

Reproductive Health Status of Sugali Tribal Women: A Field Based Study

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ABSTRACT The present study aimed at assessing the reproductive health status of Sugali women of the Rayalaseema region in Andhra Pradesh. About 200 women in the age range of 15-45 years were interviewed regarding age at menarche, age at marriage, age at first conception, menstrual problems, fertility and mortality levels, prevalence of diseases and women's perception towards health in a cross-sectional design. Illiteracy was documented to an extent of sixty-five percent. Thirty-six percent of the subjects opined that their self-reported health was fair or poor. Illiterate women were 1.27 times at risk of developing menstrual irregularity than educated women. Simultaneously, the risk increased to 1.85 times when the spouse was illiterate too. Similar results were obtained with menstrual problems and abortions. In conclusion, it is inferred that Sugali women are subjected to significant reproductive health risks mediated by socio-economic conditions.

INTRODUCTION

Reproductive health care is defined as the constellation of methods, techniques and attitudes that contribute to reproductive health and wellbeing by preventing and solving reproductive health problems (Khan et al. 2009). Reproductive health covers diseases and conditions that affect the female reproductive system, including symptoms, diagnosis, treatment, and prevention of women's reproductive health issues (Bhardwaj and Tungdim 2010). The women's health status is affected by complex biological, social, economic and demographic factors such as their social position, economic affluence, age at marriage, and caste-based tradition (Rogers et al. 2010). In the context of India, due to conservative traditions, illiteracy, poverty and superstitious beliefs, women health was given less priority (Nair et al. 2011). In general, this trend was more virulent among tribal population groups. There is a general agreement that the health status of the tribal population in India is very poor, deficient in sanitary conditions, per-

sonal hygiene and health education (Agrawal 2013). On the other hand, the information available on the reproductive health status of the tribal women in India is scanty. In the light of this background, an attempt has been made in the present study to assess the reproductive health status of Sugali Women in the Rayalaseema region of Andhra Pradesh.

MATERIAL AND METHODS

The sample selected for the present study comprised of 200 Sugali married women in the age range of 15-45 years drawn from two *mandals* in the Kadapa district and two *mandals* in the Chittoor district based on the size of the population. The design of the study was cross-sectional. A house-to-house survey was carried out to recruit the sample. The inclusion criteria were apparently healthy women in the age range of 15-45 years who were willing to provide written informed consent. The exclusion criteria were women with any gross abnormality.

Structured interview schedules were administered after validating through a pilot study. Information on age, education, occupation, income, type of family, husband education, self-rated health and health problems prevailed in the family and individual, age at menarche, menstrual problems like (regularity of cycle, duration of period and stomach pain and back pain and vomiting), material used during menstrua-

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tion, age at first pregnancy of women, and total number of live births, still births, abortions (either spontaneous abortions or induced abortions) were procured.

The data was coded in the computer to carryout a statistical analysis. The data was presented in frequencies for various confounding variables. The effect of self-rated health and socioeconomic measures on the regularity of the cycle, menstrual problems and abortions were analyzed by using the odds ratios through the multinomial logistic regression model. The variables considered in the model were education and occupation of the wife and husband, income of the family and self-rated health of the subject.

RESULTS

The sample considered for the present study represents 200 reproductive women in the age range of 15 to 45 years. Data on demographic and socioeconomic conditions of the sample was shown in Table 1. In the present sample, 23.5 percent of the subjects fall in the age range of 15-25 years, 38.5 percent in 26-35 years age group and thirty-eight percent in the 36-45 years age

Table 1: Demographic and socioeconomic conditions of the study sample

Variable	Females (N=200)	
	n	%
<i>Age of the Subject</i>		
15-25	47	23.5
26-35	77	38.5
36-45	78	38
<i>Type of Family</i>		
Joint family	6	3.0
Nuclear family	194	97.0
<i>Educational Level Of Subject</i>		
No formal education	130	65.0
Formal education	70	35.0
<i>Occupation of the Subject</i>		
Agriculture	40	20.0
Labor	94	47.0
House wives	66	33.0
<i>Educational Level Of Husband</i>		
No formal education	167	83.5
Formal education	33	16.5
<i>Occupation Of Husband</i>		
Agriculture	65	32.5
Labor	88	44.0
Others	47	23.5
<i>Family Income in INR</i>		
<30000	163	81.5
>30000	37	18.5

group. Nuclear families were predominant (97%). Illiteracy was documented to an extent of sixty-five percent, whereas in spouses it was eighty-four percent. Most of the subjects' occupation was coolie (47%), followed by housewife (33%) and agricultural activities (20%). Eighty-two percent of the subjects' income falls in the category of INR <30,000 per year.

The health status of the study sample was shown in Table 2. In the present sample, sixty-four percent of the subjects opined that their self-reported health was good. Perennial health problems were noticed to an extent of two percent. During the last twelve months, twenty-two percent of the women suffered from different health problems like joint pains, fever and headache. The prevalence of communicable diseases was ten percent and non-communicable diseases were twelve percent in the family.

Table 2: Health status of the study subjects

Variable	Females (N=200)	
	n	%
<i>Self Rated Health</i>		
Good	128	64.0
Fair	46	23.0
Poor	26	13.0
<i>Perennial Health Problems</i>		
Yes	4	2.0
No	196	98.0
<i>Health Problems During The Last One Year</i>		
Yes	43	21.5
No	157	78.5
If yes		
Joint pains	32	16.0
Fever	3	1.5
Head ache	8	4
<i>Health Problems Prevalied in the Family</i>		
Communicable diseases	19	9.5
Non-communicable diseases	24	12
<i>Communicable Disease</i>		
Malaria	11	5.5
Typhoid	8	4.0
<i>Non- communicable Disease</i>		
Blood pressure	18	9.0
Diabetes	6	4.0

Information on the age at menarche and menstrual problems was shown in Table 3. Ninety percent of the sample attained menarche in the age range of 14-15 years. Eighty percent of the subjects opined that they were experiencing regularity of the cycle. Sixteen percent of the subjects' period of menstruation was 46 days. Above 58 days as the period of menstruation was noticed in four percent of the sample. The

duration of menstruation above 5 days was noticed in eleven percent of the sample. About six percent of the women were suffering from different menstrual problems like stomach pain, back pain and vomiting. In the study sample, more than fifty-nine percent of the women were using cloth as sanitary napkins during menstruation.

Table 3: Age at menarche and menstrual problems prevailed in the study sample

Variable	Females (N=200)	
	n	%
<i>Age at Menarche</i>		
12-13 years	14	7.0
14-15 years	178	89.0
>15 years	8	4.0
<i>Regularity of Cycle</i>		
Yes	162	81.0
No	38	19.0
<i>Period of Menstruation</i>		
28 days	162	81.0
46 days	31	15.5
58 days	7	3.5
<i>Duration</i>		
3 days	51	25.5
4-5 days	128	64.0
>5 days	21	10.5
<i>Menstrual Problems</i>		
Yes	12	6.0
no	188	94.0
<i>Type of Problem</i>		
Stomach ache	2	1.0
Back pain and vomiting	10	5.0
<i>Material Use During Menstruation</i>		
Cloth	117	58.5
Pad	83	41.5

The age at marriage and details of the pregnancy were shown in Table 4. Seventy-six percent of the women got married while they were in the age range of 16-20 years. Non-consanguineous marriages were predominant (79.5%). More than sixty-five percent of the women attained first pregnancy before they were 23 years old. Information on number of births during the lifetime was as follows: one child eleven percent, two children thirty-nine percent, three children thirty-two percent, four children seventeen percent, and five and above two percent. The percentage of live births was: one child for ten percent of the sample, two children for thirty-seven percent, three children for thirty-one percent, four children for fifteen percent, and five and above 1.5 percent respectively. The prevalence of stillbirths were 6.5 percent. Abortions were around thirteen percent. About four per-

cent of the sample was subjected to bleeding complications after abortions.

Table 4: Age at marriage and pregnancy details of the study sample

Variable	Females (N=200)	
	n	%
<i>Age at Marriage</i>		
13-15 years	30	15.0
16-20 years	151	75.5
21-25 years	19	9.5
<i>Type of Marriage</i>		
Consanguineous	41	20.5
Non- Consanguineous	159	79.5
<i>Age at First Conception</i>		
<20 years	25	12.5
20-23 years	105	52.5
>24 years	70	35.0
<i>Total Number of Conceptions During Life Time</i>		
1	21	10.5
2	78	39.0
3	64	32.0
4	33	16.5
> 5	4	2.0
<i>Number of Live Births</i>		
1	20	10.0
2	74	37.0
3	62	31.0
4	29	14.5
> 5	3	1.5
<i>Pregnancy Wastage</i>		
Still births	13	6.5
Abortions	26	13.0
<i>Other Complication After Abortion</i>		
Yes	7	3.5
No	193	
Bleeding	7	3.5

Odds ratio for irregularity of the cycle based on socioeconomic conditions was shown in Table 5. Illiterate women were 1.27 times at risk towards menstrual irregularity. The risk in irregularity of the cycle increased to 1.85 times (95% CI: 0.610-5.630) when the spouse was illiterate as well. The irregularity of the cycle increased the risk when both the wife and husband's occupation were agriculture. Subjects with income less than INR 30,000 were 1.26 times (95% CI: 0.485-3.282) at risk in developing irregularity of the cycle. A poor self-rated health increased the risk of menstrual irregularity by 5 times.

Odds ratio for menstrual problems based on socioeconomic conditions was shown in Table 6. Illiterate women were 1.35 times at risk at developing menstrual problems. The risk increased to 2.26 times when the spouse happened to be illiterate too. Subjects involved in labor activi-

Table 5: Odds ratio and 95% CI for irregularity of the cycle

S. No.	Variable	OR	95% CI
1	<i>Educational Level of the Subject</i>		
	No formal education	1.269	0.613-2.626
	Formal education	1.0	
2	<i>Educational Level of the Husband</i>		
	No formal education	1.853	0.610-5.630
	Formal education	1.0	
3	<i>Occupation of the Subject</i>		
	House wife	1.0	
	Agriculture	1.50	0.580-3.881
	Labor	0.923	0.405-2.106
4	<i>Occupation of the Husband</i>		
	Others	1.0	
	Agriculture	1.110	0.449-2.747
	Labor	0.641	0.257-1.599
5	<i>Income of the Family in INR</i>		
	<30,000	1.262	0.485-3.282
	>30,000	1.0	
6	<i>Self-rated Health of the Subject</i>		
	Good	1.0	
	Fair	1.370	0.415-4.519
	Poor	5.301	2.390-11.758

ties were almost 3 times at risk to menstrual problems when compared to other occupations. An income of less than INR 3000 per year and poor self-rated health also increased the risk for menstrual problems.

Table 6: Odds ratio and 95% CI for menstrual problems

S. No.	Variable	OR	95% CI
1	<i>Educational Level of the Subject</i>		
	With no formal education	1.352	0.413-4.427
	With formal education	1.0	
2	<i>Educational Level of the Husband</i>		
	With no formal education	2.256	0.281-18.100
	With formal education	1.0	
3	<i>Occupation of the Subject</i>		
	House wife	1.0	
	Agriculture	1.233	0.291-5.233
	Labor	3.033	0.730-12.596
4	<i>Occupation of the Husband</i>		
	Others	1.0	
	Agriculture	1.116	0.283-4.401
	Labor	2.636	0.564-12.309
5	<i>Income of the Family in INR</i>		
	<30,000	1.144	0.240-5.454
	>30,000	1.0	
6	<i>Self-rated Health of the Subject</i>		
	Good	1.0	
	Fair	1.194	0.186-7.654
	Poor	1.440	0.282-7.362

Odds ratio for abortions based on socioeconomic conditions were shown in Table 7. Abortions increased by 1.02 to 1.24 times when both wife and husband were illiterate. Similarly the risk was 1.2 to 1.7 times higher when both wife and husband were involved in labor activities. An elevation in abortions was noticed among the income group with less than INR 30,000 per year. Subjects with poor self-rated health were 1.50 times (0.282-7.362) at risk towards abortions.

Table 7: Odds ratio and 95% CI for abortions

S. No.	Variable	OR	95% CI
1	<i>Educational Level of the Subject</i>		
	With no formal education	1.020	0.429-2.424
	With formal education	1.0	
2	<i>Educational Status of the Husband</i>		
	With no formal education	1.241	0.432-3.568
	With formal education	1.0	
3	<i>Occupation of the Subject</i>		
	House wife	1.0	
	Agriculture	1.036	0.314-3.416
	Labor	1.164	0.453-2.988
4	<i>Occupation of the Husband</i>		
	Others	1.0	
	Agriculture	0.854	0.244-2.986
	Labor	1.726	0.586-5.087
5	<i>Income of the Family in INR</i>		
	<30,000	1.057	0.370-3.013
	>30,000	1.0	
6	<i>Self-rated Health of the Subject</i>		
	Good	1.0	
	Fair	0.348	0.414-5.471
	Poor	1.505	0.282-7.362

DISCUSSION

Understanding the reproductive health is essential not only in the interest of the family but also in the interest of the community and nation. Numerous studies have been carried out to understand the reproductive health status of the women (Aggarwal et al. 2007; Bhardwaj and Tungdim 2010). Prospective studies carried out in different communities have clearly mentioned that the reproductive health problems of women are not uniform. India, being multiethnic and multilingual, finds the need to capture the information from different population segments on reproductive health status.

Very few community-based studies have tried to address the issue of reproductive health and contributing factors (Misra et al. 2013). In the present study, illiteracy is one of the significant factor in the elevation of reproductive health

problems. Education may affect in multiple ways: it may expose women to modern ideas about reproductive health methods and family-size limitation, and enhance their ability to exercise control over their sexual relationships and childbearing preferences. Women, with more schooling, may be more comfortable interacting with medical personnel and may have better access to sources of modern birth control than women who have little education (Burgard 2004). In the present study, illiteracy among the spouses is also equally contributing towards several reproductive health problems as reflected by odds ratios. In the present sample, a low economic status leads to precipitation of menstrual problems, irregularity of the cycle and abortions.

Self-rated health is a valid indicator to assess the health status of a community. Though the Sugali population is under socioeconomic transition, still thirty-six percent of the people expressed that their self-rated health is fair or poor. Lack of access over medical treatment and low living standards may lead to the prevalence of the menstrual problems. Poor self-rated health accounts to 1.5 to 5 times higher risk in irregularity of the cycle, menstrual problems and abortions. The results clearly indicate that sociocultural factors are playing a major role for observed escalation in menstrual problems.

Age at menarche is influenced by both biological and environmental factors (Ray et al. 2010). The mean age at menarche varies from population to population between 12 to 14 years. Kapoor and Kapoor (1986) reported that the mean age at menarche was 15.4 years for the Johari Bhotias women, Rang Bhotias (settled) 15.6 years and Rang Bhotias (migratory) 16.0 years. Bhardwaj and Tungdim (2010) observed a mean age of 11.7 years in scheduled caste women and 11.8 in scheduled tribe women. The mean age at menarche in the present sample is 12.98 yrs. Thus the mean age of menarche is lesser than Bhotia women of Himalayan region and higher than scheduled caste and tribal women of Rajasthan and Punjabi Aroras (Khanna and Kapoor 2004). The age at marriage is an important factor for influencing population growth and it helps in determining the reproductive span of the women. The major limitation of the study is lack of a comparative group. Further data on body mass index will have greater advantage to correlate the results with nutritional status.

CONCLUSION

In conclusion, it can be inferred that Sugali tribal women were subjected to significant reproductive health risks mediated by socioeconomic conditions.

RECOMMENDATIONS

Policy measures are needed to improve the socioeconomic and sanitation facilities of the Sugali women. Efforts to improve women's education, raise enrollment and attendance rates of girls in school and reduce the dropout rate on the one hand, and enhance women's income autonomy on the other, are fundamental in the long run for improvements in women's health.

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