

Adolescent Reproductive and Sexual Health (ARSH): What do tribal schoolgirls know and do?

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ABSTRACT

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Adolescents (10-19 years) constitute 21.4% of India's population. A healthy adolescence is the corridor to a healthy adulthood. However, many aspects of adolescent health, particularly reproductive and sexual health, are not well understood. This is especially true of marginalised populations like tribals. This study intended to assess the knowledge, attitude and practices of tribal schoolgirls regarding menstruation, pregnancy and HIV/AIDS.

A cross-sectional study was conducted among 100 post-pubertal schoolgirls (10-19 years) in a tribal residential school in Kanyakumari district. The nearest school for tribal children was selected. Permission was obtained from concerned authorities. After stratifying the school girls by grade, systematic random sampling was employed to select the study subjects. The purpose of the study was explained and verbal consent was obtained. Data collection was done using a pre-tested, anonymous, self-administered questionnaire. Data entry and analysis was performed using Epi Info version 3.5.6. Chi-square test and Fisher's exact test were used to test for statistical significance. A p value of ≤ 0.05 was considered statistically significant.

Mean age at menarche was 13 yrs. Only 33% of the school girls were aware of menstruation before they attained menarche. Of these, 17(52%) said that their mother was the source of information. 71% were scared and anxious during their first menstruation. 69% used sanitary napkins. 37% were unaware of symptoms of pregnancy and only 47% knew that pregnancy can be avoided. Only 24% mentioned un-protected sex as a route of HIV transmission. Higher grade students (11th, 12th) were significantly associated with seeking treatment for menstrual problems ($p=0.01$); and with better awareness about modes of HIV/AIDS transmission ($p=0.03$). Lower grades (9th, 10th) were significantly associated with awareness of methods to confirm pregnancy ($p=0.007$).

The study concludes that there is considerable anxiety among tribal school girls surrounding menarche, probably due to a lack of prior knowledge about the event. The overall lack of awareness regarding pregnancy and contraception indicates an increased vulnerability to unintended pregnancies. Awareness regarding HIV/AIDS though present, misconceptions persist about the spread and outcome of the disease.

Keywords: Adolescent Reproductive and Sexual Health, ARSH, Tribal Health, School Girls, Menstrual Hygiene, Menarche, Kanyakumari

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INTRODUCTION

The World Health Organization (WHO) and United Nations (UN) define adolescents as those aged between 10 and 19 years.¹⁻³ There are 234 million adolescents in India, of which an estimated 85.5 million are girls residing in rural areas.³⁻⁵ Lack of reproductive and sexual health knowledge has been associated with increased vulnerability to unintended pregnancies, sexually transmitted infections, and other negative health outcomes during adolescence and adulthood.^{6,7} The knowledge of, and practices related to reproductive and sexual health among adolescent tribal girls are not known.

Kanyakumari District is home to Kani tribals, with a sizeable tribal population residing in and around

Pechipparai - a village panchayat with an eponymous reservoir. The area is part of the 3500.36 sq.km Agasthiyarmalai Biosphere Reserve spread over 1828 sq.km in Kerala, and 1672.36 sq.km in Tamil Nadu.

OBJECTIVES

- To assess the knowledge, attitude and practice regarding menstruation, and menstrual hygiene among adolescent (10-19 years) tribal schoolgirls.
- To assess basic knowledge regarding pregnancy, contraception and HIV/AIDS among the participants.

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METHODS

This cross-sectional study was conducted among 100 post-pubertal schoolgirls, 10-19 years of age, at the Government Tribal Residential Higher Secondary School, Pechipparai in Kanyakumari district of Tamil Nadu during November, 2011. The school caters to the 24 Kani tribal settlements in and around Pechipparai.

Sample size was calculated using the formula $n = \frac{z^2 pq}{L^2}$; where p was the proportion of girls having satisfactory menstrual hygiene. Based on the assumption that only 50% of the subjects would have satisfactory menstrual hygiene (defined as change of absorbent >2 times/day), the sample size calculated was 100.

After obtaining permission from the school authorities, all girls (grades 9 to 12) were assembled in a classroom. After stratifying them by grade, systematic random sampling was employed to identify the study participants. Grade-wise distribution of the sample is given in **Figure 1**. The purpose of the study was explained by the lady co-investigators, and verbal consent was obtained.

Data collection was done using a pre-tested, self-administered questionnaire. The questionnaire had been translated and back-translated and checked for accuracy. Students were instructed not to mention their names on the forms to maintain confidentiality.

Data entry and analysis was performed using Epi Info version 3.5.6. Chi-square test and Fisher's exact test were used to test for statistical significance. A p value of ≤ 0.05 was considered statistically significant.

RESULTS AND DISCUSSION

Mean age at menarche was 13 yrs, and is similar to other studies that have reported mean age at menarche as ranging from 12.6 to 13.6 years (**Figure 2**).⁸⁻¹²

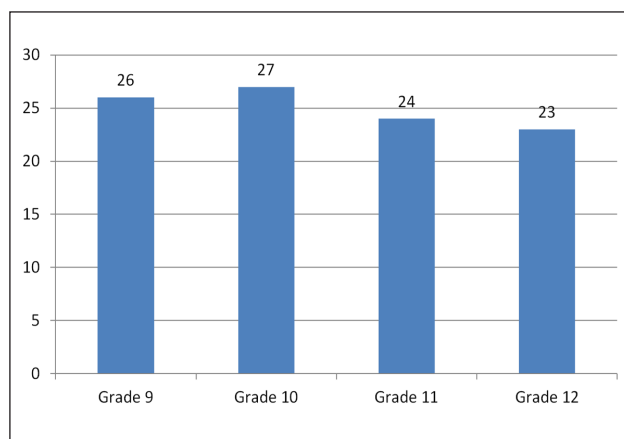


Figure 1. Grade-wise distribution of participants

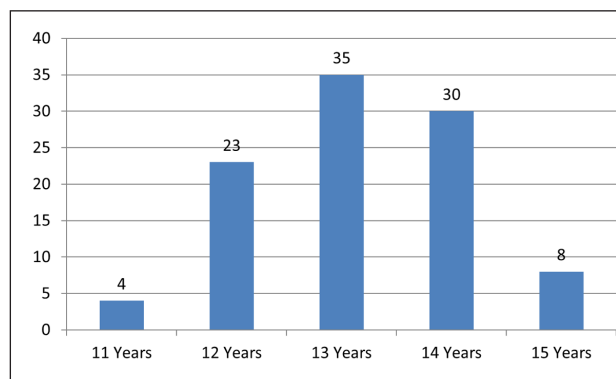


Figure 2. Age at Menarche

Only 33% were aware of menstruation before they attained menarche. Studies in rural areas have reported awareness of menstruation before menarche to be between 35 and 67.5%.¹³⁻¹⁵ However, studies conducted in urban areas have reported such awareness to range from 18.4-80%.^{8,16,17} Among those who were aware of menstruation before menarche, 17(52%) said that their mother was the source of information. Other studies reported mothers/parents as being the main source of information for 57- 70.8% of respondents.¹⁴⁻¹⁶ However, Singh et al mentioned television as the main source of information for 73.1% of respondents.¹¹

71% were scared and anxious during their first menstruation. This is similar to the findings of Singh et al, who reported that 80.7% of the subjects felt embarrassed and anxious at first menstruation.¹¹

In the present study 69% used only sanitary napkins, while 27% used new cloth as absorbent. Both practices are preferable to the reuse of old cloth napkins. Studies have highlighted the use of sanitary napkins, suggesting that other absorbents are somehow inferior. The proportion of subjects using only sanitary napkins in other studies ranges from 5-30.8% in rural areas.^{9,13,15} The findings are closer to those reported by Nair et al (45.5%) from a study conducted in Thiruvananthapuram.⁸ 91% changed the absorbent two or more times per day. This compares favorably with Nair et al, who reported that 92.1% of subjects changed the absorbent more than two times a day.⁸ 48% of the subjects in this study disposed the absorbent by burning. This is in line with the recommendations of the Menstrual Hygiene Scheme of the Government of India (under the National Rural Health Mission). However, the guidelines are for burning the absorbent in an incinerator after obtaining due environmental clearances.² Thakre et al reported that 60.9% of respondents in their study disposed the absorbent by burning. This value is higher than that obtained in the present study, and could be due to much higher use of

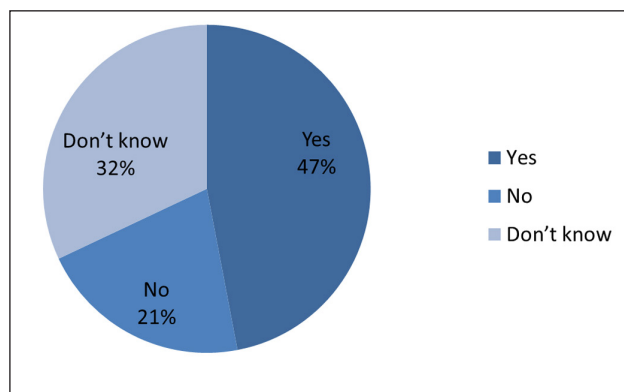


Figure 3. Can pregnancy be prevented?

old cloth (62.3%) as well as much lower use of sanitary napkins (30.8%) in that study.⁹

93% of subjects in this study said they approached their mother if faced with menstrual problems. This is similar to the findings of other studies.^{11,12} Only 26% sought treatment for menstrual problems. This is higher than the 11.5% reported by Nair et al. However, while 75.3% of those who sought treatment in that study preferred modern medicine, the corresponding proportion in this study is only 46.1%.⁸ This may be explained by the rural-urban divide that exists between the two locations.

In this study 37% of subjects did not know the symptoms of pregnancy; 34% didn't know how to confirm pregnancy; and only 47% knew that pregnancy can be avoided (**Figure 3**). In addition, 60% were unaware of any contraceptive methods. These findings reflect poor knowledge of reproductive health. Similar findings have been reported by other investigators.^{6,11,14,18-21} The consequences of lack of knowledge regarding pregnancy and contraception are well known. In the Indian context this assumes greater significance, since 45% of women are married by age 18 and 63% by age 20.^{22,23} 14% of all babies born to adolescents recently were unplanned (in 2006); and "43% of married 15-19 year old women have unmet needs for contraception".²² Not surprisingly, adolescents (15-19 years) contribute nearly 16% of total fertility in India.²⁴ Consequently, the Adolescent Birth Rate (Births/1000 women 15-19 years age) in India for the year 2013 is 73.²³ The Adolescent Birth Rate, and unmet need for family planning are key indicators for monitoring progress towards achievement of MDG Goal 5.²⁵

72% of the subjects mentioned virus as the causative agent of HIV/AIDS. However, only 24% mentioned

un-protected sex as a route of HIV transmission. 23% believed that AIDS can be cured. These findings are consistent with those reported by Unni.¹⁷ Lal et al also reported that only 45% of respondents in their study knew that AIDS is not curable.²¹ Considering that Tamil Nadu is one of the high prevalence states in India; HIV epidemic is mainly driven by high risk behaviour like unprotected sexual intercourse; 10-25 year olds account for 50% of HIV incidence and 31% of the AIDS burden in India is borne by 15-29 year olds, these findings are disappointing.²⁶⁻²⁸ Although disaggregated statistics for adolescents are unavailable for India, it is reported that only 30% of women aged 15-24 have comprehensive knowledge of HIV/AIDS.²³

The data were analyzed to ascertain if there was any relationship between grade of study, knowledge and practice. Higher grades (XI, XII) were significantly associated with seeking treatment for menstrual problems ($p=0.01$); and awareness of mode of HIV/AIDS transmission ($p=0.03$). Lower grades (IX, X) were significantly associated with awareness of methods to confirm pregnancy ($p=0.007$). We considered grade of study to be a surrogate of age, and expected to see consistently better awareness among the higher grades as compared to the lower grades. This pattern has been reported by other investigators.^{18,21} Therefore, higher awareness about methods to confirm pregnancy among the lower grades is unexpected. This unusual finding may be due to greater exposure to Information Education Communication (IEC) activities and mass media.

CONCLUSIONS

The present study has demonstrated that there is considerable anxiety surrounding menarche among adolescent tribal schoolgirls, probably due to a lack of prior knowledge about the event. However, menstrual hygiene is satisfactory. The overall lack of awareness regarding pregnancy and contraception indicates an increased vulnerability to unintended pregnancies. Awareness regarding HIV/AIDS though present, misconceptions persist about the spread and outcome of the disease.

LIMITATIONS

Due to time constraints, in-depth assessment of all aspects of reproductive and sexual health was not possible.

END NOTES

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List of Abbreviations

MDG: Millennium Development Goals

Conflict of Interest

None declared

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