International Journal of Community Medicine and Public Health
Mavelil SJ et al. Int J Community Med Public Health. 2019 Oct;6(10):4232-4237
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20194215

Original Research Article

Reproductive health status of women in the matrilineal tribes of Meghalaya: a field-based quantitative study

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Received: 27 August 2019
Accepted: 13 September 2019

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ABSTRACT

Background: Reproductive health of the tribal women in India is less studied and the present study attempts to fill the gap by understanding the reproductive health of women in the matrilineal tribes in Meghalaya. The objective of the study was to study the reproductive health status of tribal women.
Methods: A field-based quantitative study was conducted among randomly chosen 900 tribal women in their reproductive age from the 142 villages selected randomly across 15 PHCs functional in five districts. We used a semi-structured validated questionnaire consisting of the socio-demographic profile, reproductive health status, blood pressure and haemoglobin level.
Results: Median age of the 900 respondents was 28.9 years, 83% had primary education and 82% got married between 13-18 years. Over 96% lived with their spouse, and 80% had a monthly income ≤Rs. 5000. Their mean age at menarche was 14.3 years, 10% reported menstrual issues: stomach ache, back pain and vomiting. Though 58% planned their pregnancy, 77% had their first pregnancy before 18 years, and 10.3% of respondents had three deliveries within a four-year period. 76% had poor self-rated health, 83% had abnormal blood pressure and 95% reported anaemia. Out of 81 deaths, 69% were infants and 33.3% did not avail medical service from PHC.
Conclusions: Reproductive health risks, anaemia and abnormal blood pressure were found among women in Garo tribes. Mitigating the ill effects of reproductive health issues through indigenous interventions as part of the NRHM program is needed.

Keywords: Reproductive health, Garo women, Matrilineal tribes, Menstrual issues

INTRODUCTION

Meghalaya is a hilly state in north-eastern India with an estimated population of 3,211,474 as of 2016.[1] It has a predominantly indigenous population belonging to three major tribes: Khasi, Garo and Jaintia with one of the largest matrilineal cultures in the world as their identities are strictly related to maternal lineage.[2,3] Despite living in a matrilineal society, women in Meghalaya has some of the poorest maternal health indices in the country: Meghalaya had the highest unmet contraceptive needs in the country.[4,5] 64 per cent of pregnant women were anaemic, home delivery was 71 per cent of all births, and the maternal mortality rate was 238 per 100,000 deliveries.[6-8] When compared to the national average of 12.8 per cent, 35 per cent of women in their child-bearing years in Meghalaya did not have access to family planning.[6] In India, the health of women, in general, gained less momentum due to diverse factors including conventional traditions, illiteracy, poverty and superstitious beliefs.[9] However, this trend was more apparent in tribal women and the same applied especially to the rural women in Meghalaya. Thus, there is a general agreement that the health status of the tribal women India

is very poor: poor personal hygiene, lack of gender-sensitive sanitary facilities, poor health education and limited healthcare service.[10] While there has been rapid progress in medical sciences and medical services across India and the world, the tribal women in Meghalaya still have limited access to quality medical care and reproductive health services. Further, there is a dearth of information related to the reproductive health status of tribal women in India.[11] Hence, the present study has attempted to assess some aspects of the reproductive health status of women belonging to the matrilineal tribes living in the Garo Hills division of Meghalaya.

METHODS

The present field-based quantitative study was carried out in the Garo Hills division of Meghalaya between the year 2014 to 2017. During the time of this study, there were five districts in the Garo Hills Division. Due to the inadequacy of health facilities to provide integral reproductive health services, significant fractions of women avail services from the traditional healers. However, the national rural health mission (NRHM) was implemented in those districts majorly through the primary health centres (PHCs) and community health centres (CHCs) catering to a population of nearly 1.4 million people. As women from the tribes started availing services from PHCs and so PHCs continue to remain as the reproductive health delivery centres in the tribal areas. In the year 2017, a total of 37 PHCs were functional across five districts in the Garo Hills Division. For the purpose of the present study, a total of 15 PHCs from 37 PHCs were randomly sampled by the then government officials of the respective district. We then wanted to randomly select the villages for the study. The then medical officers or their representatives of 15 PHCs randomly sampled 142 villages. From each village, five respondents were randomly selected by senior staff of the PHC. Hence, a total of 760 respondents were randomly sampled from 142 villages. Besides, 140 Accredited Social Health Activists (ASHAs) worked in those sampled 142 villages were also selected for the study. Thus, a total number of 900 respondents (760 female heads of households and 140 ASHAs) form the sample size of the present study.

Inclusion criteria

Female heads of the households and ASHAs who were residents of the sampled villages, married, in their reproductive age and gave voluntary consent were only included.

Exclusion criteria

Female heads of the households and ASHAs who were non-residents of the sampled villages, unmarried, not in their reproductive age, not present during the field visit, and did not give voluntary consent were excluded.

The approval of the Institutional Ethics Committee was obtained and then permission was sought to conduct the study from all Medical Officers of the 15 PHCs. After receiving the necessary permission, the principal investigator trained the three co-investigators with the postgraduate degree in social work or psychology or public health/ rural development or tribal health and welfare, and auxiliary nurse midwifery (ANM) in the research protocol and the survey tool. All of them comprised the research team who then informed the respondents about the objectives of the study and explained them the details about the interview tool. Informed verbal consent was obtained from each of the respondents who volunteered to participate in this study. To retain confidentiality, the name of the respondent was not mentioned in the data collection tool. Originally, the survey tool was written in English and then we translated into the Garo language which is widely spoken in the Garo Hills Division of Meghalaya. Then it was pilot tested on 60 subjects and then modified with a couple of answer options. Later we back-translated the questionnaire into English and again tested on 60 people to check the validity of the back-translated questionnaire. The Cronbach's alpha of the back-translated questionnaire was 0.89. After collecting the data for the study, we then finalized the revised version of the semi-structured questionnaire consisting of socio-demographic details, the reproductive health status besides details on blood pressure and haemoglobin levels were ascertained.

Statistical analysis

We first entered the collected data into Microsoft Excel and then imported it to SPSS version 20.0 for coding, recoding and analysis of the study data. For the purpose of this article, we used statistical methods like descriptive statistics to interpret data and to arrive at conclusions.

RESULTS

There were a total of 900 women respondents from the randomly selected 142 villages spread across the five districts namely East Garo Hills (13.3%), West Garo Hills (20.7%), South Garo Hills (12.7%), South West Garo Hills (26.7%) and North Garo Hills (26.7%) of Meghalaya where the NRHM program was operational as portrayed in Figure 1.

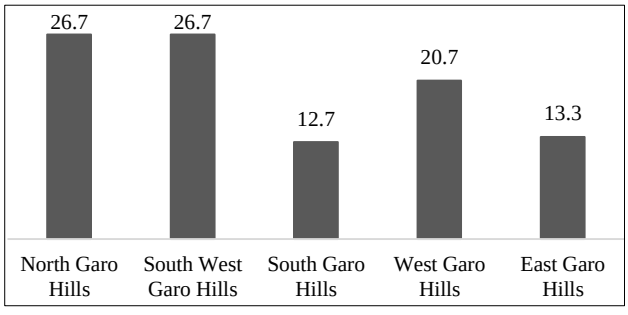

Figure 1: District-wise distribution of the respondents.

The median age of the respondents was 28.9 years affirming the inclusion criteria of this study as all the respondents were in the peak of their reproductive age. As apparent in Table 1, over 96% of the respondents were married and lived with their spouse. Eighty-one per cent of the respondents identified them as Christians. Almost 83% of them had minimum primary education, 65% of them earned their livelihood through farming activities, and a majority (80%) had a monthly income of INR. 5000/ or below.

Table 1: Socio-demographics and economic status of the respondents (n=900).

Variable	Women	
	N	%
Age of respondents (in years)		
17-25	353	39.2
26-35	376	41.8
36 and above	171	19.0
Marital status		
Married and with husband	867	96.3
Widowed	33	3.7
Education level		
Illiterate	156	17.3
Primary school	330	36.7
High school	357	39.7
Higher secondary school	47	5.2
Graduation	10	1.1
Occupation		
Farming & food crops	582	64.7
Monthly salary	94	10.4
Daily wage earner	224	24.9
Monthly income		
Rs. 5000 or below	765	85.0
Rs. 5000-7000	48	5.4
Above Rs. 7000	87	9.6
Religious identity		
Christian	729	81.0
Hindu	65	7.2
Muslim	71	7.9
Traditional Garo religion	35	3.9

Information related to the age at menarche and menstrual problems reported by the respondents is given in Table 2. A vast majority (86.2%) of the respondents reported having had their menarche at the age of 14 and/or 15 years. Almost 81% of the respondents had a regular menstrual cycle. The duration of menstrual bleeding was above five days for 41 (4.6%) respondents. Fourteen per cent of the respondents' period of the menstrual cycle was 46 days. Nearly 66% of tribal women used the pad as sanitary napkins during menstruation. In our study, 89 (10%) respondents reported menstrual issues and out of which 72 women (81%) suffered from menstrual issues like stomach ache, back pain and vomiting.

Table 2: Menstrual history of the respondents (n=900).

Variable	Women	
	N	%
Age at menarche (in years)		
12-13	89	9.9
14-15	776	86.2
>15	35	3.9
Regularity of menstrual cycle		
Regular	727	80.8
Irregular	173	19.2
Duration of menstrual bleeding		
3 days	235	26.1
4-5 days	624	69.3
> 5 days	41	4.6
Period of menstrual cycle		
28 days	761	84.6
46 days	126	14.0
58 days	13	1.4
Type of material used during menstruation		
Cloth	309	34.3
Pad	591	65.7
Occurrence of menstrual issues		
Yes	89	9.9
No	811	90.1
Type of menstrual issues (n=89)		
Stomach ache	21	23.6
Backpain	36	40.4
Vomiting	15	16.9
Other issues	17	19.1

Table 3: Age at marriage and pregnancy details of the respondents (n=900).

Variable	Women	
	N	%
Age at marriage (in years)		
13-18	735	81.7
19-24	165	18.3
Type of marriage		
Arranged by family	106	11.8
Self-selected	779	86.6
Arranged by the clan	15	1.7
Planned pregnancy		
Yes	521	57.9
No	379	42.1
Age at first conception (in years)		
<18	689	76.6
19-24	162	18.0
>24	49	5.4
Number of births between 2014-2017		
One	307	34.1
Two	233	25.9
Three	93	10.3
Abortion or still birth	267	29.7

Among our study participants, 81.7% of the women in the matrilineal tribes of Meghalaya got married while they were in the age group of 13-18 years. Nearly 87% of them chose their own partner for their marriage, and the family members selected the groom for 12% of the respondents. Fifty-eight per cent of the respondents in our study stated that they have planned their pregnancy. A majority (77%) of the respondents had their first pregnancy before they were 18 years old. Ninety-three (10.3%) respondents had three deliveries between a four-year period from 2014 to 2017 (Table 3).

Table 4: Health status of the respondents and frequency of death in their family (n=900).

Variable	Women	
	N	%
Self-rated health		
Poor	685	76.1
Moderate	174	19.3
Good	41	4.6
Blood pressure		
Normal	151	16.8
Below normal	513	57.0
Above normal	236	26.2
Haemoglobin level		
Normal (>12)	42	4.7
Mild anaemia (10-11)	218	24.2
Moderate anaemia (7-9)	600	66.7
Severe anaemia (<7)	40	4.4
Death occurred in the family between 2014-2017		
Yes	81	9.0
No	819	91.0
Age group of the deceased (n=81) (year)		
<1	56	69.1
1-5	5	6.2
>5	20	24.7
Sex of the deceased (n=81)		
Female	37	45.7
Male	44	54.3
Cause of death (n=81)		
Peri, neo and postnatal complications	34	42.0
Communicable diseases	2	2.5
Non-communicable diseases	45	55.5
Health services availed from PHC (n=81)		
Yes	54	66.7
No	27	33.3

In the present study, 76% of the respondents self-rated their health as poor. While normal blood pressure was recorded only for 16.8% of the respondents, others had their blood pressure either above or below the normal range. Regarding the haemoglobin level of the respondents, mild, moderate and severe anaemia were reported by 24.2%, 66.7%, and 4.4% of the respondents respectively. Eighty-one respondents reported at least one death of a family member between the years 2014-2017. Out of the 81 (44 male and 37 female) reported deaths in the mentioned period, 56 (69%) of them were below the age of one when they died; and 34 (42%) of the respondents cited peri and postnatal complications as the causes of death of their infants. Wherein, 45 (55.5%) respondents reported non-communicable disease as a cause for the death of their family member/s. Though the family member was ill, 27 (33.3%) out of the 81 respondents did not avail medical service from the PHC (Table 4).

DISCUSSION

Studying the reproductive health of the women from the matrilineal tribes is vital as their reproductive years are of central importance to their lives.[12] Besides, their role in reproductive health is affected by and could influence their status and empowerment as individuals of their respective community.[13] A number of studies have been carried out to understand the reproductive health status of the tribal women in India.[14,15] Empirical evidence from the numerous studies conducted across communities emphasized the fact that the reproductive health status and issues of women in India are different. As India being a very diverse nation with multiple ethnicities and languages, it is essential to capture the specific information related to the reproductive health status of women hailing from various tribes.

There is a dearth of community-based studies which tried to address the issues of reproductive health pertaining to tribal women.[16] To our knowledge, this is the first of its kind field-based quantitative study carried out in the state of Meghalaya to know the reproductive health of the women belonging to the matrilineal tribes. In the present study, 28.9 years was the median age of the 900 respondents denoting that they were in their reproductive age. Above 96% of the respondents lived with their spouse. In general, illiteracy is considered as one of the major contributors to reproductive health problems. Educational qualification may affect reproductive health in numerous ways.[11] It may enhance the ability of a woman to exercise control over the sexual relationship, expose a woman to time-tested reproductive health methods, age at marriage, pregnancy preferences and family planning. Women with reasonable educational qualification may have comparatively more access to better reproductive health sources than women who are less qualified.[17] The literacy level of the spouse and the economic status of the family were also found to be equally contributing to several reproductive health problems.[11] In the present study, a majority (76.3%) completed primary and high school education, and 80% belonged to the low socio-economic status which may precipitate menstrual issues, irregularity of the menstrual cycle, abortions and or stillbirths. However, associations and predictions of factors leading to reproductive health problems were out of the scope of this article.

Menarche is the onset of menstruation in girls and it generally occurs approximately 2.5 years after the larche. The mean age of its onset is 12.6 years but with some variation depending on the ethnicity.[18] However, various estimates have placed it at 13 years. Thus, the worldwide average age of menarche is very difficult to estimate accurately, and it varies significantly by geographical region, race, ethnicity and other characteristics.[19] Over the last century, the mean age of menarche has declined but the extent of the decline and the factors responsible for it are still debatable. Nevertheless, it is generally stated that the age at menarche is influenced by both biological and environmental factors.[20] In their study, Geetha et al reported 12.98 years as the mean age at menarche of Sugali women of the Rayalaseema region in Andhra Pradesh.[11] Kapoor and Kapoor reported 15.4, 15.6 and 16.0 years as the mean age at menarche for the Johari Bhotias women, Rang Bhotias (settled) and Rang Bhotias (migratory) respectively.[21] In the present study, the mean age at menarche was 14.3 years which is closer to the results mentioned above. Bhardwaj and Tungdim observed 11.7 years among in scheduled caste women and 11.8 years in scheduled tribe women as mean age of menarche. (14) Thus, the mean age of menarche in the present study participants is closer to that of the Bhotia women of the Himalayan region and it is higher than that of women belonged to scheduled caste and tribe in Rajasthan and Punjabi Aroras.[22] In our study, the majority (81%) of the respondents had a regular menstrual cycle and about 66% of them used the pad as sanitary napkins, and 10% reported menstrual issues like stomach ache, back pain and vomiting. These results seem to corroborate with the other study results carried out in India.[11]

Age at marriage also determines the reproductive span of the women and it also influences population growth. Almost 82% of women in our study got married when they were 13-18 years. Apparently, 87% of them selected their own life partner, and 58% of the respondents planned their pregnancy. These results remain specific to our study. As reported in other studies, a majority (77%) of the present study respondents had their first pregnancy before they attained 18 years.[11,14,21,22] Between the years of 2014-2017, 30% of the respondents had either abortion or stillbirth posing a challenge for the successful implementation National Health Mission in the hard to reach tribal belts.

In our study, 76% of the respondents stated that their health was poor. Self-rated individual health status is a valid indicator of the health status of a community. The reported percentage of women with poor health is two times greater than the results reported in another study.[11] Further, 17% of women recorded normal blood pressure and 95.3% were found to have mild to severe anaemia. This major finding has grave implications for the health of tribal women. Among the deceased between the years, 2014-2017, 69% of them were neonates who died due to perinatal, neonatal and postnatal complications; and 33.3% of respondents did not avail medical service from the PHC though the family member was severely ill. Lack of access to medical treatment, poor living standards and poor self-rated health may lead to the higher prevalence of the reproductive health issues including menstrual problems, irregular menstrual cycle, abortions and stillbirths. A future study could focus on the role of sociocultural factors in escalating reproductive health issues.

Though a multistage random sampling was used in this study, the quantitative nature of the study with a sample drawn only from Garo Hills Division of Meghalaya may limit the generalizability of results. However, reproductive health of tribal women in Meghalaya is seldom studied despite the far-reaching NHM programme across India. Besides, the literature on the reproductive health of tribal women is scant. The present study findings portray a vivid reproductive health status of women belonging to the matrilineal tribes and also set a baseline for future multi-centric research. Thus, we strongly recommend the need for appropriate policy measures to improve the socioeconomic status of the women in the matrilineal tribes in Meghalaya. Concentrated efforts are needed to raise enrolment and attendance rates of girls in schools and colleges, to enhance women's income, autonomy to rheostat sexual relationship, plan pregnancy and childbearing. These are fundamental in the pursuit of improving the health of women in India.

CONCLUSION

Women in the matrilineal tribes of Meghalaya were subjected to substantial reproductive health risks besides moderate to severe anaemia and significantly fluctuating blood pressure. These results substantiate their poor self-rated health. In conclusion, one can infer that the tribal women in the Garo Hills Division of Meghalaya had prevalence of anaemia, clinically abnormal blood pressure and they had a higher risk of reproductive health problems. It is imperative to know their health status to develop necessary interventions as part of the NHM programme to mitigate the ill effects of reproductive health issues.

ACKNOWLEDGEMENTS

We thank the then-District Collectors, Medical Officers, ASHAs and the women heads of the family who participated in this study. We are grateful to Thaddeus Alfonso, a freelance researcher for his analytical inputs and valuable comments on the previous version of the manuscript.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Mavelil SJ, Srivastava SC. Reproductive health status of women in the matrilineal tribes of Meghalaya: a field-based quantitative study. Int J Community Med Public Health 2019;6:4232-7.