

Reproductive health status of rural married women in Tamil Nadu: A descriptive cross-sectional study

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ABSTRACT

Introduction: Reproductive health of women is of special concern, especially during their reproductive years where the reproductive morbidity is very high, especially in countries like India. **Aims:** This study was carried out to find the reproductive health status of rural married women and identify those suffering from reproductive morbidity to provide appropriate guidance and treatment. **Methodology:** This community-based cross-sectional descriptive study was carried among rural married women above 18 years of age in the field practice areas of a medical college. By simple random sampling method, the required sample size of 650 was identified. Data collected by female investigators using a pretested structured questionnaire was analyzed using SPSS version 22. **Results:** Most of the study participants were in the age group of 21–40 years. About 32% of married women delivered by cesarean section and exclusive breastfeeding was followed by 88.9% of the mothers. Around 78% of the participants used contraceptive methods and the major reason given was for economic reasons (48%). About 67% of study participants suffered from one or more gynecological problems such as menorrhagia, lower abdominal pain, dysmenorrhea, and abnormal vaginal discharge. UTI (14%) and RTI (11.6%) were the most commonly diagnosed gynecological morbidity. Pallor was present in 45.5% of the study participants and 6.9% had clinical goiter. **Conclusion:** High prevalence of gynecological morbidity in this study shows that there is a dire need to plan and implement health education and awareness creation programs to complement the existing programs targeting women.

Keywords: Contraceptive morbidity, gynecological morbidity, obstetrical morbidity

Introduction

Reproductive health is a state of complete physical, mental, and social well-being, and not merely the absence of reproductive disease or infirmity. Reproductive health is one of the crucial components of general health and well-being and one among the central features of human development. Reproductive health is most important for women, especially during their reproductive years as most of their reproductive health

problems arise during that period. Women form an equal proportion of the population and they have their own social and medical problems.^[1]

The morbidity and the mortality profile of the women in any country are specific to their sociodemographic and other environmental-related conditions.^[1] The morbidity problems of the women are basically complicated because they have to bear the gynecological as well as obstetrical problems apart from the other health-related issues. The general health and well-being of a woman greatly depends on a healthy reproductive life. The leading cause of ill health in women of reproductive age group worldwide can be attributed to reproductive health problems, especially to those in the developing countries.^[1,2]

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Any morbidity or dysfunction of the reproductive tract or any morbidity which is a consequence of reproductive behavior including pregnancy, abortion, and childbirth or sexual behaviors are included as part of reproductive morbidity. Reproductive morbidity can be broadly classified into three categories: obstetrical, gynecological, and contraceptive morbidity. Obstetric morbidity refers to any ill health in relation to pregnancy and childbirth.^[3] Gynecological morbidity is the disorders of the genital tract, which are not directly related to pregnancy, delivery, and puerperium.^[4] Contraceptive morbidity refers to morbidity caused by use of specific contraceptives. Quantifying all of these morbidities as a whole will give us the overall reproductive health status of women.

Studies conducted in various parts of the World during the past few years have shown that the reproductive morbidities including menstrual, obstetrics, and gynecological morbidities vary widely from 40% to 80%. Studies conducted in India showed that the percentage of women complaining on gynecological problems varied from 35% to 58.9%.^[5,6] These reports just touch the tip of the iceberg and much need to be done to screen and assess the reproductive health status of women.

The health-seeking behavior of women in our country is to be blamed for this high prevalence of reproductive morbidity because the health care of the women is the last priority among the family members. Community-based assessment of reproductive health status including the various gynecological morbidities will serve as an important tool for epidemiological surveillance, health service planning, and policy advocacy.^[7]

One of the basic components of primary health care in India was maternal and child health care service.^[8] The Reproductive and Child Health [RCH] Program was launched by the Govt. of India in 1997, which concentrated on reducing the fertility and maternal mortality and morbidity rates, but failed to understand that the women's health is also affected by problems that are not related to pregnancy or childbirth. This contributed to a marked difference in the prevalence of reported reproductive morbidity from 24.4% to 74.1% at various regions of India.^[9]

Women seeks medical care and intervention when the problem they suffer becomes too much to tolerate and often when in the advanced stages of the disease or illness. They also tend to hide the reproductive system-related problems because of the highly sensitive nature and are hesitant to share with their own family members. There are very few published studies on prevalence of reproductive/gynecological morbidities among the women, especially in the study area, and their health-seeking behavior is not documented because the women suffer these morbidities silently without seeking proper institutional care for early diagnosis and treatment.

Objectives of the study

With this background, this study was planned and conducted with the following objectives:

1. To study the reproductive health status of rural married women in Kancheepuram district of Tamil Nadu.
2. To perform a detailed assessment of those identified to be suffering from reproductive morbidity and quantify them in order to provide appropriate guidance and treatment for those affected.

Methodology

Study design

This is a community-based cross-sectional descriptive study.

Study area and population

This study was conducted in the rural field practice areas of a Medical College and Hospital in Kancheepuram district, Tamil Nadu. The field practice areas are located partly in Sripuram and Padappai areas. Out of the total population of 58,235, women comprises of about 48.92%.

Sample size and sampling technique

Based on the study conducted by Mathew *et al.* in 2017 in a rural area of Karnataka,^[10] the prevalence of gynecological morbidity was found to be 66.4%, the sample size was calculated by applying the formula $4pq/d^2$ with precision of 6% at 95% confidence interval. The sample size calculated was 563. Adding 10% for non-response, the total sample was found out to be 619, which was rounded off to 650. Married women in the age group of 18 years and above formed the study population.

Details of women above 18 years of age in the respective study areas were obtained from the website of Chief electoral officer, Tamil Nadu. From each study area, a list was prepared with the names of women arranged in alphabetical order. By simple random sampling, 325 women were chosen randomly from each of the study area to obtain the required sample size of 650.

Study tool

The data collection was done by using a pretested, structured questionnaire consisting of sociodemographic details, various reproductive morbidity details, anthropometry measurements, and clinical examination findings. Pretesting was carried out for standardizing the questionnaire. The results of the pilot study were not included in the final analysis.

Data collection

Married women above 18 years age residing in the field practice area were interviewed by trained female investigators by house-to-house visits and collected data regarding the sociodemographic details and the various reproductive morbidities like signs and symptoms of menstrual, obstetric, and gynecological problems in the past 6 months. Anthropometric measurements and clinical examinations findings were also noted down.

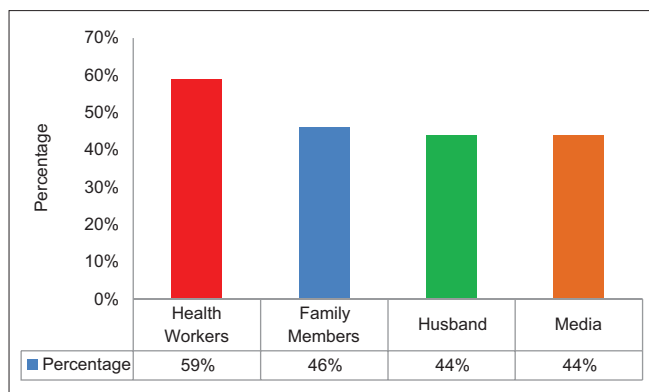


Figure 1: Motivating factors for contraceptive use among the study participants: [Multiple responses]

Ethical clearance and informed consent

Ethical clearance was obtained from the Institutional Ethical Committee to carry out this study (Ethical committee approval obtained dated 21-03-2018). The purpose and objectives of this study were explained to the participant in detail and informed consent were obtained from those who were willing to participate in the study. Confidentiality of the study subjects was maintained.

Inclusion and exclusion criteria

The inclusion criteria for the study was those married women aged 18 years and above residing with their families in the study area and were willing to participate in the study. The exclusion criteria for not including in the study was those who are unwilling to participate in the study and those who are not permanent residents of the study area.

Statistical analysis

Data entry was done by using MS Excel software and analyzed by using SPSS Software Version 22 (manufactured by SPSS Inc. Chicago, USA). Applying appropriate descriptive statistical methods, the results were tabulated.

Results

The study carried out among rural married women in Kancheepuram district to find out the reproductive health status yielded interesting results, which are presented in tables and graphs.

In this study, most of the study participants were in the age group of 21–40 years and nearly 49.2% of the participants had education up to high school level. High percentages (77.1%) of the participants were unemployed owing to their housewife status and 78% of the participants belonged to nuclear families [Table 1].

It was found that 72.3% of the study participants attained menarche in the age group of 13–15 years. Nearly 90% of the study participants had regular menstrual cycles with duration of 21–35 days and menstrual flow lasting for 2–7 days. Around 16.8% of the participants were passing clots and 37.2% had pain during their menstrual period [Table 2].

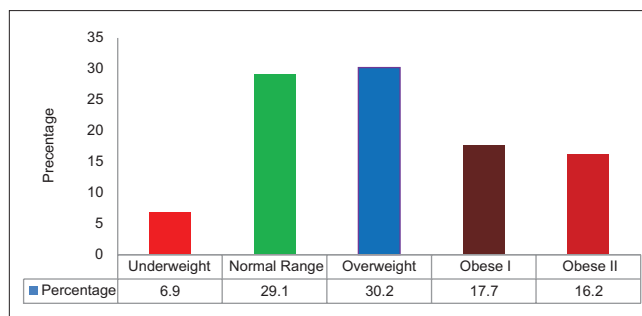


Figure 2: Nutritional status of the study group (BMI)

Table 1: Sociodemographic characteristics of the study participants

S. No	Characteristic	Frequency (n=650)	Percentage (%)
Age in years			
1	< 20	22	3.4
2	21-40	358	55.1
3	41-60	207	31.8
4	> 61	63	9.7
Education			
1	Illiterate	96	14.8
2	Primary School	87	13.4
3	Middle School	94	14.5
4	High School	320	49.2
5	Diploma	7	1.1
6	Graduate/PG	46	7.1
Occupation			
1	Unemployed	501	77.1
2	Unskilled	57	8.8
3	Semiprofessional	68	10.5
4	Professional	24	3.7
Type of family			
1	Nuclear	507	78.0
2	Joint	123	18.9
3	Three Generation	20	3.0
History of substance abuse			
1	Yes	18	2.8
2	No	632	97.2

From this study, it was found that 10.2% of the study participants had no children while the rest of them had at least one child and 6.4% of the participants were having four or more children. Most of the mothers had their child delivered by normal delivery (68%). Exclusive breastfeeding was followed by 88.9% of mothers. Among the study participants, 30.5% (198) had a history of abortion and among them, 79.7% (158) had at least one abortion, and among those having history of abortion, 70.7% (140) were found to be had a spontaneous abortion [Table 3].

Table 4 shows the contraceptive details of the study participants. Around 78% of the study participants have used contraceptive methods to prevent pregnancy and among them, 66.6% had permanent sterilization like tubectomy, 6.9% took oral contraceptive pills, 19.9% of them used condom, and 6.5% had intrauterine contraceptive device like Copper-T inserted. About

Table 2: Menstrual details of the study participants

S.No	Characteristic	Frequency (n=650)	Percentage (%)
Age at menarche			
1	<12 years	108	16.6
2	13-15 years	470	72.3
3	>16 years	72	11.1
Regularity of the menstrual cycles			
1	Regular	573	88.2
2	Irregular	77	11.8
Duration of the menstrual cycle			
1	Less than 21 days	22	3.4
2	21-35 days	589	90.6
3	More than 35 days	39	6
Duration of menstrual flow			
1	Less than 2 days	49	7.5
2	2-7 days	588	90.5
3	More than 7 days	13	2
Passing clots during menstrual flow			
1	Yes	109	16.8
2	No	541	83.2
Presence of pain during menstruation			
1	Yes	242	37.2
2	No	408	62.8

Table 3: Obstetric details of the study participants

S.No	Characteristic	Frequency (n=650)	Percentage (%)
Number of children			
1	Nil	66	10.2
2	One	143	22.0
3	Two	292	44.9
4	Three	107	16.5
5	≥Four	42	6.4
Type of delivery [n=584]			
1	Cesarean Section	187	32.0
2	Normal Delivery	397	68.0
Number of abortions [n=198] [30.5%]			
1	One	158	79.7
2	Two	32	16.1
3	≥Three	8	4.0
Type of abortion [n=198]			
1	Spontaneous	140	70.7
2	Induced	58	29.3
Exclusive breast feeding [n=584]			
1	Given	519	88.9
2	Not Given	65	11.1

72.6% of the study group utilized government hospitals for their contraceptive needs. The major reason for using contraceptives was for economic reasons (48%), followed by the reasons related to health (20%) and compulsion from family members (22%).

The major motivating factors for contraceptive use were influenced by health workers (59%) followed by family members (46%), husbands (44%), and the media (44%) [Figure 1].

Table 5 shows the clinical characteristics of gynecological morbidity among the study participants. It was found that 67%

Table 4: Contraceptive details of the study participants

No	Contraceptive Characteristic	Frequency	Percentage
Use of contraceptives [n=650]			
1	Yes	507	78.0
2	No	143	22.0
Type of contraceptive used [n=507]			
1	Oral Contraceptive pills	35	6.9
2	Condom	101	19.9
3	IUCD	33	6.5
4	Permanent (Sterilization)	338	66.6
Reasons for following contraceptive practices [n=507]			
1	Economic reasons	243	48.0
2	Social reasons	51	10.0
3	Health reasons	101	20.0
4	Compulsion	112	22.0
Any complications due to contraception use [n=507]			
1	Yes	76	15.0
2	No	431	85.0
Source of contraceptives [n=507]			
1	Government hospitals	368	72.6
2	Health workers	82	16.2
3	Shops	57	11.2

Table 5: Clinical characteristics of gynecological morbidity among the study participants

S.No	Clinical characteristics	Frequency (n=650)	Percentage
Presence of any symptom related to gynecological morbidity		436	67.0
Commonly reported symptom related to gynecological problem			
1	Menorrhagia	92	14.1
2	Dysmenorrhea	78	12.0
3	Lower abdominal pain	92	14.1
4	Abnormal Discharge per vaginum	85	13.1
5	History of Burning micturition	38	5.8
6	History of constipation	21	3.2
7	Intermenstrual bleeding	18	1.2
8	Dyspareunia	12	1.8
Presence of any diagnosed gynecological morbidity		207	31.8
Type of Diagnosed gynecological morbidity (n=207)			
1	Urinary tract infection	91	14.0
2	Reproductive tract infection (Cervicitis/Vaginitis)	76	11.6
3	Fibroids	24	3.6
4	Endometriosis	6	1.0
5	DUB	5	0.7
6	Ovarian Cyst	3	0.4
7	History of infertility	2	0.3

of the study participants had one or more symptoms related to gynecological problems in the past 6 months. The most common symptoms reported were menorrhagia (14.1%), lower abdominal pain (14.1%), dysmenorrhea (12%), and abnormal vaginal discharge (13.1%). One or more diagnosed gynecological morbidity was present in 31.8% of the study participants, among

Table 6: Health seeking behavior and co-morbidity details of the study participants

S. No	Health seeking behavior and co-morbidity details	Frequency (n=650)	Percentage
Seeks medical treatment from			
1	Government hospitals	406	62.5
2	Private hospitals	244	37.5
Type of Treatment seeking			
1	Allopathic	602	92.6
2	AYUSH	23	3.5
3	Others	25	3.9
Diagnosed co-morbidities			
1	Hypertension	101	15.5
2	Diabetes	74	11.4
3	Both Hypertension and Diabetes	29	4.4
4	Pallor	296	45.5
5	Breast Abnormalities on examination	81	21.8
6	No diagnosed morbidity	69	10.6
Thyroid Problems [Goiter]			
1	Grade 0	605	93.1
2	Grade 1	35	5.4
3	Grade 2	10	1.5

which, 14% had urinary tract infection, 11.6% had reproductive tract infection, and 3.6% had fibroids.

Body mass index of the study participants were calculated using their height and weight. It was found that 30.2% were found to be overweight, 17.1% were in obese Category I, 16.2% were in obese category II, and 6.9% were found to be underweight [Figure 2].

Regarding the health-seeking behavior of the study participants, it was found that 62.5% of them seek medical treatment from government hospitals and 92.6% prefer allopathic medical treatment. On physical and clinical examination of the study participants, the diagnosed co-morbidities were found to be pallor (45.5%), breast abnormalities (21%), hypertension (15.5%), diabetes (11.4%), both hypertension and diabetes (4.4%), and clinical goiter (6.9%). Only 10.6% of the study participants had no diagnosed co-morbidity [Table 6].

Discussion

The reproductive health problems of women are on Global Social agenda for the forthcoming century. Although maternal mortality is an important indicator of women's health, reproductive health status of women serves as an important tool to identify, diagnose, and treat the health issues of the target population so that, they can lead a healthy productive life. This study done in Kancheepuram district of Tamil Nadu has given varied and interesting results regarding the reproductive health status of the study group which are discussed below.

From this study, it was found that 67% of the study participants had one or more symptom related to gynecological problems. Similar results were obtained in a study done by Matthew *et al.* among married rural women in Karnataka.^[10] In a study done by Garg *et al.*, the prevalence of gynecological problems was found to be higher (88%),^[11] whereas, in studies done by Indra D Kambo *et al.*, Abraham *et al.*, and Rani *et al.*,^[5,9,12] the prevalence of gynecological problems were found to be comparatively lower (24.4%, 36.85%, and 46.76% respectively). These variations may be attributed to various factors such as educational status, health services available in respective study areas, and health-seeking behavior of the study population.

The most commonly reported gynecological problems were menstrual disorders such as menorrhagia and dysmenorrhea. Similar results were obtained in studies done by Mathew *et al.* and Mathur *et al.*^[10,13] Urinary tract infections and reproductive tract infections [UTI and RTI] were the most commonly diagnosed gynecological morbidity with prevalence of 14% and 11.6%, respectively. Studies done by Srikala *et al.* and Muthulakshmi *et al.*, the prevalence of UTI was found to be 12.4% and 20.4%, respectively.^[14,15] Abnormal vaginal discharge was found in 13.1% of the study participants and history of RTI was present in 11.6% of study participants. Study done by Mansi *et al.* found the prevalence of RTI to be 8.1%.^[13] This shows that UTI and RTI are more common among married women when compared with other gynecological problems.

Regarding the obstetric details of the study participants, 68% of those who had children delivered by normal delivery, while 32% delivered by cesarean section. A hospital-based study done by Shalini *et al.* found that 48% mothers had normal delivery while 52% had undergone cesarean section.^[16] Similar results were obtained in a study by Priyanka *et al.*^[17] The high cesarean section rate indicates that elective cesarean section was performed along with emergency indications in most of the situations.

The prevalence of exclusive breastfeeding in the present study was found to be 88.9%. Similar results were obtained in a study done by Gopalakrishnan *et al.*^[18] The prevalence was found to be comparatively lower in studies conducted by Chedarla *et al.* (64%) and Umadevi *et al.* (38.8%).^[19,20] This may be attributed to the increased awareness of the study population on the benefits of exclusive breastfeeding.

The prevalence of contraceptive use among the study participants was found to be comparatively high at 78% while studies done by Qazi *et al.* and Thulaseedharan found the prevalence of contraceptive use to be 60% and 57.1%, respectively.^[21,22] Among the study participants, 64.1% of the study participants were found to be overweight/obese while in studies done by Karthik *et al.* and Prasad *et al.*, the prevalence of obesity was found to be 49.8% and 62%, respectively.^[23,24] This higher prevalence of obesity may be attributed to the fact that majority of the study participants (77.1%) were housewives who might be having a

sedentary lifestyle. The high prevalence of obesity among women in reproductive age group increases the risk of developing ovulatory problems, poor compliance to oral contraceptive pills, miscarriage, urinary incontinence, fibroids, and menstrual problems.^[25]

It was found that 62.5% of the study participants preferred government hospitals for their medical treatment. These findings are contradictory to findings in studies done by Abraham *et al.* and Mathew *et al.*^[9,10] This preference may have been due to easy accessibility and availability of government health services in the study area when compared to private hospitals. Pallor, diabetes, and hypertension were the most prevalent co-morbidities among the study population. The high prevalence of menstrual problems among the study participants could have been one among the causes of increased presence of pallor and the participants have to be further evaluated for grading of anemia. Diabetic women are vulnerable to develop urinary tract infections and reproductive tract infections and, hence, early diagnosis and treatment is mandatory to prevent occurrence of associated co-morbidities.

Relevance of this study to the practice of primary health care

This study and its finding are very much relevant to the practicing primary health care physicians and family physicians in our country. Primary health care/family physicians play a major role in the early identification and diagnosis of gynecological problems among women, as they are the first level of contact of patients with the healthcare facilities. It is imperative that all the primary health care/family physicians should be trained and sensitized adequately to provide holistic medical care to all women, so that, most of their reproductive morbidities can be screened for early diagnosis and treated adequately to help them lead a better quality of life.

Conclusion

This study shows the reproductive health status of the study population and their health-seeking behavior with the major finding of high prevalence of gynecological morbidities among them. This necessitates planning and implementing various health education and awareness creation activities along with the existing programs to be directed against the target population. Therefore, women will be empowered to take care of their health problems at an earlier stage. Women's active participation in their health-seeking behavior has to be encouraged further so that proper preventive and curative women-centric services can be provided to improve their overall reproductive health and general well-being.

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Conflicts of interest

There are no conflicts of interest.

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