

## Health and Morbidity Profile of Bharias-A Primitive Tribe of Madhya Pradesh

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**ABSTRACT** The study was carried out to determine the health and morbidity status of Bharia tribe. A total of ten villages were surveyed, and total of 172 households and nine hundred ten individuals were covered. The major occupation of the head in the households surveyed is agriculture and agriculture labor. 66.4 percent of the population was illiterate. Acute respiratory infection and fever were the commonest morbidity found more in preschool and school going children than adult population. According to weight for age, 52.5 percent of the Pre-school children were underweight (<-2SD). Stunting was 48.1 and wasting was 33.9 percent. Prevalence of chronic energy deficiency (BMI<18.5) was about 35.6 percent in adult population. Bharia Children are suffering with more morbidity like fever, respiratory infection and malnutrition than adult population.

### INTRODUCTION

Bharias listed as one of the Primitive tribe of Madhya Pradesh mainly inhabitants of the district Chhindwara. A small section of this community lives in an area known as Patalkot valley. Patalkot is a bow shaped formation on the Satpura plateau and area consists of ridges and valleys. The place is spread over an area from 22°.24' to 22°.29' North, 78°.43' to 78°.50' East. Patalkot is a lovely landscape located at a depth of 1200-1500 feet in a valley. Because of the great depth at which it is located this place is christened as 'Patalkot' (Patal means very deep, in Sanskrit). The approach into the area is very difficult being a deep depression in hilly region. Total area of Patalkot is about 79.89 sq. km at an average height of 2750-3250 feet above Mean Sea Level. 'Doodh' river flows in the picturesque valley. It is a treasure of forest and herbal wealth. There are 12 villages and 13 hamlets in this valley, with a total population of 2012 (1017 male and 995 female). Because of the inaccessibility of this area, the tribals of this region were totally cut off from the civilized world. Shifting cultivation depicted as an important means of livelihood. There is only one sub-center (Health) in the valley and eight Anganwadi centers. The Bharia economy is still highly dependent on agricultural pursuits, collection of minor forest produce and others like tubers, roots, and fruits. They also work as farm servants in the forest department (Tewari, 1984). Numerous studies (Chandra-

sekar et al., 1997) have shown a close relationship between the tribal ecosystem and their health and morbidity status. The main purpose of this study was to establish baseline information on the health and morbidity status of Bharia.

### MATERIALS AND METHODS

A community-based survey was carried out in Patalkot valley, Tamia block of Chhindwara district in the year 2000. Ten villages were covered for the study and 172 households surveyed. Clinical Examination was carried out in nine hundred ten individuals. The information on socio-demographic profile was collected for all the households. Data was recorded on pre-designed and pre-tested schedules. All the individuals were clinically examined for morbid conditions, while the data on anthropometrical measurements weight, height were measured using standard anthropometric procedures (Jelliffe, 1966). Statistical analysis was done using SPSS 11.5 software. The extent of different types of under-nutrition was assessed in pre-school children using waterlows, standard deviation classification (SD) based on weight for age (under weight) height for age (stunting) and weight for height (wasting) (Waterlow, 1977). The nutritional status of adults was assessed based on the Body Mass Index (BMI) and were grouped into different grades (James, 1988). Body Mass Index is ratio of weight in kilograms and square

of height in meters. Structured questionnaire was used to know the health service utilization.

## RESULTS

The details of socio-economic characteristics are presented in the (Table 1). More than 98 percent of the Bharias belonged to Hindu religion. About 99 percent of the Bharias belonged to socio-economically vulnerable sections (below poverty line) of Scheduled Tribe. The most of the families were nuclear (78 percent). All most the Bharias were residing in their own house and type of Household was *kutchra* (98.7 percent), semi-*puccka* (1.3 percent). About 66.4 percent of the individuals were illiterate only 11.6 percent passed the primary education. The major occupation of the head of the household was own cultivation (38.7 percent) and agriculture labour (37 percent), and other labour like forest work (24.3 percent). The general morbidity of the

**Table 1: Socio-economic characteristics of households**

Variable	Description	%
Religion	Hindu	98.8
	Others	1.2
	Total	100
Community	ST	99.0
	Others	1.0
	Total	100
Type of Family	Nuclear	78.0
	Joint	14.0
	Extended	8.0
	Total	100
Type of House	Kuccha	98.7
	Semi pukka	1.3
	Total	100
Literacy	Illiterate	66.4
	Read and Write	15.6
	Primary	11.6
	Middle	5.3
	High school	1.1
Occupation	Total	100
	Cultivation	38.7
	Agriculture Labour	37.0
	Other	24.3
	Total	100

**Table 3: Percent prevalence of malnutrition (SD classification) in Pre-school children**

Indicator	< - 3 S.D.	- 3 S.D to - 2 S.D	- 2 S.D to - 1 S.D.	- 1 S.D. to median	>=Median
Weight/age (Under weight)	21.4	31.1	27.7	11.9	7.9
Height/age (Stunting)	23.4	24.7	22.1	9.9	19.0
Weight/Height (Wasting)	8.8	25.1	30.0	27.7	8.1

population was shown in the (Table 2). The main morbid condition observed was fever about 56.8 percent and acute respiratory infection 57.9 percent at the time of survey. The Fever which had high occurrence about 23 percent in pre school children followed by 21 percent and 12.9 percent in the age group 6-14 years and 15+ years, respectively. The acute respiratory infection has higher prevalence (36.5 percent) among preschool children. The proportion of preschool children with weight deficit (<median-2 S.D) was 52.5 percent. Stunting was 48 percent, and wasting was 33.9 percent. The proportion of

**Table 2: Percent prevalence of morbidity**

Morbidity	Age groups		
	0-5 years	6-14 years	>15years
Fever	23.0	21.0	12.8
G.I.T*	3.4	3.8	3.6
A.R.I.#	36.5	16.9	4.5
Skin	0.6	1.9	0.4
Eye	0.6	0.0	2.0
NAD	35.9	56.4	76.7

\*Gastro Intestinal Tract.

# Acute Respiratory Infection.

children with severe underweight (<-3 S.D) was 21.4 percent, severe stunting was 23.4 percent and severe wasting was 8.8 percent (Table 3). The prevalence of chronic energy deficiency (BMI <18.5) was about 35.6 percent in adult population (Table 4). There was no marked difference in males and females. The utilization of health services shown in (Table 5). 33 percent of the women reported having visited a health center for examination during pregnancy and 67 percent of the pregnant women were not taken any antenatal care. The institutional postpartum care is nil. The place of deliveries was at home (100 percent) and 58.6 percent deliveries conducted by untrained Dai.

## DISCUSSION

The prevalence of morbidity in Bharia adult

**Table 4: Percent distribution of Chronic Energy Deficiency (CED) in adults according to BMI classification**

Gender	BMI Grades					
	<16 (CED-III)	16-17 (CED-II)	17-18.5 (CED-I)	18.5-20 Low Wt	20-25 Normal	>25 Obese
Male	0.9	6.8	23.9	39.3	28.6	0.9
Female	2.4	7.9	29.1	26.0	34.6	0.4
Total	1.6	7.4	26.6	32.4	31.6	0.4

**Table 5: Percent of health services (natal care) utilization**

Natal Care	Percent	
Antenatal	No Care	67.0
	Visited PHC	33.0
	Total	100
Intranatal	Home	100.0
	Hospital	0.0
	Total	100
Person attended	Dai -Trained	8.6
	Dai -Un-Trained	58.6
	Relatives	12.2
	Other	20.6
	Total	100
Post Natal Care	Nil	

population was relatively low than children and other tribal of Madhya Pradesh. The prevalence of chronic energy deficiency was about 35.6 percent, which is lower than the reported figure of 48 percent for Madhya Pradesh (NNMB, 2000). The higher prevalence of acute respiratory infection in preschool and school children was observed when compared to earlier studies carried out by the RMRC center which is 89.4 percent in pre school children and 66.7 percent in school going children (Annual Report, 1989). This may be due to poor utilization/non availability of health services of the area. The magnitude of the wasting in preschool children (below -2SD) that reflects recent nutritional stress was more (33.9 percent) than the figure reported for tribal of Madhya Pradesh i.e. 23.7 percent (NNMB, 2000). The study revealed that Bharia children are nutritionally poor than other tribal children of Madhya Pradesh (NNMB, 2000). These preliminary findings indicate that there is a need to improve utilization of Primary health care

services including the vital MCH services for better child health and survival. The strengthening of the supplementary feeding programs and monitoring with essential feedback is required.

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### REFERENCES

- Annual Report*: Regional Medical Research Center for Tribals: ICMR Jabalpur, Madhya Pradesh (1989).
- Chandrashekar U, Kowsalya S and Sinha S. Nutritional Status of selected Oran Tribe of Bihar. *The Indian Journal of Nutrition & Dietics*, **34**: 264 (1997).
- James, W.P.T. Ferro-Luzzi, Anna and Waterlow, J. C.: Definition of chronic energy Deficiency in adults. *European Journal of Clinical Nutrition*, **42(12)**: 969-981 (1988).
- Jelliffe D.B.: *The Assessment of Nutritional Status of the Community*. WHO Monograph Series No.53, WHO, Geneva (1966).
- National Nutrition Monitoring Bureau Report: *Diet and Nutritional Status of Tribal Population. 1st Repeat Survey*, National Institute Nutrition, Hyderabad, India (2000).
- Tewari, D.N.: *Primitive Tribes of Madhya Pradesh: Strategy for Development*. Govt. of India. Ministry of Home affairs, Tribal Development Division, New Delhi (1984).
- Waterlow, J.C. Buzina, R. Keller, W. Lane, J.M. Nichaman, M.Z. and Tanner, J.M.: The presentation and use of height and weight data for comparing the nutritional status of groups of children under the age of 10 years. *Bulletin of the World Health Organization*, **55(4)**: 489-498 (1977).