Original Article

Demographic and Health Profile of Tribal Population at Udaipur, Rajasthan: A Cross Sectional Study

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Abstract

Background: India is the second largest home for tribal communities, and they are distributed all over the country. One of the main public health concerns in our nation, which has a vast forest belt and numerous tribes living there, is tribal health and the problems encountered by tribal people.

Objective: 1. To determine the Socio - Demographic profile of the tribal population.

2. To estimate the health problems of the tribal population.

Materials and Methods: The present study was a community based, cross-sectional, multicentric study carried out among tribal populations residing in Iswal, Gogunda, and Losing village from 1st November 2022 to 1st January 2023. House-to-house visits were done to collect socio-demographic data and health check-ups of all family members were done to identify the health problems among them.

Results: A total of 906 tribal people (160 families) were interviewed. Age ranged between 1 month to 95 years with a mean age of 30.05 ± 19.22 years, the majority were in the age group of 11-30 years. About 51.32% were males and 48.68% were females, and literacy rates were low. About 60.63% of family's socioeconomic status was class IV and V, Hindu religion (82.45%) was most followed among them, and nuclear family types (45.63%) were more common. Overall housing conditions were good. Most of them had pucca houses (64.3%), consumed purified drinking water (73.1%), had separate kitchens (78.7%), used LPG as the major fuel for cooking (63.1%). While some practiced open-air defecation, and most of them dumped the house-generated waste (garbage) indiscriminately or on the streets 54.3). out of 906 individuals 714 individuals were apparently healthy whereas 192 individuals had certain health problems. Among them respiratory illness was the major problem affecting 52 (28.08 %) individuals followed by sexually transmitted infections 46 (19.86 %). Whereas injuries by wild animals / RTA were the least common health problem encountered among tribals 2(1.04%).

Keywords: Health problems, housing conditions, socio-demography, tribal community.

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Introduction

"Adivasi" refers to Indian tribes, indigenous people, and ethnic minorities. Sons of the soil, the tribal are forestland cultivators, minor forest product collectors, and hunters who lived in isolation near nature. 476 million indigenous people live in 90 countries, making up 6.2% of the global population.[1] 8.6% of India's population is tribal. [2] The Government of India has designated 75 of the 705 Scheduled Tribes (STs) in the country as particularly vulnerable tribal groups (PVTGs) due to pre-agriculture technology, subsistence economy, low literacy, and declining or stagnant population. [3]

Most states have tribes except Punjab, Haryana, Chandigarh, Delhi, and Pondicherry. [4] Rajasthan is the largest state in India, covering 10.4% of its total area with 3,42,239 sq. km. 56.51 million people, or 5.5% of the nation, live in this state, according to the 2001 Census. The state's scheduled tribe population is 12.4%. The scheduled tribes' population in Rajasthan is concentrated in five southern districts: Udaipur, Banswara, Dungarpur, Jaipur, and Chittorgarh. Bhil, Meena, Damor, Patelias, Saharaiyas, and Gharasia are the main tribes.[5]

Tribal agriculture is still based on small landholdings and irrigation. Industrialization, irrigation, productive land, and skill development are lacking. [5] Tribes are the poorest and most vulnerable in the nation. Poor health worsens their backwardness. [4] Human development requires health. Due to isolation, remoteness, and being largely unaffected by India's development, tribal populations have the worst health. Despite India's recent economic growth, ST or Adivasi health and human development indicators lag behind national averages. [1]

Tribal people have poorer health than non-tribal people. Low awareness, religious and cultural beliefs, inaccessible housing, and financial constraints exacerbate poor health. Health and sanitation vary among tribal communities. Poor infrastructure and inaccessible landscapes make their lives miserable and backward. They have developed differently from the rest of the country. [4] Addressing vulnerable population issues helps India meet its commitment for Indian tribes, indigenous peoples, and ethnic minorities make up 6.2% of the global population. India has the second-largest tribal population and concentration. 75 Scheduled Tribes (STs) are government designated PVTGs. Most states have tribes except Punjab, Haryana, Chandigarh, Delhi, and Pondicherry. Rajasthan, India's largest state, has 5.5% tribal people, mostly in five southern districts. Agriculture dominates the tribal community's economy, with limited productive land, irrigation, industrialization, and skill building.

Due to isolation, remoteness, and resource scarcity, tribal populations have poor health. Despite recent economic growth, ST/Adivasi health and human development indicators lag behind national averages. India's SDGs and universal health coverage depend on addressing these issues (UHC). SDGs and universal healthcare (UHC). [3] Thus, this study assessed health status and sociodemographic factors in the Rajasthan Bhil tribe in Udaipur.

Aim & Objectives:

1. To determine the Socio - Demographic profile of the study population.
2. To estimate the health problems of the tribal population of Study area.

Materials and Methods

Study area:

A total of 150 families residing in Gogunda, Iswal and Losing villages were studied based on the inclusion criteria and exclusion criteria.

Study Population:

Tribal people residing in Gogunda, Iswal and Losing village are included in the study.

Study design:

Inter-departmental, observational, Cross-Sectional, community-based Prospective type of study.

Sample size:

No sample size is calculated as the whole population is included in the study.

Sampling method:

No sampling was done; the entire universe was included in the study.

Study duration: Study carried out during 1st November 2022 to 1st January 2023.

Study tool:

A pre-tested, pre-structured and standardized questionnaire was used to collect information.

Inclusion criteria:

All the families who gave consent and residing in Gogunda, Iswal and Losing (three villages) of Badagaon taluk, Udaipur district was included in the study.

Exclusion criteria:

- Families whose houses are locked at the time of visit.
- Families who do not give consent.

Informed consent and ethical approval:

Institutional approval for the study was sought from, and granted by the Institutional Ethics Committee of Pacific Medical College and Hospital, Udaipur. All patients were briefed about the study; background, aim, risks, benefits and expectations for participation before being consented to participate. Written informed consent (in English or Hindi) were sought from each of the prospective participants in the study prior to enrolment and data collection.

Data collection

- In order to visit the hamlets, a road map was developed. Assistance was sought by the local PHC staff to schedule the visits.
- House-to-house visits were made in all hamlets. Families who did not reply and locked houses were not included. For the collection of data, a pre-tested, pre-structured and standardized questionnaire was created.
- A responsible family member from each family was interrogated to gather the relevant information. After obtaining oral consent, the entire family was subjected to clinical examination. The assistance of a female health worker, Anganwadi worker or adult female member of that family was obtained wherever possible and followed on mandatory basis when a male doctor was examining a female study participant. There was no laboratory investigation done.
- Health awareness camps were conducted at Losing, Iswal and Gogunda villages to create awareness about health, the causation of disease, preventive and control measures for the common ailments in that area as well as the free health care services available in Government and private health sector.

Statistical analysis:

The collected data was entered systematically in MS Excel software. The statistical software Epi – info 7.2.5.0 by CDC was used for data analysis. Descriptive statistics was presented in terms of tables and figures and frequency, percentage, mean, and standard deviation were calculated for the variables.

Results

Table 1: Distribution of tribal families based on their village of residence.

Name of village	Number	Percentage (%)
Iswal	27	16.87
Gogunda	89	55.63
Losing	44	27.5
Total	160	100

Table 2: Distribution of tribal population based on socioeconomic details.

Variables	Number	Percentage (%)
Age (n= 906)		
<5	73	8.05
6-10	100	11.04
11-20	172	18.98
21-30	201	22.19
31-40	131	14.46
41-50	95	10.48
51-60	80	8.83
61-70	30	3.32
>70	24	2.65
Gender (n= 906)		
Male	465	51.32
Female	441	48.68
Religion (n= 906)		
Hindu	747	82.45
Muslim	130	14.35
Others*	29	3.20
Educational Status (n= 906)		

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Illiterate	256	28.26
Primary School	293	32.34
High School	204	22.52
Intermediate	90	9.94
Graduate or above	63	6.94
Current employment status* (n= 906)		
Unemployed	145	16
Unskilled	397	43.82
Skilled	142	15.67
Professional	16	1.77
Housewife	206	22.74
Type of family (n= 160)		
Nuclear	73	45.63
Joint	43	26.87
Three generation	44	27.5
Socioeconomic class (B.J. Prasad classification) (n= 160 families)		
Class I	18	11.25
Class II	29	18.12
Class III	48	30
Class IV	49	30.63
Class V	16	10

*Unskilled, skilled, employees of government & private sector, housewives are included in employed category.

Table 3. Available Facilities among tribal Families.

Facilities (n=160)	Number	Percentage (%)
Type of house		
Kachha	18	11.2%
Pakka	103	64.3%
Semi-Pakka	39	24.3%
Drinking water source		
Piped water	69	43.1%
Ground water	83	51.8%
Both*	8	5%
Drinking water storage		
Closed container	131	81.8%
Open container	29	18.1%
Drinking water purification*		
Yes	117	73.1%
No	43	26.8%
Kitchen		
Separate	126	78.7%
Not- separate	34	21.2%
Fuel for cooking		
LPG	101	63.1%
Wood/Kerosene	32	20%
Both	27	16.8%
Bathroom facility		
Present	129	80.6%
Absent	31	19.3%
Drainage system		
Open type	47	29.3%
Close type	113	70.6%
Place of defecation		
Open field	61	38.1%
Latrine type	99	61.8%
Collection of refuse		
Bins	73	45.6%
Street dump / Indiscriminate dumping	87	54.3%

Table 4. Distribution of tribal population based on health problems.

Health problems (n = 192)	Number	Percentage
Non communicable diseases (DM, HTN, Stroke)	31	16.15 %
GIT problems*	20	10.42%
Respiratory illness*	52	27.08 %
Sexually transmitted diseases	46	23.96 %
Skin problems*	23	11.98 %
Eye problems*	18	9.37 %
Injuries*	2	1.04 %

*GIT problems: All subjects complained of vomiting, diarrhea, heart burns, indigestion, constipation were included in this category.

*Respiratory illness: All subjects complained of cough, cold, sneeze, difficulty in breathing, shortness of breath, asthma, allergic respiratory diseases were included in this category.

*Sexually transmitted diseases: Genital warts, Genito-urinary tract infection, candidiasis, gonorrhea, syphilis, HPV infection, herpes infection.

*Skin problems: acne, eczema, leukoderma, itching, hyperkeratosis, rashes.

Results and Discussion

This study examined the socio-demographic and health profile of Meena tribes in three Udaipur hamlets. The mean age was 30.05 ± 19.22 years. Young adults dominated (21 - 30 years) 201 (22.19%), 172 (18.98%) in 11–20 years, 60.26 % under 30, 5.96% elderly. Our findings match Yadav AK et al. [6], who found that over 50% of the population is under 30. According to Gutta SK et al. [7] and Sathiyanarayanan S et al. [8], Hindus made up 82.45% of the tribes and Muslims 14.35%. Gutta SK et al. [7] found that Hinduism dominated their tribes (92.86%). 71.74% were literate, 28.26% illiterate. 6.94% of tribals graduated or higher. ST literacy is 59% in India and 52.8% in Rajasthan, according to census data. The above shows higher literacy rates than tribal literacy. NGO activity, free primary education, and mid-day meal programmes may explain high literacy.[9] Despite improving literacy, most tribals (43.82%) worked unskilled jobs like daily wage work, forest hunting, wood cutting, and honey gathering. Only 1.77% were professionals. Our findings match a south Indian study by Siddalingappa H et al. [10] in tribal hamlets, where most were unskilled and unemployed. According to the modified B.J. Prasad classification, most tribes had nuclear families (45.63%) and three-generation families (27.5%). Gutta SK et al. [7] and Sujith et al. [11] found that most tribes were nuclear families. In a Maharashtra study, most tribes lived in pakka houses, followed by semi-pakka and kachha houses. [6]

Half of tribal families (51.8%) drank ground water (bore well) followed by piped water. 43.1% and 5% families used both sources when available. 81.8% of families stored drinking water in closed containers. Siddalingappa H et al. [10] found that most tribal hamlet families used borewells or hand pumps for drinking water. 73.1% of families had purified water. Most tribal families had separate kitchens and cooked with LPG. Due to state and central government efforts (Pradhan Mantri Ujwala Yojana), LPG use increased from previous years. Haq J et al. [12] reported 91.53% of tribal families used LPG for cooking. 80.6% of tribal hamlets had bathrooms and 70% had open drainage systems. 61.8% of tribal hamlets defecated in latrines. This shows community hygiene awareness and practise. Saleem SM et al. [13] found that all northern Indian rural households used sanitary latrines for defecation. In our study, 54.3% of families used street dumping and 38.1% of hamlets defecated outside. Illiteracy, ignorance, and lack of awareness about the health risks of improper household waste disposal and open-air defecation may be the cause.

714 of 906 study participants were healthy, while 192 were not. 52 (27.08%) had respiratory illness. Tapas Chakma et al.[4] studied seven primitive tribal groups in Madhya Pradesh and Chhattisgarh and found that acute respiratory infections were common in all tribes and regions. Sexually transmitted diseases (STD) 46 (23.96%) followed by RTA and/or any other cause 2 (1.04%) were the least common health issues among tribals. Salil Basu et al.[4] also believes sexually transmitted diseases, particularly female genital tract infections, are common among Indian tribes. Veena Bhasin et al. [4] found that Rajasthani tribes were unaware of sexual infection and disease transmission. Poor personal hygiene, poverty, low literacy, undernutrition, improper household-garbage disposal, open-air defecation, poor STD knowledge, and cultural factors contributed to health and disease in Meena tribe. Traditional health practitioners (Bhopa, Devala) and herbalists (Jaankar/Jaangar) treat them. This study shows that long health care system distances and poor transportation facilities drove people to local traditional treatment.

Limitation: This study identifies health issues based on the patient's history and doctors' general physical examination, but due to financial and time constraints, detailed laboratory evaluation is not done.

Recommendation:

- Long-term, broad-coverage studies are ideal for health planners to improve strategy.
- Government development programmes should be explained to tribal people.
- All stakeholders must work to improve tribal education, socioeconomic status, and sanitation.

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Conflict of interest: None.

Bibliography

1. Hima Bindu M, Joshi KP, Jamadar D. Demographic & health profile of tribal population of telangana - A

cross sectional study. J Community Health Manag. 2022 Sep 28;9(3):120–5.

2. Jawadul H, M R, M Nizamuddin A, M K, Shagufta P, Tamanna N, et al. Socio- Demographic Profile of Schedule Tribes of Five Integrated Tribal Development Agency Spots at Kurnool, Andhra Pradesh in India. Int J Prev Curative Community Med. 2021 Jun 30;07(02):14–9.
3. Mallya S, Shreedhar S, Sudhakaran D, Aravindhkumar B, Nair S, Shetty R. Health status of Koraga community: A pilot study among a particularly vulnerable tribal group of Udupi District, Karnataka, India. Indian J Med Res. 2022;156(2):275.
4. Singh MM, Negi DP. Health Status of the Tribal Communities in India: A Literature Review. Int J InnovKnowl Concepts. 2019 Mar;7(3):31–6.
5. Panchayat and Rural Development Department. Tribal development framework. Rajasthan Rural Livelihood Project. [Internet]. Rajasthan; 2014. Available from: http://hdl.handle.net/ 123456789/8198
6. Yadav AK, Teli TP, Juverkar SK, Kumar R, Kunte R, Faujdar DS. Kasurdi health and demographic surveillance system: A profile and way forward. Indian Journal of Public Health. 2022 Apr 1;66(2):196-9.
7. Gutta SK, Kothapalle S, Goru K, Kadali S. Socio-demographic and socio-economic profile of tribal communities in East Godavari district, Andhra Pradesh. Int J Community Med Public Health 2019; 6 (6): 2390-5.
8. Sathiyanarayanan S, Muthunarayanan L, Devaparthasarathy TA. Changing perspectives in tribal health: Rising prevalence of lifestyle diseases among tribal population in India. Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine. 2019 Oct;44(4):342.
9. Indian Tribal Welfare and Development, Annual Report, New Delhi. The Ministry of Tribal Affairs 2020 -21. Available from: https://tribal.nic.in/downloads/ Statistics/Annual Report/AnnualReport2020-21.pdf.
10. Hugara S, Hoogar V, Kumar SD, Pradeep TS, Renuka M. Sociodemographic and healthcare profile of tribal people in Bandipur Tiger Reserve area, Mysore, Karnataka, India. Int J Community Med Public Health 2016;3(9): 2655-60.
11. Dondapati SKS, Karimaddela K. Socio-demographic and health profile of schedule tribes of Velugodu, Andhra Pradesh, India. Int J Community Med Public Health. 2016; 3(9):2615-2
12. Haq J, Ramesh M, Ansari MN, Komala M, Parveen S, Nazli T, Raheem A. Socio- Demographic Profile of Schedule Tribes of Five Integrated Tribal Development Agency Spots at Kurnool, Andhra Pradesh in India. International Journal of Preventive, Curative & Community Medicine. 2021 Jun 30;7(2):14-9.
13. Saleem SM, Khan S M, Jan SS. Sub-center health profiling and health care delivery services in a rural community of northern India. Ann Trop Med Public Health 2017; 10 (2):436- 439.