SILENT ENDURANCE: FACTORS ASSOCIATED WITH SEEKING TREATMENT FOR REPRODUCTIVE MORBIDITIES AMONG WOMEN IN INDIA

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ABSTRACT

Reproductive morbidity pertains the major problem among the women all over the world. The research tries to examine the prevalence of selected reproductive health problems and seeking treatment. Also study aims to identify the significant factors associated with reproductive morbidity and treatment-seeking behaviour among ever-married women aged 15-49 years using the DLHS-3 and DLHS-4 data. Bivariate and multi-variate logistic analyse was performed to examine the nature of the association between reproductive morbidity by selected socioeconomic and demographic characteristics. The results reveals that approximately 12.5 per cent women suffered from at least one of the three categories of reproductive morbidities, lower tract infections, upper tract infections and sexual intercourse related reproductive morbidity. The prevalence of at least one reproductive morbidity was approximately 15 per cent in DLHS-III survey which reduced to 12.4 percent in DLHS-IV. Reproductive morbidity found to be more prevalent among the marginalized sections of the society. The treatment seeking behaviour was found to be very poor, where those who have suffered from at least one reproductivity morbidity, more than two-thirds of the women did not seek any treatment. Reducing the burden of reproductive morbidities in India is a challenge and require time to establish the programme which needs to be based on priority and to design the appropriate intervention strategies.

INTRODUCTION

The subject of reproductive health and the nature of silence surrounding it renders the estimation of the extent of reproductive morbidity in the world. Reproductive morbidity is one of the leading causes of the increasing trend of morbidity among women across the world. Millions of women in the world at least suffered with "Reproductive tract infections (RTIs), Sexually transmitted infections (STIs), obstetric fistula, pain in the pelvic region and experience of incontinence during defecation and urination at least once in their lifetime (Glasier & Gülmezoglu,2006).

In India, more than one million women and infants die due to complications related to RTIs (Aparajita & Madhutandra,2008). According to the latest estimates from the National Family Health Survey (NFHS)-4, 2015-2016, around 11% women and eight percent men reported of suffered with STI within 12 months preceding the survey (IIPS & ICF, 2017) and also according to the District Level Household Survey-3 (DLHS-3), 2007-2008, the Prevalence of RTIs was found to be approximately 40% in India while the treatment-seeking behaviour found to be very low (33 %). According to the WHO (2004), reproductive and sexual ill-health contribute 20% of the global burden of ill-health among women and 18% among men. Low utilization of public health services among the individuals depicts extremely low credibility or non-availability or inaccessibility of effective public health service among the population (Duggal,1994), which acts as a barrier to seek treatment for reproductive health issues in India.

The reproductive health in India is a recent phenomenon which is skewed mostly towards childbirth, pregnancy, information on their reproductive health situation due to gynaecological factors which continued to be patchy. According to WHO (1996) the Maternal mortality rate is in India was found to be 53 times higher than the United States, which exhibits the picture of the poor reproductive health status of Indian women. This high rates of mortality particularly common during childhood and their reproductive years (Velkoff & Adlakha,1998). Therefore reproductive health problem causes a negative impact on the women health which includes physical, mental and sexual health. Moreover, it has an adverse impact on women's social and economic wellness, self-esteem and body image (Singh & Kumar,2014).

The subject of reproductive health and the nature of the culture of silence surrounding it in developing countries render the estimation of the extent of reproductive morbidity in the hospital setting very difficult (Spinillo et al., 1996). India has a huge burden of reproductive morbidities similar to many developing countries. Regarding the same, no national-level study has been conducted stating the issue. However, the District Level Household Survey (DLHS) data has collected information on nine symptoms related to reproductive tract infections and has asked a few questions regarding the treatment-seeking behaviour among women as well. Therefore, using a recent round of DLHS conducted during 2012-2013, the study aims to examine the prevalence of selected reproductive health problems and seeking treatment. Further, the study has also attempted to identify the significant factors associated with reproductive morbidity and treatment-seeking behaviour among ever-married women aged 15-49 years in Non Empowered action group (Non-EAG) states of India.

MATERIALS AND METHODS
Data

The fourth round data of District Level Household and Facility Survey conducted in India during 2012-2013 was used for our study. The basic purpose of the survey was to provide information at the district level of India on maternal and child health, family planning reproductive health of the ever-married women, utilization of maternal and child healthcare services. A multi-stage, stratified, probability proportional to size sample with replacement design was adopted by DLHS-4. Each district was divided into rural and urban areas. For rural areas, primary sampling unit (PSU) was the village and the Census of India 2001 was the sampling frame. For urban areas, PSU   NSSO Urban Frame Survey (UFS) blocks. UFS blocks in each district have been stratified into million-class cities and non-million class cities and allocation of the sample was proportional to relative sizes. Twenty-five households have been selected from each rural and urban PSU (Singh, Hashmi & Swain, 2018).

We have used data from two rounds of DLHS, third and fourth round to examine the trends of reproductive morbidity. We have filtered the common states available in both the round of the survey, Himachal Pradesh, Punjab, Chandigarh, Haryana, Sikkim, Arunachal Pradesh, Manipur, Mizoram, Tripura, Meghalaya, West Bengal, Maharashtra, Andhra Pradesh, Telangana , Karnataka, Goa, Kerala, Tamil Nadu, Puducherry, Andaman Nicobar with a sample of 313,347 ever-married women aged between 15-49 years who belong above mentioned non-empowered action group states form DLHS-4.

Dependent variable

In DLHS survey data on women who had symptom/s of RTI/STI problem during three months prior to the survey was collected by asking "whether they had experienced any of the following health problems: infection in and around vulva i.e. boils/ulcers/warts around the vulva, painful blister-like

lesions in and around vagina, itching or irritation over the vulva and swelling in the groin region, pain in the lower abdomen not related to menses, pain during urination and defecations and lower backache, abnormal vaginal discharge, sexual intercourse related problem of pain and spotting". Further these nine symptoms of reproductive morbidities categories was clubbed into three broad categories such as lower tract infection, upper tract infection and sexual intercourse related problems. The symptoms associated with lower tract infections included itching or irritation over the vulva, painful blister-like lesions in and around the vulva, painful blister-like lesions in and around the vagina and swelling in the groin region. The symptom of upper tract infection includes pain in the lower blister-like related to menses, pain during urination and defecation and lower backache while problems related to sexual intercourse consists of pain and spotting during the activity. Women who reported any of the above-mentioned problems were further asked whether they sought consultation or treatment for their reproductive health problems during the three months period preceding the survey. To assess the treatment-seeking a dependent variable was created for women who sought treatment/consultation for their problems related to reproductive morbidity. If women have reported that sought treatment/consultation, so 1 code was given else 0 code was given. The treatment-seeking question was asked for any reported morbidities together in one question.

Independent variables

Utilization of health service is a complex behavioural phenomenon. Many studies have shown that health care utilization is related to availability, quality and cost of service. In addition to it the social structure, health beliefs and personal characteristics of the users are major factors in health service utilization. There are several models to understand reproductive healthcare utilization. One such model is known as a behavioural model of healthcare utilization. According to the behaviour model, accessibility and the use of health service by an individual depends on three factors

I. predisposing factors, which suggest that it is the socio-culture characteristics of the individuals before the occurrence of incident illness, such as education, occupation, ethnicity, social interactions, culture, attitudes, values, knowledge of the healthcare system, age, and gender which make individually vulnerable to illnesses.

II. enabling factors, means the environment within which obtaining care, which include the awareness and knowledge of how to access health-related services, cost of care and the income of the individual, existing health insurance , a regular source of care,

ability to travel, extent and quality of social relationships, available healthcare personnel and facilities, and the required waiting time at these facilities; and

III. need factors, the factors that perceived and evaluated by the individual for immediate health service utilization. To understand the reasons for seeking care and adhering to a medical regimen a perceived needs-based level of understanding is used, while evaluated needs are used, when a patient reached to a medical facility for their need it helps in evaluating the kind and amount of treatment should provide.

In the analysis, we have considered the socio-economic and demographic variables such as religion and caste of women, place of residence, completed years of education, employment status, economic status of the household, the current age of women, age at marriage. The social identity of each respondent represented by many factors such as caste, religion, and education. Wealth index was used to measure the household's economic status. Some of the studies reported that employment as the best predictors of women's autonomy we have included the employment status of the women. Studies have shown that these variables have been associations with the treatment-seeking behaviour of reproductive health problems (Prusty & Unisa, 2013).

Statistical analysis

Univariate and bivariate analysis was used to understand the level and differential of the prevalence of reproductive morbidities and seeking treatment across the selected background characteristics. To identify the significant factors associated with treatment-seeking behaviour of reproductive morbidity and sought treatment multivariate binary logistic regression analysis were performed. Bivariate analyses were performed to examine the nature of the association between reproductive morbidity by selected socioeconomic and demographic characteristics. In the first model dependent variable was coded as '0' for not suffering from any reproductive morbidity, as '1' as suffering from at least one reproductive morbidity. In the second model, the dependent variable was coded as '0' for not seeking treatment for reproductive morbidity. The adjusted odds ratio (AOR) and its 95% confidence interval (CI) were calculated. A P value of <0.05 was considered significant.

The binary response (y, suffering from at least one reproductive morbidity/sought treatment for each woman was related to a set of categorical predictors, X, and a fixed effect by a logit link function as following.

$$\text{Logit}(\pi_i)=\log [\pi_i/(1-\pi_i)]=\beta_0+\beta(x)+\varepsilon$$

The parameter βo estimates the log odds of suffer with at least one reproductive morbidity/ sought treatment for reference group, and the parameter β estimates with maximum likelihood, the differential log odds of suffering from at least one reproductive morbidity/ sought treatment is associated with the predictor X, as compared to the reference group and ε represents the error term in the model.

The SPSS 20.0 (Statistical Package of Social Sciences) package has been used for the analysis.

RESULTS

The prevalence for all categories of reproductive morbidity has been reduced from the third round of survey to fourth round of survey except for sexual intercourse related category (Figure 1). The prevalence of lower tract infection and upper tract infection was five per cent and 12.1% respectively during DLHS-3 which reduced to four per cent and ten per cent respectively in DLHS-4. However, the sexually intercourse related problems of reproductive morbidities have been slightly increased (2.2 to 2.3%) from DLHS-3 to DLHS-4 survey. In all approximately 12.4% of women reported at least one of the three morbidities during the fourth round of the survey.

Table 1 shows the prevalence of reproductive morbidities among ever-married women in India during the 2012-2013 according to selected socioeconomic and demographic characteristics. The prevalence of having at least one morbidity was high among the poorest women (15 %) and lowest among the wealthiest women (11.3 %). Similarly the prevalence of having at least one morbidity was highest among women with less than five years of education (15%) and lowest among women with more than twelve years of education (11%). This discrepancies between the women's education level also persist for different categories of reproductive morbidities. For example, the prevalence of upper tract infection was higher among the women with below primary level of education (14.8%) and lowest among those having more than 12 years of education (10.8%). In addition, women who reported suffering from lower tract infection, the highest prevalence was found among women with below secondary level of education and the lowest among those having more than a secondary level of education. Morbidities varied across age and highest among the younger age group in comparison to aged women. Muslim and Women who don't report any religion were clubbed in the category of others were little more burdened as compared to Hindu women. A similar pattern was found for different categories of reproductive morbidities. Among the different caste groups, the prevalence of having at least one morbidity was highest among scheduled tribes (15%) followed by open caste (14.5%), Schedule caste (13.3%) in

comparison to other backward castes (12.6%). However, for the different categories of reproductive morbidity (Lower tract infection-3.8%, Upper tract infection-10 %, Sexual intercourse related problems-2.4%) was highest among women belongs to schedule caste and lowest among women belongs to other backward castes (Lower tract infection-1%, Upper tract infection-4.4%, Sexual intercourse related problems-1%). The burden of morbidities among women living in the southern part of India was the lowest (11.9%), and in the eastern region of India, it was found to be highest (17.2 %). A similar pattern was found for different categories of reproductive morbidities separately.

Table 2 presents the adjusted odds ratios (ORs) and 95% confidence interval for at least one reproductive morbidities with background characteristic of the respondents. Almost, all response variable was found to be significant except women's age at marriage. There was an increase in ORs for reproductive morbidity among women with higher age in comparison to women belongs to 15-19 age, except women with age category of 40-49. All else held constant, women belong to age group 20-29 and 30-39 were 2.1% and 9.1% respectively more likely to suffer from reproductive morbidity in comparison to women of 15-19 age category. In contrast, women belong to the 40-49 age group were 8.1% less likely to suffer from reproductive morbidity in comparison to the 15-19 age group. These findings were statistically significant except for the age group of 20-29. All else held constant, 8.7% of Muslim women were more likely to suffer from problems of reproductive morbidity in comparison to Hindu. Similarly, women reside in urban area 4.8% were more likely to suffer from reproductive morbidity in comparison to rural women. All else held equal, the ORs for reproductive morbidities were 33%, 36% and four percent higher for women living in the northeastern, eastern and western regions respectively than among those living in the northern region of India, while the ORs among women living in the southern region were found to be approximately 11% lower than among those living in the northern part of India. All else held equal, women from third, fourth and fifth wealth quintiles were 2.4%, 4.6%, 12.6%, respectively, less likely to have at least one reproductive health-related problems than women from first quintiles. Similarly, occupational status also significantly impacts the likelihood of reproductive morbidity. All else held constant, the non-working women are 0.80 times less likely to report of having reproductive morbidity than a working woman. Among different caste group, in comparison to schedule caste, other caste groups were less likely to have at least one reproductive morbidity, all else were held equal. However, this finding was statistically significant only for schedule tribe. All else held equal,

women with higher parity were found to be more likely to suffer from reproductive morbidities in comparison to women with zero parity. Women with one, two, three or more than three parity were 24.4%, 12.4%, seven and six per cent respectively were more likely to have reproductive health-related illnesses in comparison to women with no parity.

Differentials in treatment-seeking

Table 3 reports the proportion of women who sought treatment for at least one reproductive morbidities by their background characteristics. The data related to seeking treatment were collected from only those women who suffered from at least one reproductive morbidities. Overall, approximately 35% of women who suffered from at least one morbidities sought treatment for reproductive morbidities in India. There were no differences in seeking treatment for reproductive morbidity among women with different age group. Almost 35% of women of each age category seeking treatment for at least one reproductive morbidity. The proportion of seeking treatment was higher among women who didn't report any religion were clubbed in the category of other found to be 59%. However, the proportion of seeking treatment among Hindu and Muslim women were 34% and 35% respectively. The proportion of women who sought treatment for reproductive morbidity was higher among women with a higher secondary level of education. Only 33.1% of women from rural area sought treatment versus 38.3% of urban women who sought treatment for at least one reproductive health related problems. Their proportion of seeking treatment was higher among women belongs to the eastern, western and southern part of India. Approximately 41.1% of women from the wealthiest quintile sought treatment vs. 28.9% who sought treatment from the poorest quintile. A similar increasing trend in the proportion of women seeking treatment for reproductive morbidities was witnessed as the husband's education increased. The proportion of treatment-seeking was substantially lower (32.3%) among SC women than that among OBC women (53.9%) were. The proportion of women with early age (<10) of marriage and late age (40-49 year) of marriage for treatment-seeking was substantially lower 36% and 32% respectively than those women who get married at age of 20-39 years.

Factor associated with treatment-seeking behaviour

Table 4 presents the adjusted odd ratios (ORs) and 95% confidence interval for seeking treatment for at least one reproductive morbidities with background characteristics of the respondents. The analysis shows that as age increases the treatment-seeking behaviour among women also increase. All else held equal, the woman belongs to the 30-39 age group were 1.1 times more likely to seek treatment for the reproductive

morbidity. If all else held equal, Muslim women were 17% more likely to seek treatment for their reproductive morbidity than a Hindu woman. All else held equal, the urban women are 7% more likely to seek-treatment than the rural women. The analysis shows that literate women were found to be seeking treatment for the reproductive morbidity in comparison to women with no education. All else held equal, women reside north-eastern, eastern and western region was 1.076 times, 1.520 times, 1.024 times respectively more likely to seek treatment than women residing in Northern India. Women reside in the southern region were found to be 15.6% less likely to seek treatment for their reproductive health related problems comparison Northern woman. All else held equal, women from the first, second, third and fourth quintiles were 17%, 13%, 16% and 23% respectively, more likely to seek treatment than women from the lowest quintile. Moreover, working women were 30% more likely to seek-treatment than non-working women. Caste was also significantly associated with seeking treatment. All else held equal, women from the Upper Caste (General), Other Backward Caste (OBC) and No caste (Those who have mentioned not belong to any caste group) were five per cent, 16% and five per cent more likely to seek treatment regarding their reproductive morbidities than women belongs to Schedule Caste (SC). However, women belong to Schedule Tribe (ST) 20% were found to be less likely to seek treatment in comparison to SC women

Type of health facility visited for treatment /consultation

The District Level Household Survey asked participants to describe the type of treatment/ consultation facility that they had visited. Approximately 26.2% of women reported that they had visited a private hospital for treatment /consultation for their reproductive morbidities. The proportion of women who visited a district hospital, primary healthcare center, community health center, or health sub-center were 7.8%, 1.2%, 0.5%, 0.8%, respectively (figure 2).

DISCUSSION

Poor reproductive health status of women characterized by lack of reproductive health knowledge and lack of autonomy in India. In a country like India where poor knowledge and patriarchal society are barriers for women to fulfill their reproductive health needs. Using data from the fourth round of District Level Household Survey, this study examined the various factors associated with seeking treatment for reproductive morbidity among women in India. The study further adds knowledge in the prior research as of now, this national-level study is the first to examine the current level, trends and determinants of reproductive morbidities and factors affecting treatment-seeking for reproductive morbidity. In addition to these factors, this study also examined the choice of provider in relation to reproductive morbidity.

Multiple factors such as various determinant of reproductive health like income, gender, year of education, the social position has been found to be significantly associated with reproductive morbidity. The results reveals that approximately 12.5 per cent women suffered from at least one of the three categories of reproductive morbidities, which were categories as lower tract infections, upper tract infections and sexual intercourse related reproductive morbidity. While comparing the results from the two rounds of DLHS, prevalence of at least one reproductive morbidity was approximately 15 per cent in DLHS-III survey which reduced to 12.4 percent in DLHS-IV, which reflect only minuscule reduction in the prevalence rate, down the line of five year, indicated the neglect or slow response of the healthcare pertaining to concern problem. Prevalence of having at least one reproductive morbidity differs significantly across the different socioeconomic strata. Morbidity among the poorest women was higher than that among the wealthiest women. Rural and Muslim women were also disproportionally suffered by reproductive morbidities. However, women belongs to other than Hindu or Muslim were suffering more with the reproductive morbidity. Economic status was also found to be positively associated with the treatment-seeking behaviour of women. Women belong to upper wealth quintile were less likely to suffer from the reproductive morbidity compared to poorer women, as wealthier women can able to afford expensive healthcare and for that, the poorer women earnings are typically spent on daily living expenses, such as food, children up brings (Mohanty,2012). In addition, a progressive decline in the prevalence of morbidities was observed with rising education levels of the woman and her husband. Various other studies have shown that education is an effective means of achieving autonomy in one's family and gaining employment, hence more financial security and thereby achieving more economic independence than the women who had no formal education. In addition, a significant association has been found with formal education with seeking treatment from formal providers, likely because women with a higher level of education had more information about the protective actions and the source to adopt them as compared to those with lower level of education (Mohanty,2012).

The study indicated more reproductive morbidities among the working woman, the findings can be attributed to more accurate response by the working class and working women have higher social support and networking and higher opportunities to become educated on health and healthcare-related issues, which might motivate them to seek treatment (Jat, Ng & Sebastian,2012). Three-fourths of the women who sought treatment for the reproductive morbidities took service from the private facility.

CONCLUSION

Reproductive health of women is an important indicator for the good health status of women. This study reveals that reproductive health awareness and knowledge of women in India still need to be improved. Reproductive morbidity found to be more prevalent among the marginalized section (Poorest, uneducated, unemployed, Muslims, and tribal women) of the society. Future policies should aim to increase the level of awareness about reproductive morbidities and their related treatment, especially among women belongs to this group. More than half of the women whose reproductive morbidity suffered from upper tract infections. With this scenario, more than two-thirds of the women did not seek any treatment. Hence, their treatment-seeking behaviour has been found to be very poor. The findings of the study suggest there is a need to sensitize women and the society towards reproductive health needs of the women. Reducing the burden of reproductive morbidities in India is a challenge and require time to establish the programme which needs to be based on priority and to design the appropriate intervention strategies.

Authors' contributions

Disclosure Statement

Funding

Ethical approval

This analysis is based on a secondary dataset with no identifiable information on the survey participants. This dataset is available in the public domain for research use hence no approval was required from any institutional review board as there is no question of human subject protection arise in this case.

Data Availability

The data is available online on the website and can be downloaded.

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Figures and Tables
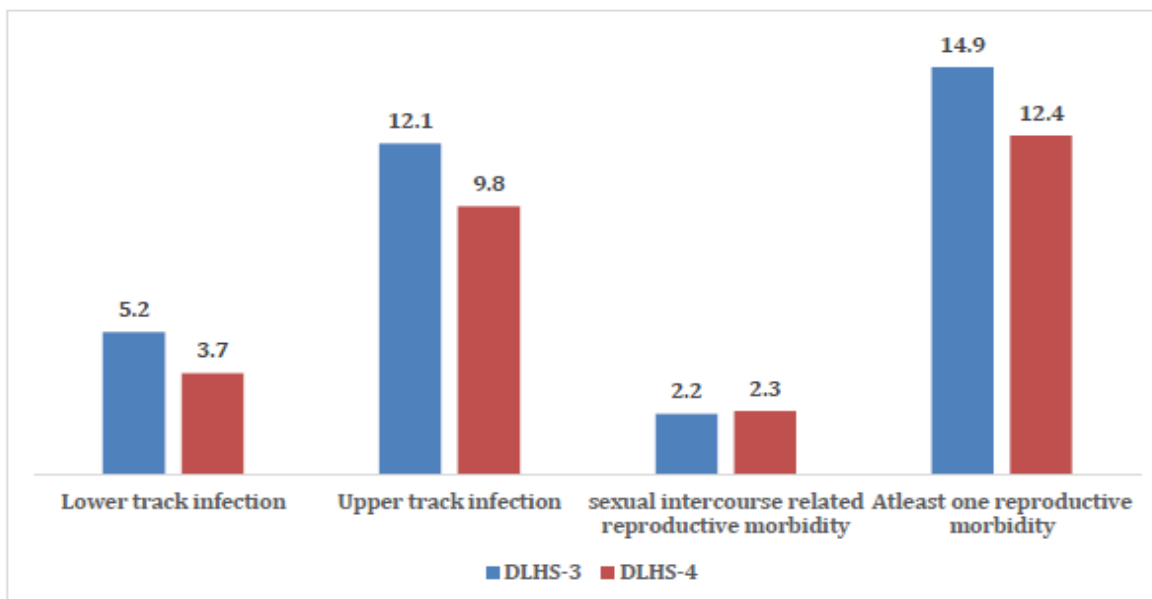
Figure 1. Prevalence of reproductive morbidities among ever married women (aged 15-49 years) in India, during third (2007-08) and fourth (2012-13) round of District Level Household Survey.

Table 1. Prevalence (In percentage) of at least one and one or more reproductive morbidities among ever married women (15-49 years) in India, 2012-2013.

	Person suffering from at least one reproductive morbidity	Person suffering from any three categories of reproductive morbidity			Person suffering from one or more than one reproductive morbidity							
					Lower tract infection			Upper tract infection			Sexual intercourse related RTIs	
		Lower tract infection	Upper tract infection	Sexual intercourse related problems	Only one type	two different type	three different type	Only one type	two different type	three different type	One problem	both problems
Age												
15-19	13.4	4.1	11.0	2.5	3.6	0.5	0.1	8.0	2.5	0.4	2.2	0.3
20-29	12.7	3.3	8.4	2.1	2.9	0.4	0.0	6.4	1.8	0.2	2.0	0.2
30-39	13.8	3.2	10.7	1.8	2.9	0.3	0.0	7.9	2.4	0.4	1.7	0.1
40-49	11.9	3.3	10.5	0.8	2.9	0.3	0.0	8.5	1.7	0.3	0.8	0.0
Religion												
Hindu	12.9	3.7	9.8	2.2	3.2	0.4	0.0	7.3	2.2	0.3	2.0	0.2
Muslim	14.1	4.2	9.2	3.0	3.9	0.3	0.0	7.3	1.4	0.5	2.8	0.2
Other	14.2	3.1	10.2	2.0	2.8	0.3	0.0	7.3	2.7	0.2	1.8	0.2
Education(Years)												
Non-literate	12.9	3.7	10.2	2.0	3.3	0.4	0.0	7.7	2.1	0.3	1.8	0.2
Below primary	14.8	3.4	11.5	2.0	2.7	0.6	0.1	8.5	2.5	0.5	1.9	0.1
Primary	14.5	4.1	10.3	2.5	3.7	0.3	0.0	7.5	2.5	0.3	2.2	0.3

Secondary	12.8	3.8	9.6	2.6	3.4	0.4	0.1	7.0	2.3	0.3	2.4	0.2
Higher secondary	10.8	3.1	7.2	2.1	2.6	0.5	0.0	5.7	1.3	0.1	1.9	0.2
Type of locality												
Rural	12.4	3.8	10.5	2.5	3.4	0.4	0.0	7.9	2.2	0.3	2.3	0.3
Urban	13.9	3.5	8.8	1.9	2.9	0.5	0.0	6.5	2.1	0.2	1.7	0.1
Region												
North	12.3	3.7	9.8	2.3	3.2	0.4	0.0	7.3	2.2	0.3	2.1	0.2
North-east	16.7	6.8	12.0	2.0	5.7	1.0	0.1	8.3	3.2	0.6	1.6	0.3
East	17.2	9.5	13.0	2.0	7.6	1.7	0.1	7.5	4.5	1.0	1.9	0.1
West	13.8	3.0	8.0	0.8	2.4	0.5	0.1	6.3	1.6	0.2	0.6	0.2
South	11.9	4.0	9.9	1.6	3.1	0.8	0.1	7.0	2.5	0.4	1.3	0.3
Wealth Index												
Poorest	14.9	4.2	11.3	2.3	3.6	0.5	0.0	8.3	2.8	0.2	2.1	0.2
Poor	14.2	4.2	9.9	2.1	3.8	0.4	0.0	7.7	1.8	0.3	1.8	0.3
Medium	13.3	4.0	11.0	2.4	3.4	0.5	0.1	8.0	2.6	0.4	2.2	0.2
Rich	12.7	3.8	10.2	2.6	3.4	0.4	0.1	7.6	2.3	0.3	2.3	0.3
Richest	11.3	3.2	8.7	2.0	2.8	0.4	0.0	6.6	1.9	0.2	1.9	0.2
Working status of women												
Working	15.1	4.6	13.6	2.5	4.0	0.5	0.1	9.7	3.4	0.5	2.0	0.5
Nonworking	12.8	3.6	9.5	2.3	3.2	0.4	0.0	7.2	2.1	0.3	2.1	0.2
Caste												
No caste	12.8	3.6	9.5	2.2	3.1	0.5	0.0	7.3	1.9	0.3	2.1	0.2
Scheduled Castes	13.3	3.8	10.0	2.4	3.4	0.4	0.0	7.2	2.5	0.4	2.1	0.3
Scheduled Tribes	15.0	3.6	7.4	1.8	3.0	0.6	0.0	5.9	1.3	0.3	1.7	0.1
Other Backward Classes	12.6	1.0	4.4	1.0	0.8	0.2	0.0	2.5	1.5	0.4	1.0	0.0
General	14.5	3.9	10.8	2.4	3.4	04	0.1	8.1	2.4	0.3	2.1	0.3
Age at marriage												
<10	13.4	5.9	10.7	2.1	5.2	0.7	0.0	6.6	3.6	0.5	1.8	0.3
10-19	14.0	5.1	11.3	1.7	4.1	0.9	0.1	7.7	3.1	0.5	1.4	0.2
20-29	12.7	4.6	9.8	1.8	3.7	0.9	0.1	6.8	2.6	0.4	1.5	0.3
30-39	11.9	4.5	9.1	1.4	3.6	0.8	0.1	6.4	2.3	0.4	1.2	0.3
40-49	12.8	6.3	7.7	1.2	5.3	0.9	0.2	6.2	1.4	0.2	1.2	0.0
Parity												
0	14.3	3.9	9.1	3.9	3.4	0.5	0.0	6.5	2.4	0.2	3.2	0.6
1	11.5	3.3	8.4	2.5	2.9	0.3	0.1	6.8	1.4	0.2	2.3	0.2
2	13.0	3.7	9.9	2.1	3.2	0.5	0.0	7.2	2.4	0.3	2.0	0.2
3	14.1	3.9	10.4	1.9	3.4	0.5	0.0	7.7	2.4	0.3	1.7	0.2
+4	14.7	3.5	10.9	1.8	3.2	0.3	0.0	8.3	2.1	0.5	1.7	0.1
Husband education												
Non-literate	12.6	2.8	7.6	1.7	2.4	0.3	0.0	5.7	1.6	0.3	1.5	0.2
Below primary	15.6	4.6	13.0	3.1	3.9	0.7	0.0	8.7	3.7	0.6	3.1	0.0
Primary	14.7	4.3	11.6	2.4	3.7	0.6	0.0	8.3	2.9	0.4	2.1	0.2
Secondary	13.1	4.2	10.5	2.4	3.7	0.4	0.1	8.0	2.2	0.3	2.2	0.3
Higher secondary	11.3	2.8	7.8	2.3	2.3	0.4	0.1	6.1	1.5	0.2	2.2	0.1

Table 2. Presents the Adjusted odd Ratio (ORs) for at least one reproductive morbidities with background characteristic of the respondents.

Variables	Adjusted odd ratios (ORs)
Age	
15-19®	1.00
20-29	1.021 (0.953-1.092)
30-39	1.091 (1.030-1.156)*
40-49	0.919 (0.863-0.979)*
Religion	
Hindu®	1.00
Muslim	1.087 (1.047-1.129)*
Other	1.004 (0.973-1.037)
Education (years)	
Non-literate®	1.00
Below primary	1.124 (1.086-1.164)*
Primary	1.153 (1.115-1.193)*
Secondary	1.120 (1.080-1.162)*
Higher secondary	1.022 (0.969-1.079)
Type of locality	
Rural®	1.00
Urban	1.048 (1.023-1.074)*
Region	
North®	1.00
North-east	1.331 (1.271-1.392)*
East	1.366 (1.306-1.428)*
West	1.042 (1.003-1.082)*
South	0.895 (0.866-0.924)*
Wealth Index	
Poorest®	1.00
Poor	1.001 (0.969-1.034)
Medium	0.976 (0.943-1.011)
Rich	0.954 (0.919-0.991)*
Richest	0.874 (0.837-0.913)*
Employment status	
Working ®	1.00
Nonworking	0.800 (0.781-0.821)*
Caste	
Scheduled Castes®	1.00
Scheduled Tribes	0.952 (0.915-0.991)*
General	0.991 (0.962-1.020)
OBC	0.972 (0.923-1.024)
No caste	0.979 (0.948-1.012)
Age at marriage	
<10 year®	1
10-19	1.056 (0.915-1.219)
20-29	0.943 (0.817-1.089)
30-39	0.881 (0.743-1.046)

40-49	0.889 (0.766-1.033)
Parity	
0®	1.00
1	0.756 (0.727-0.785)*
2	0.876 (0.846-0.908)*
3	0.927 (0.892-0.964)*
+4	0.935 (0.896-0.976)*
Husband education	
Non-literate®	1.00
Below primary	1.140 (1.083-1.200)*
Primary	1.130 (1.095-1.167)*
Secondary	1.088 (1.051-1.127)*
Higher secondary	1.006 (0.959-1.055)

Table 3. Proportion of ever married women (15-49 years) in India during 2012-2013 who sought advice or treatment after experiencing at least one reproductive morbidities.

Variables	Sought treatment (%)	Total population (N)
Percentage of women sought treatment	35.0	17310
Age		
15-19	35.2	8600
20-29	35.0	7038
30-39	36.6	933
40-49	32.2	739
Religion		
Hindu	34.1	11997
Muslim	35.1	1851
Other	59.0	3462
Education (years)		
Non-literate	34.3	3921
Below primary	35.4	2816
Primary	35.8	4229

Secondary	34.2	4663
Higher secondary	37.6	1681
Type of locality		
Rural	33.1	10378
Urban	38.3	6932
Region		
North	35.0	4086
North-east	35.2	2096
East	46.7	1999
West	42.4	2846
South	37.9	6283
Wealth Index		
Poorest	28.9	3287
Poor	30.5	3579
Medium	30.8	3398
Rich	34.2	3438
Richest	41.1	3608
Employment status		
Working	41.5	4629
Non-working	34.4	12681
Caste		
No caste	34.9	4195
Scheduled Castes	32.3	3985
Scheduled Tribes	33.5	2251
OBC	53.9	1000
General	37.6	5879
Age at marriage		
<10	35.9	78
10-19	41.6	9711
20-29	43.0	6603
30-39	42.1	207
40-49	31.5	728
Parity		
0	37.4	1914
1	33.8	2841

| 2	34.0	6350
3	36.2	3711
4	35.3	2494
Husband education		
Non-literate	33.8	3177
Below primary	32.9	895
Primary	35.3	5397
Secondary	34.1	5590
Higher secondary	39.1	2244

Table 4. Adjusted odds ratios (ORs) for treatment-seeking among ever married women (aged 15-49 years) residing in India, who experienced at least one reproductive morbidities within last three months.

Variables	Adjusted odds ratios (ORs)
Age	
15-19®	1.00
20-29	1.085 (0.979-1.202)
30-39	1.118 (1.026-1.219)*
40-49	1.017 (0.926-1.118)
Religion	
Hindu®	1.00
Muslim	1.171 (1.110-1.235)*
Other	1.147 (1.095-1.201)*
Education (years)	
Non-literate®	1.00
Below primary	1.136 (1.078-1.198)*
Primary	1.176 (1.118-1.238)*
Secondary	1.093 (1.034-1.155)*
Higher secondary	0.964 (0.891-1.044)
Type of locality	
Rural®	1.00
Urban	1.071 (1.034-1.110)*
Region	
North®	1.00
North-east	1.076 (1.003-1.154)*
East	1.520 (1.427-1.619)*
West	1.024 (0.969-1.081)
South	0.844 (0.805-0.885)*
Wealth Index	
Poorest®	1.00
Poor	1.169 (1.112-1.229)*
Medium	1.134 (1.074-1.197)*

Rich	1.159 (1.094-1.228)*
Richest	1.234 (1.156-1.316)*
Employment status	
Working ®	1.00
Nonworking	0.701 (0.676-0.727)*
Caste	
Scheduled Castes®	1.00
Scheduled Tribes	0.798 (0.749-0.851)*
General	1.050 (1.005-1.098)*
Other Backward Classes	1.016 (0.942-1.096)
No caste	1.053 (1.005-1.104)*
Age at marriage	
<10 year®	1
10-19	1.228 (0.978-1.544)
20-29	1.146 (0.912-1.441)
30-39	1.050 (0.804-1.372)
40-49	0.794 (0.625-1.009)
Parity	
0®	1.00
1	0.775 (0.730-0.823)*
2	0.990 (0939-1.045)
3	1.112 (1.048-1.180)*
+4	1.113 (1.042-1.189)*
Husband education	
Non-literate®	1.00
Below primary	1.344 (1.243-1.453)*
Primary	1.384 (1.318-1.454)*
Secondary	1.368 (1.297-1.443)*
Higher secondary	1.330 (1.239-1.428)*
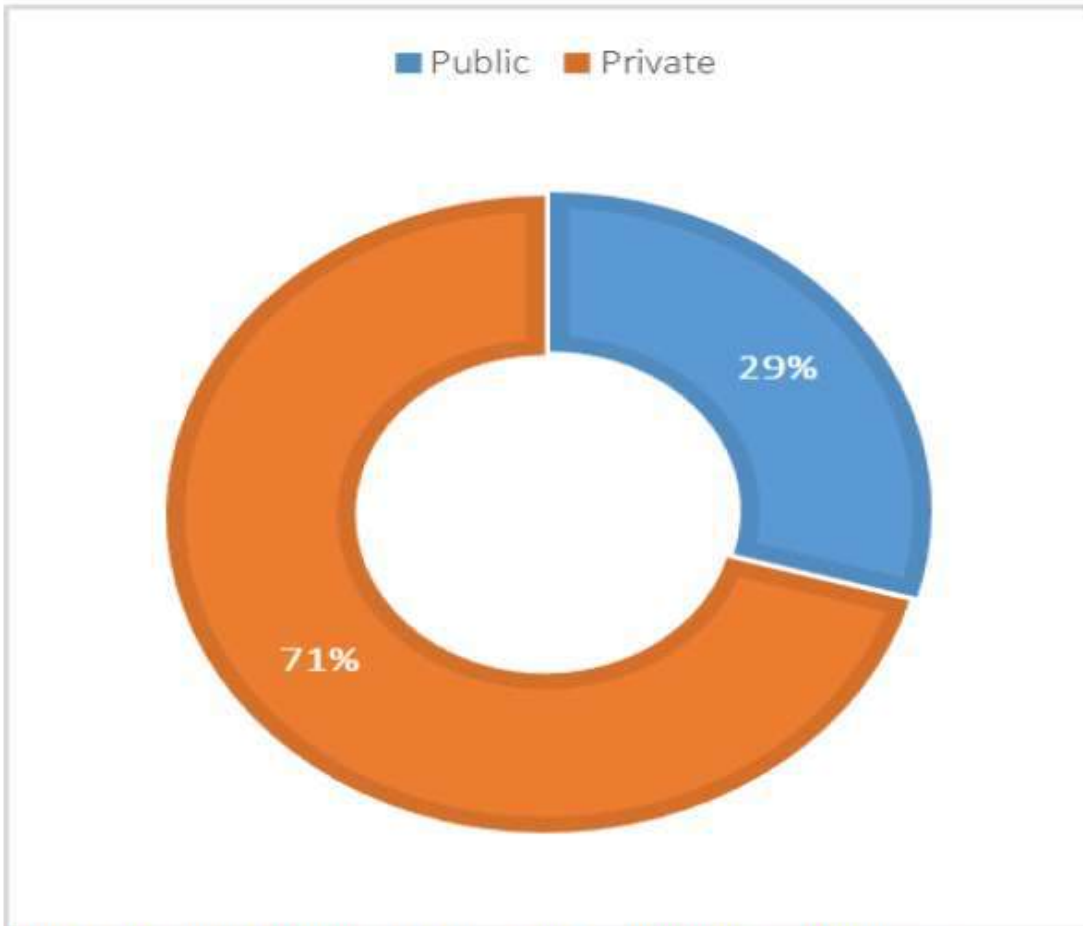
Figure 2. Percent distribution of the place where consultations or treatment for reproductive morbidities were sought, India, 2012-2013
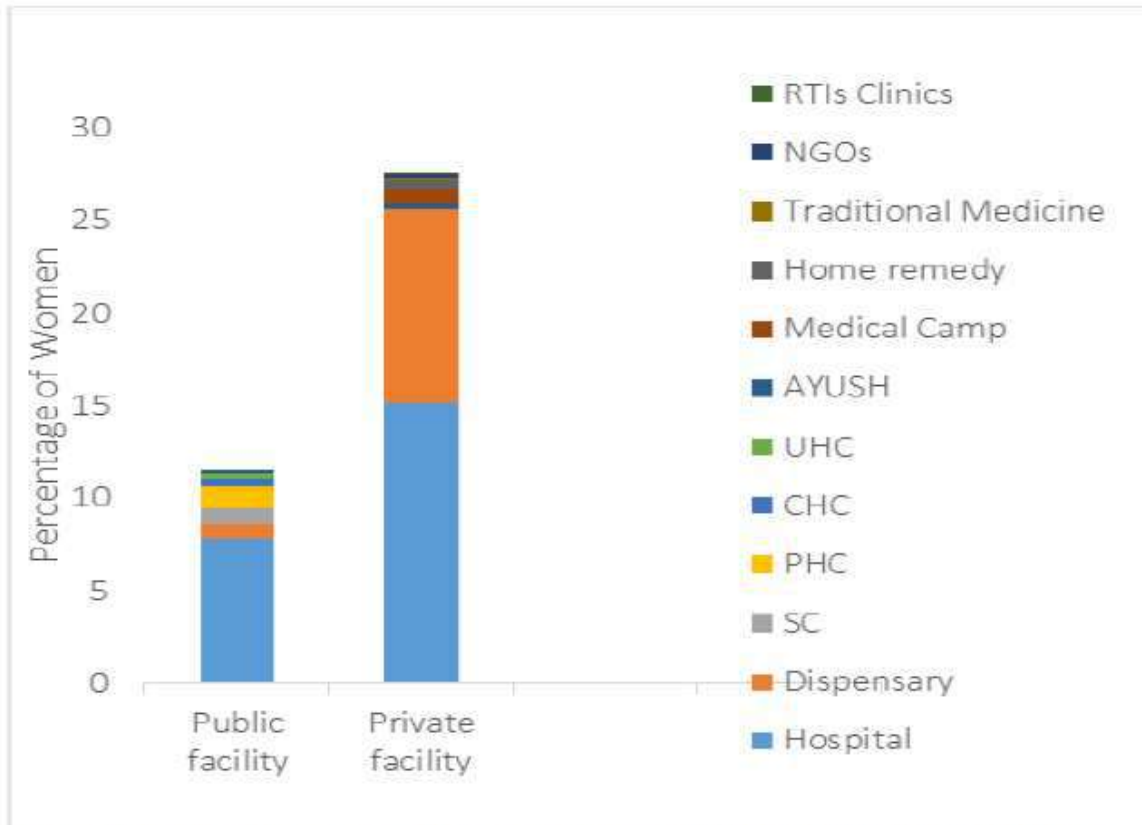
Figure 3. Percentage of Public VS. Private health service utilization for reproductive health related problems.