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Tracing Commoner Health Problems among Tribal School Children of the Dang District of Gujarat

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ABSTRACT

Background: Development, food security, safe housing and sanitation being the rights of every citizen. Health is inseparable component of these essentials of living. Tribal population is poorest and experience extreme levels of health deprivation and that's why they lag behind state as well as national average on several health indicators. Tribal children being most vulnerable, this study is planned to know morbidity profile of the tribal children living in residential hostel in Dang district.

Methodology: Community Medicine Department of Government Medical College, Surat conducted general health check-up camp for the benefit of tribal students.

Result: One hundred and seventeen students from 5 tribal residential hostels were beneficiaries of this camp. Dental caries, Ear wax and discharge, passing worms in stool, refractive errors and skin infection were some common problems identified and treated in the camp.

Conclusion: Personal hygiene and oral health is more compromising factor that becomes hurdle for their overall development. Periodical health check-up and health education is most needed especially for tribal children.

Key words: Health camp, Health education, Morbidity profile, Tribal children

INTRODUCTION

One fourth of India's poorest people are Scheduled Tribes (ST), even though they are only 8% percent of India's population[1]. Gujarat is a state on fifth number of having more number of tribal populations after Madhya Pradesh, Maharashtra, Odisha and Rajasthan respectively, and 14.75% of total Gujarat's population, near about 8,917,174 persons, belong to STs category as per census 2011[2]. If we talked about India, over 84 million people are scheduled tribes[1].

Health indicators are far worse among India's underprivileged tribal people as contrary to general population. Illiteracy, irritating physical surroundings, lack of nutrition, insufficient access to potable water, and absence of personal hygiene and sanitation are some other profound factors that make them more vulnerable to have diseases[3]. Lack of access to healthcare facility, absence of awareness of diseases, non-affordable transportation and poor civil work and above all financial constraint are some factors that add on susceptibility of having diseases[4].

Under-five mortality rates (U5MR) of 95 deaths per 1,000 live births in 2006 suggestive of poor hygiene practices among tribal population only because of lack of awareness[5]. In recent study of Maharashtra, almost 80% of tribal women weighed less than 50 kg and malnourished children were 74% [6]. Death due to starvation is still reported in tribal communities even in advance state like Kerala[5]. In epidemiological transitions of disease, nutritional deficien-

cy replaced by infectious diseases to non-communicable diseases and with that, moreover disturbing is the prevalence of rare disease like diabetes and hypertension in tribal population is also increasing[7,8].

Frequently reported complaints from tribal area are malaria, pneumonia, respiratory disorders, snake and scorpion bites, diarrhoea and fever[3]. Inadequate antenatal visit, home deliveries, unimmunized children, inadequate postnatal visits, and rising prevalence of RTI/STI infection decreases impact of government efforts[1,3].

Not surprisingly, the health status of India's tribal communities is in need of special attention. So, Government Medical College Surat organized general health check-up for tribal children with the support of Swapath Non-Government Organization (NGO) to provide preventive, promotive and curative health services to the tribal children. The objective of the camp was to provide free general health check-ups, providing treatment for minor ailments, refer for free treatment to those patients who required specialized treatment and to identify common health problems.

OBJECTIVES

The present study was conducted to know the commoner health problems and its prevalence among tribal children; to assess the nutritional status of tribal children; and to know the prevalence of prehypertension and hypertension among tribal children.

METHODOLOGY

This was a cross sectional study. All the students living in residential hostel maintained by Swapath NGO in the tribal area of Jamnyamal, Zaran, Girmala, Kaksala & Amlipara villages of dang district were examined. The study was done in the month of March to May 2016.

A total of 130 students studying from Std I to Std VII living in concern residential hostels of studied village included as study participants. Data was collected of 117 students as 13 students were not present at the time of our visit.

A pre-designed questionnaire was used to record the complaints of tribal students. Tribal students living in the residential hostel and provided informed consent were included in the study. All other children of concern village who examined in the camp were excluded.

A Pre-designed questionnaire cum case paper was used to collect all the important information. Students were examined for general health check-up by the post-graduate doctors, tutor and assistant and associate professors of the department of community medicine, government medical college, Surat. Students were examined for dental caries, ear wax/ pus or discharge from ear, clinical anaemia, refractive errors, skin diseases, and other eye problems and along with that, history passing warms in stool was collected. Inch tape, digital weight machine and sphygmomanometer also took with us for measurement of height (cm), weight (kg) and blood pressure (mm of Hg) respectively. Body Mass Index (BMI) was also calculated.

Statistical Analysis: Data was entered in Microsoft Excel and descriptive analysis was done using Statistical Package for the Social Sciences (SPSS) V.16 and converted in to information.

RESULTS

One hundred and thirty children enrolled or living in a residential hostel set by Swapath NGO at different villages of Dang district and out of them, 117 children were present at the time of our visit. All the children were in the age group range from 6 years to 18 years with male to female ratio of 1.12:1.

One fourth of the total tribal children had a problem of dental caries (23.93%).

Basing on Body Mass Index-for-age percentile, it was observed that more than two third of tribal children had healthy weight. On the contrary, nutritional status 19.65% of total child deviated from the normal.

Table 1: Baseline information of children

Characteristic	Frequency (n= 117) (%)
Residential hostel of	
Jamnyamal	42 (35.9)
Girmala	18 (15.38)
Zaran	25 (21.37)
Kakshala	7 (5.98)
Amlipara	25 (21.37)
Age of children (in years)	
6 – 8	54 (46.15)
9 – 12	44 (37.61)
13-18	19 (16.24)
Sex of children	
Male	62 (52.99)
Female	55 (47.01)
Mean of Height (in cm)	**(mean ± SD)**
Boys	124.96 ± 13.31
Girls	125.3 ± 13.46
Combined	124.80 ± 13.12
Mean of weight (in kg)	**(mean ± SD)**
Boys	21.59 ± 6.21
Girls	21.63 ± 6.31
Combined	21.50 ± 6.12

Table 2: Commoner health problems found during camp (n = 117)

List of commoner problem	Cases (%)
Dental caries	28 (23.93)
Ear wax/ pus or discharge from ear	17 (14.53)
Clinical anaemia (pale nails and tongue)	17 (14.53)
Worm infestation (Warms pass in stool)	14 (11.97)
Refractive errors (diminished vision)	8 (6.84)
Multiple boils/ skin itching or Skin problem	7 (5.98)
Cough and Cold (URTI)	4 (3.42)
Abdominal discomfort	2 (1.71)
Red /painful eye	1 (0.85)
Vitamin A deficiency (Bitot spot)	1 (0.85)

Table 3: Nutritional status of children (n = 117)

Weight status category	Percentile Range	Children (%)
Underweight	< 5th percentile	5 (4.27)
Normal Weight	5th to <85th percentile	94 (80.34)
Overweight	85th to <95th percentile	13 (11.11)
Obese	≥95th percentile	5 (4.27)

Seventeen percent and 12 percent of total tribal children had deviated systolic and diastolic blood pressure respectively and place in to prehypertension, stage 1 hypertension and stage 2 hypertension categories.

DISCUSSION

General health check-up camp was organised by the department of community medicine, Government Medical College, Surat with the help of Swapath NGO trust.

Health problems of tribal children: The present study identified that more common health problems were dental caries (23.93%), clinical anaemia (14.53%),ear wax/ pus or discharge from ear (14.53%) and worm infestation (11.97%).A study conducted in Central and Western Nepal among 5–6 year old school children, reported 67% of children were affected by dental caries[9]. The dental caries prevalence among 5–6 –year old Chepang school children was 52%[10]. The prevalence of dental caries in Gond children in Kalahandi district of Orissa was 20% and is in line with our study[11]. The prevalence of dental caries in our study is in line with the recommended target of WHO and Federation of Dentistry International of having less than 50% caries free children by 2000[12].The High prevalence of dental problems may be due to lack of accessible adequate water, inadequate oral hygiene and lack of awareness of dental cleanliness. The prevalence of clinical anaemia among the children of welfare hostels in rural health centre, tadikonda area of Guntur district was 6.7% which was lower than our study findings (14.53%)[13].

In our study prevalence of ENT problems was 14.53% which was lower than the Sivaiah's[13] study (17.1%), but a lower prevalence was reported from the study conducted in Nellore[14] city of Andhra Pradesh (7%). The prevalence of skin problem was 5.98% in our study which was lower than the reported in study of welfare hostel of Tirupathi[15] that was 25.7%, Nellore[14] city of Andhra Pradesh (26%) and Ropar district of Punjab[16] (23.2%).The current study revealed the prevalence of history of passing worms in stool (11.97%) which was lower than the Sivaiah's study (18%)[13]andTirupathi's[15] study (20.7%)but a higher figure was reported in Shantiananthakrishnan[17] et. al study (46%) and Udaipur[18] study (45.5%).Other health problems like upper respiratory tract infection including cough and cold (3.42%) and abdominal discomfort (1.71%) markedly lower that the report of sivaiah's study[13] (52.7%respiratory tract infections) and Shanthi Ananthakrishnan's[17] study (15% GIT tract infection). In our study, the prevalence of vitamin – A deficiency (based on clinical findings like Bitot's spots) 0.85% was lower than the report of Sivaiah's[13] study (2.2%) and ShanthiAnanthakrishnan's[17] study (3%).

Nutritional status of children: Our study reported prevalence of underweight was 4.27%, which is quite lower than the study carried out by MdShahnawaz[19] on 1286 children of tribal block of Jhadol in district Udaipur, Rajasthan (26.6%). The prevalence of overweight and obese was 11.11% and 4.27% respectively which is comparable of report of Basu D (prevalence of obesity, 5.1% in boys and 9.5% in girls)[20].

Prevalence of prehypertension and hypertension: The prevalence of prehypertension in our study for SBP percentile was 13.68% and that was 8.55% for DBP percentile and that of for stage 1 hypertension was 3.42% for SBP as well as for DBP percentile and that in stage 2 hypertension was found to be 0.85%. Comparable findings were found in study of Verma Vivek[21], (pre-hypertension prevalence: 6.16% for SBP and 5.61% for DBP and hypertensive prevalence: 5.06% for SBP and 5.09% for DBP).

Table 4: Prevalence of prehypertension and hypertension (n = 117)

Classification	Systolic Or Diastolic Blood Pressure*	SBP percentile (%)	DBP percentile (%)
Normal	< 90th percentile	96 (82.05)	102 (87.18)
Prehypertension	90th to < 95th percentile or ≥ 120/80 mm Hg	16 (13.68)	10 (8.55)
Stage 1 hypertension	95th to < 99th percentile plus 5 mm Hg	4 (3.42)	4 (3.42)
Stage 2 hypertension	> 99th percentile plus 5 mm Hg	1 (0.85)	1 (0.85)

CONCLUSION AND RECOMMENDATION

In view of the high prevalence of morbidity among the children of residential hostel, periodic medical examination is the most crucial thing for the welfare of children. Health education of children regarding personal hygiene and oral hygiene is also needed. Regular iron and folic acid supplementation along with periodic deworming are advised as there was high prevalence of clinical anaemia and had history of passing worms in stool. Also there were a problem of refractive error among children, they were without spectacles. So it is recommended it should be provided on urgent basis. Though small prevalence of obesity, overweight and hypertension, there is a need of anthropometric and regular blood pressure measurement to keep watches their cardiovascular status.

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