Journal of
Community & Public Health Nursing

De, J Comm Pub Health Nursing 2017, 3:2
DOI: 10.4172/2471-9846.1000172

Research Article OMICS International

Study of Bio-Social Behaviour of Rural Adolescent Girls

Kankana De*

Vidyasagar University, Medinipur, West Bengal, India

Abstract

Adolescence is a vital phase of human life cycle where several physical, mental changes have occurred; those changes are influenced by their growth spurt, socioeconomic status, in female adolescence they experience menarche, in adolescence growth acceleration happens so subjects of adolescence groups. In this adolescence experience undernutrition due to lack of nutritious food; due to iron deficiency they experience their stunting in growth.

Methods: Study area is 3 no. gram panchayats of Salboni block of West Medinipur. This study age group is adolescent girls. For this study height is measured by stadiometer and weight is measured by weighing scale, to collect socio-economic data some schedule questionnaires are followed.

Result: Relation of mean age, menarche and nutritional status is shown which shows the girls who belong to normal body mass index experiences menarche at age of 11 years; 268 girls experience menarche at age of 12 years. Negative impact of occupation in mean age at menarche 1.08% adolescent experience severe anemia which proves under nutrient adolescent. 13 girls belongs to chronic energy deficiency I. 12.30% adolescent are of age 10-14 years.

Conclusion: At stage puberty girls need nutritive food which stimulate their growth, due to lack of nutrition they become under nutrient and in future when they become mother they give birth to underweight children, so stop this cycle people should take care of girls and girls should learn about hygiene, menstrual health to fight against all reproductive health issue.

Keywords: Menarche; Bio-social aspect; Health; Nutrition

Introduction

Adolescence is a vital phase of human life cycle where several physical, mental changes have occurred; those changes are influenced by their growth spurt, socio-economic status, In female adolescence they experience menarche, in adolescence growth acceleration happens so subjects of adolescence groups, so adolescence overall increases of weight, height, circumferences by going through that stage. In this adolescence experience undernutrition due to lack of nutritious food; due to iron deficiency they experience their stunting in growth.to influence growth spurt adolescent need nutritive food, but due inadequate knowledge they do not reach their actual height, weight in long term effect if they do not catch up growth girls when become mother they give birth underweight child. Health care researchers would be best served by knowing the impact of each SES factor on health-related outcomes so that the true variation due to SES is not missed by employing a weaker SES measure. The CHIP-AE is the most comprehensive currently available generic health status tool to measure the health status of adolescents. Although chronic undernutrition is an important and widespread problem [1] with multiple adverse health outcomes, it is not usually the highest nutritional priority in emergency situations. In such situations, acute undernutrition is often a more pressing problem and, at least in young children, may account for a substantial proportion of overall mortality.

Methods

Study area is 3 no. gram pachayats of Salboni block of West Medinipur. This study age group is adolescent girls. For this study height is measured by stadiometer and weight is measured by weighing scale, to collect socio-economic data some schedule questionnaires are followed.

Different anthropometric data taken by using different instruments, Socio-economic data are taken by interview schedules, Body mass index is taken by measuring weight, height; age at menarche of girls are collected by retrospective methods. Weight is measured by weighing machines, height by anthropometric rod; socio-economic status is collected by schedule questionnaire, skinfold caliper help to collect skinfold measurement, menarcheal age is collected by retrospective method.

Results

Table 1 represents relation of mean age menarche and nutritional status, it shows the girls who belong to normal body mass index experiences menarche at age of 11 years; 268 girls experience menarche at age of 12 years 9 (Table 2). Table 3 has shown negative impact of occupation in mean age at menarche.1.08 % adolescent experience severe anaemia which proves under nutrient adolescent. 13 girls belong to chronic energy deficiency I. 12.30% adolescent are of age 10-14 years.

Discussion

In India 10-19 years comprise 22% of the total population. 12.3% belong to 10-14 years age group and 9.7% are in the 15-19 years age group and almost 20% belong to 15-24 years [2].

Adolescents of 15-19 years who were already mothers or pregnant in India is 16% years compared to 25.3% in West Bengal [3]. Even married anemic women are 55.3% in India compared to 63.8% in West Bengal. School attendance rate is 68.7% among females of 15-17 years are for West Bengal compared to 34.4% for females in India [4,5] (Figures 1 and 2).

The mean height, weight and BMI of the Bengalee boys and girls of this study were among rural adolescents from India. However, Shabar boys were taller up to 12 years of age compared to Indian boys, while the

***Corresponding author:** Kankana De, Research scholar, Vidyasagar University, Medinipur, West Bengal, India, Tel: 9474714273; E-mail: dekankana@gmail.com

Received April 19, 2017; **Accepted** May 18, 2017; **Published** May 25, 2017

Citation: De K (2017) Study of Bio-Social Behaviour of Rural Adolescent Girls. J Comm Pub Health Nursing 3: 172. doi:10.4172/2471-9846.1000172

Age at Menarche (years)	Cross tabulation of mean age at menarche and nutritional category					
	CED I	CED II	CED III	Normal	Overweight	Total
9.0000	1	0	0	11	0	12
10.0000	13	1	1	74	0	89
10.1000	2	0	0	2	0	4
10.2000	2	0	0	7	0	9
10.3000	1	0	0	4	0	5
10.4000	0	0	0	11	0	11
10.5000	1	0	1	5	0	7
10.6000	0	0	0	3	0	3
10.8000	0	0	0	1	0	1
11.0000	22	0	0	122	1	145
11.2000	0	0	0	8	1	9
11.3000	0	0	0	7	0	7
11.4000	1	0	0	5	1	7
11.5000	6	0	0	15	1	22
11.6000	2	0	0	2	0	4
11.7000	2	0	0	11	0	13
11.8000	0	0	0	4	0	4
11.9000	2	0	0	7	0	9
12.0000	55	0	0	213	0	268
12.2000	0	0	0	1	0	1
12.3000	1	0	0	7	0	8
12.4000	3	0	0	9	0	12
12.5000	2	0	0	12	0	14
12.6000	1	0	0	2	0	3
12.7000	0	0	0	1	0	1
12.8000	0	0	0	1	0	1
13.0000	17	0	0	130	0	147
13.2000	0	0	0	2	0	2
13.3000	1	0	0	1	0	2
13.4000	0	0	0	1	0	1
13.7000	1	0	0	0	0	1
14.0000	1	0	0	49	0	50
14.9000	1	0	0	0	0	1
15.0000	0	0	0	16	0	16
16.0000	0	0	0	5	0	5
17.0000	0	0	0	2	0	2

Table 1: Relation of age menarche and nutritional status.

Variables	Mean	Std. Deviation	N
Age (years)	14.54	2.892	1009
Height (cm)	151.02	4.81	1009
Weight (kg)	44.56	5.073	1009
MUAC (cm)	21.71	2.85	1009
TSF (mm)	8.98	2.031	1009
BSF (mm)	6.12	1.54	1009
Chest circumference (cm)	74.48	7.087	1009
Waist circumference (cm)	78.325441	6.35	1009
Hip circumference (cm)	84.85	6.57	1009

Table 2: Descriptive status represents mean SD of different anthropometric variables.

girls were taller compared to Indian boys, while the girls were taller up to 13 years of age, after which they fell below Indian standard height of the Shabar adolescents of both sexes is well below the median reference values for Children in United States.

		Mean age menarche	Occupation of parents
Mean Age Menarche	Pearson Correlation	1	-0.028
	Sig. (2-tailed)		0.400
	N	896	896
Occupation of Parents	Pearson Correlation	-0.028	1
	Sig. (2-tailed)	0.400	
	N	896	1009

Table 3: Correlations of mean age at menarche with occupation.

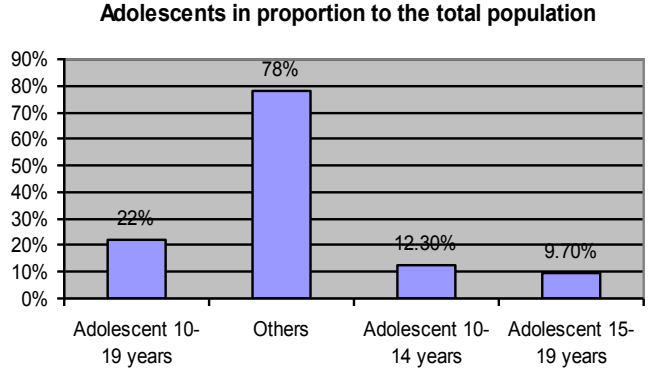

Figure 1: This represents percentage of adolescent in study.

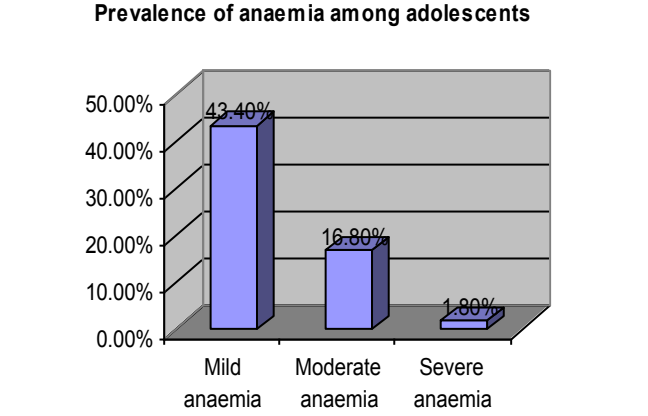

Figure 2: Percentage of adolescent suffering from anaemia.

Weight and height deficits were reported low in other tribal adolescents in India those are when compared to the NCHS 50th percentile adolescents. The complexity of the period of adolescence and the accompanying changes in physical and social characteristics are usually emphasized, but it is not very well understood by adolescents or adults. A poor understanding of reproductive health and sexual issues is the main cause for the absence of focus on services, the trends of globalisation and liberalisation with the rapid spread of communication and information technology, shifting of social and moral norms maybe said to have eroded the traditional bases and defining points for adolescent reproductive and sexual behaviour, leading to a host of changes in reproductive health and low socio-economic status. Risk of underweight was, on average, significantly higher for adolescent males than adolescent females. This may be because of the fact that biological, behavioral and sociocultural mechanisms have been proposed for the

gender differences in morbidity and mortality. The risk of underweight and stunted was significantly high, on average, for unemployed adolescents than employed adolescents.

In addition, undernutrition reduces the reproductive, physical and mental capacities of girls and continues to result in low birth weights and foetal loss. If India wishes to achieve the goals of Health for All and adequate Nutrition for All, it must attend to the problem of under nutrition among adolescent girls.

The study of Choudhury et al. Various anthropometric indices were used to pinpoint nutritional status of adolescent girls; BMI for age of 17.41% adolescent girls was >100% of their reference values.

None of the study subjects were labelled as obese as per previous WHO criteria; however 0.74% subjects belonged to this category according to Proposed Asian criteria.

As much as 19.63% adolescent girls had suffered from chronic energy deficiency (CED) grade I; corresponding value for grade II and grade III was 17.78% and 31.11%, respectively.

The study by Bose et al. showed the overall rate of underweight was 31% and the overall rate of the total percentages of boys of moderate and severe malnutrition was 44.89% and total percentage of girls of moderate and severe malnutrition was 38.33%. The study by it showed that about 41.5% of mild (-2 SD to -1 SD) stunting was recorded in all the age groups and gender, followed by moderate (39.3%) and severe (6.7%) [6].

The Integrated Child Development Services (ICDS) programme has expanded steadily across the country during the 30 years of its existence with special emphasis on scheduled tribes. However, after puberty, the Shabar children do not appear to grow as well as children from other tribes. The growth parameters after puberty, compared to the Indian reference, is a matter of concern that should be addressed through dedicated nutritional interventions for these groups [7]. The study provides valuable data on growth parameters that may be used as reference for monitoring interventions in the future. In depth studies are necessary for Improvement of the nutritional status of adolescent girls which requires a multi-sectorial approach in order to ensure adequate food supply, maintain equity in food distribution and promote improved knowledge about nutrition and healthy eating habits.

Low level of literacy and higher family size have been the major factors, health and nutrition education especially of the mothers who can play a vital role in health and nutrition [8-12] education especially of the mothers can play a vital role in improving the nutritional status of these adolescent girls.

Conclusion

At stage puberty girls need nutritive food which stimulate their growth, due to lack of nutrition they become undernutritient and in future when they become mother they give birth to underweight children, so stop this cycle people should take care of girls and girls should learn about hygiene, menstrual health to fight against all reproductive health issue [13-16].

Recommendation

Government should take initiative to aware parents of adolescents how they take care of their worth, provide adolescent friendly health facility and give knowledge on nutritive food, cleanliness, hygiene.

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