	R(r)	R^2	P Value (0.05)
	I	II	III	I	II	III				
Knowledge Score	**59**	**22**	**19**	**44**	**35**	**21**	0.667	0.9634	0.9281	< .00001
Mean knowledge Score	**1.2**	**0.4**	**0.4**	**0.9**	**0.7**	**0.4**				
Practice Score	**61**	**23**	**16**	**42**	**35**	**23**				
Mean practice Score	**1.2**	**0.5**	**0.3**	**0.8**	**0.7**	**0.5**				

Scoring Criteria: I (Good), II (Very good), III (Excellent).

to joint family and 114(57%) were having the family members below 5 numbers.

The Table 3 represented the knowledge level of rural women 44(44%) good, 35(35%) very good and 21(21%) are having excellent level of knowledge whereas knowledge score of urban women 59(59%) having good knowledge level, 22(22%) very good and 19(19%) are having excellent level.

The Table 4 revealed that, the practicing level of reproductive health interventions by rural women as majority 61(61%) good, 23(23%) very good and 16(16%) excellent level. Regarding the practice of reproductive health interventions by urban women represented 42(42%) good, 35(35%) very good and 23(23%) excellent level.

The chi-square statistic is 7.244. The p-value is .026729. The result is significant at $p < .05$ (Table 5).

The Chi-square statistic revealed in Table 5 is 7.244. (df=6), p-value.026729 at a significance level of 0.05 indicate a significant comparison of the practice scores on reproductive health interventions among rural and urban women aged 18 – 45 years. Hence, the research hypothesis (H1) is proved.

Pearson Correlation Coefficient Equation was used to calculate the liner relationship between the knowledge score and practice scores.

$$r = \frac{\sum_i (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_i (x_i - \bar{x})^2}\sqrt{\sum_i (y_i - \bar{y})^2}}$$

The Table 6 shows value of R is 0.9634.The value of R2, the coefficient of determination, is 0.9281The P-Value is < .00001. The result is significant at $p < .05$. It is clear that there is a strong positive correlation between knowledge and practice score of rural and urban women (Figures 1-3).

Discussion

The present study findings revealed majority 97(48.5%) participants were in the age group 18 to 27 years. This was evidence from the result of a study on Knowledge of obstetric danger signs and associated factors: a study among mothers in Shashamane town, Oromia region, Ethiopia, conducted by Wassihun B, Negese B, et.al. they have reported that, the mean age of the respondent was 25 with a standard deviation of 4.3 year. 59.5% of the respondents were found to have poor knowledge of obstetric danger signs. The multivariable analysis, antenatal care was significantly associated with the knowledge of obstetric danger sign. Respondents who attended antenatal care were 1.26 times more likely to have good knowledge of obstetric danger signs than those who had no antenatal care (AOR = 1.26, 95%CI (1.08–1.85)) [7].

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Limenih MA, et al. in their study on Birth preparedness, readiness planning and associated factors among mothers in Farta district, Ethiopia reported that, the percentage of women implementing complication readiness plan and practicing birth preparedness was found to be 34% [8]. Mwilike, B., Nalwadda, G., Kagawa, M. et al. conducted a cross-sectional study on Knowledge of danger signs during pregnancy and subsequent healthcare seeking actions among women in Urban Tanzania and reported that, the most commonly known pregnancy danger signs were vaginal bleeding (81%); swelling of the fingers, face, and legs (46%); and severe headache (44%). Older women were 1.6 times more likely to have knowledge of danger signs than young women. The majority had low knowledge of pregnancy danger signs [9]. Pervin J, Nu UT, et.al. conducted A cross sectional study in a rural area in Bangladesh on Level and determinants of birth preparedness and complication readiness among pregnant women and found the proportion of study participants with "good knowledge", measured by the ability to recognise three or more danger signs, in pregnancy and delivery were 26% and 23%, respectively. Pervin, J, Nu, UT, Rahman, AMQ, Rahman, M, Uddin, B, Razzaque, A, Johnson, S, Kuhn, R & Rahman, A, 'Level and determinants of birth preparedness and complication readiness among pregnant women: A cross sectional study in a rural area in Bangladesh', in A Portela (ed.), PLOS ONE, vol. 13, no. 12, p. e0209076 [10].

Significant differences were seen between urban and rural regarding adverse pregnancy outcomes ($p<0.001$), induced abortion ($p<0.0001$), menstrual problems ($p<0.0004$) and gynaecological problems ($p=0.0031$) in the study done by De, Abhishek & Kar, Sonali & Das, Bhagabati. (2017) on Rural-urban correlates of reproductive health with mental health in women in Odisha, India [11]. Haque M, Hossain S, Rumana Ahmed K, Sultana T, Chowdhury HA, Akter J did A Comparative Study on Knowledge about Reproductive Health among Urban and Rural Women of Bangladesh. The result revealed that, Overall level of reproductive health knowledge was more evident among urban reproductive aged women than rural counterparts ($p < 0.001$). Moreover, significant knowledge gap was found regarding family planning ($p = 0.005$), care during pregnancy ($p < 0.001$), safe motherhood ($p = 0.002$), new-born care ($p = 0.009$) and birth spacing ($p <0.001$) between urban and rural women [12]. Knowledge, Attitude and Practice Regarding Reproductive Health among Urban and Rural Girls: A Comparative Study conducted by Dube, Shubha & Sharma, Kirti (2012). The result revealed that, 33 percent urban respondent had prior information regarding menstruation, 62 percent rural respondent were unaware of the right age of menarche. Majority girls had several taboos, regarding reproductive health [13]. Daniel EE, Masilamani R, Rahman M (2008) found in their study that, the Contraceptive use was very low (2-6%) at baseline in both comparison and intervention areas. Demand for contraception increased from 25% at baseline to 40% at follow-up in intervention areas, but remained virtually unchanged in comparison areas [14].

Conclusion

The study findings revealed that, there is a wide gap in the practice of reproductive health interventions between rural and urban women aged 18 to 45 years. The significant comparison between the practice of reproductive health interventions among rural and urban women determined a round the clock comprehensive maternal health service in rural areas will fill the gap. So, effective interventions in terms of awareness programme on reproductive health interventions, mother craft classes, health education and demonstration of different practice skills can be undertaken for the reproductive women in rural areas.

Acknowledgement

We acknowledged all the rural and urban women those who have been co-operated us for obtaining necessary information to conduct this research study.

Conflict of Interests

None

References

1. Sexual & reproductive health 2019.
2. A-Z of health information.
3. Reproductive Health 2019.
4. Frederiksen B, Ranji U, Apr 21, MLP & 2021 2021, Women's Sexual and Reproductive Health Services: Key Findings from the 2020 KFF Women's Health Survey, KFF.
5. Stephanie 2016, Spearman-Brown Formula, Statistics How To, 9 October 2021.
6. Wassihun B, Negese B, Bedada H. Knowledge of obstetric danger signs and associated factors: a study among mothers in Shashamane town, Oromia region, Ethiopia. Reproductive Health. 2020;17(1).
7. Limenih MA, Belay HG, Tassew HA. Birth preparedness, readiness planning and associated factors among mothers in Farta district, Ethiopia: a cross-sectional study. BMC Pregnancy Childbirth. 2019;19(1).
8. Mwilike, B, Nalwadda, G, Kagawa, M. Knowledge of danger signs during pregnancy and subsequent healthcare seeking actions among women in Urban Tanzania: a cross-sectional study. BMC Pregnancy Childbirth. 2018;18(1):1628-6.
9. Pervin J, Nu UT, Rahman AMQ. Level and determinants of birth preparedness and complication readiness among pregnant women: A cross sectional study in a rural area in Bangladesh. PLOS ONE. 2018;13(12):e0209076.
10. De A, Kar S, Das BC. Rural-urban correlates of reproductive health with mental health in women in Odisha, India. Int J Community Med Public Health. 2017;4(10):3846.
11. Haque M, Hossain S, Rumana Ahmed K. A Comparative Study on Knowledge about Reproductive Health among

Urban and Rural Women of Bangladesh. J Family Reprod Health. 2015;9(1):35-40.

12. Dube S, Sharma K. Knowledge, Attitude and Practice Regarding Reproductive Health among Urban and Rural Girls: A Comparative Study. Studies Ethno Med. 2012;6(2):85–94.
13. Daniel EE, Masilamani R, Rahman M. The effect of community-based reproductive health communication interventions on contraceptive use among young married couples in Bihar, India. Int Fam Plan Perspect. 2008;34(4):189-97.

***Correspondence to:**

Roger S Holmes
Department of Medicine,
Griffith Research Institute for Drug Design,
Griffith University, Nathan,
QLD, 4111 Australia
Phone: +61-410-583-348
Email: r.holmes@griffith.edu.au

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