



STUDY OF ADOLESCENT HEALTH STATUS IN NORTH INDIA

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ABSTRACT

Background: Adolescence is the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 19 years. It is a period of dynamic brain development. During this period, adolescents learn from the social behavior and environmental surroundings of their community. This study was undertaken to assess the health status of adolescents of District Kanpur

Materials and Methods: This community based, cross-sectional study was conducted in among 954 adolescents in the age group 10 to 18 years using simple random sampling. A pre-tested and pre-designed schedule was used to collect the information. Data entry and statistical analysis was performed using the Microsoft Excel.

Results: The prevalence of anemia (47.56%), diseases of teeth (3.67%), skin problems (7.19%) and GIT problems (10.9%) was more among the rural adolescents. A higher proportion of vision and eye problems (10.13%), respiratory problems (24.09%) and emotional problems (7.07 %) was observed among the urban adolescents.

Conclusions: Adolescent health should be given due importance in the curriculum of senior schools. Implementation of Annual health check up of adolescents by medical officers is essential in all school/college health programmes.

KEYWORDS : Adolescents, health problems, rural, urban**INTRODUCTION:**

The World Health Organization (WHO) defines "adolescent" as an individual between 10 to 19 years of age. (1) According to census 2011 report, 20.9% of population in India comprise of adolescents. The trend is static or small decreasing trend compared to 21.9% in 2001 census. But the number of adolescents is increasing to approximately 253.2 millions. The rural and urban population constituted 22% and 19% adolescents respectively. (2) According to sample registration system statistical report 2010, 21% of the total Indian population is comprised of adolescent. Out of them 11% is contributed by male and 10% contributed by female. The World Population Day in the year 2003 had been declared as the year of one billion adolescents in the world. (1) Most young people are presumed to be healthy but, as per WHO, an estimated 2.6 million young people aged 10 to 24 years die each year and a much greater number of young people suffer from illnesses 'behaviours' which hinder their ability to grow and develop to their full potential. Nearly two-thirds of premature deaths and one-third of the total disease burden in adults are associated with conditions or behaviours initiated in their youth (e.g. tobacco use, physical inactivity, high risk sexual behaviours, injury and violence and others). (3) The behavioural patterns established during this developmental phase determine their current health status and the risk for developing some chronic diseases in later years. (4) A significant reduction in the mortality and morbidity of communicable, maternal and neonatal disorders since 1990 due to concerted and integrated efforts. (5,6) led to a shift in focus towards the health, safety and survival of the young people. It is crucial to understand health problems of this population, processes and mechanisms that affect their health, identify interventions and strategic approaches that protect their health and develop and implement policies and programmes. Although adolescence and young adulthood are generally considered healthy times of life, several important public health and social behaviours and problems either start or peak during these years. (7) Most of these problems are linked with social determinants and lifestyles operating and interacting in complex environments that precipitate or trigger these conditions or behaviours. Developmental transition of young people makes them vulnerable particularly to environmental, contextual or surrounding influences. Environmental factors, including family, peer group, school, neighbourhood, policies, and societal cues, can both support or challenge young people's health and well-being. (7) In all countries, whether developing, transitional or developed, disabilities and acute and chronic illnesses are often induced or compounded by economic hardship, unemployment, sanctions, restrictions, poverty or poorly distributed wealth at both individual and country level. (8) There is little information about nutritional status of adolescents in India. With this background the present study was undertaken with the objective of assessing the health problem status of adolescents attending schools as well as those residing in Kanpur.

MATERIALS AND METHODS:

To conduct the present cross-sectional study total of 954 subjects was studied in the Department of Paediatrics, GSVM Medical College, Kanpur after taking permission from the institutional ethical committee. The adolescents in the age group of 10-18 years studying in various schools, institutions and residing in different urban and rural areas of Kanpur were included. For this, meeting was arranged with principals of schools and colleges and after explaining the purpose of visit, a verbal consent was obtained from them. In home visit consent was obtained from the parent(s) or guardian(s) for the interview and physical examinations. An attempt was also made to include adolescent girls who were examined in the presence of a female attendant. The respondents were interviewed in small batches not exceeding 40 per day. It required multiple visits to complete each school or college in order to get the required information. Thus, the study sample depicts a representative community from rural and urban area of Kanpur which constitute different ethnic, religious, socio economic, occupational and educational groups of people.

Health Information And Examination:

Information regarding present illness, any significant past illness, accidents, injuries, and hospitalization were recorded. A detailed health examination was conducted.

Statistical Analysis:

All the data were collected and scrutinized after the survey. The data were analysed and tables were prepared to highlight the specific information. Data entry and statistical analysis was performed using the Microsoft Excel.

RESULTS:

A total of 1126 adolescents were contacted, 954 (84.7%) were studied and 172 (15.3%) could not be interviewed either due to their absence at the time of survey or they refused to give interview. 539 (56.5%) were males and 415 (43.5%) were females.

Table 1: Frequency Of Reported Health Problems

Number of problems	Rural		Urban		Total	
	No.	%	No.	%	No.	%
None	279	68.91	403	77.06	700	73.38
One	78	18.10	69	13.19	147	15.41
Two	46	10.67	40	7.65	86	9.01
Three	10	2.32	11	2.10	21	2.20
Total	431	100.0	523	100.0	954	100.0

The above table shows that the 431 adolescents from rural and 523 adolescents from urban area, in which 68.91% rural and 77.06% urban adolescents cited no health problems. On the other hand, almost equal number of adolescents were suffering for at least three health problems from rural and urban area. One forty-seven adolescents had only one health issue, in which 78 belongs to rural

and 69 were belongs to urban area. (table 1)

Table 2: Area Wise Prevalence Of Health Problems In Adolescents

Disorder	Rural (n=431)		Urban (n=523)	
	No.	%	No.	%
Anemia	205	47.56	219	41.85
Goitre	53	12.30	39	7.46
Disease of teeth	102	23.67	79	15.11
Hearing difficulties	9	2.09	16	3.06
Vision and eye problems	24	5.57	53	10.13
Skin problems	31	7.19	21	4.02
Disease of CVS	2	0.46	3	0.57
Disease of respiratory tract	67	15.54	126	24.09
GIT problems	47	10.90	33	6.31
Urinary problems	19	4.41	27	5.16
Emotional problems	13	3.02	37	7.07
Accidents & injuries	5	1.16	12	2.29

Table 2 indicates that the anemia, goitre, disease of teeth, skin problems and GIT problems were more prevalent among rural adolescents as compared to urban adolescents, among them hearing difficulties vision and eye problems, disease of respiratory tract and emotional problems were more prevalent. Majority of adolescents were suffering from anemia, in which percentage of rural adolescents were 47.56% out of total 431 rural adolescents. Followed by disease of teeth, among them 23.67% out of total rural adolescents. (table 2)

DISCUSSION:

In present study 73.38% Of adolescents reported that they had no health problem whereas after examination 57.32% males and 58.07% female adolescents were found to be healthy. This study was based on school and home visit among urban & rural as well as in different socioeconomic status. Thus, the result of this survey is representative of school going children and non-school going of rural and urban area belonging to different socioeconomic status. In present study hearing difficulties vision and eye problems, disease of respiratory tract and emotional problems were more prevalent in urban areas. In addition, neighbourhood contextual factors play an important role in adolescent health. Adolescents in urban settlements may experience less poverty, better education, and health services. Conversely, urban upbringing can increase the risk of mental health, substance use, obesity, and physical inactivity. Physical environment includes built structures, air and water, indoor and outdoor noise, and parkland inside and surrounding the city.(9) Among rural adolescent's dental problem was seen in 23.67% while in urban adolescents it was found to be 15.11%. Similar result reported by Hussain (2015) that the prevalence of dental caries was 22.5%.(10) In another study in slum children of Delhi reported a higher prevalence (37.3%) whereas lower prevalence was reported in Umaipur (9.2%), in Orissa (8.5%) and in rural Bangladesh (11.0%)(11-14)The prevalence of anemia in the present study was found to be 47.56% in rural. Which was comparable to that reported by the study in children of rural China (61.8%).(15)The prevalence of skin disorders was found to be 60.7% . In a study reported a prevalence of 44.0% of skin disorders in rural Udaipur, including dandruff, acne and fungal infections. Another study reported a prevalence of 63.5% in rural children of Jodhpur which is comparable to the present study. In studies in rural children of Tamilnadu reported a lower prevalence of 7.8% and 8.7% respectively. The high prevalence of skin disorders in current study could be due to poor personal hygiene.

CONCLUSION:

To achieve adolescent health and well-being, planning of policies in health and allied fields should be multidimensional. The number and kinds of untreated health problems reported and observed in this study need for increased adolescent health services. Health education to adolescents, especially to those studying at schools and colleges is the need of the hour.

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