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Original Research Article

Health status and demand for health care of the rural women: preliminary observations from the backward districts of Karnataka state, South India

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ABSTRACT

Background: In the last few decades, rural people's health care has garnered increased attention. Especially rural women are facing a variety of life-threatening diseases as a result of traditional health culture, gender-based health exclusion, and low socioeconomic status. This study attempted to disclose the health status and demand for health care of rural women in two backward districts of Karnataka state- south India.
Methods: The study has used a survey and interview methods of data collection from 426 rural women from two districts of Karnataka.
Results: This study found that women reaching menopause state face a slew of health issues; including anemia (44%), stress (63%) menstrual irregularities (39%), heart disease (47%), arthritis (50%), and diabetes (48%) from a low socio-economic profile. Women in the menopausal stage are the most impacted, followed by pre-menopause and reproductive groups. Per-capita income, level of education, and medical expenditure are decisive factors in the demand for quality health care.
Conclusions: Changing health culture has a close nexus with the socioeconomic status affecting rural health behaviour of women. Household income and occupation have a key role in determining women's health. It is time to establish low-cost healthcare insurance for rural women and encourage the medical pluralism that exists in rural areas.

Keywords: Diseases, Health, Policy, Rural area, Women

INTRODUCTION

Health is not only a stable state of physical and natural well-being, but it also encompasses several other complex issues.[1] India is a country populated primarily by rural people and more than half of the country's population lives in rural areas. Experts attribute the increased health issues to a lack of health education, a poor environment, a lack of basic medical care, inadequate maternal and infant hygiene, insufficient vaccination against infectious diseases, a lack of access to safe drinking water and traditional health culture, and other factors.[1-3] Today, the majority of Indian rural people are afflicted with a wide range of communicable and non-communicable diseases, and there is a direct link between rural people's health status and their social, economic, and cultural background.[4]

Health-seeking behaviour of Indian rural women is extremely complex and multi-faceted because of changing health culture and health dynamics.[5] According to studies, rural society is very casual and neglects health care issues for rural women due to gender bias.[1,6] Approximately 2.67% of rural women die due every year due to a lack of adequate on-time treatment.[7] It is also revealed that maternal mortality rates and neonatal and infant mortality rates are higher due to anaemia, malnutrition, and other pregnancy-related issues among

rural women.[2,3] Studies have shown that obesity, early menopause, muscular-skeletal issues, heart and lung diseases, and menstrual issues are also a threat to women reaching the pre-menopause and menopause stage.[7,9] Following that it is also found that women are also suffering from other rare chronic and infectious diseases than men due to gender inequality.[1] Experts believe that maternal depletion among rural women is also caused by early mating, continuous pregnancy, and insufficient lactation It is opined that the mechanism of non-eroticization was a significant responsible factor in this phenomenon.[4]

Today rural people with low and middle income are more showing interest to get quality private health care facilities or are ready to pay a user fee to get good service at public health institutions.[2] Low-cost health insurance or a free cashless treatment scheme is also the reason for rural women to choose private health care services today. To date, there has been extensive research and review of epidemiology and etiology and its contributing factors for a variety of general and disease-specific health issues affecting rural women. There is a scarcity of data on mapping diseases, socioeconomic inequalities, and demand for healthcare for rural women's poor health especially focusing on backward districts of the country.[3] With this background, the current study aimed to reveal the health status and demand for health care of rural women in two backward districts (Chamaraja nagara and Chitradurga) of Karnataka- south India. The paper has been structured into an introduction, methods, results, discussion, and conclusion.

METHODS

The primary data was collected using a three-stage stratified random sampling technique in the year November 2022. According to the Niti Ayoga report (Government of India) and the Karnataka Human Development Report (2015), Chamaraj nagara and Chitradurga districts in Karnataka state are comes under the backward category (along with other Eight districts in the state). Hence, we have selected the above two districts for the current study.

In the second stage, four talookas (counties) were chosen in each district based on the results of a national family health and welfare survey-2019. Following that, the required number of villages for the survey was determined based on the village-level socio-economic data and the demographic size of the women population of the villages. In the final stage, approximately 426 women respondents belonging to 226 households from the selected villages were chosen at random for the current study with the help of ASHA workers. Study samples were characterized into three groups including 1) reproductive group 2) pre-menopause group and 3) menopause group. It has been classified those 17-35 years was considered reproductive age, 36-45 years' age was considered pre-menopausal, and 45 years and above was considered menopause. The study only looked at married women with at least one live child who had been married for three years before the study. Newly married women were not taken into account in this study. In rural areas, most women marry before they become 17 years old, so we've chosen 17-35 as the reproductive age group. Households from all sections i.e. BPL, lower, upper-middle classes, and well-off have been taken for the study. WHO-approved common diseases list has been adopted here. The interviews were conducted in the presence of local health activists with the help of local physicians. We followed a women-centered approach that was sensitive to the culture and psychosocial context while collecting data with oral consent from the participants.[10]

The survey questionnaire was filled out voluntarily by a few women participants and in the majority of the case by the researcher. The survey questionnaire was in the Kannada language. Oral consent was obtained before the survey. Medical documents were verified with the consent with the help of the local doctor. In the final stage, interviews were cross-checked to ensure the data's quality and validity. Women admitted for treatment during the study period have been excluded from the survey. Data has been analyzed using SPSS 18.0 version (IBM). Frequency tables and p value were obtained. A binary logistic regression model was used to find out the likelihood of an association between a categorical dependent variable and the logistic function regarding the usage of the public health care system. All explanatory variables (caste, income, occupation, education etc.) were categorical except age. Data were also analyzed using two logit models to find out the demand for health care. Wrong and missing values from the data set have been removed. The qualitative data were analyzed using the NUD*ISD database. Ethical clearance was obtained. Oral informed consent was obtained from the participants.

RESULTS

The demographic factor (Table 1) found that around 47% of women have been married in the age group of 16-18 years. The study has shown that more than 44% have completed only upper primary education and 7% have no formal education. In the case of occupation, the majority (49%) of women are working as daily labourers. The study has revealed that more than 51% of respondents belong to backward or excluded castes. In 34% of households, the male member and 32% of the household's in-laws take the final decision on health-related issues of women. Household catastrophic health expenditure is quite high among rural people as 23% are spending Rs.10000/ -Rs.15000/- per year. About 52% of women have undergone sterilization. Significant percentages (49%) of people were still living in semi-pukka houses. Around 52% have undone sterilization.

Table 1: Baseline socio economic characteristics of the respondents (n=426).

Variables	Number (%)	P value
Age at marriage (in years)		
Less or at 18	201 (47.1)	0.00
18-35	154 (36.1)	
Above 35	71 (16.6)	
Marital status		
Diverse/unmarried	13 (3.0)	
Married	403 (94.6)	0.21
Widow	10 (2.4)	
Number of surviving children		
0-1	53 (12.4)	
2-3	347 (81.4)	0.01
3+	26 (6.1)	
Educational qualification		
Primary	127 (29.8)	
Upper primary	191 (44.8)	
High school	65 (15.2)	0.00
College and above	12 (2.8)	
No education	31 (7.2)	
Family income declared (in Rs. pm)		
5000-10000	211 (49.5)	
10,000-15,000	147 (34.5)	0.10
15,000-20000	40 (9.3)	
Above 20000	28 (6.5)	
Occupation		
Daily labour	211 (49.5)	
Skilled	95 (22.3)	
Agricultural labour	70 (16.5)	0.11
Government	30 (7.1)	
No work	20 (4.6)	
Social group		
Backward community	220 (51.6)	
Scheduled caste	104 (24.4)	0.00
Others	102 (23.1)	
Household health decision making		
Husband	146 (34.2)	
Wife	90 (21.1)	0.00
In laws	140 (32.8)	
Depends	50 (11.7)	
Medical expenditure (pa)		
Rs. 5000-10000	243 (57.0)	
Rs. 10000-15000	103 (23.4)	0.00
Rs. 15000-20000	59 (13.8)	
Rs. Above 20000	21 (5.0)	
Housing type		
Pucca	167 (39.2)	
Semi pucca	211 (49.5)	0.10
RCC	48 (11.2)	
Sterilization history		
No	204 (47.8)	0.10
Yes	222 (52.1)	
Gravida		
1	59 (13.8)	0.03
2	200 (47.2)	

Continued.

Variables	Number (%)	P value
3+	167 (40.0)	
Free health insurance coverage		
Yes	336 (79.0)	0.00
No	90 (21.1)	

Source: primary data.

Table 2: Disease-wise (selected) affected women in the study area (n=426).

Diseases	Reproductive age	Pre-menopause	Menopause	Total
Anemic	7 (15.5)	18 (40.0)	20 (44.0)	45 (100)
BP	2 (14.2)	5 (35.7)	7 (50.0)	14 (100)
Menstrual issues	10 (20.8)	19 (39.5)	19 (39.5)	48 (100)
Stress	---	4 (36.3)	7 (63.6)	11 (100)
Bone related	2 (7.4)	9 (33.3)	16 (59.2)	27 (100)
Thyroid	7 (33.3)	8 (38.0)	6 (28.5)	21 (100)
Arthritis	3 (12.5)	9 (37.5)	12 (50.0)	24 (100)
Skin	2 (28.5)	5 (71.4)	---	7 (100)
ENT	5 (62.5)	---	3 (37.5)	8 (100)
Eye	3 (37.5)	4 (50.0)	1 (12.5)	8 (100)
Obesity	5 (20.8)	7 (29.1)	12 (50.0)	24 (100)
Diabetics	5 (18.5)	9 (33.3)	13 (48.1)	27 (100)
Heart	3 (13.3)	9 (39.0)	11 (47.8)	23 (100)
Respiratory	---	---	12 (100)	9 (100)
PCOD	5 (15.1)	15 (48.3)	11 (35.4)	31 (100)
Uterine fibroids	7 (25.0	9 (32.1)	12 (42.8)	28 (100)
Other gynic related	10 (22.7)	14 (50.)	20 (45.4)	44 (100)
STD	3 (42.8)	3 (42.8)	1 (14.2)	7 (100)
Cancer	1 (5.8)	7 (41.1)	9 (53.0)	17 (100)
Total	83 (100)	154 (100)	189 (100)	426 (100)

Sources: Primary data; p value 0.11.

Table 3: Selection of health care system of the women respondents (n=426).

Diseases	Total reporting cases (in numbers)	Traditional medicine (%)	Modern medicine (%)	Over the counter (%)	Negligence (%)
Anemic	45	39	47	2	12
BP	14	31	53	9	7
Menstrual	48	51	42	4	3
Stress	11	11	7	1	81
Bone related	`27	32	54	7	7
Thyroid	21	23	54	3	20
Arthritis	24	32	42	14	12
Dental	3	12	48	32	7
Skin	7	43	32	11	14
ENT	8	11	65	20	4
Eye	8	8	71	13	7
Obesity	24	3	12	13	72
Diabetics	27	55	35	5	5
Heart	23	13	71	9	6
Respiratory	9	21	71	8	1
PCOD	31	---	81	5	14
Uterine fibroids	28	11	56	8	24
Other gynecological issues	44	32	42	10	16
STD	7	54	25	11	9
Cancer	17	27	59	14	-----
Total	426	--	--	--	100

Sources: Primary data calculation; p value 0.14.

Further, Table 2 reveals details about various diseases affected in all 3 groups of women including reproductive, pre and post-menopause. Women in the reproductive age group are suffering from anemic (15.5%), menstrual issues (20.8%), thyroid (33.3%), ENT (62.5%), obesity (20.8%), diabetics (18.5%), heart (13.3%), PCOD (15.1%), and the STD (42%). Next, it has been found that women from pre-menopause are suffering from anemic (40%), BP (35%), stress (36%), arthritis (73%), uterine fibroids (32%), and STD (42%). Further, women from the menopause age group are suffering from anemic (44%), BP (50%), menstrual issues (39%), thyroid (28%), ENT (62.5%), obesity (50.8%), diabetics (48%), cardiovascular (47%), PCOD (35.4%), STD (14.2%), uterine fibroids (42%), and roughly 45% women were from the other gynecology related issues.

Table 4: Likelihood utilizing types of public health care services- logistic regression estimates.

Coefficient	Exp (B)	SE	Wald	P value	Odds ratio (OR)	95% CI for OR	
						Lower bound	Upper bound
Age (years)	0.004	0.053	1.439	0.00	1.133	0.4333	1.444
Caste	0.009	0.210	1.201	0.11	1.024	1.021	1.045
SC and ST	0.067	0.076	5.678	0.21	1.433	1.229	1.245
OBC and others	0.054	0.055	8.900	0.00	1.233	1.438	1.444
Household health decision making							
Self	0.053	0.290	3.139	0.00	1.221	1.220	1.226
In laws/husband	0.410	0.410	3.678	0.21	1.653	1.651	1.655
Distance	0.036	0.005	-176	0.00	1.333	1.331	1.343
Education							
Below high school	0.025	0.090	1.27	0.14	1.233	1.230	1.235
Above high school	0.041	0.963	-1.30	0.19	0.344	0.300	0.355
Occupation							
Organized	0.069	0.030	2.720	0.21	1.043	1051	1057
Unorganized	0.020	0.069	1.689	0.00	1.056	1.041	1.045
Income (pm)							
Below 10000	0.011	0.092	0.905	0.21	1.032	1.031	1.033
Above 10000	1.560	0.769	3.901	0.11	0.022	0.020	0.024
Type of illness							
Gynic	0.069	0.610	3.902	0.22	1.011	1.010	1.012
Non gynic	0.044	0.905	0.905	0.11	1.410	1.409	1.412
Health insurance (free/private)							
Yes	0.009	0.703	2.905	0.13	0.334	0.331	0.335
No	0.048	0.433	1.904	0.21	1.432	1.430	1.435
-2 Log likelihood				214.891			
Cox and Snell R square				0.291			

Table 5: Demand for health care: logistic regression analysis.

Variables	Coefficient	Marginal effect
Age (years)	0.004567* (0.00)	0.005134* (0.00)
Education	0.001347** (0.00)	0.001421* (0.00)
Income	-0.001420*** (0.04)	0.001390** (0.04)
Occupation (women)	0.003983*** (0.00)	0.003590*** (0.00)
In-laws' education	0.005689* (0.03)	0.005330* (0.03)
Monthly medical expenditure	-0.003321** (0.00)	0.003044* (0.00)
Household decision making	-0.004332* (0.00)	0.004112* (0.00)
Type of health care system	-0.002021* (0.10)	0.002269* (0.00)
Housing	0.003811* (0.30)	0.003709* (0.29)
Constant	-11.65901 (0.01)	---

Note: The values in parenthesis denote probability value. Next, * ** and *** characterizes significance at one per cent level five per cent level, ten per cent.

Table 3 found the selection of health care system of the women respondents for their health issues. It was revealed that for the anemic problem around 39% of rural woman use traditional medicine, 47% of women use modern medicine and 2% of them takes 'over-the-counter medicines'. In the case of the BP problem, it has been found that 31% of the respondents use traditional medicine, 53% use modern medicine and 9% over the counter medications. Next, for menstrual issues, 51% of them use traditional medicine, 42% of them use modern medicine, and 4% of women use over-the-counter medicates. For arthritis problems, around 32% of rural women use traditional medicine, 42% of them were using modern medicine and 14% of them were depending on over-the-counter medications. For obesity problems, roughly 3% use traditional medicine, 12% modern medicine, and 13% over-the-counter medications. For Diabetic issues, around 55% of women respondents use traditional medicine, 35% use modern medicine, and 5% over the counter.

Table 4 gives a glimpse of logistic regression estimates of the likelihood of utilizing types of public health care services. At a significance level of 0.05, it was found that age, education, occupation, and distance were statistically significant for each variable concerning the usage of public health care services by the respondents. People were using the public health system more as they get older since there are more health issues in old age and due to cost factors. More SC/ST individuals (OR:1.433) use the public health care system. Because of the more health expenses, more people from the unorganized sector are utilizing public health care services. It was also found that lower-schooling individuals use the public healthcare system (OR: 1.234) compare to others. People without insurance were using the government health care system more. Table 5 reveals the estimated co-efficient, variables, and marginal effect of demand for health care. According to the table, age significantly affects the need for health care. When age increases by one unit, the odds ratio for willingness for payment increases by 0.4%, and the likelihood (probability) of the willingness to pay increases by 0.005. The demand for high-quality medical treatment is significantly influenced by education. The log-off ratio for willingness to pay for quality health care increases by 0.013% with each unit increase in education level, and the likelihood of being willing to pay similarly rises by 0.0113. Similar to this, factors like occupation and in-laws' education play a significant role in the probability of greater willingness to pay for high-quality healthcare.

DISCUSSION

This preliminary study has been conducted in two backward districts of Karnataka to reveal the current health status and health demand of rural women using mixed methods. The deprived socio-economic factor (Table 1) is an important cause for the poor health behaviour of any community. Studies have shown that an early marriage may also lead to some serious gynecological and stress related problems in the future including an early hysterectomy.[9,10] The current study also supports this fact. Level of education is a key indicator of good health care seeking behaviour among rural women as it plays a key role in opting for modern and timely medical treatment and woman has very little role to play in their health-related matters as in-laws/husband are taking major decision even today in rural areas.[5] Women from the unorganized sectors are having more health issues as per the studies because of poor work hazards.[11] In India caste-based social and health exclusion is an important determining factor for having low-quality health care and health inequalities. Health decision-making in rural areas is a strategic and significant factor in the case of early, timely, and quality treatment. This study corroborates with all the above issues. When it comes to caste, a woman from higher caste people prefers to go to private hospitals, whereas lower caste people are to the public hospitals only. It might be due to health exclusion and health inequality.[6] Women are making visits to government hospitals, where in-laws are making health decisions at the household level. The distance to the nearest government healthcare facilities was found to have a detrimental impact on the type of healthcare institutes used by rural women.

The study has covered common health issues found among selected reproductive, pre and post menopause women period (Table 2). Large number of women nearing menopause are having anemic and it might be due to poor diet due to poverty and other food taboos prevalent in the area and BP also common among the studied women cases at this stage could be because of menopause anxiety.[11] More worrying factor is that menopausal women have heart-related issues and among them, few of them had opted for hysterectomy previously (removal of the uterus). The study says early hysterectomy may lead to heart-related issues in the due course of time.[9] Women have obesity issues because of menopause complications as a study found.[3] Diabetic among rurals is sharply increasing among pre-menopause and menopause age groups as the noted from the data and recent NRHM reports also substantiates this. This is also interesting to note those significant portions of reproductive age group women are having sexually transmitted diseases (STD) cases and it may be attributed to unprotected and early sexual activities among more educated women.[7] Local health workers opined in some cases rural men would bring STDs from the city-based sex workers and pass them on to their wives. Further it has been noticed that for sexually transmitted diseases women are not coming forward to take modern medicines because of shyness as we found in the interview.[1,12]

The healthcare behaviour of the respondents has shown some interesting findings (Table 3). Though the respondents have more willing to have modern medicine for their health needs still a significant percentage of rural women are showing interest in getting traditional

medicines/folk for health needs. This is because of the nature and dynamic of the health culture, success rate, easy to access and affordability.[14] Also, it has been observed that most of the women are still depending on traditional approaches for their serious gynecological problems and it is due to health illiteracy and it requires immoderate intervention.[13] Noted percentage of women rely upon over-the-counter medicines.

We found that respondents will not rely on any single type of health care system (Table 4). Some people seek more than one type of medical care to heal faster, to be culturally sensitive, save money, etc. Medical pluralism in rural people shows that sick respondents would like to locate illness events in the total context of their own life and resort to multiple therapeutic systems for a speedy recovery, which is not a necessary part of the clinical establishment.[2] In terms of pluralistic treatment, respondents prefer a combination of the traditional and modern medical systems for a variety of diseases. It has been found that due to strong customs and health culture respondents are unwilling to completely abandon traditional medicine or accept the Allopathic system. It is stated '*biomedicine and other types of medicinal systems take into account the social genesis and constraints on health and well-being. Rural' think all types of medical care systems rely just on medicines and social, cultural factors are more vital than any pharmacology'*.[14]

It has been found that there is a substantial link between English education and the desire for high-quality modern healthcare. Women working in the organized sector visit private hospitals more. As household income rises, so do the likelihood of more using private hospitals for all types of health issues. It is observed that women prefer more to visit private hospitals rather than government hospitals for all forms of gynaecological issues.[15] People in rural areas have been observed visiting government hospitals for minor health issues and private hospitals for serious health issues as no such health infrastructure in rural hospitals. People with government health insurance will visit city based private hospitals as no such good services at rural hospitals.[16]

Health is both a consumer and a capital good. Demand for quality health care is a key issue in the case of the rural health care system (Table 5). The age of the person has a significant association regarding ready to pay for quality health care. Old age people are more depend on public healthcare system due to cost factor. Here education is also a key point. As the level of education increases women have more willing to pay for health needs. The level of income is also slightly a significant factor. More income means more willingness to pay for quality health care.[5] It was found that as medical expenditure increases poor will move to the government hospitals having less medical infrastructure. Household decision-making has a positive impact on willingness to pay for good health care.[17] It is suggested that government funding for rural health infrastructure is said to need to increase, and NRHM programme gaps are said to need to be effectively filled. It was also advised that a future study be done on how the effect of outside factors is influencing rural people's health dynamics and health culture.

The study's main drawbacks are that it only covers two backward districts and it was cross-sectional in nature. Because of this, a causal factor cannot be ruled out.

CONCLUSION

Women reaching the menopause stage are the most impacted, ranging from stress to cancer followed by pre-menopause and reproductive groups. Gynecologic and other lifestyle disorder issues are gradually increasing among rural women. STD cases at alarming stage among reproductive-age women. There is a high demand for quality health care in rural areas. Per-capita income, level of education, and medical expenditure are decisive factors in the demand for quality health care. Though rural people are gradually moving towards modern health care still have great faith in the traditional healthcare system. The unique health culture and health behaviour of rural women have a great influence on current social, cultural, political, and economic factors. There is an urgent need to provide health infrastructure and health awareness programs in the rural areas with the involvement of various stakeholders.

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