

# Evaluation of Socio-economic and healthcare disparities in scheduled tribe population living in peripheral areas of District Burhanpur

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## Abstract:

**Introduction:** Demography is the statistical and mathematical study of human population numbers, composition, and spatial distribution. Burhanpur has some Scheduled Tribes dominated areas around its periphery, but the distribution and demographic details of these areas are not properly documented. The main objective of the study is to analyse the socio-economic and health status of the scheduled cast population of peripheral villages in Burhanpur, also focusing on age, sex ratio, literacy level, marital status, dietary habits, sanitation, occupation, income, socio-economic, and health status.

**Methodology:** A cross-sectional qualitative study was conducted. Data was collected using a pre-tested questionnaire provided by the CCRUM (Central Council for Research in Unani Medicine), Ministry of Ayush Govt. of India, Clinical Research Unit, Burhanpur, a peripheral institute of CCRUM. The data was obtained with the help of questionnaires, containing details of demographics such as caste, age, gender, religion, educational attainment, marital status, dietary habits, occupation, and monthly income etc. during the years 2021–2022. Weekly OPDs in each adopted villages were carried out, 6646 sample sizes were covered. Name of the villages are Mohangarh, Rangai, Nandura, Dabalikhurd, and Tajnapur.

**Result & Conclusion:** The Collected and compiled data exhibits that the scheduled tribe population visited the OPDs belonged to a low socioeconomic group and were mainly agricultural and landless labourers. The analysis of data clearly indicates that there were significant differences in the age, gender, caste, religion, educational status, occupation, monthly income, Mizaj, food habits of the Scheduled tribe population.

**Keywords:** Demography, Burhanpur, Tribes Sub Plane, Ayush, CCRUM

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**Introduction:** The statistical and mathematical study of the size, composition, and geographical distribution of the human population is known as demography. Collecting race and ethnicity data can assist in improving the quality of treatment for all patients by identifying and addressing disparities in care for specific communities and identifying which populations do not receive optimal therapies. The most fundamental tool for all quantitative outcome research approaches and studies is survey research.<sup>1,2</sup> In state of Madhya Pradesh, India, there are 46 recognised Scheduled Tribes, three of which have been designated as "Particularly Vulnerable Tribal Groups" or "PTGs" (formerly known as "Special Primitive Tribal Groups"). According to the 2011 Census, 15.31 million Scheduled Tribes (ST) made up 21.1% of the

total population of the state (72.62 million people).<sup>3</sup> The term scheduled tribes refers to specific indigenous peoples whose status is acknowledged by the constitute of India. The term Adivasi also applies to the indigenous peoples of this area. Tribal variety in the state is a result of variations in genetics, way of life, cultural traditions, social structure, economic system, and language and speech. The complex tribal world of Madhya Pradesh has been mainly isolated from the mainstream of development because of the various linguistic, cultural, and geographical contexts. Madhya Pradesh is ranked first among all the States or Union Territories (UTs) in terms of the special tribal population and ranked twelfth in respect of the proportion of the ST population to the total population.<sup>4</sup> The socioeconomic status of a person or

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family is a combined economic and sociological measure of their work experience, access to resources on an economic level, and standing in society.<sup>5</sup> High, moderate, and low socioeconomic status levels are typically used to characterise the three categories into which a family or a person may fall. Any or all of the three factors (income, education, and occupation) can be considered when categorising a family or a person into one of these orders.<sup>6</sup> As part of socioeconomic status, occupational prestige includes both income and level of education. The occupational status represents the level of education needed for the position as well as the salary levels that vary across and within occupational ranks. The level of education also affects income. With each degree of schooling, median wages rise. According to the data, those with professional and doctoral degrees earn the most money, while those with only a high school education get less money. Better economic and psychological outcomes (i.e., increased income, more control, and greater social support) are related to higher levels of education.<sup>7</sup> The Central Council for Research in Unani Medicine, Ministry of Ayush Govt. of India, New Delhi, has initiated a mobile healthcare programme under the SCSP (Scheduled Caste Sub Plan) and TSP (Tribal Sub Plan) since 1981 in many peripheral institutes of the council with the view to uplift the Schedule Tribe populations. Weekly health camps are being organised for this underprivileged population to not only treat them with Unani Medicine but also make them aware of preventive, promotional, and curative measures. The aim of the programme goals is to screen and examine the Scheduled Tribes community for health issues in the OPD and to provide them with Unani treatments for different diseases.<sup>8</sup>

In this study, we focus on demographic information such as age, gender, education, caste, religion, occupation, and dietary habits that may be used to evaluate the socioeconomic and health status of the Scheduled tribes in the tribal area of Burhanpur. It is a district of Madhya Pradesh state in central India. that is well-known for its textile businesses. There are 268 villages in the Burhanpur district.

**Objectives:** The main objective of the study is to enumerate and analyse the status of the ST population in the tribal areas of five villages in Burhanpur with respect to the size of the population, family type, sex ratio, marital status, literacy, occupation, religion, dietary habits, and income level.

**Methodology:** This is a cross-sectional qualitative study that was conducted by the Clinical Research Unit, Burhanpur, Madhya Pradesh, a peripheral

institute of the Central Council for Research in Unani Medicine, which is a renowned autonomous research organisation working under the Ministry of Ayush, Government of India, New Delhi. Five villages were selected, which are scheduled tribe-dominated areas situated in Burhanpur's periphery, namely Mohangarh, Rangai, Nandura, Dabalikhurd, and Tajnapur. Household surveys and healthcare camps are organised on a daily basis (once in each village) to provide Unani medicine to the diseased and to create awareness about healthy lifestyles. These are also the objectives of the programme from April 2021 to March 2022. In order to assess the demographic parameters, i.e., age, gender, education, caste, religion, marital status, occupation, and dietary habits, the data was recorded using a pretested questionnaire provided by the council. To reach maximum populations, camps were held in public places, including schools, Anganwaris, and gramme panchayat offices. The mobile healthcare team under TSP made 199 visits to these villages, which benefited 6646 people.

After the collection of data, it was entered in Case Record Form (CRF) & Excel sheet

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**Result and Discussion:** The data of 6646 participants was obtained through the Mobile Healthcare OPDs conducted in five adopted villages by the Clinical Research Unit, Burhanpur, with the help of a pretested questionnaire. The data focused on age, gender, education, caste, religion, marital status, occupation, dietary habits, and socioeconomic status. The data were organised into different demographic categories to make it easier to understand.

**Table 1: Population distribution of the five villages of Burhanpur**

Villages	Population Covered	Percentage
Tajnapur	1357	20.4%
Mohangarh	1471	23.4%
Dabalikhurd	1108	15.2%
Nandura	1255	18.9%
Rangai	1455	22.1%
<b>Total</b>	<b>6646</b>	<b>100%</b>

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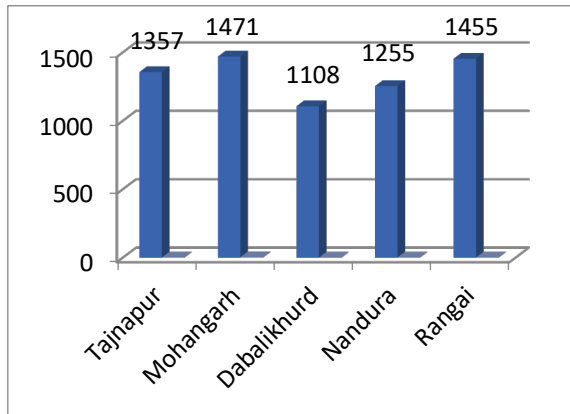


Figure 1: Population distribution of five villages of Burhanpur

According to Table and Figure 1, out of the total population who attended the OPD of the TSP programme in the five villages, 23.4% attended Mohangarh, 22.1% attended Rangai, 20.4% attended Tajnapur, 18.9% attended Nandura, and 15.2% attended Dabalikhurd.

Table 2: Age-wise distribution of population at adopted spots

Age Group	Tajnapur	Mohangarh	Dabali Khurd
1 To 15	124	94	88
16 To 30	320	340	222
31 To 45	419	424	429
46 To 60	367	438	295
61 To 75	126	163	68
75 To Above	1	12	6
Total	1357	1471	1108

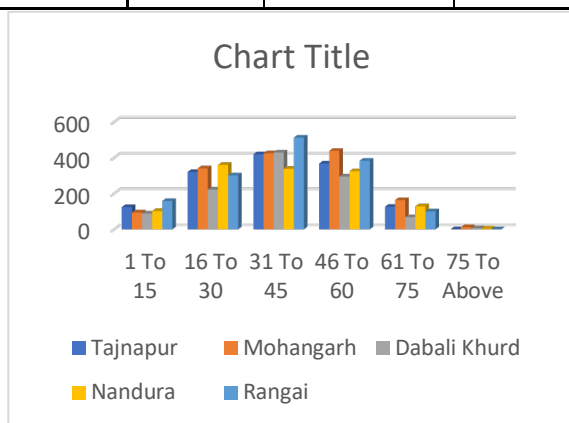


Figure 2: Age-wise distribution of population

Age-wise distribution of patients mentioned in Table & Figure 2 reveals that the maximum percentage of patients 32.00 % belonged to the age group 31-45 years and 27.3% belonged to the age group 46-60 years, and the percentage of 13-30 years age group was 22.4%.

Table 3: Gender-wise distribution of population

Gender	Villages					Total	Percentage
	Tajnapur	Mohangarh	Dabalikhurd	Nandura	Rangai		
Male	740	894	636	619	772	3661	55.08%
Female	617	577	472	636	683	2985	44.91%
Total	1357	1471	1108	1255	1455	6646	100%

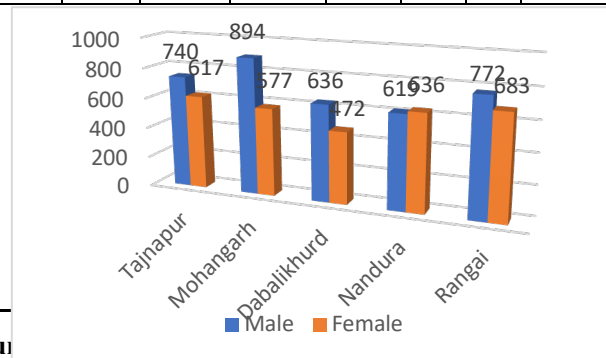


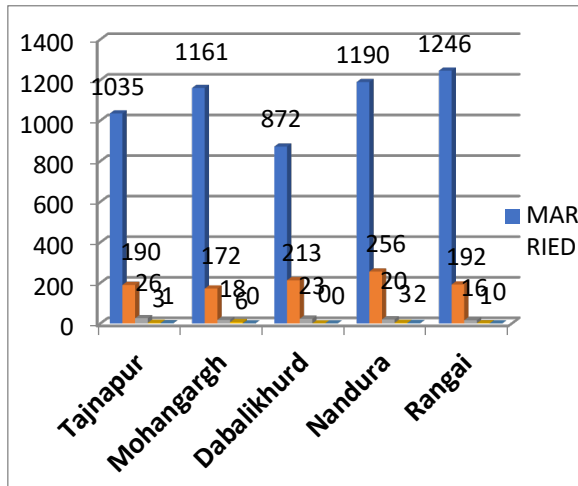
Figure 3: Gender-wise distribution of population

Table & Figure 3 exhibits that the total percentage of males who visited the OPDs were 55.01% and females who visited were 44.09%. Data reveals that male patients were more in number as compared to the female. 128, 100, 585, 8.80%

Table 4: Distribution of population according to marital status

Marital Status	Villages					Total	Percentage
	Tajnapur	Mohangarh	Dabalikhurd	Nandura	Rangai		
Married	1035	1161	872	1190	1246	5504	82.81%
Unmarried	190	172	213	256	192	1023	15.39%
Widow/Widower	26	18	23	20	16	103	1.54%
Divorced	3	6	0	3	1	13	0.19%
Separated	1	0	0	2	0	3	0.04%
Total	1255	1357	1108	1471	1455	6646	100%

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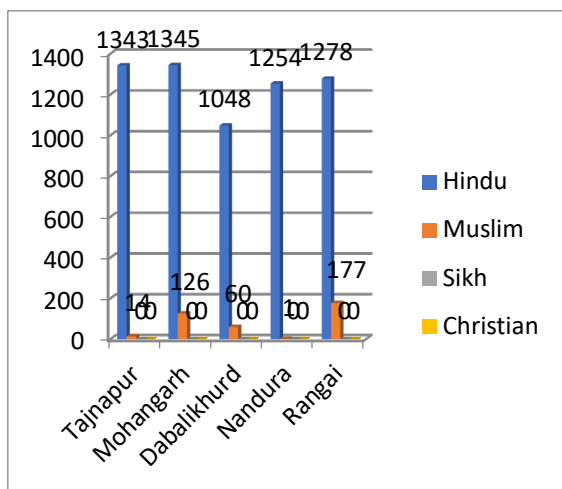


**Figure 4: Distribution of population according to marital status**

Table 4 and Figure 4 reveal that 78.9% of the of the population were married, and 19% were unmarried. The proportion of divorced and separated people is small, i.e., 1.5% and 0.10%, respectively, and the number of widows is negligible (0.5%). Overall, we found that women marry at younger ages than men.

**Table 5: Religion-wise distribution of population**

Religion	Villages					Total	Percentage
	Tajnapur	Mohangarh	Dabalikhurd	Nandura	Rangai		
Hindu	1343	1345	1048	1254	1278	6268	94.31%
Muslim	14	126	60	1	177	378	5.68%
Sikh	0	0	0	0	0	0	0%
Christian	0	0	0	0	0	0	0%
<b>Total</b>	<b>1357</b>	<b>1471</b>	<b>1108</b>	<b>1255</b>	<b>1455</b>	<b>6646</b>	<b>100%</b>

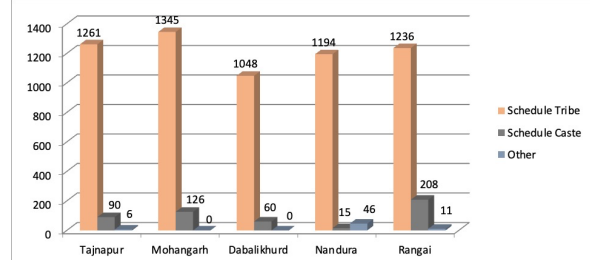


**Figure 5: Religion-wise distribution of population**

The religion-wise distribution of population in Table and Figure 5 reveals that the majority of the population (94.3%) that visited the TSP OPD belonged to the Hindu community, and only 5.7% belonged to the Muslim community. On the other hand, the percentage of people who belonged to the Christian and Sikh communities was negligible.

**Table 6: Caste-wise distribution of population**

Caste	Village					Total	Percentage
	Tajnapur	Mohangarh	Dabalikhurd	Nandura	Rangai		
Schedule caste	6	0	0	46	11	63	0.95%
Schedule Tribe	1261	1345	1048	1194	1236	6084	91.54%
Other	90	126	60	15	208	499	7.50%
<b>Total</b>	<b>1357</b>	<b>1471</b>	<b>1108</b>	<b>1255</b>	<b>1455</b>	<b>6646</b>	<b>100%</b>



**Figure 6: Caste-wise distribution of population**

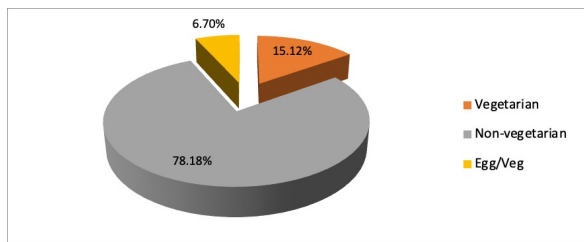
Table and Figure 6 exhibit the total percentage of the participants as per their castes (scheduled caste, scheduled tribe, and others). The percentage of the scheduled caste population that visited the OPD was 0.95%. The percentage of the scheduled tribe population was a maximum 91.05%, which actually meets the objective of conducting mobile OPDs under TSP. The other population was 7.55%.

**Table 7. Distribution of population according to dietary habits**

Caste	Village					Total	Percentage
	Tajnapur	Mohangarh	Dabalikhurd	Nandura	Rangai		

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Vegetarian	421	144	121	128	191	1005	15.12%
Non-vegetarian	938	1134	954	1046	1124	5196	78.18%
Egg/Veg	0	195	39	69	142	445	6.70%
Total	1359	1473	1114	1243	1457	6646	100%

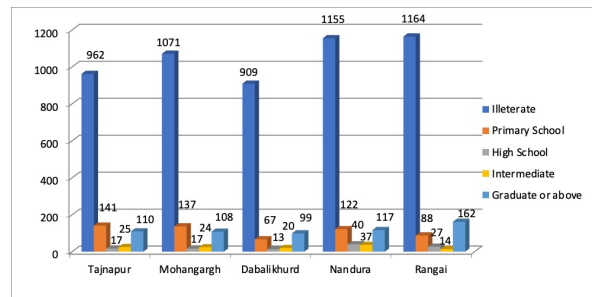


**Graph 7: Diet-wise distribution of population**

Table and Figure 7 show that about 78.18% of patients were taking a non-vegetarian diet, 15.12% were taking a vegetarian diet, and 6.70% of patients were taking a vegetarian diet with eggs.

**Table-8. Education-wise distribution of population**

Education	Villages					Total	%
	Tajnapur	Mohangarh	Dabalikhurd	Nandura	Rangai		
Illiterate	962	1071	909	1155	1164	5261	79.16%
Primary School	141	137	67	122	88	555	8.35%
High School	17	17	13	40	27	114	1.71%
Intermediate	25	24	20	37	14	120	1.80%
Graduate or above	110	108	99	117	162	596	8.96%
	1255	1357	1108	1471	1455	6646	100%



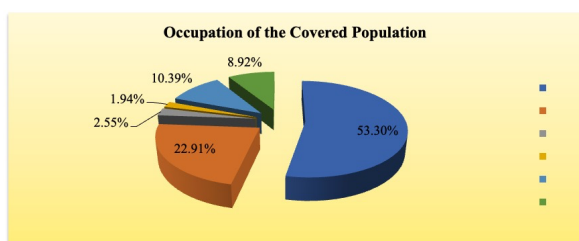
**Graph 8: Education-wise distribution of population**

Table and Figure 8 show that 79% of the population was illiterate, 8.5% had studied up to 8th grade, 1.5% had studied up to high school, 1.8% of the population had studied up to higher secondary, and 9.2% were graduates and above. The data exhibits that only 79% of the population of these five villages was not literate, and 21% of the population could read and write. The educational level of household members is an important characteristic because educational attainment often affects the health of children, proper hygienic practices, the use of contraceptives, and reproductive behaviour.

**Table 9: Occupation-wise distribution of population**

Occupation	Villages					Total	Percentage
	Tajnapur	Mohangarh	Dabalikhurd	Nandura	Rangai		
Agriculture	740	821	579	681	721	3542	53.3%
Labourer	225	400	189	388	321	1523	22.9%
Farmer	40	22	32	63	11	168	2.52%
Businessman	27	32	20	23	27	129	1.94%
Skilled Labourer	187	85	159	58	202	691	10.4%
Unskilled Labourer	138	111	129	42	173	593	8.92%
Other						6646	100%

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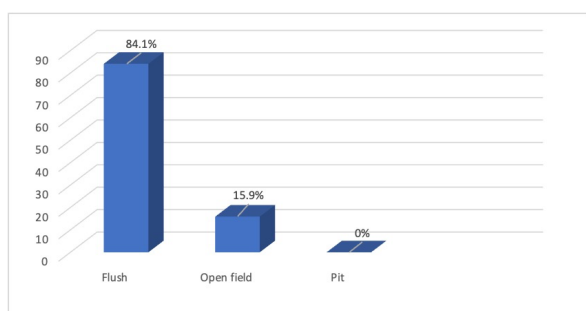


**Figure 9: Occupation-wise distribution of population**

As shown in Table and Figure 9, 53.3% were agricultural labourers, 22.9% were farmers, and 10.4% were unskilled labourers. 2.0% were skilled labourers, 2.8% were doing business, and 8.6% were others.

**Table: 14 Distribution of population according to toilets usage**

Toilet Type	Villages					%
	Tajnapur	Mohangarh	Dabalikhurd	Nandura	Ranngai	
Flush	124	142	165	176	133	84.10%
Pit	0	0	0	0	0	0.00%
Open field	21	47	13	29	30	15.90%
						<b>100</b>



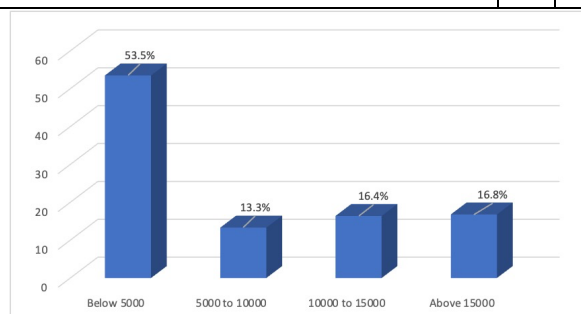
**Figure 14: Distribution of population according to toilets usage**

Table No. 14 exhibits that about 84.10% of households used flush toilets, and 15.90% used open fields. The percentage of people who used the pit toilet was negligible.

**Table-16: Monthly Income of Household Distribution in Five Villages of Burhanpur district**

Monthly Income	Villages					Total	%
	Tajnapur	Mohangarh	Dabalikhurd	Nandura	Ranngai		
Below 5000	80	97	89	105	99	470	53.5
5000 To 10000	9	29	27	29	23	117	13.3
10000 To 15000	29	33	31	31	20	144	16.4
Above 15000	27	30	31	40	21	149	16.8
						<b>880</b>	<b>100</b>

Monthly Income	Tajnapur	Mohangarh	Dabalikhurd	Nandura	Ranngai	Total	%
Below 5000	80	97	89	105	99	470	53.5
5000 To 10000	9	29	27	29	23	117	13.3
10000 To 15000	29	33	31	31	20	144	16.4
Above 15000	27	30	31	40	21	149	16.8
						<b>880</b>	<b>100</b>



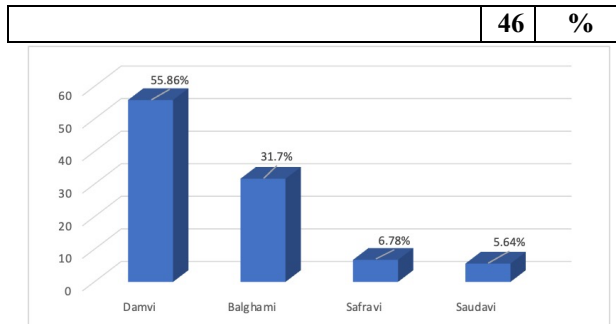
**Graph 16: Monthly Income of Household Distribution in Five Villages (%)**

Table 16 reveals that the percentage of the economic condition of households adopted in five ST villages, i.e., 53.5% of households had an income below Rs. 5000, 13.3% earned in a range of Rs. 5000–10000, 16.4% had an income of Rs. 10000–15,000, and 16.8% had an income above 15,000.

**Table 17: Mizaj-wise Distribution of Population**

Mizaj	Villages					Total	Percentage
	Mohangarh	Ranngai	Nandura	Dabalikhurd	Tajnapur		
Damvi	780	690	791	650	802	3713	55.86%
Balgaham	530	630	315	249	383	2107	31.70%
Safravi	108	79	84	96	84	451	6.78%
Sau davi	53	56	65	113	88	375	5.64%
						<b>66</b>	<b>100</b>

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**Graph 17: Mizaj-Wise Distribution of Population**

Table 17 exhibits the Mizaj (temperament) of patients in the present study: 55.86% of the patients were Damvi Mizaj, 31.70% were Balghami Mizaj, and 6.78% and 5.64% were S Afravi and Saudawi Mizaj, respectively.

**Conclusion:** The collected and compiled data exhibit that the population that visited the OPDs belonged to the Schedule Tribes, which is a low socioeconomic category and is mainly dependent on agriculture and labour. The percentage of males who visited the OPDs is higher, which may be due to excessive burden of workload and poor dietary habits, In the present study, we found an increase in the number of patients in the age groups 31–45 and 46–60 years, and according to Unani Damvi Mizaj, they are more susceptible to having an illness in adopted villages. The study can be concluded on the basis of the above-mentioned findings relating to the facts.

### Source of Funding

Central Council for Research in Unani Medicine, Ministry of Ayush, Govt. Of India, New Delhi.

**Conflict of Interest:** None

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