Reproductive Health Status of Rural Unmarried Girls in Chengalpattu District, Tamil Nadu

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Abstract

The research primarily assesses the reproductive health status of poor unmarried girls in rural Tamil Nadu. The study covered 25 villages which comes under 12 panchayat villages in Thirukazhukundrum block of Chengalpattu District. There were 1062 unmarried girls who attained menarche in the villages. Almost all except 48 girls were Hindus. About 46% were SC/STs and another 40% belonged to most backward castes. The mean and median ages of the girls' were 18.59 and 18 years respectively. In terms of body mass index, nearly about three fifths of the participants had normal and healthy weight. The prevalence of underweight was 30%. The prevalence of reproductive morbidity was 27% during the reference period of three months prior to the date of survey. While looking into the nature of the morbidities reported we observed that menstrual problems were highly mentioned. The results of multivariate regression analysis indicates that while comparing with those aged over 25 years, adolescent girls were 3.3 times higher chances of having reproductive illness. Similarly the odds of having reproductive illness amplified with increasing body weight, as compared those having low BMI; girls who are obese were 1.27 times more likely to have reproductive illness. Based on the findings it is concluded that imparting knowledge about reproductive physiology and fitness, personal hygiene would empower young girls and make them free from reproductive morbidity.

Keywords: Body Mass Index, Dysmenorrhea, Household Standard of Living, Reproductive Morbidity

1. 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 deals with the reproductive processes, functions and system at all stages of life (World Health Organisation) and UN–POPIN). But, there are so many social, cultural, religious and individual factors which affect the health status women, especially adolescents and unmarried youth in developing countries including India. There are so many taboos in talking about reproductive health issues of women as a result the awareness and knowledge about reproductive health is very limited. Patriarchal norms and gender disparities also significantly affect women's reproductive health and care seeking behaviour.

Various community based studies in India shows the prevalence of reproductive morbidity among women ranges between 39–84 [3,4]. A community based study from rural Tamil Nadu found that prevalence of reproductive morbidity among adolescent girls was 82% [1]. A recent study from Maharashtra reported that 65.18% of girls were having one or more reproductive morbidity. The same study found a high prevalence of dysmenorrhoea (53.60%) among adolescent girls [5]. Another research from Goa indicated that the prevalence of reproductive morbidity is positively correlated with educational level and household economic status [6]. Many studies in India reported that private health facilities are predominantly used for reproductive health care services [2].

2. Objectives and Data

The study was undertaken with an objective of assessing the prevalence of reproductive morbidity among unmarried girls in rural areas and care seeking behaviour for the illness.

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Thus, what are the main determinants of reproductive morbidity among unmarried girls in rural areas was the main research question for the study.

The data for the study was drawn from Rural Women's Social education Centre – (RUWSEC's) household health survey which was conducted in the year 2012. A structured survey tool was used to gather information on the socio–economic characteristics and reproductive health status of girls. Data were collected using interviewer–administered questionnaire by visiting the household of each participant between November–December 2012. Six female filed investigators who have more than 5 years' experience in community based surveys were involved in the data collection work

The study covered 25 villages which comes under 12 panchayat villages in Thirukazhukundrum administrative block of Chengalpattu District in Tamil Nadu. There were 4662 households in these villages; covering a population of 20, 556. (10273 males and 10283 females).

3. Variables Used

3.1 Dependent Variable

Prevalence of reproductive morbidity; proportion of girls who report any morbidity related to their reproductive system and it functions at any time during the reference period of three months prior to the date of survey.

3.2 Independent variables

1. Religion: 1. Hindu 2. Non–Hindus, 2. Caste: 1. Scheduled caste/Scheduled tribes, 2. Most backward class 3. Others. (Predominantly Backward caste). 3. Education: 1. <= 5 years of Schooling, 2. 6–12 years of Schooling 3. Diploma and Degree. 4. Occupation: 1) Studying, 2) Employed outside home, 3) Household work and unemployed. 5. Land Owning Status: 1. Land owned 2. Land Less. 6. Household Standard of Living Index: It is considered as a proxy for economic class which included ownership of a wide range of durable goods, house property cultivatable land and livestock. Scores were given to each of these attributes using same scoring pattern in National family health Survey–NFHS–2 1998–99 and observations classified as 1. Low 2. Medium 3. High. 7. Toilet Facilities in the houses: 1. Available, 2. Not available. 8. Age: Age in completed years 1. 10–19 years, 2. 20–24 years, 3. 25 and above years. 9. Age at menarche; <=13 years 14–15 years 16 and above years. 10. Body Mass Index. It is a health status indicator which shows a person has healthy

weight/body mass according to his or her height. It is calculated by simple procedure using the information about person's height and weight as follows; BMI = weight (in kilograms)/ height (in meters) [2]. On the basis of BMI value the participants were categorised as: 1. Underweight –<18.5, 2. Healthy weight – between 18.5 and 24.9, 3. Overweight – between 25 and 29.9, 4. Obese – Above 30.

The data was analysed using SPSS version 17. The analysis was done at two levels. Firstly, the prevalence of reproductive morbidity was analysed with the background characteristics of the participants through cross–tabular analysis and the associations have been tested with the chi–square test of significance. At the second stage, the determinants of reproductive morbidity were assessed using logistic regression analysis.

4. Profile of the Study Population

There were 1062 unmarried girls who attained menarche in the sample villages and they formed the sample for the study. An overwhelming majority of the girls (95.5%) were Hindus and only 48 girls belonged to non–Hindus. By caste, nearly half of the girls (45.6%) belonged to socially and economically marginalised caste groups of Scheduled Caste and Scheduled Tribes (predominantly SC), followed by another 39% were Most Backward Castes and the rest were Backward Caste girls.

Every second girl in the study reported that they were studying in school or colleges, thirty engaged in economic activities; predominantly industrial workers, these girls were mainly working in garments, leather and other factories. Another 20% reported they were unemployed and engaged in household work. As expected, among the adolescents an overwhelming majority of 82% were in educational institutions whereas those aged over 25 years, only 7% were studying, 33% working in companies and the remaining 66% were unemployed.

Table 1. Background characteristics of the study participants

Religion	Total N	Percent
Hindu	1014	95.5
Muslim	30	2.8
Christian	18	1.7
Caste		
SC/ST	484	45.6
MBC	413	38.9
Others	165	15.5

Religion	Total N	Percent
Education		
<= 5 years of schooling	58	5.46
6–12 years of schooling	743	69.96
Above school education	261	24.58
Family Type		
Nuclear	823	77.5
Joint	239	22.5
Working Status		
Currently Studying	522	49.15
Working outside home	315	29.66
Unemployed and household work	225	21.19
Land Owning status		
Land less	648	61.0
Land owned	414	39.0
Household Standard of Living		
Low	353	33.2
Medium	411	38.7
High	298	28.1
Toilet Facilities in the houses		
Had	215	20.2
Not had	847	79.8
Age		
10–19 years	708	66.7
20–24	288	27.1
25 and above years	66	6.2
Age at menarche		
<=13 years	511	48.1
14–15	487	45.9
16 and above years	64	6.0
Total	1062	100.0
Body Mass Index – BMI		
Low BMI – < 18.5	309	29.7
Normal – 18.5–24.9	595	57.2
High – 25 and above	137	13.2
Total	**1041**	**100**

A little over three fifths were from landless households and a large majority (77.5%) were in nuclear family. Further, household economic status is measured through the household standard of living index. According to the SLI, about two fifths of the girls (39%) were in the medium standard of living index households and another one third fell in the low economic class. An overwhelming majorly of the girls lived in their own houses however, toilet facilities rarely existed; only 20% had toilet facilities and the others used open defecation.

Age is an important demographic variable and it has wider effects on women's sexual and reproductive health. About two thirds of the study participants were in adolescence (aged between 10–19 years) and 27% were in the 20–24 years age groups; only 6% were aged over 25 years. The mean and median ages of the participants' were 18.59 and 18 years respectively.

Age at menarche which is popularly called as age at puberty has significantly declined over the years. Another 45% matured at the age 14–15 years. Only 6% reported 16 or above. The mean and median age at puberty of the girls was 13.6 and 14 years respectively.

In the study, about three fifths of girls (57.2%) had normal and healthy weight. The prevalence of underweight was 30%. Interestingly, only 13% of the girls in the study were obese or overweight which was noticeably low as compared with the NFHS 2015–16 results of Tamil Nadu (30%).

5. Nature of the Reproductive Morbidity Reported

Of the 1062 girls, about 27% had reported having one or more reproductive health problems during the reference period of three months prior to the data of survey. That is the prevalence of self–reported reproductive morbidity among the young girls was 27 which is significantly low as compared with other studies. It is noticed in the field that many girls believed that reproductive health problems are not an illness to be reported. These are all natural process and will get cure itself. There is a common belief among villagers that certain reproductive health problems will get cured after marriage or when the age increases on its own through the natural process. So, many rural girls perceive it is a health problem needs medical attention.

While looking into the nature of the morbidities reported we observed that menstrual problems were highly mentioned. About 46% of girls had painful periods which are popularly called menstrual cramps or dysmenorrhoea. Another 27% had problems related to menstrual cycles and excessive or scanty bleeding. Next to that, one out of five girls had white discharge problem which is a symptom of reproductive tract infection. The remaining 5% reported having other reproductive morbidities which included urinary tract infections, itches and irritation in the genital region and polycystic ovarian diseases. Overall, the 283 girls reported 313 morbidities; that is one tenth had more than one illness, thus the mean reproductive morbidity per girl was 1.2.

While we were cross classifying, it was noted that the nature of the morbidity by age, as universal we observed that dysmenorrhoea and white discharge problems were more common among adolescent girls than the others.

6. Correlates of Reproductive Morbidity

As we noticed from the Table 2 that religion appears to be an important factor for reproductive morbidity, the prevalence of reproductive was significantly higher among non–Hindus (48%) than the Hindus (26%). Likewise the prevalence was slightly higher among SC/STs and other castes than those belonged to MBC. However this association was not statistically significant. It seems there is a positive association between households' economic status and morbidity rate. But bivariate analysis indicates the association was statistically very weak. The prevalence was low among those studied above school education and not working outside home. However, this was also not statistically significant.

Table 2. Prevalence of reproductive morbidity among girls by their socio–economic and demographic characteristics

	Prevalence	Total N
Religion**		
Hindu	257 (25.9%)	993
Others	23 (47.9%)	48
Caste		
SC/ST	137 (28.3%)	484
MBC	99 (24.0%)	413
Others	47 (28.5%)	165
Education		
<= 5 years of schooling	16 (27.6%)	58
6–12 years of schooling	207 (27.9%)	743
Diploma and degree	60 (23%)	261
Current working status		
Studying	142 (27.2%)	522
Working outside home	89 (28.35)	315
Unemployed and Household work	52 (23.1%)	225
Landowning Status		
Land less	176 (27.2%)	648
Land owned	107 (25.8%)	414
Household Standard of living		
Low	93 (26.3%)	353
Medium	113 (27.5%)	411
High	77 (25.8%)	298

	Prevalence	Total N
Toilet Facility in the Houses		
Yes	57 (26.5%)	215
No	226 (26.7%)	847
Age Group**		
10–19 years	208 (29.4%)	708
20–24	68 (23.6%)	288
25 and above years	7 (10.6%)	66
Age at menarche		
<=13 years	142 (27.8%)	511
14–15	122 (25.1%)	487
16 and above years	19 (29.7%)	64
Total	283 (26.6%)	1062
Body Mass Index*		
Low BMI – < 18.5	93 (30.01%)	309
Normal – 18.5–24.9	140 (23.53%)	595
High–25 and above	47 (34.30%)	137
Total	280 (26.89%	1041@

@ 21 Girls either height or weight was not available hence the total is 1041.

**Significant at 0.01% level of significant and *Significant at 0.05% level of significant.

Age is an important factor which shows negative relationship with morbidity, among adolescents the morbidity rate was 29.4% and declined to 23.6% for the 20–24 years age group and girls aged over 25 years it was only 10.6%. Bivariate analysis shows that the relationship between the age and morbidity rate is highly significant. Likewise girls who attained puberty below 14 years and menarche above 16 years are having higher prevalence. More importantly, the morbidity rate varies significantly by BMI, the morbidity rate was highest among those who were obese (34.3%) and girls with low BMI (30.01%). Overall it was vividly clear from the study religion age and BMI shows significant association with reproductive morbidity

As reported in the previous research here in the study also found that the treatment seeking behaviour for reproductive morbidities was very low, a majority of the girls did not seek any medical assistance and only one third underwent treatment. This is mainly due to socio– cultural and gender related barriers which prevents the girls to seek care for reproductive health problems. Generally, private doctors and hospitals were predominantly used (88%) and only twelve% accessed public health facilities. This is mainly due to perceived better quality of care services and availability lady doctors in the private hospitals.

7. Determinants of Reproductive Morbidity

In order the capture the individual effects of independent variables (Religion, age and BMI) which showed some association with dependent variable, further exploration was done using regression analysis. The results of multivariate regression analysis are presented in the Table 3.

Table 3. Regression analysis

		95% C.I. for EXP(B)	
Religion**	Odds Ratio	Lower	Upper
Hindu	Reference		
Others	2.388	1.322	4.315
Age Group**			
10–19 years	3.301	1.473	7.397
20–24	2.624	1.138	6.050
25 and above years	Reference		
Body Mass Index*			
Low BMI – < 18.5	Reference		
Normal – 18.5–24.9	0.751	0.550	1.025
High – 25 and above	1.274	0.824	1.970

**Significant at 0.01% level of significant and

*Significant at 0.05% level of significant.

It is very evident from the research that girls belonging to Muslim and Christianity are more susceptible to reproductive illness, as compared with Hindus; girls from other religion are 2.3 times more likely to suffer from reproductive illness. In the Muslim religion there are strong beliefs and restrictions on women's mobility which prevents them to seek treatment for their gynaecological illness at an early stage, which in turn would increase their susceptibility.

It is very clear from the study that age is an important determinant of reproductive morbidity. While comparing with those aged over 25 years, adolescent girls were 3.3 times higher chances of having reproductive illness. Here it must be noted that dysmenorrhoea was the top most illness reported and hence naturally it was high among the teens than the others. Again the odds of having reproductive illness amplified with increasing body weight, as compared those having low BMI; obese girls are 1.27 times more likely to have reproductive illness. So, obesity increased the risk of having gynaecological illness among girls. A few studies in Europe have found that obesity increased the risk of reproductive morbidity [8].

8. Conclusion

Unlike other studies, we observed in the research that the prevalence of self–reported reproductive morbidity among unmarried girls was low. It was also observed that many rural girls believe that morbidity related to menstrual cycle is common and it will cure naturally when we grow up. It could be one of the reasons for under reporting of gynaecological problems. There productive morbidity varies significantly by their socio–economic and demographic characteristics. Religion, age and BMI showed a strong association for morbidity rate and they emerged as an important determinant of gynaecological problems. Imparting knowledge about reproductive physiology and fitness, personal hygiene would empower young girls and make them free from reproductive morbidity. Breaking the myths and misconceptions surrounding the menstruation and urinary tract infection is also equally important to increase the reporting of morbidly. Above all special health camps could be organised in the schools and colleges to treat their illness at the very beginning.

9. References

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