Available online at www.agrifarming.org

DOI: http://dx.doi.org/10.18782/2582-7146.252

ISSN: 2582 – 7146

Curr. Rese. Agri. Far. (2025) *6*(1), 26-31

Current Research in Agriculture and Farming

Research Article

Peer-Reviewed, Refereed, Open Access Journal

Assessment of Healthcare among Tribal People of Chhindwara District of Madhya Pradesh

Sarita Singh*, D.C. Shrivastava, S.L. Alawa

Krishi Vigyan Kendra, Chhindwara

*Corresponding Author E-mail: drsaritasingh10@gmail.com

Received: 5.01.2025 | Revised: 21.02.2025 | Accepted: 27.02.2025

ABSTRACT

This study is confined to Chhindwara district of Madhya Pradesh, covering tribal population in relation to their food security and healthcare. To conduct the study a sample size of 200 was taken, in which 100 of the respondents were working tribal people and rest 100 were non working people. These 200 people from each village were interviewed with the help of schedule and questionnaires developed for collecting the data. It is found from the study, the analysis of health indices of the tribal population in Chhindwara is worse than the national average; infant mortality rate 84.2, under five mortality rates 126.6, children under weight 55.9, anemia in children 79.8, children with acute respiratory infection 22.4, children with recent diarrhea 21.1, women with anemia 64.9 per 1000. A high incidence of malnutrition has been documented in tribal dominated in tribal dominated districts of Chhindwara. More than 60% of tribal population of Chhindwara lives in high –risk areas for malaria. The spleen rate in children between 2 to 9 years was also high in Parasiya (28.3%), Tamia (36.1%), Junnardev (25.3%) and in Amarwada (28.5%) tribal population in Chhindwara. The acute diarrheal problems were basically due to poor environmental hygiene, lack of safe drinking water, improper disposal of human excreta, aggravated by low literacy, socio-economic status coupled with blind cultural belief, lack of access to medical facilities leading to serious public health problem. The distribution of thalassemia trait showed wide range of variations, i.e. from 0% to 8.5% among the major tribes. The distribution of G-6-PD deficiency among 18 major schedule tribes was studied and the enzyme deficiency was quite high, varying from 5.1% to 15.9%. The frequency of deficiency was high in males (range 4.3-17.4%) than in females (range 0.0 -13.6%).

Keywords: *Tribal, Health care, Chhindwara.*

INTRODUCTION

Indian society is composed of various social groups among which the scheduled tribes and scheduled caste are quite prominent. In the state of Madhya Pradesh, tribes are about 24% of total population. These tribal's lived in isolation for centuries, which could preserve their social customs, traditional and religious belief to a large extent. The tribal community is socially and economically backward in comparison to non tribal community.

Cite this article: Singh, S., Shrivastava, D.C., Alawa, S. L., (2025). Assessment of Healthcare among Tribal People of Chhindwara District of Madhya Pradesh, *Curr. Rese. Agri. Far.* *6*(1), 26-31. doi: http://dx.doi.org/10.18782/2582-7146.252

This article is published under the terms of the Creative Commons Attribution License 4.0.

Tribal people, who are self reliant and self-sufficient, have over the centuries, developed their own medicine system based on herbs and other items collected from the nature and processed locally. They have also their own system of diagnosis and cure of diseases. They believe in taboos, spiritual powers and faith healing. There are wide variations among tribal in their health status and willingness to access and utilize health services, depending on their culture, level of contact with other cultures and degree of adaptability.

It is often said that tribal are not utilizing the government services for health and nutrition up to the extent as desired level, since the services of primary health centers (PHC) located in tribal areas are underutilized. To improve the situation, it is the five year plan, it was recommended that for tribal areas one PHC would be made available for twenty thousand populations, where as for non tribal areas this ratio was as **1:30000.** It is not enough to open PHCs for small segments of population but it equally important to know the cause for under utilization of the government health services by tribal state similar to that of Ethiopia. It has not only surpassed its neighboring state like Chhattisgarh, but has outdone even Ethiopia in some indicator related to hunger and malnutrition. The report revealed that the nutritional levels of women and children in MP have been steadily declining over the past decade (Allen & Gillespie, 2002). This comes out after taking into consideration a number of health and nutritional aspects particularly for women and children. As per the report:-

1) The percentage of underweight children less than 3 years old has increased from 53.5 per cent in NFHS 2 concluded in 1996 to 60.3 per cnet in the NFHS 3.

2) The percentage of anemic children has increased from 71.3 per cent to 82.6 per cent between the two surveys.

3) The percentage of anemic pregnant mothers, too, has increased from 49.9 per cent to 57.9 per cent.

4) The infant mortality rate has decreased from 88 per cent to 57 per cent. It is higher than the national average of 55 per cent (Angela & king, 2004).

To achieve the aim and objectives of the title, the study is confined to Chhindwara district of Madhya Pradesh, covering tribal population in relation to their food security and healthcare. Survey method will be applied to collect the information of the tribes covering their food habits, consumption pattern, health and hygiene. Both primary and secondary data will be used for meeting the objectives and testing the hypothesis. Stratified random sampling will be the statistical design to determine the sample and sample estimates. District Chhindwara was purposively selected for this study as the researcher hailed from this place. This helped the investigator to collect the necessary information accurately and timely. The researcher, being from the same place could easily have dialogue and discussions with both during pilot study and final data collection.

MATERIALS AND METHODS

Chhindwara is located in the Malwa region of western Madhya Pradesh state in central India. It is a tribal dominant district situated in south-western corner of Madhya Pradesh. The district has a geographical area of 8198 sq km. The population of the district is 13.67 lakhs (according to 1991 census) of which 53% is tribal. Main tribes residing in the district are Bhils, Bhilalas, Patlyas and Bareliyas etc. 74 per cent population lives below the poverty line. According to the last census, merely 27% of the population was literate. Female literacy was only 16% and in several areas it was even below the 5%.

To conduct the study a sample size of 200 was taken, in which 100 of the respondents were working tribal people and rest 100 were non working people. Most of the working people selected belong to the labour class like agriculture labour, working on road construction, building construction and house work, some belong to labour class like mate in hospitals and few were doing work as labour on wages. The sample was taken purposively for both groups that are working and non

working group. Only those people were selected who were agreed for interview and respondent positively. These 200 people from each village were interviewed with the help of schedule and questionnaires developed for collecting the data. Collected data were arranged in the different categories that are given below.

(i) Independent variables

(a) Age:- The chronological age of people at the time of investigation was taken. All person were listed according to following age groups and given the scores as follows.

Age-group (Years)	Score assigned
1) 25-30	1
2) 31-35	2
3) 36-40	3

(b) Educational qualification:- Score assigned to different categories on the basis of modified Kulshresth's socio-economic status (SES) scale for rural was as follows.

Educational qualification Score assigned

1) Illiterate 1
2) Primary 2
3) Middle 3
4) High School 4
5) Intermediate 5
6) Graduate & above 6

(c) Caste:- caste of the respondents in the study was not required as the study was made for only tribal's. But for comparison of the data with others caste is measured on the basis of response of individual people to which they belong i.e. in terms of upper caste, backward caste and schedule caste. The scores were assigned as:

Caste	Score assigned
1) Upper caste	1
2) Other backward caste	2
3) Schedule caste	3
4) Schedule tribe	4

(d) Type of family:- Family type divided into two major categories viz. nuclear and joint. Nuclear type was referred to the family comprising of parents and their children only, while joint family referred to the family comprising of more than one couple and their children including other person related to them. Scoring procedure adopted was taken from the modified socio-economic status scale for rural of Kulshresta.

Family Size	Score Assigned
1) Nuclear Family	1
2) Joint Family	2

(e) Family Size:- Family composition was scored on the basis of family members.

Family Size	Score Assigned
1) Up to 5 members	1
2) 6 and more	2

(f) Total Income:- the total income of the family was calculated by recording the amount of money earned by the women and her husband from all sources. The recorded total income per month was divided into four categories on the basis of modified Kulshresth's socio-economic status (SES) scale for rural was as follows.

Income group	Score assigned
1) Up to Rs 5000	1
2) Rs 5001 to 10000	2
3) Rs 10001 to 15000	3
4) Rs 15001 to above	4

(ii) Dependent variables

(a) Anthropometrics measurement:- it is a power full tool for the assessment of nutritional status, particularly in field conditions where it is difficult to conduct clinical and laboratory test (Bisnoi & Yadav et al., 1999). it concerned with the measurement of variation of physical dimension and gross composition of human body at different age levels and degree of nutrition. All the subjects were measured for weight, height and BMI was then calculated. It was calculated by dividing the weight of a person (kg) by the square of person height (metre) (Rao & Vijayraghavan, 1996 & Chouchhindwarai, 2001).

BMI = Weight (kg)/ Height^2 ($m^{2)}$

(c) Clinical Survey:- all the subjects were visually examined for the various deficiency disorder in the clinical examination. Clinical examination consist of routine medical history and physical examination.

RESULT AND DISCUSSION

It is found from the study, the analysis of health indices of the tribal population in Chhindwara is worse than the national average; infant mortality rate 84.2, under five mortality rates 126.6, children under weight 55.9, anemia in children 79.8, children with acute respiratory infection 22.4, children with recent diarrhea 21.1, women with anemia 64.9 per 1000. A high incidence of malnutrition has been documented in tribal dominated in tribal dominated districts of Chhindwara.

Communicable diseases:

There are several communicable diseases prevalent among the tribal of Chhindwara. These are: tuberculosis, hepatitis, sexually transmitted diseases (STDs), malaria, filariasis, diarrhea and dysentery, jaundice, parasitic infestation, viral and fungal infections, conjunctivitis, yaws, scabies, measles, leprosy, cough and cold, HIV/AIDS, which is spreading like wild fire, etc. due to lack of sanitation and unhygienic living. The leprosy prevalence rate in Chhindwara is 1.91 per 10,000 populations as against the national rate of 1.34 per 10,000 populations. Beside the other communicable diseases like diarrhea, measles, typhoid and influenza are also reported among the tribals of Chhindwara.

Malaria is emerging as the major public health problem in all tribes of Chhindwara. Owing to the heavy rainfall and, mosquito fauna is rich and breeding habitats are diverse. The transmission of malaria is perennial and persistent in Chhindwara.this type of malaria is often termed as tribal malaria. Malaria is the foremost public health problem in Chhindwara contributing 23% of malaria cases, 40%of plasmodium falciparum (Pf) cases and 50% of malaria death in India. More than 60% of tribal population of Chhindwara lives in high –risk areas for malaria. During the year 2009-10 in Chhindwaraampuri, Kukshi, Chhindwara and Sardarpur the slide positivity rate (SPR) was recorded to be high in Bhils (14.2%), Bhilalas (14,4%), Patlyas (9.5%) and Bareliyas (10.5%) with the high Pf rate in Bhils (93.5%), Bhilalas (92.7%), Patlyas (91.2%) and in Bareliyas (92.7%) tribe. The spleen rate in children between 2 to 9 years was also high in Bhils (25.8%), Bhilalas (35.1%), Patlyas (24.4%) and in Bareliyas (26.3%) tribal population in Chhindwara. Diarrheal disorders are communicable waterborne diseases like gastro-intestinal disorders including acute diarrhea and are responsible for high morbidity and mortality. In tribal areas of Chhindwara, the diarrheal/dysentery diseases including cholera occur throughout the year attaining peak during the rainy season (from June to October). During the year 2009-10 bhils (12.7%), bhilalas (13.2%), patlyas (12.6%) and bareliyas (10.4%) children (0-6 years) and bhils (10.9%), bhilalas (11.6%), patlyas (6.9%) and bareliyas (10.2%) adult population had acute diarrhea. The bacteriological investigation of rectal swabs revealed Vibrio cholera (2.5%), Escherichia coli (39.2%), salmonella (0.2%) and shigella spp. (1.8%) in all culture positive cases, while 56.3% of rectal swabs were culture negative. The acute diarrheal problems were basically due to poor environmental hygiene, lack of safe drinking water, improper disposal of human excreta, aggravated by low literacy, socio-economic status coupled with blind cultural belief, lack of access to medical facilities leading to serious public health problem. Intestinal parasitism (protozoan and helminthic infestation) is a common public health in Paraiya (44.6%), Tamia (44.6%), Junnardev (31.9%) and Amarwada (41.1%) tribals Chhindwara. Amongst helmiinnthic infestation, the hookworm is most common in Paraiya (21%), Tamia (18.7%), Junnardev (14%) and Amarwada (18.2%) children aged 0-14 years. Both infective and noninfective scabies is prevalent in tribal communities i.e. in Paraiya (20.6%), Tamia (6.9%), Junnardev (10.7%) and Amarwada (15%) of Chhindwara.

Non-communicable Diseases:- According to National Nutrition Monitoring Bureau (NNMB) report (2000-01), the state of chhindwara continuous to have the 2nd highest position for under nutrition among the six district of indore division. While comparing the aggregate figures for chronic energy deficiency (CED), i.e. Body Mass Index (BMI) less than 18.5 in adult men and women in six district of indore division, the level of CED was figher in Chhindwara. The prevalence of CED in adult men in the Chhindwara was 38.6% as compared to aggregate of 37.4%, whereas, the CED for adult women was 46% against 39.3% of aggregate. As malnutrition is known to lead susceptibility to infectious diseases to death, the mortality rate in primitive tribes may be attributes to malnutrition.

Four primitive tribes, namely, Paraiya (16%), Tamia (19%), Junardev (25.1) and Amarwada (26.6%) showed severe malnutrition as mentioned above, respectively in Mohked, Chourai, and Bichua tehsil of Chhindwara. The severe anemia (Hb<7g/dl) ranged from 0.6 to 2.3%, moderate (Hb 7-9 g/dl) from 7.4 to 13.6% and mild (Hb 9-11g/dl) 30.7 to 48.2% in the above primitive tribes. Anemia was more common in female than male. The majority (51.2%) of these tribals showed microcytic and hypochromic blood picture suggestive of iron deficiency anemia. There was a positive correlation between hookworm infestation and anemia due to indiscriminate defecation, bare foot and lack of health awareness. Drug administration intervention revealed reduction in worm infestation (51.2%) and improvement of anemia (34.8%) in individuals belonging to above tribes.

Liver cirrhosis due to excessive drinking of country made alcohol, hypertension due to excessive salt intake, chronic respiratory diseases due to excessive smoking, oral cancer (due to regular betel nut chewing) malnutrition, nutritional deficiency disorders like iron deficiency (anemia), iodine deficiency (goiter), avitaminosis, etc form a major chunk. Cardio-vascular disease are very uncommon among the tribals in chhindwara.

Silent killer genetic disease:- Genetic disorders are gaining prominence and have profound health implications in morbidity status of tribals in Chhindwara sickle cell anemia and glucose-6-phosphate dehdrogenase (G-6-PD) enzyme deficiency are the two important genetically determined disorders, which play an important role in human health and disease.

CONCLUSION

the health scenario of tribes of Chhindwara presents a kaleidoscopic mosaic of various communicable and no communicable diseases in consonance with socio-economic developments in the state. The wide spread poverty, illiteracy, malnutrition, absence of safe drinking water and sanitary conditions, poor materials and child health services, ineffective coverage of national health and nutritional services, etc. are the major contributing factors for dismal health in tribal community of Chhindwara.

The tribal people of Chhindwara suffer from special health problems disproportionately such as malaria, sexually transmitted disease, tuberculosis, nutritional deficiency diseases, genetic disorder, like glucose-6-phosphate dehydrogenase (6-G-PD) deficiency, sickle cell anemia, etc. The situation analysis of health indices of the tribal population in chhindwara is worse than the national average: infant mortality rate 84.2, under five mortality rates 126.6, children under weight 55.9, anemia in children 79.8, children with acute respiratory infection 22.4, children with recent diarrhea 21.1, and women with anemia 64.9 per 1000. A high incidence of malnutrition has been documented in tribal dominated in tribal dominated districts of Chhindwara. This scenario presents a very grim picture of about the general health and quality of life of the tribal people in Chhindwara. There is an urgent need to combat the health problems and take the rehabilitative measures to alleviate the

sufferings of the dwinding masses in the Chhindwara.

Acknowledgement:
I would like to sincerely thank my co-authors for their support and kind gesture to complete this manuscript in time.

Funding: NIL.

Conflict of Interest:
There is no such evidence of conflict of interest.

Author Contribution:
All authors have participated in critically revising of the entire manuscript and approval of the final manuscript.

REFERENCES

Allen & Gillespie (2002). What works? Lowrence? Nutriotion and Poverty. http://www./Fpri.org./pubs/book/intnut.08.pdf.

Angela, & king, E. V. (2004). Health for all women in the 21st century: how do we get there? The global alliance for women's health.

Bisnoi, S., Jood, S., Schgal, S., Kwatra, A., & Yadav, S. K. (1999). A study on nutritional status of rural lactating women of Flariyana. *The Indian Journal of Nutrition and Dietetics, 36*, 275-284.

Rao, D. H., & Vijayraghavan, K. (1996). Antropometric assessment of nutritional status in Bamji, S. B., Rao, N. P., & Reddy, V. eds. Textbook of Human Nutrition, New Delhi, *Oxford and IBH publishing Co Pvt Ltd*., pp 148-162.

Chouchhindwarai, R. P. (2001). Anthropometric indices and nutritional deficiency sign in preschool children of the Pahariya tribe of the Rajmahal Hills Bihar. *Anthropol Anz. 59*, 61.