Research Article

Health profile of adolescents of tribal area of state Maharashtra, INDIA

D N Dhekale[1*], Y A Hiwarkar[2], C D Dhekale[3]

[1]Professor, [2]Associate Professor, Department of Community Medicine, Dr. Ulhas Patil Medical College and Hospital, Jalgaon- 425001, Maharashtra, INDIA.
[3]Medical Officer, ESIS Dispensary, Chalisgaon, Maharashtra, INDIA.
Email: dilipdhekale@gmail.com, yogitabavaskar@gmail.com, dhekalecharulata@gmail.com

Abstract

People living in isolation in natural and unpolluted surroundings far away from civilization with their traditional values, customs, beliefs and myth intact arecommonly known as "tribal". Their health status is poor. It is necessary to focus primary preventive efforts on adolescents in order to improve overall public health in near and distant future. Present cross sectional community based study was undertaken to know the health profile of adolescents in tribal area of Yavatmal District of Maharashtra. Data was collected on predesigned proforma during November 20012 to April 2013. Total 502 adolescents were studied. The commonest morbidities among adolescents were anemia (88.04%), helminthiasis (19.72%), acne (19.45%), deposition on teeth (41.33%) and acute nasopharyngitis (13.14%). Females were more anemic (92.99%) than males (77.95%). Anemiawas found to be significantly associated ($p<0.05$) with age, sex and worm infestation. 379 (75.50%) adolescents were under weight.
Keywords: Adolescents, Tribal, morbid conditions.

[*]**Address for Correspondence:**
Dr. Dilip Narayan Dhekale, Flat no.1, Suvarnvilla Apartment, Vyankatesh Colony, B/H Collector Bangalow, Jalgaon-425001, Maharashtra, INDIA.
Email: dilipdhekale@gmail.com
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INTRODUCTION

"Healthy adolescence, the need of Hour"[1]. World Health Organization defined "adolescence" as being between the ages of 10-19 years encompassing entire continuum of transition from childhood to adulthood. It is the most critical period of development second only to early childhood[2]. The period of adolescence is generally regarded as a period, virtually free from any health problem[3] and therefore does not receive attention from public healthcare providers. But on the contrary they have many health related problems particularly among tribal population especially from developing countries. At the same time, it is easier to include healthy behavior at a young age rather than to modify behaviour at later ages or after onset of a disease. In Yavatmal district some tribal communities mainly kolam, pardhan were living on separated places known as Pod, Thanda which are attached to villages inhabited by non tribal communities. Now in many villages of this district, both tribal and nontribal communities are living together in same villages. Department of Tribal Development, Government of Maharashtra in1995 declared such villages as tribal villages[4] and their socio culture has maximum tribal influence. In order to quantify the health problems and to measures the health status of adolescents of tribal area, community based study is better tool. Thus on the heel of emphasis laid in the National Reproductive and Child Health (R CH) programme, present study was planned.

MATERIAL AND METHODS

The present cross sectional study was carried out during November 20012 to April 2013 in 5 tribal villages of Primary Health Centre, Waradh of Yavatmal District in Maharashtra State, India. PHC Waradh has six sub centres, out of these Waradh-1 sub centre was selected randomly for the study. Waradh-1 sub centre has 5 villages which are situated 2 to 5 km away from each

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other. According to department of tribal development, Government of Maharashtra, the villages selected for study comes under tribal zone .These villages are mostly inhabited by tribal people belonging to Kolam, Perdhan, Gond, and Perkhi community and also have some non-tribal caste like Kunabi, Boudha, Dhanger, Sutar etc. In the study area total adolescents were 520, out of which 18 were not available during home visit in study period hence total 502 adolescents were included in the study. Before starting the study, permission from District Health Officer, Yavatmal was obtained. Purpose of study was explained to trusted local community leaders like Zilla parishad member, Sarpanch and parents of adolescents. Informed consent was taken from adolescents and from parents in case of minor. In each village numbering of houses was carried out with the help of attendant and family folders were prepared. The age of study subject was confirmed from available age related proof and those who did not have any proof approximate age according to parents was considered. From family folder adolescent girls and boys of 10-19 years of age were interviewed and examined. Data was collected on predesigned proforma which was modified after pilot study conducted on 50 study subjects. Female adolescents were examined in the presence of nurse mid-wife or female family member. Height and weight measurements were taken as per the WHO standards and BMI was calculated .Synthesizing the signs and symptoms, findings of physical examinations, result of bed side laboratory investigation like hemoglobin percentage, urine, stool, blood sugar and available medical records concluded the morbidity among study subjects. The morbidities were grouped into broad categories as per the special tabulation list and main list of International Classification of Diseases (ICD) 10th revision, 2004[5]. Statistical analysis was carried out by using percentage and chi square test.

RESULTS

In present study among 502 adolescents, there were 257 (51.20%) females and 245 (48.80%) males. Most of the adolescents (97.42%) were suffering from one or more morbid condition(s), only 2.58 % adolescents were free from any morbidity. The leading morbid conditions among study subjects were anemia (88.04%), helminthiasis (19.72%),acne (19.45%), deposition on teeth (41.33%), acute nasopharyngitis (13.14%), vitamin A deficiency (10.15%), wax in Ear (7.76%), dermatitis (7.37%), dysmenorrhoea in female (5.44%), cutaneous abscess, furuncle and carbuncle (4.18%) and other morbidities ranges from 3- 0.19% (Table 1). Anemia (mild to moderate) was the predominant morbidity found among these tribal adolescents. Females were more anemic (92.99%) as compared to males (77.95%), no one had severe anemia. Anemia was found to be significantly associated with age (x^2 =32.64, P<0.0001), sex (x^2 = 23.08, P<0.0001) and worm infestation(x^2= 9.23, P<0.05). 379 (75.50%) adolescents were under-weight in which proportion of male adolescents was more (80.05%) than females (69.26%), 6 were overweight and 117 (23.30%) were in normal range of weight.

Table 1: Morbidities among adolescents

ICD Code	Morbid condition	Adolescent Male(%)* n=245	Adolescent Female(%)* n=257	Total (%) n=502
A15-A19	Tuberculosis	01 (0.40)	1 (0.38)	02 (0.39)
A 30	Leprosy	0 (0)	1 (0.38)	01 (0.19)
B 65-B 83	Helminthiasis	57 (23.26)	42 (16.34)	99 (19.72)
B 86	Scabies	07 (02.85)	05 (1.94)	12(2.39)
D 17	Lipoma	02 (0.81)	00 (00)	02 (2.39)
D 50-D 53	Nutritional Anemia	198 (80.81)	244 (94.94)	442 (88.04)
E 50	Vit. A deficiency	33 (13.46)	18 (7.00)	51 (10.15)
E 51	Vit. B/C deficiency	12 (4.89)	04 (1.55)	16 (3.18)
F 70-F 79	Mental retardation	03 (1.22)	02 (0.77)	05 (0.99)
G 40	Epilepsy	02 (0.81)	00 (00)	02 (0.39)
H 01	SqumaousBlepharitis	00 (00)	01 (0.38)	01 (0.19)
H 10	Conjunctivitis	01 (0.40)	02 (0.77)	03 (0.59)
H 54	Low vision	05 (2.04)	03 (1.16)	08 (1.59)
H11	Ptyrigium	02 (0.8)	02 (0.77)	04 (0.79)
H 60	Otitis externa	01 (0.40)	01 (0.38)	02 (0.39)
H 66	Wax	19 (7.75)	20 (7.78)	39 (7.76)
H 66	Suppurativeand unspecified Otitis media	07 (2.85)	05 (1.94)	12 (2.39)
J 00	Acute Nasopharyngitis	29 (11.83)	40 (15.56)	69 (13.74)
J 03	Acute tonsillitis	01 (0.40)	01 (0.38)	02 (0.39)
J 33	Nasal polyp	01 (0.40)	00 (00)	01 (0.19)

J 34.2	Deviated nasal septum	08 (3.26)	05 (1.94)	13 (2.58)
J 45	Asthma	01 (0.40)	00 (00)	01 (0.19)
K 02	Dental caries	08 (3.26)	05 (1.94)	13 (2.58)
K03.6	Deposit on teeth	121 (49.38)	87 (33.85)	208 (41.43)
K 02	Dental caries	08 (3.26)	05 (1.94)	13 (2.58)
K03.6	Deposit on teeth	121 (49.38)	87 (33.85)	208 (41.43)
K 12	Aphthous ulcer	01 (0.40)	02 (0.77)	03 (0.59)
L 02	Cutaneous abscess, Furuncle and Carbuncle	12 (4.89)	09 (3.5)	21 (4.18)
L 20-L 30	Dermatitis	17 (6.93)	20 (7.78)	37 (7.37)
L 70	Acne	26 (10.61)	24 (9.33)	50 (19.45)
L 80	Vitiligo	01 (0.40)	00 (00)	01 (0.19)
M 21	Acquired deformities of limbs	02 (0.81)	02 (0.77)	04 (0.79)
N39	Urinary tract infection	01 (0.40)	01 (0.38)	02 (0.39)
N 94.6	Dysmenorrhoea	-	14 (5.44)	
Q66	Congenital deformities of limbs	02 (0.81)	02 (0.77)	04 (0.79)
	No Morbidity	07 (2.85)	06 (2.33)	13 (2.58)

* Multiple responses

Table 2: Factors affecting anemia status

Factors	Anemia No. (%)	No anemia No. (%)	Test of significance
Age group			
10-13 years (Early adolescents)	196 (96.07)	8 (3.93)	x^2 =32.64
14-16 years (Middle adolescents)	138 (81.17)	32 (18.83)	p < 0.0001
14-16 years (Middle adolescents)	96 (75.00)	32 (25.00)	
Worm infestation			
Present	95 (95.95)	04 (4.05)	x^2= 9.23
Absent	340 (84.36)	63 (15.64)	P<0.05
Sex			
Male	191 (77.95)	54 (20.05)	x^2 = 23.08
Female	239 (93.00)	18 (7.00)	p < 0.0001

Table 3: Grading of adolescents according to their Body Mass Index

Body Mass Index	Adolescents Males (%)	Adolescent Females (%)	Total (%)
<18.50 (under weight)	201 (82.05)	178 (69.26)	379 (75.50)
18.50-24.99 (normal range)	43 (17.55)	74 (28.80)	117 (23.30)
> 25.00 (overweight)	1 (0.40)	5 (1.94)	6 (1.20)
Total	**245 (100)**	**257 (100)**	**502 (100)**

DISCUSSION

Despite remarkable world-wide progress in the field of diagnostic, curative and preventive health, still tribal people are living far away from civilization with their traditional values, customs, beliefs and myth intact. They are largely unaffected by the developmental process going on in the rest of the state[6]. Therefore these groups remain backward particularly in the health, education and socioeconomic aspects. Though it was thought that adolescence is a relatively healthier condition but on the contrary they have many health related problems particularly among tribal population. Adolescents from tribal area are largely affected by health related problems which can be easily prevented by primary level of prevention. In this study area population of female adolescents was more than male adolescents which is the general findings of tribal in India. In the present study only 2.58% adolescents were free from any morbidity and rest of them had one or more morbid conditions related to nutritional deficiencies, infectious diseases, environmental sanitation and personal hygiene. Similar findings were also reported by several studies[7,8,9,10,11,12]. Several workers[13,14,15,16] have emphasized the importance of Body Mass Index (BMI) as an index of nutritional assessment, weight for height are considered as indices of current nutritional status. 75.50% of study subjects were suffering from Under nutrition which reflects the high degree of nutritional insult. Present study revealed the high prevalence of Anemia and Under nutrition among adolescents which might be due to increased requirement of iron, calories, proteins and other nutrients for growth spurt that occur during this period. Presence of morbid conditions such as worm infestation and other infectious diseases are the contributary factors.

CONCLUSION

Tribal adolescents of study area were suffering from one or more morbid condition(s) mostly anemia ,their current nutritional and health status was poor.

RECOMMENDATIONS

There is need to improve the diet of adolescents of tribal area in respect of calorie and proteins content, regular deworming and iron supplementation. Regular health check up and treatment should be provided preferably through mobile medical unit. Male adolescents should receive equal attention as given to female adolescents in national health programme. National nutritional programme -"Prophylaxis against nutritional anemia" in children should be extended to male adolescents as it was already extended to female adolescents in RCH programme in India.

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