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MORBIDITY PATTERN AMONG ADOLESCENT SCHOOL GIRLS IN RURAL AND URBAN SCHOOL OF JHANSI (U.P.) A COMPARATIVE CROSS-SECTIONAL SURVEY

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Abstract

Background: According to World Health Organization, adolescents constitute about one fifth of the world population, and in India they constitute about 21% of the total population. Most of the surveys show that health status of adolescent girls is at sub-optimal level.

Objectives: To assess nutritional status and morbidity pattern among the adolescent girls and to suggest measures for improvement of health status of adolescent girls.

Method: A community based cross-sectional study was carried out among 250 adolescent schoolgirls in Rural and urban field practice area of Jhansi school from January 2017 to July 2014.

Results: Among the various morbidities eye problem was seen in maximum no of adolescent girls. Eye problem was present in 44.8% of adolescent girls followed by respiratory 14.7% and ear 13.06% disease. Skin disease was present in 3.2% of adolescent girls, which was more in rural girls 6.7% than in urban girls 1.7%, may be due to better hygienic practice in urban schoolgirls.

Conclusions: Rural background, low socioeconomic status, illiteracy, birth rate and order, income and number of members in a family have shown to be significant determinants of morbidity pattern in the adolescent girls.

Keywords: Adolescent, anemia, morbidity, vaginal discharge.

Introduction

WHO defines Adolescence as the segment of life between the ages of 10-19 years.[1,2] Twenty five percent of adult height and up to fifty percent of adult weight are attained during adolescence.[3] It is also an intense anabolic period when requirements for all nutrients increase[4] 85% of them live in developing countries.[5] Adolescent girls form an important vulnerable sector of population. Adolescent period is a growth stage of a girl's life, and is a unique intervention point in the lifecycle for a number of reasons, it is a transition phase through which a child becomes an adult, which is accompanied with hormonal and physical changes marked by spurt in growth. In India adolescents account for 21% (Approximately 230 million) of the total population among which the adolescent girls comprise about 10.3% of the total population of India.[3,4]Twenty five percent of adult height, and up to fifty percent of adult weight are attained during adolescence. The importance of this target group lies in the fact that they are going to be the mothers of tomorrow – whose wellbeing is critically important for improving the nutritional, health and educational status of women in the State. Thus, it is a crucial period of women's life where socio-cultural factors not only influence her health but also determine the health of future generations. Majority of adolescents still do not have access to information on reproductive health and rights, nor do they have access to preventive and curative services.[6] The health problems of adolescents are very different from those of younger children and adults.[7] Nutritional deficiency disorders (stunting, wasting), menstrual disorders, RTIs/ STIs/ HIV/ AIDS have been appeared as serious problem during this stage.[8] The vicious cycle of under nutrition and its impact on health status of adolescent girls is increasingly being studied in terms of nutritional deficiencies. One of the major impacts of under nutrition and compromised health status of adolescent girls is reflected by high prevalence of anemia. Based on the

above issues the rationale behind this study was to evaluate the status of school going adolescent girls in terms of nutrition and disease who are the most hit age group in the state of Uttar Pradesh.

Aim and Objectives:

To assess nutritional status and morbidity pattern among the adolescent girls and to suggest measures for improvement of health status of adolescent girls.

Materials and Methods:

The present school based cross sectional study was carried out for six months in Jhansi, during January 2017 to July 2017. By using multistage random sampling technique, four schools were randomly selected in urban area and 176 adolescent girls were chosen from these schools. Similarly, in rural area two schools were randomly selected and from there 74 adolescent girls were chosen. (In Jhansi District 70% of the population lives in urban area and 30% of the population lives in rural area).

All adolescent girls registered in school were decided to include in the study after taking verbal consent. Data was collected in pre-designed proforma by interview technique and clinical examination of the girls in presence of their mothers. The socio-demographic data of all the adolescent girl was recorded. Bio-social characteristic of adolescent girl were Age, Birth order, total family member, type of family, religion, caste, education status, education and occupation of parent's total family income, with the help of these per capita income was calculated. The pre-tested questionnaire included clinical examination; history of chronic illness in last 6 months and the symptoms of illness were recorded. Health status of the adolescent girls was assessed by the morbidity pattern.

Data was collected, compiled and tabulated using Microsoft Excel and analysed using SPSS 17.0 version for calculation of percentages.

Results:

A total 250 school going adolescent girls (176 urban and 74 rural) aged 10-19 years were interviewed. Our study revealed that the most of rural school girls were of 14 years.

According to Table no.2, majority of adolescent girls were Hindus (72.8%), while Muslim girls were only (27.2%). About 42.8% of the adolescent girls in our study belonged to other backward classes.

Table 3 shows the system wise morbidity pattern in adolescent school girls. 44.8% girls of urban and 22.9% girls of rural school girls were having eye problem. 14.7% girls in urban and 17.5% girls in rural school were having respiratory tract infection. About 11.3% of urban and 16.21% of rural adolescent girls were suffering with reproductive system morbidity.

Table 4 shows that there was no association seen between reproductive tract illnesses and place of schools. A total of 10.4% girls had vaginal discharge in which urban was 7.9% and rural was 16.21%

Table 1: Distribution of adolescent school girls by age.

Age (yrs)	Urban (%) (n=176)	Rural (%) (n=74)	Total (%) (n=250)
10	1 (0.5%)	3 (4.05%)	4 (1.6%)
11	15 (8.5%)	5 (6.7%)	20 (8%)
12	18 (10.2%)	5 (6.7%)	23 (9.2%)
13	10 (5.6%)	4 (5.4%)	14 (5.6%)
14	36 (20.4%	16 (21.6%)	52 (20.8%)
15	31 (17.6%)	16 (21.6%)	47 (18.8%)
16	34 (19.3%)	13 (17.5%)	47 (18.8%)
17	22 (12.5%)	4 (5.4%)	26 (10.4%)
18	7 (3.9%)	5 (6.7%)	12 (4.8%)
19	2 (1.1%)	3 (4.05%)	5 (2%)

Table 2: Distribution of adolescent school girls according to their biosocial characteristics.

Biosocial characteristics	Urban (%) (n=176)	Rural (%) (n=74)	Total (%) (n=250)
Religion			
Hindu	121 (68.7%)	61 (82.4%)	182 (72.8%)
Muslim	55 (31.2%)	13 (17.5%)	68 (27.2%)
Caste			
General	63 (35.7%)	23 (31.08%)	86 (34.4%)
OBC	71 (40.3%)	36 (48.6%)	107 (42.8%)
SC/ST	42 (23.8%)	15 (20.2%)	57 (22.8%)
Type of family			
Nuclear	166 (94.3%)	60 (81.08%)	226 (90.4%)
Joint	10 (56%)	14 (18.9%)	24 (9.6%)
Total Family Members			
Upto 5	79 (44.8%)	30 (40.5%)	109 (43.6%)
>5	97 (55.1%)	44 (59.4%)	141 (56.4%)
Birth order			
1-3	117 (66.4%)	51 (68.9%)	168 (67.2%)
3-4	55 (31.25%)	19 (25.67%)	74 (29.6%)
≥5	4 (2.21%)	4 (5.4%)	8 (3.2%)
Socio Economic Status			
I	2 (1.13%)	0 (0%)	2 (0.8%)
II	72 (40.9%)	1 (1.35%)	73 (29.2%)
III	60 (34.09%)	43 (58.10%)	103 (41.2%)
IV	42 (23.8%)	30 (40.5%)	72 (28.8%)
V	-	-	-

Table 3: Distribution of system wise morbidity pattern in adolescent school girls.

Systemic Morbidity	Urban (%) (n=176)	Rural (%) (n=74)	Total (%) (n=250)
Skin	3 (1.7%)	5 (6.7%)	8 (3.2%)
Eye	79 (44.8%)	17 (22.9%)	96 (85.8%)
Ear	23 (13.06%)	12 (16.21%)	35 (27.8%)
Respiratory	26 (14.7%)	13 (17.5%)	39 (15.6%)
GIT	17 (3.6%)	7 (9.4%)	24 (9.6%)
Cardiovascular system	8 (4.5%)	8 (10.8%)	16 (6.4%)
Reproductive system	20 (11.3%)	12 (16.21%)	32 (12.8%)

Table 4: Distribution of adolescent school girls according to reproductive tract morbidity.

Reproductive Tract illness	Urban (%) (n=176)	Rural (%) (n=74)	Total (%) (n=250)
Lower Abdominal pain	2 (1.13%)	0 (0%)	2 (1.13%)
Vaginal Discharge	14 (7.9%)	12 (16.21%)	26 (10.4%)
others	4 (2.2%)	0 (0%)	4 (2.2%)

Discussion:

In the present study, Majority (58.4%) of girls were in the age group of 14-16 years and mean age was 14.12. About 72.8% adolescent girls were Hindus. The highest percentage of girls belonged to other backward classes (OBC). Among the various morbidities eye problem was seen in maximum no of adolescent girls. Eye problem was present in (85.8%) of adolescent girls followed by ear (27.8%) and respiratory (15.6%) disease. Skin disease was present in 3.2% of adolescent girls, which was more in rural girls than in urban girls, may be due to better hygienic practice in urban school girls.

However, Baliga et al and Guduri et al in their study reported that the mean age of rural adolescent girls was (12.9) years and (12.67) which was less than our study.[10,11] As per NFHS-3, 82.6% of households in Uttar Pradesh were Hindus and 16.3% Muslims and Overall 41.9% adolescent girls belonged to other backward classes. Almost similar finding was seen in a study conducted by Yerpude et al who reported the prevalence of ophthalmic problems (12.5%), and respiratory infection (8.33%).[12] Sachan et al reported that skin disease in 3.2% of girls in both the urban and rural schools.[13] As compared to system wise morbidity of adolescent girls Yerpude et al shows highest morbidity of respiratory tract infection (23.5%) as compared to our study which has eye morbidity as common on both rural and urban (44.8%, 22.9%) but the reproductive tract illness was found to be like our study.[12] In a study conducted by Sachan et al systemic morbidity was found to be higher in rural area as compare to our study but slightly higher in urban area which depicts the seasonal variation in states of the country.[13] According to Guduri, skin and eye diseases are common in both rural and urban areas of Chennai (21%, 19%,17%,25%) which signifies the level of hygiene maintained by adolescent girls as compared to the current study.[11]

Conclusion

High morbidity was found in adolescent school girls. Health education regarding reproductive health and its morbidities should be conducted in schools and colleges and in communities. It can be included as a part of school health programme. Emphasis should be given to make them aware about the importance of seeking of health care. There is need for regular supply of iron and folic acid tablets at AWCs and to increase the compliance regarding consuming tablets among adolescent girls. The health and nutritional status of adolescent girls is very poor in rural areas. It is because of gender discrimination in the families. Regular health check –ups and periodical examination in the schools and families should be done by health workers. De-worming should be done on a mass level at regular intervals. Adolescent clinics should be opened in the health centres. Further research can be encouraged to improve the health status of the inmates of the social welfare hostels.

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