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Original Research Article

Morbidity and behavioural problems among adolescents in Hajipur village of Katihar district, Bihar

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ABSTRACT

Background: Adolescence is a transitional stage of physical and mental development that occurs between childhood and adulthood. Adolescence is a gateway to health promotion since key behavior patterns that influence health and longevity have their origin in adolescence. The aim and objectives of the study were to study the morbidity and behavioural problems among adolescents.
Methods: A community based cross sectional descriptive study was at Hajipur village, a rural field practice area of Department of Community Medicine, Katihar Medical College, Katihar, Bihar. 400 adolescents (213 boys and 187 girls) were included in the study. Systematic random sampling technique was used.
Results: Among 400 adolescents, 25% of the adolescents having some health problem during the survey; predominant problems were psychological and behavioral in nature. 6.25% of adolescents were addicted (tobacco chewing), 1.5% abused drugs, 9.75% were depressed and 7.5% had anxiety disorder. Higher number of adolescents (29%) had history of worm infestation. 9.75% adolescents were suffering from upper respiratory tract infection and also had ear, nose, throat, eye, skin, and or dental problems.
Conclusions: The adolescents had higher rate of morbidity and behaviour problems.

Keywords: Adolescents, Addiction, Anxiety, Stress, Dental problem, Worm Infestation

INTRODUCTION

Adolescent period is very crucial since these are formative years in the life of an individual when major physical, psychological and behavoural changes take place.[1] WHO defines adolescence both in terms of the age and in term of a phase of life marked by special attributes. These attributes include rapid physical growth, and development, physical, social, and psychological achievement of maturity.[2] Adolescents start experimenting with their lives and indulge in unhealthy lifestyles like smoking, alcohol use and abuse of drugs apart from premarital sex, under the influence of pear pressure. The WHO estimates that about 500 million people who are alive today will eventually die of smoking-related diseases, including cancers, heart disease and respiratory diseases.[3]

As a result, worldwide mortality from tobacco smoking-related diseases is expected to rise to 10 million deaths a year by 2030, more than the total of deaths from malaria, maternal and major childhood conditions and tuberculosis combined.[3] Anxiety and stress may play an important part in adolescent's initiation of alcohol or other drug use.[4] Adolescent girl's health covers morbidity, mortality, nutritional status and reproductive health and linked to these are environmental degradations, violence and occupational hazards all of which have implications for

adolescent girl's health.[5] World Health Organization Centre for Disease Control in the United States launched "Global Youth Tobacco Survey (GYTS)." GYTS results in India revealed that 30.4% boys and 16.8% girls never used tobacco; 22% boys and 10.3% girls were current users of tobacco; 18.5% boys and 8.4% girls were current users of smokeless tobacco with 10.5% boys and 4.4% girls being current smokers.[6] In recent years, research on adolescent behavioural adjustment and the development of deviant behaviour has shown that conditions found at individual, family, school and community level, as well as their interactions, can influence the probability of involvement in risk activities and practices.[7] According to NACO, 1996 the majority of the newly infected people with HIV/AIDS are young people below 25 years in age.[8] Adolescent children often face the problem of violence in the form of physical attack, verbal abuse, and bullying by family members (including parents), teachers, fellow students, and other groups. Victims of bullying have increased stress and a reduced ability to concentrate and are at increased risk for substance abuse, aggressive behavior and suicidal attempts.[9]

So the present study was undertaken among adolescents girls and boys in the rural community with the objective to study the morbidity and behavioural problems among adolescents in Hajipur village of Katihar district, Bihar.

METHODS

The present population based, cross sectional, descriptive study was undertaken among adolescents (10-19 Years) in Hajipur village of Katihar district, Bihar. The population of the Hazipur village is about 10000. The numbers of houses were approximately 1800. Data was collected by the Principal Investigator (PI) from adolescents (10-19 years) of Hajipur village in Katihar district, Bihar. The study was undertaken during January to December (2012). Permission for the study was obtained from the College authorities prior to commencement.

Sample size

On the basis of this prevalence of undernutrition among adolescents the sample size of the present study has been calculated by adopting the formula:

$$n = \frac{z^2 \alpha / 2 \times PQ}{\sum^2}$$

Where P =Prevalence rate of the disease =50% =0.50 Q=1–P, =0.50

α=level of Significance (at α=0.05)
$=Z^2 \alpha / 2 = 4$

∑ = Allowable error 10% of P
$= 0.05 \sum^2 = 0.0025$

Then $n = \frac{4x0.50x0.50}{.0025} = 400$

Hence the required study sample size is 400 adolescents (10-19 years).

Sampling technique

Houses that are having at least one adolescent or more were numbered serially. Then the houses were selected by systematic random sampling technique.

Inclusion criteria for sampling

The study was conducted on adolescents who were of both the gender (adolescent boys and girls), willing to participate in the study and apparently healthy on general physical examination.

Exclusion criteria for sampling

The study excluded adolescents who were above 19 years of age and below 10 years of age group, not willing to participate in the study, with chronic illness or receiving long term allopathic or indigenous drugs and with history of any severe illness within the past 2 weeks for which they required hospitalization.

Data collection method

For a period of one month, collection of data was undertaken by principal investigator herself. During this period the proposed proforma on the study was tested out in the field practice areas and necessary modifications were made.

Written informed consent was taken from the head of the household of adolescents who were below eighteen years, and direct written informed consent was taken from girls who were eighteen years and above. After establishing good rapport with the family, detailed information about socio-demographic characteristics/profile (age, education and occupation of parents, socio-economic status of the family, types of family, family size), dietary intake and contributory factors in relation with health, nutritional and behaviour profile and morbidity status of the adolescents were recorded in the predesigned and pretested questionnaire. Subject suffering from severe morbidity symptoms like URTI, ENT, Eye problems were referred to Katihar Medical College, Katihar for proper treatment.

Data analysis

Data collected was entered in Microsoft Office Excel and analysed by using SPSS version 20.0. Dependent variable frequencies, percentage, mean, range and proportion were calculated. Chi-square test and Yate's correction were used for statistical analysis. The differences were considered as significant at a p value of<0.05.

RESULTS

It was observed from Table 1 that among 400 adolescents (213 boys and 187 girls) the largest number of adolescents 41.25% belonged to 10-14 years of age group followed by 32.5% and 26% in the age group 15-17 years, and 18-19 years respectively. Out of 400 adolescents, 53.25% were boys and 46.75% were girls. Among 400 adolescents, 25% of the adolescents were having some health problem during the survey; predominant problems were psychological and behavioral in nature. 6.25% of adolescents were addicted (tobacco chewing), 1.5% abused drugs, 9.75% depressed and 7.5% had anxiety disorder.

Table 1: Distribution of adolescent boys and girls according to behavioural problems.

Behavioural problems	Boys (%)	Girls (%)	Total (%)
Addiction	22 (5.5)	3 (0.75)	25 (6.25)
Anxiety	1 (0.25)	29 (7.25)	30 (7.5)
Depression	15 (3.75)	24 (6)	39 (9.75)
Drug abuse	6 (1.5)	0 (0)	6 (1.5)
Total	44 (11)	56 (14)	100 (25)

Among 400 adolescents a high number of adolescents (29%) had history of worm infestation. 9.75% adolescents were suffering from upper respiratory tract infection. 6.8% girls showed upper respiratory tract infection,7.5% were having dysmenorrhoea, 1% dental problem, 1% eye problem,1.25% ENT problem,1.5% skin problems, 21% worm infestation and 2% other problems. And 3% boys had upper respiratory tract infection, 0.75% had dental problem, ear nose throat, 0.75% eye problem, 1% skin problem and 8% worm infestation and 1.75% other problems (Table 2).

Table 2: Prevalence of morbidity status in adolescent boys and girls.

Morbidity problems	Boys (%)	Girls (%)	Total (%)
URTI	12 (3.0)	27 (6.75)	39 (9.75)
Dysmenorrhoea	00 (0.0)	30 (7.5)	30 (7.5)
Dental problems	03 (0.75)	04 (1.0)	07 (1.75)
ENT problems	03 (0.75)	05 (1.25)	08 (2.0)
EYE problems	03 (0.75)	04 (1.0)	07 (1.75)
Worm infestation	32 (8.0)	84 (21.0)	116 (29.0)
Skin problems	04 (1.0)	06 (1.5)	10 (2.5)
Other problems	07 (1.75)	08 (2.0)	15 (3.75)

DISCUSSION

Similar to our study Mukherjee et al tobacco intake was obtained among the students, with 9.8% reported having ever used smokeless tobacco and 4.3% ever smoked.[10] Tobacco intake was higher among those with a history of parental tobacco intake. It was reported that girls may be especially vulnerable to stress, perceiving events to be more stressful at that time than at any other.[11] Prajapati et al in their cross -sectional study on 401 students (195 boys and 206 girls) 10-19 years age in Ahmadabad observed that only boys had addiction (15.9%) and most common was tobacco chewing (61.29%).[12] No one was intra venous drug user. Wasnik et al in a study found that 30% showed clinical anaemia, 27.1% were having dental caries, 16.7% reproductive problem (Dysmenorrhoea), 16% skin problem, 4% e problem (defective vision and refractive error), 2.4% URTI and 2.1% ENT problem.[13] Srinivasan et al found the common morbid conditions to be skin disorders 25.7%, dental caries 21.5%, ARTI 7%, dysmenorrhea 3.5%.[14] Dambhare in their study reported that 86.21% adolescents were suffering from one or more illness at the time of examination.[15] 35.34% adolescents had dental caries, refractive error 13.79%, worm infestation 7.76%, skin problems 6.9%, tonsillitis 2.59% and wax in the ear 2.59%. Dey et al reported that pallor was present in 40% of the population (30% female; 46% male).[16] Caries and other problems of oral cavity were found to be common in 15% followed by 13% who complained of skin infections including scabies. Almost one fourth adolescent complained of psychological problems. Mishra conducted a study among adolescent girls in (12-18 years) schools in New Delhi showed prevalence of psychiatric morbidity as 13.76%.[17] Highest psychiatric morbidity was found among girls of 17–18 years (23.96%) followed by girls of 14 to15 years who had 18.89% of morbidity. In Internalizing syndromes group, anxious/ depressed syndrome was most common.10.3% of girls had this syndrome. Second most common was somatic syndrome (4.38%) while 2.55% of girls were withdrawn. Among externalizing syndromes 4.4% of girls had aggressive behaviour syndrome. Psychiatric morbidity among adolescents in other countries has been reported in the range varying from 10 to 40%.[18] Christ identified depression and anxiety as the most common mental problems endured by girls.[19]

CONCLUSION

The adolescents had higher rate of morbidity and behavior problems. Major behavioral problems which need to be addressed through counseling and adequate information based on evidence and science. School health services provide an ideal platform to detect the health problems early and treat them. Early detection of the morbidities through regular survey helps in prompt treatment and prevention of serious complications. Well-developed adolescents who were empowered with appropriate life skills had a better chance of becoming healthy, responsible, and productive adults, leading to better potentials for leading successful careers, and increased productivity and progress. Self awareness, critical thinking, decision making, effective communication, coping with stress and some of the life-skills required.

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