International Journal of Community Medicine and Public Health
Das DK et al. Int J Community Med Public Health. 2024 May;11(5):1882-1888
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20241182

Original Research Article

Morbidity pattern among tribal farmers in a selected district of Tripura, India

Dipak Kumar Das*, Murali Dhar

Department of Bio-Statistics and Epidemiology, International Institute for Population Sciences, Mumbai, Maharashtra, India

Received: 10 February 2024
Revised: 20 March 2024
Accepted: 21 March 2024

***Correspondence:**
Dr. Dipak Kumar Das,
E-mail: dipakdhsi@gmail.com

ABSTRACT

Background: Tribal communities in Tripura comprise 31.76% of the state's total population. The tribal people of Tripura are primarily farmers, and in spite of concerns about their poor health and unfulfilled requirements, they continue to get healthcare in isolated locations where there are obstacles such as undernourishment, a lack of medical facilities, and a labor scarcity. The study's objective is to ascertain the morbidity pattern among tribal farmers in Tripura.
Methods: In 2021 after receiving approval from IIPS, Mumbai, selected farmers from Dhalai district were surveyed. We utilised cross-tabulation, chi2, PCA and straightforward logistic regression.
Results: Only 5.17% of the sample population had higher education, 54.1% overall was male, and 23.1% were smokers. Jhum (Hill) cultivation was used by 15.5%, while regular (plain) farming was used by 84.5%. Tribal farmers in Tripura were suffered by both acute and chronic diseases. Diarrhoea and fever amongst acute diseases seemed to have the highest prevalence rates (1.82% each), whereas jaundice and reproductive tract infections have the lowest levels (0.30 each). Asthma had the highest prevalence (3.65%) among the chronic diseases, followed by hypertension (2.74%). The morbidity rate decreased as education levels rose. Normal cultivators and the cultivators who worked more times were more likely to have both acute and chronic diseases than jhum cultivators.
Conclusions: It is possible to draw the conclusion that farmers didn't lead a healthy lifestyle and suffered from diseases. The study's findings could serve as a foundation for developing economic, educational, and medical plans for tribal farmers to safeguard them from health risks and workplace dangers.

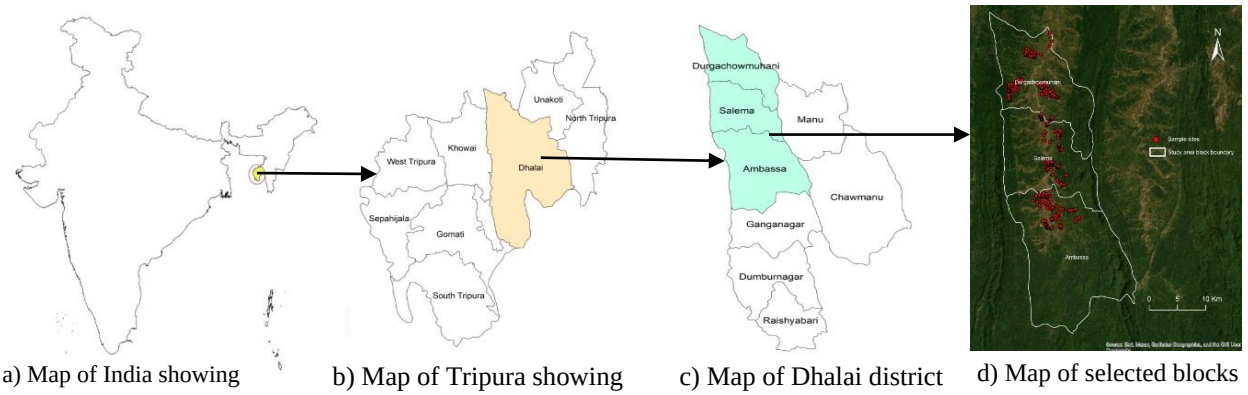
Keywords: Acute Disease, Chronic Disease, Framer, India, Tribal Farmer, Tribal Health, Tripura

INTRODUCTION

As an essential aspect of human growth and development, health is critical in determining community well-being.[1] Technological and socioeconomic progress depends on people's being in the best possible health.[2] Morbidity is referred to by the World Health Organisation (WHO) as a deviation from physical or psychological well-being brought on by illness or disease; this includes knowledge of the condition, the presence of an illness or symptom, or the prevalence of an illness in a community.[3] Indigenous people are governed by their rules and regulations, traditions, or specific legislation. They are characterized by distinctive social, cultural, and economic characteristics.[4] The largest Indigenous people are found in China and India.[5] In India, these people are referred to as tribes, Adivasi, Vanvasi, etc., and are recognized by the constitution as Scheduled Tribes (ST).[6] According to

the 2011 Indian Census, half of all indigenous people worldwide are tribal, making up 8.6% of the nation's overall population.[7,8] Indian tribes, which number about 698 communities and are distinguished by their own culture, are mainly found in the lower classes of society.[6]

Data was gathered from Tripura, the third smallest state in the country, during the year 2021 for this research work. The North-eastern Indian state of Tripura is bordered by international borders. It has a significant tribal population (31%), consisting of 19 communities, while the non-tribal majority (69.95%) is made up mostly of Bengalis.[9,10] The study region and the chosen households were shown in Figure 1.



a) Map of India showing Tripura state

b) Map of Tripura showing Dhalai district

c) Map of Dhalai district showing selected blocks

d) Map of selected blocks showing selected households

Figure 1: Map showing the study area and the selected households in Tripura, India.

The primary employment in the state, agriculture, has been classified as the third most hazardous profession in the world.[11,12] Health risks associated with the occupation include those related to mechanical, chemical, biological, ergonomic, psychosocial, and environmental attributes.[12] These difficulties may cause pre-existing conditions to deteriorate or cause additional issues to emerge.[11,13] Tribal people continue to get healthcare in remote areas with challenges like undernourishment, a lack of medical facilities, and a shortage of labor, despite suspicions about their bad health and unmet needs.[14] The most recent National Family Health Survey (NFHS) reveals intra-group disparities by highlighting high mortality, malnutrition, low obstetric care, and poor healthcare services utilization among ST.[15]

Even though several studies have been conducted all over the world to investigate the relationship between diseases and the utilization of healthcare, there is a substantial absence of such research among tribal farmers in Tripura, which presents difficulties for the development of tailored policies. The purpose of this study is to fill this gap by investigating the morbidity patterns and associated determinants among tribal farmers in Tripura. Additionally, this study will discuss the program and policy gaps that are preventing the advancement of tribal health in the country.

METHODS

This study was cross-sectional in nature and conducted in the Dhalai district of Tripura, India, depicted in Map 1. The study included a sample size of 995 respondents from 350 households chosen using a multi-stage sampling technique. This sample size was calculated to be adequate to estimate a minimum proportion of 10% with an absolute error of 3% and 95% confidence. In the first stage of sampling, the district with the highest proportions of farmers, namely, Dhalai was chosen. In the second step, three blocks were selected randomly from a total of eight blocks. Subsequently, using a simple random sampling process, five villages were chosen in the third stage from each of the selected blocks. Finally, required number of households from each village were selected based on probability proportional to size (PPS) and applying systematic random sampling strategy. For the purpose of random sampling, mapping and listing of the households in the selected villages was carried out. Thus, a sampling frame of all the households with at least one adult farmer was prepared. Those, working as a cultivator or as agricultural labour, were defined as ‘farmer’. All the farmers in the selected households, who gave the consent, were administered the questionnaire for the data collection.

The basic data was collected from 995 sample farmers in Tripura's Dahali districts in 2021. A pre-tested, semi-structured questionnaire was developed. Questions regarding self-reported information on acute diseases (last one month), chronic symptoms, and chronic diseases (last one year) were included in the questionnaire. Concerning acute illnesses, the questionnaire asked whether the respondent suffered from any acute diseases within the last thirty days; and about chronic illnesses, it questioned whether the respondent had gone through any chronic symptoms or been diagnosed with a condition throughout the preceding year. A questionnaire with

sociodemographic and economic factors was also included. The International Institute for Population Sciences (IIPS), Mumbai's Students Research Ethics Committee (SREC) granted the study ethical authorization. Each respondent provided informed written consent prior to the administration of the survey instrument.

Out of the total sample population there were 329 farmers were tribal. This present paper is focusing on only tribal farmers, so for this present work sample size was 329 farmers. The pattern of acute illnesses and chronic illnesses among the farmers was assesed by univariate analysis and prevalence of the same were presented in precentages. The household economic status of the farmers' wealth index was constructed based on information on housing characteristics, household position, agricultural land holding, etc. using Principal Component Analysis (PCA). The prevalences according the various socio-demographic and economic factors were obtained applying bi-variate analysis. In bi-variate analysis, chi-square test was applied to find unadjusted significance of association with the factors under consideration. Finally, logistic regression was used to examine the factors that were independently associated with various morbidities.

RESULTS

The farmers of Tripura, India included only 5.2 percent of those with a higher degree, 54.1% of men overall, and 23.1% of smokers. Eighty-five percent of tribal farmers used conventional (plain) farming, but just fifteen percent engaged in jhum (hill) cultivation. In addition to chronic diseases like diabetes, hypertension, stroke, asthma, tuberculosis, leprosy, renal stones, renal diseases, chronic skin diseases, cataracts, tumor, respiratory cancer, oesophageal cancer, piles, anemia, and hernia, tribal farmers in Tripura additionally suffered from acute illnesses like diarrhea, asthma, jaundice, malaria, and fever. Among acute illnesses, fever, and diarrhea appeared to have the highest incidence rates (1.8 percent each), whereas reproductive tract infections and jaundice reported the lowest rates (0.3 each) (Figure 2). Among the chronic diseases, asthma had the highest prevalence (3.7 percent), followed by hypertension (2.7 percent) (Figure 3).

Table 1 illustrates the percentages of acute and chronic disease prevalence among tribal farmers in Tripura, India, together with the outcomes of chi-2 tests and logistic regression analysis. The logistic regression analysis's odds ratio shows an association between socioeconomic factors and acute and chronic diseases, while the chi-2 test's p-value demonstrates the distribution's significance. Compared to jhum cultivators, normal cultivators had higher rates of acute and chronic illnesses; nevertheless, the difference was not statistically significant. Male farmers had a considerably lower risk of acute illness (OR:0.07, 95% CI:0.01-0.41) than female farmers did. The acute disease incidence was 2.1 times higher among farmers between the ages of 45 and 60 compared to younger farmers. While the association was not statistically significant at the highest educational level, there was a noticeable reduction in the prevalence rate of acute and chronic diseases as education levels climbed. Compared to farmers with fewer than 20 years of farming experience who were employed as a reference group, farmers with 20-40 years of experience had an 80% increased risk of chronic disease (OR: 1.81, 95% CI: 1.23-5.41). When it came to acute ailments, alcohol drinking demonstrated beneficial.

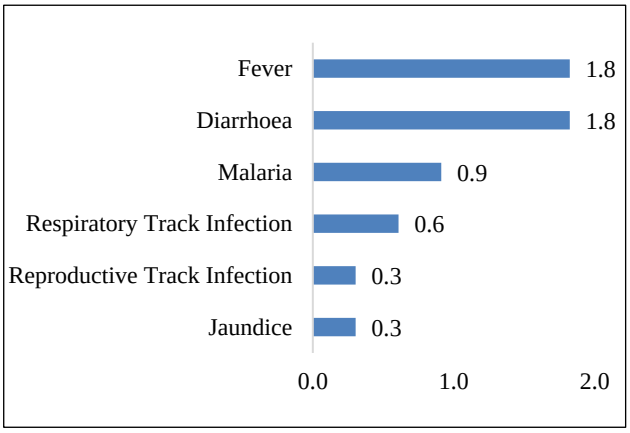


Figure 2: Prevalence of acute diseases by type of acute diseases among the tribal farmers of Tripura, India.

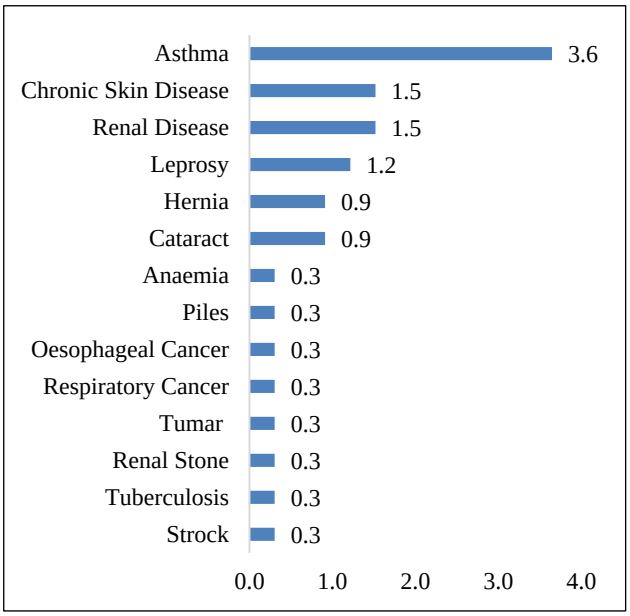


Figure 3: Prevalence of chronic diseases by type of chronic diseases among the tribal farmers of Tripura, India.

Table 1: Prevalence and association of acute and chronic diseases according to the socio-demographic and economic characteristics of tribal farmers in Tripura, India.

Socio-demographic characteristics	Sample size	Any acute disease			Any chronic disease		
		P (%)	P value, chai 2	AOR (95% CI)	P (%)	P value, chai 2	AOR (95% CI)
Total	329	5.78			14.59		
Types of farmer							
Agricultural labour	54	3.70	0.475		3.70	0.013	
Cultivator	275	6.18		0.44 (0.04-4.91)	16.73		6.6 (1.19-36.51)
Kind of cultivation							
Shifting cultivation	51	3.92	0.537		11.76	0.534	
Normal cultivation	278	6.12		2.85 (0.40-20.36)	15.11		1.8 (0.55-5.91)
Sex							
Female	151	8.61	0.042		17.88	0.119	
Male	178	3.37		0.07 (0.01-0.41)	11.80		0.82 (0.27-2.47)
Age group							
15-29	72	2.78	0.229		8.33	<0.001	
30-44	113	7.08		4.95 (0.63-38.85)	5.31		0.35 (0.08-1.46)
45-60	114	7.89		2.12 (0.24-18.95)	21.05		1.36 (0.35-5.28)
65+	30	0.00		#	40.00		3.33 (1.66-6.72)
Educational level							
Illiterate	57	10.53	0.050		26.32	0.047	
Up-to primary (five)	96	3.12		0.12 (0.02-0.80)	14.58		0.98 (0.35-2.7)
Six to nine	96	2.08		0.05 (0-0.55)	13.54		0.88 (0.29-2.69)
Secondary/ten	63	11.11		0.98 (0.16-5.99)	7.94		0.89 (0.22-3.61)
Above secondary/ten	17	5.88		0.59 (0.03-10.15)	5.88		0.86 (0.07-10.45)
Religion							
Hindu	91	4.40	0.789		15.38	0.953	
Christian	179	6.15		0.63 (0.13-3.19)	14.53		0.82 (0.34-1.96)
Other	59	6.78		0.61 (0.08-4.54)	13.56		0.94 (0.29-3.11)
Marital status							
Never married	33	0.00	0.016		6.06	0.005	
Currently married	274	5.47		#	13.87		0.92 (0.14-6.08)
Widow/separated	22	18.80			36.36		1.88 (0.17-20.75)
Duration of farming							
Below 20 year	63	6.35	0.352		7.94	0.019	
20-40 year	109	6.42		1.61 (0.89-5.31)	18.35		1.40 (0.83-5.41)
Above 40 year	33	3.03		2.10 (0.62-4.69)	30.30		1.81 (1.23-5.41)
Working time/day							
Below 5 hours	48	12.50	0.056		18.75	0.636	
5-7 hours	108	2.78		0.08 (0.01-0.63)	14.81		1.45 (0.47-4.44)
8-10 hours)	173	5.78		1.11 (0.23-5.41)	13.29		0.29 (0.08-1.05)
Drinking water source							
Piped water	47	6.38	0.369		12.77	0.271	
Tubewell or Borewell	157	7.01		0.65 (0.12-3.64)	12.74		0.99 (0.29-3.34)
Under surface	107	2.80		0.15 (0.02-1.15)	19.63		1.85 (0.57-5.98)
Surface water	18	11.11		4.21 (0.32-54.93)	5.56		0.49 (0.04-5.8)
Type of toilet							
No toilet	17	11.76	0.541		35.29	0.036	
Advance toilet	19	10.53		4.21 (0.11-164.93)	21.05		0.24 (0.03-2.08)
Pit with slab	251	5.18		0.53 (0.04-6.91)	11.95		0.2 (0.04-0.9)
Open pit	42	4.76		1.08 (0.05-21.79)	19.05		0.23 (0.04-1.32)
Drainage system							
No drainage	261	5.36	0.649		15.33	0.692	

Continued.

Socio-demographic characteristics	Sample size	Any acute disease			Any chronic disease		
		P (%)	P value, chai 2	AOR (95% CI)	P (%)	P value, chai 2	AOR (95% CI)
Pucca	22	4.55		0.39 (0.02-7.66)	9.09		0.52 (0.09-2.92)
Kaccha	46	8.70		2.01 (0.39-10.25)	13.04		0.7 (0.22-2.23)
Wealth index							
Poor	103	5.83	0.649		15.53	0.898	
Middle	121	4.96		1.2 (0.22-6.63)	14.88		1.14 (0.43-3.06)
High	105	6.67		0.55 (0.09-3.17)	13.33		1.19 (0.43-3.25)
Smoking							
No	253	5.53	0.732		11.46	0.003	
Yes	76	6.58		1.2 (0.22-6.46)	25.00		2.01 (0.71-5.68)
Drinking							
No	252	5.16	0.386		12.30	0.033	
Yes	77	7.79		7.31 (1.29-41.4)	22.08		1.98 (0.75-5.22)
Chewing tobacco							
No	247	5.26	0.490		13.36	0.273	
Yes	82	7.32		1.19 (0.31-4.55)	18.29		1.19 (0.53-2.67)

Note:- P (%): Prevalence (percentage), #: Omitted because of collinearity or '0' predicts failure perfectly, AOR (95%CI): Adjusted odds ratio (95% confidence interval

DISCUSSION

The health profile of tribal farmers in Tripura, as outlined in the study, reveals a complex interplay of acute and chronic illnesses that warrants attention and targeted interventions. The prevalence rates of various health conditions among this population shed light on the pressing health challenges faced by tribal farmers in the region. Our study, along with that of Singh et al and Rao et al demonstrates that diarrhoea and fever are the most prevalent acute diseases, with the greatest prevalence rates for each.[16,17] Based on the field experience of researchers, this could potentially account for the tribal farmers' limited access to public health measures such as clean water and enhanced sanitation facilities. Additionally, farmers are subjected to elevated levels of particulate fog, which may contain pathogens, animal manures, and mold, among other substances.[18,19] Some research suggests that acute and chronic poisoning may result from agrochemicals penetrating the human body.[20]

The significant incidence of chronic diseases, such as hypertension and asthma, among tribal cultivators is alarming and suggests that they bear a substantial burden of respiratory ailments. As per a study conducted in the adjacent state of Assam, respiratory tract infections are identified as the primary cause of illness and death among agricultural workers.[21] Environmental factors also play a role in the development of respiratory ailments in agricultural environments, which may exacerbate cardiovascular health problems among this population. Without being statistically significant, comparisons between normal cultivators and jhum cultivators suggest possible discrepancies in health outcomes associated with diverse agricultural practices, animal waste, and other factors. A prior study further corroborated the notion that dust, along with its by-products such as fungi, bacteria, and animal excrement, could potentially be the source of these illnesses.[19] The health outcomes that differ by gender are a subject of great interest, as male farmers exhibit a significantly lower likelihood of experiencing acute diseases in comparison to their female counterparts.

The researchers noted that a significant proportion of female farmers exhibited a lack of awareness regarding health concerns associated with their occupation and the use of diverse agrochemicals. In contrast, a prior investigation conducted by Donham demonstrated the exact opposite: male farmers had a higher propensity for acute disease incidence than their female counterparts due to the challenging conditions and extended work hours they endured.[18] Farmers between the ages of 45 and 60 are more susceptible to acute illnesses, which emphasizes the significance of age-specific health initiatives. According to comparable findings, elderly patients made up a higher portion of the patient population and were more likely to become ill in the study "Morbidity Pattern and Treatment in India".[22] The causes of the health issues older farmers address might involve illnesses attributed to aging, cumulative occupational exposures, and awareness of the risks that accompany agriculture.

Higher levels of education are linked to a considerable drop in the occurrence of both acute and chronic diseases, revealing that education might serve as a protective factor. The general trend indicates the possible health benefits of education, supporting educational activities targeted to tribal farmers even though statistical significance is not seen at the highest educated level. Research from previous decades also indicates that as education levels increased, the prevalence of diseases declined.[25-28] It was fascinating to observe that as farmers became wealthier, the prevalence of acute and chronic diseases grew; this could have been caused by leading an unhealthy lifestyle. Previous studies and our research have found that several diseases can be triggered by poor

drainage, inadequate drinking water, and open or lacking toilets.[29,30] Researchers Zhou and Roseman and the current study both show that farmers who smoked and consumed alcohol had higher rates of acute and chronic illnesses.[31]

CONCLUSION

The study provides valuable insights into the health challenges faced by tribal farmers in Tripura. Thus, the tribal cultivators were unable to maintain a healthy way of life. The findings underscore the need for targeted public health interventions addressing acute and chronic diseases, considering factors such as gender, age, education, and agricultural practices. It is also necessary to evaluate government programmes for the welfare of farmers so that their effectiveness can be felt at the local level. The scope of the present research was limited to examining the factors collectively associated with acute and chronic diseases. Consequently, it was impossible to investigate the factors associated with specific acute and chronic diseases. Additionally, the estimated prevalences in the study are relatively low, demanding a larger sample size to ensure reasonable error in the estimation. Therefore, it might be beneficial to propose undertaking more comprehensive research to acquire more reliable estimates and to examine the factors associated with particular acute or chronic ailments to improve the overall health and well-being of indigenous farmers in the region.

Recommendations

The study's findings could serve as a foundation for developing economic, educational, and medical plans for tribal farmers to safeguard them from health risks and workplace dangers.

ACKNOWLEDGEMENTS

We would like to thank all the participants of the study, all the panchayat's Pradhan and members of the study area, my guide Dr. Murali Dhar, all faculty and staff of IIPS, my parents, teachers, elder brother, relatives, and numerous friends, both seniors and juniors.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the International Institute for Population Sciences' ethical committee, known as the Students Research Ethics Committee (SREC)

REFERENCES

1. Negi DP, Singh MM. Tribal health in India: a need for a comprehensive health policy. Int J Health Sci Res. 2019;9(3):299-305.
2. Das S. Rural health status and health care in north-eastern India: a case study. J Health Manag. 2012;14(3):283-96.
3. World Health Organization. Towards a common language for functioning, disability and health, International Classification of Functioning, Disability and Health (ICF). Geneva, Switzerland, 2002. Available at: https://cir.nii.ac.jp/crid/1573668925447490176. Accessed 05 February 2024.
4. United Nations. Guidelines on indigenous peoples' issues (Vol. 16). United Nations Development Group, 2009 Available at: https://www.un.org/development/desa/indigenouspeoples/publications/2009/08/undg-guidelines-on-indigenous-peoples-issues Accessed 05 February 2024.
5. Anderson I, Robson B, Connolly M, Al-Yaman F, Bjertness E, King A, et al. Indigenous and tribal peoples' health (The Lancet-Lowitja Institute Global Collaboration): a population study. Lancet. 2016;388(10040):131-57.
6. Raushan R, Acharya SS. Morbidity and treatment-seeking behaviour among scheduled Tribe in India: A cross-sectional study. J Soci Inclu Stud. 2018;4(2):325-40.
7. Balgir RS. Tribal health problems, disease burden and ameliorative challenges in tribal communities with special emphasis on tribes of Orissa. In Proceedings of National Symposium on "Tribal Health". 2006;20:161-76.
8. Census of India. Agriculture Sector in India. Register General of India. Government of India, 2011. Available at: https://agcensus.dacnet.nic.in/. Accessed 05 February 2024.
9. Tripura Tribal Areas Autonomous District Council. Tripura Tribal Areas Autonomous District Council. Government of Tripura, 2022. Available at: https://ttaadc.gov.in/people#:~:text=Tripura%20has%20rich%20cultural%20heritage,Garo%2C%20Khasia%2C%20and%20Lepcha. Accessed 05 February 2024.
10. Tribal Research and Cultural Institute. Welcome to Tribal Research and Cultural Institute. Government of Tripura, 2022. Available at: https://trci.tripura.gov.in/. Accessed 05 February 2024.
11. Karttunen JP, Rautiainen RH. Distribution and characteristics of occupational injuries and diseases among farmers: a retrospective analysis of workers' compensation claims. Ame J Industr Medi. 2013;56(8):856-69.
12. Rajsri TR. Occupational profile and morbidity pattern among farmers of Perambalur Taluk: a cross sectional study (Doctoral dissertation, Dhanalakshmi Srinivasan Medical College and Hospital, Perambalur. Tamil-Nadu. 2020. Available at: http://repository-tnmgrmu.ac.in/13797/1/201545520rajsri.pdf. Accessed 05 February 2024.

13. Spiewak R. Occupational skin diseases among self-employed farmers. Advan Dermatol Allerg/Post Dermatol Alergol. 2004;21(6):278-85.
14. Kumar MM, Pathak VK, Ruikar M. Tribal population in India: A public health challenge and road to future. J Fam Medi Prim Care. 2020;9(2):508-12.
15. International Institute for Population Sciences, ICF. National family health survey 5, 2020. Available at: https://main.mohfw.gov.in/sites/default/files/NFHS-5_Phase-II_0.pdf. Accessed 05 February 2024.
16. Singh AK, Maheshwari A, Sharma N, Anand K. Lifestyle associated risk factors in adolescents. Ind J Pediatr. 2006;73:901-6.
17. Rao VG, Aggrawal MC, Yadav R, Das SK, Sahare LK, Bondley MK, et al. Intestinal parasitic infections, anaemia and undernutrition among tribal adolescents of Madhya Pradesh. Ind J Commu Medi. 2003;28(1):26.
18. Donham KJ. Hazardous agents in agricultural dusts and methods of evaluation. Am J Indust Medi. 1986;10(3):205-20.
19. Croppenstedt A, Muller C. The impact of farmers' health and nutritional status on their productivity and efficiency: Evidence from Ethiopia. Econ Develop Cult Chan. 2000;48(3):475-502.
20. MN S, Patil P. Knowledge, attitude, practice and toxicity symptoms associated with pesticide exposure among farm workers in Jalgaon, Maharashtra, India. J Environm Res Develop. 2016;11(2):371-80.
21. Rahman SJ, Das BR, Nath G. Health seeking behavior of farming community in rural area of Titabor block in Jorhat district. Int J Commu Medi Publ Heal. 2017;4(10):3854.
22. Prasad S. Morbidity pattern and treatment in India. Annals Trop Medi Publ Heal. 2012;5(5).
23. Perry MJ, Layde PM. Farm pesticides: outcomes of a randomized controlled intervention to reduce risks. Am J Prevent Medi. 2003;24(4):310-5.
24. Hashemi SM, Hosseini SM, Hashemi MK. Farmers' perceptions of safe use of pesticides: determinants and training needs. Int Arch Occupat Environm Heal. 2012;85:57-66.
25. Kumari PL, Reddy KG. Knowledge and practices of safety use of pesticides among farm workers. J Agr Veter Sci. 2013;6(2):1-8.
26. Oztaş D, Kurt B, Koç A, Akbaba M, İlter H. Knowledge level, attitude, and behaviors of farmers in Cukurova region regarding the use of pesticides. Biomed research international. 2018;2018.
27. Lakshmi Singh A, Rahman A. Malaria and related environmental issues in India: a case study of Aligarh city. Geo Journal. 2001;53:89-99.
28. Moraes LR, Cancio JA, Cairncross S. Impact of drainage and sewerage on intestinal nematode infections in poor urban areas in Salvador, Brazil. Trans Roy Soci Trop Medi Hyg. 2004;98(4):197-204.
29. Zhou C, Roseman JM. Agriculture-related residual injuries: prevalence, type, and associated factors among Alabama farm operators-1990. J Rural Heal. 1995;11(4):251-8.

Cite this article as: Das DK, Dhar M. Morbidity pattern among tribal farmers in a selected district of Tripura, India. Int J Community Med Public Health 2024;11:1882-8.