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Original Research Article

Knowledge regarding reproductive health among women of reproductive age group in three sub-centre areas of a primary health center, Sarjapur, Bengaluru, Karnataka: a cross sectional study

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ABSTRACT

Background: Reproductive health plays a significant role in a woman's life. Women of child bearing age group in developing countries suffer ill health due to lack of knowledge on reproductive health issues. The objective of the present study was to assess the knowledge regarding reproductive health among women and the associated socio-demographic factors.
Methods: A total of 345 women of age group 15-44 years were recruited using cluster sampling in 15 clusters from among 28 villages under a Primary Health Center from May to July 2017. Data on sociodemographic details and knowledge of reproductive health under the following domains: menstruation, contraception, reproductive tract infections and marriage and pregnancy were collected using a modified interview schedule.
Results: The mean age of the study population was 28.59±9.08 years. Majority of them belonged to age group 15-30 years (60%), attained school level education (55.7%), 45% were gainfully employed, married (65.5%) and from middle class (40.6%). It was found that out of 345 study population; only 19% had adequate knowledge on reproductive health. The proportion of women who had adequate knowledge in each domain was marriage and pregnancy (47.5%), menstruation (29.9%), contraception (17.4%) and least being reproductive tract infections (15%). Knowledge on reproductive health was significantly inadequate among women in the age group 31-44 years, illiterate women, who belongs to lower class and students. Only, socio-economic status and occupation were the significant predictors of knowledge.
Conclusions: Knowledge regarding reproductive health was inadequate among women in reproductive age group in rural areas.

Keywords: Knowledge, Reproductive health, Rural, Women of reproductive age group

INTRODUCTION

Reproductive health plays a key role in a woman's life. According to United Nations Population Fund, good sexual and reproductive health is a state of complete physical, mental and social well-being in all matters relating to the reproductive system. It implies that people can have a satisfying and safe sex life, the capability to reproduce, and the freedom to decide if, when and how often to do so.[1] According to World Health Organization, sexual and reproductive health issues accounts for more than one third of the global burden of diseases in women. In women, 36% of healthy life lost is due to reproductive health problems like maternal mortality, maternal morbidity and sexually transmitted diseases.[2,3]

Poor reproductive health is due to lack of knowledge, lack of access and lack of availability of services. In rural areas knowledge regarding menstrual hygiene practices and sexually transmitted diseases are very poor.[4,5] Regular health education regarding menstruation, menstrual hygiene, family planning methods, reproductive tract infections to women of the reproductive age group improves the maternal and child health. Reproductive health depends on economic status, education, employment and the living conditions. So, the empowerment of women through education is very important for a good sexual and reproductive health.[6]

There are few studies assessing knowledge on reproductive health in urban women and college students.[5-7] There are not much studies in rural Karnataka assessing knowledge on reproductive health among reproductive age group (15-44 years).[8,9] So, the objectives of the study were to assess the knowledge regarding reproductive health among community dwelling women in reproductive age group in three sub-center areas of a Primary Health Centre, Sarjapur, Bengaluru Urban District and to identify socio-demographic factors associated with knowledge on reproductive health among the study population.

METHODS

This study was a community-based cross-sectional study conducted among women of reproductive age group (15 - 44 years) in three sub-centers of a primary health center at Mugalur, Kuthganahalli and Handenahalli, Anekal Taluk over a period of 2 months from May to July 2017. Women of age 15-44 years residing in the village were included in this study.

Based on the study done in Mangalore, Karnataka in a rural area by Kripa et al, taking proportion of rural women with poor knowledge regarding family planning as 88%, 5% as relative precision, α as 5%, minimum sample size obtained is 163, approximately 170 using the formula $\frac{z^2pq}{d^2}$.[10] Calculated sample size by using design effect was 340.

A total of 345 women of age group 15- 44 years were recruited using cluster sampling in 15 clusters from among 28 villages, 23 women in each cluster under Sarjapur Primary Health Centre. Informed consent was obtained from all participants included in the study. A modified interview schedule from "asking young people about sexual and reproductive behaviours: illustrative core instruments" developed by UNDP/UNFPA/ WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction was used to collect data on sociodemographic details like age, education, occupation, marital status, socioeconomic status based on Modified B. G. Prasad, 2017 and knowledge on reproductive health under different domains: menstruation, contraception, reproductive tract infections and marriage and pregnancy.[11] Each correct response was given one point and each wrong answer or don't know response was given zero. Total score was calculated and converted into percentages. Knowledge less than 50% was inadequate and more than 50% as adequate knowledge.

Data collected were entered in Microsoft Excel. Analysis of data was done using standard Statistical Package for Social Sciences (SPSS). Socio-demographic factors like age, education, occupation, socioeconomic status, marital status and knowledge level were analyzed as categorical variables. Descriptive frequencies were found using percentages, mean and standard deviation. Associations between socio-demographic factors and knowledge were found using Chi-square test. Multivariate logistic regression was done to find exact relationship with knowledge level as dependent variable and age, education, occupation, socio-economic factors and marital status as independent variables. Results are depicted in tables and graphs. A p-value of <0.05 was statistically significant.

RESULTS

Out of the 345 women in the reproductive age group included in the study, 207 (60%) belonged to the age group of 15-30 years. The mean age of the study sample was 28.59±9.08 years. Majority of them (55.7%) had completed a school level education, were gainfully employed (45%), belonged to the middle class (40.6%) and were married (65.5%). Sociodemographic details of the study sample are depicted in Table 1.

Less than one-fifth (19%) of the women had adequate knowledge on reproductive health. The proportion of women who had adequate knowledge in each of the domains was: marriage and pregnancy (47.5%), menstruation (29.9%), contraception (17.4%) and least being reproductive tract infections (15%). Knowledge level of study sample in each domain is depicted in Table 2.

Regarding knowledge on menstruation, 211 (61.2%) had heard about menstruation before attaining menarche. The proportion of women who gave correct responses to questions regarding menstruation were as follows: menstruation as cyclical uterine bleeding (23.2%), hormones as the cause of menstruation (21.7%) and source of menstrual bleeding is from uterus (29%) and duration of normal menstrual cycle (95.4%). The major source of information on menstruation was from family members 335 (97.1%), followed by health personnel 68 (19.7%), friends 64 (18.6%) and media 1 (0.3%).

Knowledge about hygienic practices during menstruation was high with a majority (99.7%) reporting usage of sanitary napkins, frequent change of sanitary napkins (88.7%), bathing daily (54.5%) and proper disposal of sanitary napkins as hygienic (43.8%).

Table 1: Sociodemographic details of the study population (n=345).

Factors	Category	Frequency	%
Age (in years)	15-30	207	60
	31-44	138	40
Education	Illiterate	46	13.3
	School level	192	55.7
	College level	107	31
Occupation	Gainfully employed	155	45
	Housewife	108	31.3
	Student	82	23.8
Socio-economic status	Lower	81	23.5
	Middle class	140	40.6
	Upper	124	35.9
Marital status	Single	119	34.5
	Married	226	65.5

Table 2: Knowledge level in each domain (n=345).

Domains	Level of knowledge	
	Adequate	Inadequate
Marriage and pregnancy	164 (47.5)	181 (52.5)
Menstruation	103 (29.9)	242 (70.1)
Contraception	60 (17.4)	285 (82.6)
Reproductive tract infections	52 (15.1)	293 (84.9)

Awareness on marriage and pregnancy was poor with only around half 181 (52.5%) of the study population having adequate knowledge in this domain. Most of the study subjects 259 (75.1%) knew the legal age of marriage for boys, whereas only 122 (35.4%) knew the legal age of marriage for girls. 159 (46.1%) answered ideal number of children is 2-3 in a family. Out of 345 women, only 125 (36.2%) knew about ovulation period and 138 (40%) believed that having first sexual intercourse will not result in pregnancy.

About one fifth (17%) of the study participants had adequate knowledge on contraception. Out of the 345 study samples, only 162 (47%) had heard about family planning. The proportion of women who were aware about the different family planning methods were tubectomy (51.9%), followed by condoms (50.7%), emergency contraceptives (33.3%), copper-T (28.4%), oral contraceptive pills (26.1%), vasectomy (2.9%) and lactational amenorrhea method (1.2%). Majority 189 (54.8%) reported source of information on family planning methods was from health personnel followed by family members 182 (52.8%), media 70 (20.3%) and friends 53 (15.4%).

Of the 345 women, 301 (87.2%) had heard about HIV/AIDS. Family members were the major source of information regarding reproductive tract infection 206 (59.7%), followed by media 131 (38%), health personnel 98 (28.4%) and friends 69 (20%).

Only 98 (28.4%) had attended classes on sexual and reproductive health.

Socio-demographic factors like age, education, occupation and socioeconomic status were found to have statistically significant association ($p<0.05$) with knowledge regarding reproductive health. In this study we found significantly lower knowledge among older women [31-44 years] compared to younger women [15-30 years] ($p<0.01$). Among the younger women, housewives and gainfully employed were found to have higher knowledge than students which was found to be statistically significant ($p<0.05$). We also found that women with higher education had significantly higher level of knowledge on reproductive health ($p<0.01$). Also, women from higher socioeconomic status were found to have a statistically significant association ($p<0.01$) with higher level of knowledge. No statistically significant association was found between marital status and knowledge ($p>0.05$). Among 98 women who had attended classes on sexual and reproductive health, 56.1% had adequate knowledge which was statistically significant ($p<0.01$). Association between sociodemographic factors and knowledge level is depicted in Table 3.

Multivariate logistic regression analysis showed that occupation and socioeconomic status were the significant predictors of knowledge on reproductive health. We found that adequate knowledge on reproductive health was significantly higher among housewives (OR=5.9 [CI: 1.5-33]) and gainfully employed women (OR=10.3 [CI:

2.4-35.1]) compared to students. Women from higher socioeconomic status were 4.5 times more likely to have adequate knowledge (OR=4.5 [CI: 1.10-9.73]) compared to women from lower socioeconomic status. Multivariate logistic regression analysis is depicted in Table 4.

Table 3: Association of sociodemographic factors with the knowledge level of reproductive health (n=345).

Socio-demographic factors	Knowledge on reproductive health		Total	P value
	Adequate frequency N (%)	Inadequate frequency N (%)		
Age (in years)				
15-30	56 (27.1)	151 (72.9)	207	Chi-square value=24.76 p<0.01[a]
31-44	8 (5.8)	130 (94.2)	138	
Education				
Illiterate	0 (0.0)	46 (100)	46	Chi-square value=130.74 p<0.01[a]
School level	6 (3.1)	186 (96.9)	192	
College level	58 (54.2)	49 (45.8)	107	
Occupation				
Housewife	27 (25)	81 (75)	108	Chi-square value=7.17 p<0.05[a]
Student	8 (9.8)	74 (90.2)	82	
Gainfully employed	29 (18.7)	126 (81.3)	155	
Socioeconomic status				
Lower	6 (7.4)	75 (92.6)	81	Chi-square value=25.08 p<0.01[a]
Middle	18 (12.9)	122 (87.1)	140	
Upper	40 (32.3)	84 (67.7)	124	
Marital status				
Single	24 (20.2)	95 (79.8)	119	Chi-square value=0.314 p>0.05
Married	40 (17.7)	186 (82.3)	226	
Attended classes on reproductive health				
Yes	55 (56.1)	43 (43.9)	98	Chi-square value=127.89 p<0.01[a]
No	9 (3.6)	238 (96.4)	247	

a=Statistically significant.

Table 4: Multivariate logistic regression analysis.

Factors	Odds ratio (OR)	Confidence interval (CI)		P value
		Lower	Upper	
Occupation				
Students	-[b]	-[b]	-[b]	-[b]
Housewives	5.9	1.5	33.0	0.015[a]
Gainfully employed	10.4	2.4	35.1	0.001[a]
Socio-economic status				
Lower	-[b]	-[b]	-[b]	-[b]
Middle	1.7	0.66	7.40	0.19
Upper	4.5	1.10	9.73	0.03[a]

a=Statistically significant; b=Reference category.

DISCUSSION

In our study we found that the proportion of women who had adequate knowledge on reproductive health was only 19%. Similar findings were reported by a study done in Bangladesh where only 25% of women had good knowledge on reproductive health.[12] In-adequate knowledge among women in our study might be due to their low level of education and poor socioeconomic status. Also, only 28.4% of the study participants had attended classes on sexual and reproductive health which many studies have shown to have a role in improving knowledge on reproductive health.[4,13]

In our study more than half (61.2 %) of women had heard about menstruation before menarche which contrasts with a study done in other parts of India like Kolkata and Chennai where only 20% and 32% of women respectively had heard about menstruation before attaining menarche.[14,15] Also, our study found that 99.7% were aware of usage of sanitary napkins during menstruation whereas this proportion was 62.7% in the Chennai study done in 2014.[15]

Frequent change of napkins was reported by 88.7% in our study which is much higher than a study done in Tirunelveli among adolescent girls from a rural area which was only 15%.[16] This higher knowledge on menstruation in our study might be due to more accessibility to media and services compared with previous years.

A cross-sectional study done in two slum areas of Bangalore reported that 69% of women had ever heard of reproductive tract infections, none had adequate knowledge, 69% had some knowledge and 31% had no knowledge on reproductive tract infections (RTIs).[8] Whereas, in our study, we found that 86% of women had inadequate knowledge regarding RTIs. Better knowledge level on RTI in urbans areas when compared to rural areas could be due to better access to health facilities and opportunities for information in urban settings. A study done in Bangladesh showed a significant knowledge difference between urban and rural women.[12] The study participants in our study were reluctant to respond to these questions on reproductive health issues, especially when the interviewers were of the opposite gender. On similar lines, they will be reluctant to seek health care for reproductive health issues.

In our study only 47% had heard about family planning methods and only 38% knew about benefits of family planning which were similar to the results of a study done in Bangladesh where 40 % had heard about family planning.[12] This contrasts with a study done in Nigeria where 90.0% of respondents had knowledge of benefits of family planning.[17] Similar high percentages were reported by a study done in Sikkim where 98% had heard about family planning and 94.2 % were aware of contraceptives.[7] In our study, we also found that the source of information on contraceptives were from health workers (54.8 %) followed by family members (52.8%) and media (20.3%) and 15.4% from friends which was similar with a study done in Meghalaya where the health workers (58.6%) were the major source of information followed by media (24.1%) and friends (15.5%).[18] The knowledge on family planning was poor in our study might be due to the reluctance of women to discuss these issues which is a limitation of this study.

In our study 87.2% had heard about HIV or AIDS (Human Immunodeficiency Virus infection or Acquired Immunodeficiency syndrome). Also, only 21.2% knew that condoms can prevent these diseases and 3.2% were aware of transmission of HIV during delivery which was found to be lower compared with a study done in Central India where the findings showed that 82% knew that condoms can prevent the transmission of diseases and 83% were aware of transmission through pregnancy.[19] The most common source of information on HIV was from family members (59.7%) followed by media (38%) which was similar to a study done in Northern India where source of information from television was 41% and radio was 40%, only 27.4% had heard of HIV and 5.8% were aware of mother to child transmission.[20]

The study showed that the knowledge regarding reproductive health was significantly high among younger women (15-30 years) which could be due to more access to media and internet. Our study also showed an increase in knowledge as the level of education increased which was similar to other studies done in West Bengal which showed that among illiterates 97.7% were not aware of contraception and family planning methods and there was an increase in knowledge among women who had attained high school and middle school education.[21]

Limitations

It was a rural community based study which was conducted among the vulnerable group. Limitations were social desirability bias and reluctance by women to discuss reproductive health issues.

CONCLUSION

Knowledge regarding reproductive health was inadequate among women in reproductive age group in rural areas.

Recommendations

Health education sessions, focus group discussions on reproductive health in schools and Anganwadi centers must be accelerated. Self-help groups can be used as a forum to discuss reproductive issues among women. Classes on reproductive health in schools should be encouraged.

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