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Original Research Article

A study of health status of adolescent girls and their health seeking behavior in a rural area of Kanpur

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ABSTRACT

Background: Adolescent's problems constitute a bulk of morbidities which are generally unrecognized and uncared for, furthering the disease burden. Worldwide about more than 1.2 billion are adolescents. Adolescent population in India is 240 million (21.4%). The study will help to know about various health problems and unmet needs of the study population so that we can recommend necessary actions required for betterment of the existing health infrastructure and Programmes for adolescent girls.
Methodology: The present study was conducted in Shivrajpur block of district Kanpur Nagar (U.P.).
Study design: Community-based cross-sectional study.
Sample size: Has been calculated using the formula $4pq/l^2$ where prevalence (P) of usage of sanitary napkins in adolescent girls was 25.1%.
Sampling technique: Two stage random sampling has been used.
Exclusion criteria: Those Adolescent girls who were unwilling/ not ready to interact and had not achieved their menarche were excluded from study.
Results: Show that most of the subjects 154 (44.0%) belong to 14-16 year age group and 121(34.6%) are in 17-19 year age group. Out of total 350 subject 332 (94.9%) were unmarried and 18 (5.1%) were married. Most of the study subjects 228(65.1%) belonged to Lower middle class (IV). 35.1% (30.6-40.3%) were underweight, 6.6% (4.0%-9.1%) were overweight and remaining 1.7% (.6-3.1%) were obese. 28.6% with 95% CI (24.0-33.1%) had mild pallor, 18.6% (14.6-22.9%) had moderate and remaining 9.7% (6.6-12.9%) had severe pallor.Most of the study subjects 250 (71.4%) did not have any RTI/STI symptoms, 20 (5.7%). Majority 339(96.9%) of the study subjects had no obstetric history, 3(.85%) had history of abortion, 2(.57%) still birth. About 127(36.3%) preferred allopathic treatment, 103 (29.4%) preferred home remedy and 120 (34.3%) did not take any treatment.
Conclusion: Prevalence of RTI/STI symptoms was 28.57%. 35.1% (30.6-40.3%) subjects were underweight and 56.85% were found anemic.

1. Introduction

According to World health organization (WHO) adolescent age group lies between 10 to 19 years. Adolescence is a transitional phase through which a child becomes an adult. It is characterized by rapid growth and development of body physiologically, psychologically and socially.[1]

Worldwide about more than 1.2 billion are adolescents, this indicates that roughly one in every six persons is an adolescent.[2] In India 240 million are in the age group of 10–19 years, accounting for 21.4 percent of the country's population.[3]

Adolescent's problems constitute a bulk of morbidities which are generally unrecognized and uncared for, furthering the disease burden. The different problems of adolescence girls are infections, nutritional deficiency disorders (stunting, wasting), iron deficiency anemia, iodine deficiency disorders, childhood obesity, menstrual disorders, skin, dental and eye problems, RTIs/STIs/HIV/AIDS have appeared as serious problems.[4] Morbidity among

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adolescent school girls have been studied in different surveys, which indicate that the majority of health problems in adolescent girls are preventable.[5]

The study will help to know about various health problems and unmet needs; so that we can recommend changes for the betterment of the existing health infrastructure and programs for our study group. It is the need of hour to help them by eliminating these negative environmental factors, for the upliftment of their awareness regarding reproductive health so as to formulate healthy mother of new millennium.

2. Objectives

To study the health status of adolescent girls and their health seeking behavior. To suggest suitable interventional strategies for this age group.

2.1. Period of study

Was one year between from Dec 2017 to Dec 2018.

3. Methodology

3.1. Study setting

The present study was conducted in the Field practice area of (RHTC), Department of Community Medicine, in Shivrajpur block of district Kanpur Nagar (U.P.).

Study design community-based cross-sectional study.

3.2. Sample size

The sample size has been calculated using the formula $4pq/l^2$ where preliminary estimates of prevalence (P) of usage of sanitary napkins in adolescent girls, the results of the study conducted by Vidya V. Patil et al in the year 2016[6] was 25.1%, considering the allowable error (l) as 20% of Prevalence. Sample size was calculated to be 300 which was approximated to 350 to adjust for non-response if any.

3.2.1. Sampling technique

Two stage random sampling has been used. In the first stage out of 24 villages under health care coverage of RHTC of Rama Medical College Hospital & Research Centre, Kanpur, six villages were selected randomly. In the second stage, for the study survey first house in the village was selected randomly from right side and then survey was carried out in alternate houses in all the six villages. All the adolescent girls between ages 10-19 were interviewed using a pretested interview schedule. Verbal consent was taken from the parents of adolescent girls after explaining the nature of study in the language they understand.

3.3. Inclusion and exclusion criteria

All girls aged between 10 to 19 years who have achieved their menarche were included in this study. Those girls who were unwilling/ not ready to interact and had not achieved their menarche were excluded from study.

3.4. Study tool

Data was collected using predesigned and pretested interview schedule.

3.5. Equipment

Mercury Sphygmomanometer blood pressure measuring apparatus, calibrated electronic weighing machine, and steel measuring tape for measuring height.

4. Results

Demographic profile of study subjects shows that most of the subjects 154(44.0%) belong to 14-16 year age group and 121(34.6%) are in 17-19 year age group. Out of total 350 subject 332 (94.9%) were unmarried and 18 (5.1%) were married. Most of the study subjects 228(65.1%) belonged to Lower middle class (IV), followed by Middle class (III) i.e., 45(12.9%), 43(12.3%) Upper Middle (II), 20(5.7%) Lower Class (V) and 14(4.0%) Upper class (I) respectively. Majority of the study subjects 56.6% with 95% CI (51.0 – 62.0%) had normal BMI, 35.1% (30.6-40.3%) were underweight, 6.6% (4.0%-9.1%) were overweight and remaining 1.7% (.6-3.1%) were obese. Most of the subjects 28.6%with 95% CI (24.0-33.1%) had mild pallor on examination, 18.6% (14.6-22.9%) had moderate and remaining 9.7%(6.6-12.9%) had severe pallor. Majority of the study subjects 56.6% with 95% CI (51.0 – 62.0%) had normal BMI, 35.1% (30.6-40.3%) were underweight, 6.6% (4.0%-9.1%) were overweight and remaining 1.7% (.6-3.1%) were obese. Most of the subjects 28.6%with 95% CI (24.0-33.1%) had mild pallor on examination, 18.6% (14.6-22.9%) had moderate and remaining 9.7%(6.6-12.9%) had severe pallor. Majority 58.3% study subject with 95% CI (53.1-63.4%) had no illness at the time of the study, out of remaining 146, 11.7% (8.6-15.4%) had Gastrointestinal, 8.0%(5.1%-11.1%) Genitourinary, 6.6%(4.0-9.4%) Respiratory, 3.1% (1.4-5.1%) Skin and hair diseases and 4.6(2.6-6.9%) ENT and dental diseases and 7.7% (5.1-10.9%) Others (fever). Majority 339(96.9%) of the study subjects had no obstetric history, 3(.85%) had history of abortion, 2(.57%) Still birth and 6(1.7%) Live birth respectively. Most of the study subjects 250 (71.4%) did not have any RTI/STI symptoms, 20(5.7%) responded that they had ulcers, wounds on private parts, discharge, 12(3.4%) had vaginal discharge, itching, pain lower abdomen, 17(4.9%) had burning micturition, vaginal discharge, 29(8.3%) had pain lower abdomen, backache and 22(6.3%) had vaginal discharge. About 127(36.3%) preferred allopathic treatment in case of menstrual and, RTI/STIs problems, 103 (29.4%) preferred home remedy and 120 (34.3%) did not take any treatment.

Table 1: Demographic profile of study subjects

Age Group	Numbers (N)	Percent (%)
10-13 years	75	21.4%
14-16 years	154	44.0%
17-19 years	121	34.6%
Total	350	100.0%
Marital Status		
Unmarried	332	94.9%
Married	18	5.1%
Total	350	100.0%
Socio-Economic Status*		
Upper Class (I)	14	4.0%
Upper Middle (II)	43	12.3%
Middle (III)	45	12.9%
Lower Middle (IV)	228	65.1%
Lower Class (V)	20	5.7%
Total	350	100.0%

*Socio-economic Status of subjects according to Modified BG Prasad

Table 2: General health status (BMI and Pallor) of study subjects (N=350)

Nutritional status (BMI Groups)*	Number (N)	Percentage (%)	95% CI	
			Lower	Upper
Under weight(<18.5)	123	35.1%	30.6%	40.3%
Normal (18.5-22.99)	198	56.6%	51.7%	62.0%
Over weight(23-24.99)	23	6.6%	4.0%	9.1%
Obese (>=25)	6	1.7%	.6%	3.1%
Pallor				
Absent	151	43.1%	37.7%	48.9%
Mild	100	28.6%	24.0%	33.1%
Moderate	65	18.6%	14.6%	22.9%
Severe	34	9.7%	6.6%	12.9%

(*BMI classification for Indians)

Table 3: History of illness amongst study subjects (N=350)

History of illness (within 2 weeks)	Number (N)	Percentage (%)	95% CI	
			Lower	Upper
No	204	58.3%	53.1%	63.4%
Gastrointestinal	41	11.7%	8.6%	15.4%
Genitourinary	28	8.0%	5.1%	11.1%
Respiratory (cold, cough, dyspnea)	23	6.6%	4.0%	9.4%
Skin and hair diseases	11	3.1%	1.4%	5.1%
ENT and dental diseases	16	4.6%	2.6%	6.9%
Others (fever, headache, weakness, fatigue)	27	7.7%	5.1%	10.9%

Table 4: Reproductive health status (Obstetric history, RTI/STI history)[N=350]

Obstetric history	Number (N)	Percentage %)
No history	339	96.9%
Abortion (G1,P0+1,L0), Still birth (G1,P1+0,L0)	5	1.4%
Live birth (G1,P1+0,L1)	6	1.7%
RTI/STIs symptoms		
No symptoms	250	71.4%
Ulcers/wound on private parts, Discharge	20	5.7%
Vaginal discharge, itching, Pain lower abdomen	12	3.4%
Burning micturition, Vaginal discharge	17	4.9%
Pain lower abdomen, Backache	29	8.3%
Vaginal discharge	22	6.3%

Table 5: Health seeking behavior of study subjects. (N=350)

Modality of treatment followed for menstrual, RTI/STDs problem	Number (N)	Percentage (%)
Allopathic treatment	127	36.3%
Home remedy	103	29.4%
Don't take any treatment	120	34.3%

5. Discussion

In the present study the demographic profile of study subjects shows that 154(44.0%) belong to 14-16 year age group and 121(34.6%) are in 17-19 year age group. Similarly in a study by Randhir Kumar et al.[7] (2017), 294(39.5%) of adolescents belonged to 15-16 year age group. Kansal et al[8] (2017) stated that out of the 650 respondents, more than half belonged to 15–17 years age group. In the study by Kumar CM, Babu CS[9] (2012) on adolescent girls in Nellore, Andhra Pradesh. Maximum girls were sixteen and seventeen years old. In the present study out of total 350 subject 332 (94.9%) were unmarried and 18 (5.1%) were married. Where as in the study by Kansal et al (2017) 23% were married and out of which, majority were below legal age of the marriage.

Regarding the socioeconomic status present study shows most of the study subjects 228(65.1%) belonged to Lower middle class (IV), followed by Middle class (III) i.e., 45(12.9%), 43(12.3%) Upper Middle (II), 20(5.7%) Lower Class (V) and 14(4.0%) Upper class (I) respectively. Similarly in the study by Kansal, et al[8] (2017) it was found that three-fourth of the respondents belonged to lower economic class, i.e., IV^{th} and V^{th}.

Results about nutritional status in this study show that majority of the subjects 56.6% with 95% CI (51.0 – 62.0%) had normal BMI, 35.1% (30.6-40.3%) were underweight, 6.6% (4.0%-9.1%) were overweight and remaining 1.7% (.6-3.1%) were obese. Similarly in the study done by Vohra et al[10] (2011) on adolescents in Lucknow, prevalence of overweight was 4.17% and obesity 7.3%. Study by Venkaiah K et al (2012) prevalence of underweight in adolescent girls was 39.5%. In the present study most of the subjects 28.6% with 95% CI (24.0-33.1%) had mild pallor on examination, 18.6% (14.6-22.9%) had moderate and remaining 9.7% (6.6-12.9%) had severe pallor. Gedam JK. et al[11] (2017) anemia of mild, moderate and severe grade was observed in 124 (32.46%), 69 (18.06%) and 28 (7.32%) adolescent girls respectively. About 161 (42.14%) adolescent girls were not having anemia. In our study majority 339(96.9%) of the study subjects had no obstetric history, 3(.85%) had history of abortion, 2(.57%) Still birth and 6(1.7%) Live birth respectively. Similar results were seen in study by Rose-Clarke et al.[12] (2019) where only Nine percent of girls had been pregnant and 68% of these girls had had a pregnancy under the age of 18. According to NFHS 4 UP factsheet (2015-2016) women between 15-19 years who were already mothers or pregnant at the time of the survey in rural area were 4.4%. In our study most of the study subjects 250(71.4%) did not have any RTI/STI symptoms, 20(5.7%) responded that they had ulcers, wounds on private parts, discharge, 12(3.4%) had vaginal discharge, itching, pain lower abdomen, 17(4.9%) had burning micturition, vaginal discharge, 29(8.3%) had pain lower abdomen, backache and 22(6.3%) had vaginal discharge.

Present study shows that about 127(36.3%) preferred allopathic treatment in case of menstrual and, RTI/STIs problems, 103 (29.4%) preferred home remedy and 120(34.3%) did not take any treatment.Similarly In the study by Mathiyalagen, et al.[13] (2017) found that out of the 214 (88.4%) adolescent girls who perceived any reproductive tract morbidity only 89 (41.6%) received treatment for these health problems. Overall, 80 (37.4%) of respondents reported for seeking treatment from any registered medical practitioner.

6. Conclusion

Health status including reproductive health and health seeking behavior of rural adolescent girls aged 10-19 years were assessed. 35.1% (30.6-40.3%) were underweight and 56.85% were found anaemic. Prevalence of RTI/STI symptoms was 28.57%. Our study concluded that nutritional and reproductive health problems were prevalent among study subjects in rural Kanpur. Health care services which are provided by sub centers and primary health centers running various programs for adolescent girls (MoHWF) India can be assessed in this study.

7. Recommendations

Further researches are recommended in the field of adolescent health to explore various risk factors associated with nutritional and reproductive problems which will be helpful to overcome the health problems at both population and individual level in future.

8. Source of Funding

None.

9. Conflict of Interest

None.

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