

ORIGINAL RESEARCH

A Study of The Level of Practice of Menstrual Hygiene, Prevalence of Aneamia, Parasitic Infestation and Awareness of Reproductive Health among Adolescent Girls in The Rural Area, Chandragiri, Chittoor District. A.P.

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ABSTRACT

Introduction: Adolescents are the important part of our population. But still their health needs remain ill served. They need health awareness in many areas such as malnutrition aneamia, menstrual hygiene, STD and HIV/AIDS. Lack of sufficient knowledge makes them vulnerable to many undesirable social problems. Objectives of the study was to know the age at menarche level of practice of menstrual hygiene prevalence of aneamia and prevalence of parasitic infestation and also to know the awareness regarding reproductive health.

Material Methods: A study was carried in rural village Chandragiri near Tirupati town A.P, as cross sectional study. The study was conducted in four government institutions among 300 Girls of 14-17 years age group of adolescents. A predesigned and pretested questionnaire regarding the awareness of menstrual hygiene, reproductive health was administered. Prevalence of aneamia is estimated by both clinical examination and Hb Estimation in twenty percent subsample. Similarly parasitic infestation also estimated in 20% sub sample.

Results: The prevalence of aneamia was 22.7 % clinically and 26.7% as per Hb estimation. The prevalence of parasitic infestation was 31.7% by stool examination. The mean age at menarche was 13.5 years with range of 11 to 15 years. Majority of the girls were having less awareness regarding menstrual hygiene. Regarding antenatal postnatal knowledge, breast feeding practices and immunization the awareness was 38 %, 39.3 % and 22.6 % in order of good, average and poor knowledge respectively.

Conclusion: Adolescent girls are need of lots of health education of regarding the awareness of reproductive health at school and college level in order to leave the better life style.

Keywords: Aneamia, parasitic infestation, menstrual hygiene, age at menarche, breast feeding, immunization.

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INTRODUCTION

The word “adolescence” comes from Latin meaning “to grow to maturity”. Adolescent period extends from onset of puberty to the time of complete sexual maturation. WHO includes the period in life aged between 10-19 years as adolescence. For the sake of research purposes, the period is further divided into early (10-13 years), middle (14-17 years) and late (18-20 years) adolescence, depending upon both physical and psychological maturity. The year 1985 was designated as “International Year of Youth” by WHO and people began to pay attention to the health problems of youth.¹

Globally the number of adolescents are expected to reach 1.13 billion by 2025. i.e. an increase of 219 million or 24% rise. In the developing world, as a whole, the adolescent population is estimated at 914 million, about one fifth of all ages.² The proportions of adolescents are high in Africa (23 percent) and in Asia (19.1 percent). Adolescents represent about 21.8 percent of India’s population. There are about 207 million adolescents in our country whose reproductive health needs remain ill served. Age specific mortality rate in the 15-19 years age is 2.2/1000 for males and 3.4/1000 for females in rural areas and 1.3 and 1.7 respectively in urban areas. (IIPS,1995)

Adolescents are generally considered to be healthier than the other age groups, and hence their health problems were not given much prominence. Only 17 percent of adolescents utilize health services. Their perception of health is different from that of adults. Acne is more concern than HIV for them. Most of the adulthood problems do have their origin during adolescence. The five major preventable risk factors of car-

diovascular diseases such as hypertension, diabetes, dyslipidemia, obesity and rheumatic heart disease take roots during either childhood or adolescence.

In spite of vast technical advances, the enrolment in secondary schools in developing countries for boys is 41 percent and for girls is a meagre 28 percent. In India, 64 percent of girls in the age of 10-14 years and 56 percent of girls of 15-19 are literate compared to 81 percent boys of same age group (IIPS, 1995). The problems specific to adolescence have to be emphasised. The social problems perceived by them are religious and cultural restrictions, gender discrimination, limited freedom of expression, peer pressures, illogical parental expectations and intergenerational conflicts. Substance abuse is on the rise. Sexual abuse has risen to alarming levels. 25 percent of rape victims are young adolescents under 16 years.

The educational problems are dominating in current society. Lack of proper career counselling and guidance, poor performance, lack of opportunities for preferred profession, peer pressure and stress related to examinations and competition are a few important ones in this regard. With regard to physical problems of adolescents in India, several studies reported a high morbidity due to malnutrition (10-98%) dental ailments (40-70.0%), worm infestation (2.0-30.0%) skin diseases (5.0-10.0%), eye diseases (40-80%) and anaemia (40-50%) among High school children.

Out of all morbidity of girls anaemia is common among adolescents as part of malnutrition. Illiteracy and ignorance among low socio economic women are the important factors leading to anaemia. The early indication of anaemia during adolescence is cause to delay in age at menarche. Persisting anaemia coupled with less awareness of reproductive knowledge contribute to 20% of maternal mortality. More than 60% adolescent girls are anemic in our country.

Due to culture of barefoot walking the parasitic infestation contribute to chronic malnutrition especially iron deficiency anaemia. Reproductive knowledge regarding antenatal postnatal care also not adequate among girls. Awareness regarding importance of breast milk particularly the role of colostrum is inadequate. Breast milk feeding practice is not been emphasized. Majority of the girls are not aware of the importance of immunization schedule to be given as per the NID. Particularly the coverage of measles vaccine is lower compared to other vaccines. However, systematic attempts to study the issues affecting our youth are not many. Some of the studies giving quantitative information are handicapped by deficiency of adequate sample size.

This study is an attempt to know the level of practice of menstrual hygiene, prevalence of anaemia and the level of awareness of reproductive health among adolescent girls, in a systematic manner in order to provide data which will be useful for planning health interventions for adolescents as well as providing a basis for future analytical studies.

Objectives of the study were to know the prevalence of anaemia and parasitic worm infestation, to know the age at me-

narche and the level of practice of Menstrual Hygiene and to know the level of awareness regarding reproductive health.

MATERIAL AND METHOD

The Cross sectional and descriptive study was conducted in the village Chandragiri, a revenue village with a population of 10,500 located 15 km from Tirupati, Chittoor District in Andhra Pradesh. It is a historical place having monuments of archaeological importance. The climate is tropical in nature. Rainfall is contributed by both southwest and northeast monsoons, more by the latter. Most of the villagers in the area are landless agricultural labourers and are socio-economically backward. The study was carried in two government institutions i.e. Junior College for Girls, and High School for Girls, located at Chandragiri. These institutes cater to students from Chandragiri and surrounding 10-15 villages. The study was conducted from July 2001 to January 2002.

The sample consisted of 300 girls of the adolescent age group i.e. 14-18 years selected systematic randomly, studying tenth and intermediate classes in the above mentioned institutions. As the required number of students in the age group of 14-17 years were not available in Tenth and Intermediate classes, some students in the age group of 18 years of Intermediate classes had to be included in the study to make up the sample size of 300.

Necessary permission was obtained from heads of the educational institutions after explaining the objectives of the study. Plan of action was prepared in advance in consultation with teaching staff to minimise the dislocation to academic schedule. Socio demographic profile is prepared based on Pretested proforma and socio economic status is determined using the proforma based on Udai Parak Classification

In order to assess the prevalence of anaemia all the girls are examined clinically. And anaemia is also estimated by hemoglobin estimation on a subsample of 20% of girl students, by sahlis method, selected by systematic random sampling from the main sample. The WHO cut-off levels were taken as standards to classify the Hb status.

In order to assess prevalence of parasitic infestation 20% sub sample selected by systematic random sampling from the main sample and subjected to stool examination for parasitic examination. The students were asked to collect stool sample in a clean bottle supplied to them and the samples were examined by a qualified laboratory technician on the same day of collection. The results are reported.

Data regarding the age at Menarche and the level of awareness of menstrual hygiene was collected using pretested proforma. The data regarding the awareness of reproductive health such as Pregnancy (Antenatal post natal care), Breast feeding, Immunization were collected using pretested proforma. The responses were analyzed and scored with a maximum score of 20. Girls were classified as having poor, average and good knowledge if the scores were ≤ 7 , 8 - 12 and 13 - 20 respectively.

STATISTICAL ANALYSIS

The data was analyzed partly manually and partly by computer. Statistical tests, like X^2 and t – test, were used wherever appropriate. Intra study comparisons as well as comparison with findings of other relevant studies were made and the results discussed.

RESULTS

Socio demographic distribution age wise distribution of adolescent girls is given in Table – 1. Socio Economic Status data is collected as per the pretested proforma based on the modified Udai Pareek's scale of social classification is presented in Table – 2. It is observed that just more than 50% of students belong to lower socio-economic status. The findings regarding prevalence of anaemia by clinical examination among girls are as follows in table – 3. About 22.7% of adolescent girls are found to be clinically anaemic. Haemoglobin estimation of 20 per cent sub sample i.e. 60 adolescent girls was done. The prevalence of anaemia along with grading is shown in Table – 4. More than 2/3 (73.3%) subsample shows one (or) other grade of anaemia. Stool examination of 20 percent sub-sample i.e. 60 adolescent girls was done. The prevalence of different parasitic infestations is shown in Table – 5. About 1/3 (31.7%) of sub sample of stool examination shown parasitic worm infestation.

Out of 300 adolescent girls, 270 had attained menarche. The mean age at menarche was found to be 13.5 years with a range of 11-15 years. The common problems perceived by them during menstruation were pain in lower abdomen (54.6%), followed by backache (38.3%). 73.3% girls had monthly cycles, remaining had cycles ranging from 3 to 5 days. The duration of flow was ranging from 15 days to 2 months. 41% families restricted the diet during menstruation. Majority of the girls (90.3%) take bath either daily or on alternate days, while 10% take bath after stoppage of menstruation. Most of the girls (54%) use ordinary cloth as 'pad' while 30% use washed cloth. Only 16.0% use sanitary napkins (commercial). About 90.3% of the girls were habituated to change the pad every day. The major source of knowledge regarding menstruation was mother (74.6%) followed by friends (13%) and relatives (10%).

Awareness of adolescent girls regarding pregnancy, antenatal, postnatal care and certain aspects of child care was assessed by asking a set of questions on topics like signs of pregnancy, diet, specific protection, complications, breast feeding, practices and coverage of immunization etc. the answers were scored as per pre-designed scoring system and awareness was classified as good, average and poor as shown in Table – 6. It was found that 114 (38.0%), 118 (39.3%) and 68 (22.6%) had good, average and poor knowledge respectively, as shown in Table - 6. The awareness regarding reproductive health, about 80% are having some level of awareness.

Age (In years)	Girls	
	No	%
14	25	8.3
15	78	26.0
16	115	38.3
17	62	20.7
18	20	6.7
Total	300	100.0

Table-1: Age and Sex Distribution of Children Studied

Socio economic status	Girls	
	No	%
Upper	19	6.3
Middle	162	54.0
Lower	119	39.7
Total	300	100.0

Table-2: Socio-economic status of the families of adolescents

Sl. No.	Morbidity	No. of Children	%
	Anaemia	68	22.7

Table-3: Morbidity Profile – Girls n: 300

Anaemia	Girls (n = 60)	
	No	%
No anaemia	16	26.7
Mild	28	46.7
Moderate	11	18.3
Severe	5	8.3
Total	60	100.0

Table-4: Prevalence of Anaemia among adolescent girls

Parasitoses	Girls (n = 60)	
	No	%
E.histolytica	5	8.3
Giardia	5	8.3
Roundworm	8	13.3
Hookworm	2	3.3
Pinworm	4	6.7
Any worm	19	31.7

Table-5: Prevalence of Parasitic infestation by stool examination

Score	Girls N:300
Good	38.0%
Average	39.3%
Poor	22.6%

Table-6: Awareness of reproductive health

DISCUSSION

The present study the clinical anaemia was 22.7% and Hb estimation was 73.3% which are comparable to the following studies.^{3,4,5} In rural Rajasthan among girls (85.4%), in the adolescent urban girls of Coimbatore (72.0%). in rural Faridabad among both boys and girls (48%), in rural girls of Marathwada (20.0%) shown less prevalence. In another study⁶

and among girls of K.V. Kuppam of Tamilnadu (44.8%) also reported a lower prevalence of anaemia. Studies^{4,7} done to assess the prevalence of anaemia in adolescents of both sexes found it in the range of 34.3%-72%. Several studies^{8,9,5,10} of anaemic among adolescents conducted in North India during last ten years showed wide prevalence figures among girls in the range of 20.0%-85.4% which is comparable to present study.

The prevalence of intestinal parasitic infestations in the current study was found 31.7% in girls). A studies^{11,12,13} among adolescent children of Himachal Pradesh. In rural children of Varanasi and in students of Jodhpur reported the prevalence as 35.0%, 30.0% and 33.1% respectively. These figures compare well with the findings of present study. Higher prevalence was reported by another study¹⁴ in rural area of Bangladesh (82.8%); Studies^{15,16} in slum children of Visakhapatnam (47.5%) and in study¹ rural students of South India (46.4%). Showed high prevalence which is comparable to present study the high prevalence in the present study could be due to inadequate sanitary facilities and poor personal hygiene. The mean age at menarche was found to be 13.5 years with a range of 11-15 years in the present study. A study¹⁷ reported the same as 13.9 years while In another study⁶ reported it as 13.6 years with a range of 11-18 years among adolescent girls of South India which substantiate the findings of present study. The study¹⁰ reported the mean age at menarche among urban girls of Pune as 14.4 years. The another study¹⁸ reported it as 14.2 years among rural girls in Coimbatore (Tamil Nadu).

The common problems perceived by the girls in the current study during menstruation were pain in lower abdomen (54.6%) followed by backache (38.3%). In a study¹⁹ reported the similar problems of pain in lower abdomen (38.7%) and backache (17.5%) among urban girls in Berhampur of Orissa as the main problems. Other study¹⁰ also reported pain in lower abdomen (68.3%) as the leading problem during menstruation. 73.3% girls had regular monthly cycle and remaining had cycles ranging from 15 days to 2 months in the present study. The reported duration of menstrual flow was 3-5 days. The study¹⁹ reported that 77.1% girls had regular monthly cycles and remaining had cycles ranging from 15-35 days. 95.7% girls had 3-7 days of duration of menstrual flow.

In this study 90.3% of girls take bath either daily or on alternate days and habituated to change the "Pad" every day. Only 16.0% use commercial sanitary napkins. The other study¹⁰ reported that about 47.7% used sanitary napkins during menstruation.

Awareness Regarding Antenatal, Postnatal and Childcare in the present study, only 22% of girls were aware of signs and symptoms of pregnancy. Another study¹⁷ reported that only 10.2% were aware of the signs and symptoms of pregnancy in Tamilnadu. In the present study, 38.7% of girls mentioned hospital as place of choice for delivery. A study²⁰ reported that majority in Himachal Pradesh insisted that delivery

should be conducted in institution preferably by trained personnel.

In the present study, 39.7% of girls considered that mother's milk was the best food for the baby. Only 20.7% were aware of the child immunization schedule and proper weaning period. In a study²¹ reported that 95% girls expressed that mother's milk was the best food and it should be given soon after birth. 82% have correct knowledge about weaning. Another study²² reported that 73.0% of girls know that mother's milk is the best food for infants. About 88% were aware of child immunization and 80% were aware of the right age for child weaning.

CONCLUSIONS

The morbidity survey in adolescents girls revealed the prevalence of anaemia is 22.7-26.7%. Stool examination of sub sample of adolescents revealed that the overall prevalence of intestinal parasitic infestation among girls (31.7%). The mean age at menarche was found to be 13.5 years with a range of 11-15 years. The common problems perceived during menstruation were pain in lower abdomen (54.6%) and backache (38.3%). 41 % of families restricted the diet of girls during menstruation. 10% of girls take bath only after cessation of menses. Only 16.0% of girls use sanitary napkins and about 30.0% use washed cloth as pad, during menses. Mother (74.6%) was the major source of knowledge regarding menstrual hygiene. While assessing the level of awareness regarding antenatal, postnatal and child care, it was found that 38.0%, 39.3% and 22.6% had good, average and poor knowledge respectively.

RECOMMENDATIONS

1. As the occurrence of anaemia was found to be high among girls of adolescent age group in the present study, contradictory to common impression, special attention has to be paid to reduce the disease burden, Periodic medical examinations have to be carried out in both high schools and junior colleges to detect morbidity-conditions in early stages and take remedial measures.
2. School/College health clinics should be organised on sound lines, incorporating preventive, promotive, and curative services backed up by well designed referral system. It is essential that present system of annual health check up by medical officer which is very perfunctory in nature is to be reorganised by systematic school/college health programmes, Separate clinics may be run for girls providing services of a gynaecologist.

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