

Alcoholic Neuropathy and Its Impact among the Tea Garden Workers in the Golaghat District of Assam

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Abstract: *The majority of Assamese tea tribe members come from Odisha, West Bengal, Jharkhand, and Andhra Pradesh. The British sent their ancestors to the state more than a century ago to work in the tea plantations, and they have remained ever since. This study performed a situational analysis of the phenomenon of alcoholism in tea garden workers, which leads to alcoholic neuropathy, and proposed appropriate measures for reducing / mitigating its impact on the quality of life among tea garden workers in Assam's Golaghat district. In this pilot study, all samples were collected at random. The study was carried out with the assistance of a pre-designed and pre-tested questionnaire. The consumption of commercial drinks as well as the locally produced alcohol known as Haria, which is made from rice and other herbal ingredients, was tracked. The sample size is 500 and the study included both men and women between the ages of 20 and 30. The study concluded that alcoholic neuropathy has a significant economic and physical impact on the social lives of tea workers.*

Keywords: Alcoholic neuropathy, tea garden workers, pilot study, Haria

1. Introduction

Around 2 billion individuals drink alcoholic beverages globally, and 76.3 million of those people have diagnosable alcohol use problems, according to WHO estimates. While certain traditional markets, like Europe, are exhibiting downward patterns in alcohol consumption, many areas of the world have reached a stable and saturated consumption level. As a result, industry has turned its attention to emerging areas that have the potential to be profitable, like Asia. The largest range of promotional methods, which operate through various media channels, are anticipated to increase alcohol production, distribution, and consumption in the South-East Asian Region. (2004 WHO Global Status Report on Alcohol)

In India, about 9% of adolescents and 24% of young adults engage in alcohol consumption, though frequency varies greatly. The number of teens and young adults who drink is higher (26%) than that of scheduled tribe men (25%) and uneducated teens and young adults (23%) respectively¹.

The majority of Assamese members of the tea tribe community are migrants from Odisha, West Bengal, Jharkhand, and Andhra Pradesh. More than a century ago, the British sent their ancestors to the state to work in the tea plantations, and they have remained ever since.

The tea industry is built on the relentless labour of these workers, the most of whom are tribal people, but they are subjected to horrendous living and working conditions. The women and children in the community are particularly at risk due to the high levels of ignorance and illiteracy there.

High levels of malnutrition among their children and an almost universal prevalence of anaemia in women, in addition to a host of other health complications like tuberculosis, gastroenteritis, diarrhoea, and typhoid, are caused by their unhygienic living conditions in their clearly

defined colonies within the tea estates (labour lines), poor socioeconomic status, and a very obvious lack of awareness.

Their vast list of problems is only made worse by a high alcohol usage rate. Nearly every Assamese tea tribe household is affected by alcoholism. Additionally, alcoholics are infamous for having high absence rates from work, which further reduces their ability to make money.

Interestingly, addiction affects people of all genders. Women are also hooked, albeit not in the same numbers.

In fact, 87% of workers over the age of 40 were found to be alcohol dependent in 64 tea gardens in the Sonitpur district, according to a sample survey conducted by the Drug Abuse Information Prevention and Rehabilitation Centre (DAIPARC), a non-government organisation with a base in Assam, five years ago.

According to earlier studies, more than 80% of adult tea workers used cigarettes and alcohol².

Additionally, according to specialists in the garden hospitals, drunkenness is the main cause of the widespread prevalence of liver cirrhosis in the community, which frequently results in death.

Additionally, a long-standing practice of drinking country liquor can result in alcoholic neuropathy, a disorder that is widely disregarded by society as a whole.

And as a result, people are unable to get to their regularly scheduled jobs, which ultimately results in social problems like unemployment and family disruptions.

Use of alcohol and tobacco are two significant, preventable health risks that have been linked to a number of serious, non-communicable diseases, including cancer, coronary

artery disease (CAD), hypertension, and stroke. These two behaviours are more often established at a young age^{3,4}.

Tobacco-related malignancies account for 50% of all cancers in men and 20% in women in India, where there are more than 2.2 million cancer patients, and cause around 0.7 million deaths annually⁴.

One of the substances that people use the most frequently worldwide is alcohol. Alcoholic neuropathy, which is the most frequent harmful side effect in patients with chronic alcohol use disorder, is one of the less well-known effects. Due to alcoholic neuropathy the people started showing symptoms like:

- Tingling sensation and paraesthesia in the hand and feet
- Burning type pain
- Wasting and weakness of hand and foot muscles
- Hyperhidrosis
- Loss of coordination

Need of the study:

Alcohol is far too important in today's society and should be treated as an afterthought rather than the most important component of any social gathering. Alcohol causes a slew of social, economic, and health issues that could be easily avoided if it played a smaller role in everyday life. The pattern of alcohol consumption by different groups of people, as well as its numerous effects on society, are of critical importance today.

Tea production is one of India's largest agricultural industries. There has been a rapid increase in alcohol-related disease among tea workers in Assam, North-eastern India.

Merriment begins as soon as the sun sets in the 'labour lines' of lower Assam's tea gardens. Because there isn't much to do here, 'having fun' essentially means indulging in the free-flowing, locally-brewed alcohol.

There is a lack of adequate information regarding risky alcohol-related behaviour among these youths. This study aims to better understand the prevalence of alcohol use on the quality of life of tea plantation workers and alcoholic neuropathy in order to develop an effective prevention strategy.

In addition, this study conducted a situational analysis of the phenomenon of alcoholism in tea garden workers leading to alcoholic neuropathy and proposed appropriate measures for reducing / mitigating its impact on the quality of life among tea garden workers in Assam's Golaghat district.

2. Aims & Objectives of the study

- To trace out the history of consumption and circumstances stimulating the drinking behaviour among the tea workers.
- To find out the occurrence of different physical disorders due to alcoholism.

- To find out the effects of alcohol neuropathy and its impact on the workers upon their occupational and social lives.

3. Materials & Methods

In this pilot based study all the samples were collected randomly. The study conducted with the help of a pre-designed and pre-tested questionnaire prepared for the purpose.

History of intake of commercial drinks, or the local made alcohol known as haria prepared from rice and other herbal ingredients were recorded.

Location: The tea estates in the Golaghat district of Assam

Sample size: 500

Age group: 20-30 year and both genders were included in the study

Tea garden labourers contribute significantly to the economy of Golaghat district, despite the fact that they are frequently underpaid and live in deplorable conditions. There is no published research on the prevalence of substance abuse habits among tea garden workers. However, there have been some studies published on the substance abuse habits of tea garden workers in some Assam districts. In the 15-24 age group, the prevalence of alcohol use, non-smoked tobacco use, and smoking was 32.2%, 52.5%, and 2.2%, respectively. A study of substance abuse among adolescents among tea garden workers in Assam discovered that 43.1% of males and 82.7% of females consumed alcohol⁵.

The study's major findings include the following:

- The majority of the respondents-drinkers (adults and adolescents), spouses of drinkers, and non-drinkers-were less educated, as were their parents.
- The majority (adults and adolescents) began drinking with their peers between the ages of 15 and 21 for the sole purpose of experimenting.
- Adults typically drank at a bar or at home, while adolescents drank at a friend's house or at home.
- The majority of adult drinkers and spouses of drinkers reported physical and potential mental health problems. More than half of the adolescents said the same thing.
- Alcohol consumption causes alcoholic neuropathy in addition to other health problems.
- The majority of Adult Drinkers/Alcohol Users and Husbands of Spouses had physical and mental health problems due to alcoholic neuropathy.

Alcohol-related neuropathy is associated with several risk factors, such as malnutrition, thiamine deficiency, direct toxicity of alcohol and a family history of alcoholism⁷⁻¹⁰, but it is not clear which of these plays a primary role in inducing neuropathy¹¹.

4. Data Collection

After counselling, data on current alcohol use and neurological symptoms were collected via face-to-face interviews and questionnaires using a pre-designed and pre-tested questionnaire. The questionnaire included questions related to the theme of this study, such as Along with neurological data, socio-demographic information such as educational status, marital status, and the educational status of the parents was collected from the head of each household or other adult member of the family.

The information was gathered between July and December of 2022. After explaining the study, ensuring confidentiality, and obtaining verbal consent, each participant was personally interviewed. Respondents were given the option to opt out of the study if they so desired.

The responses of the respondents were coded, entered into a Microsoft Excel spreadsheet, tabulated, and analysed. The findings are graphically represented and described.

The following tools were used to elicit information: a pre-tested interview schedule, an interview guide, a case study format, and a questionnaire form.

The data was analysed using both manual and computerised methods-Statistical Package for Social Science (SPSS). Wherever possible, appropriate statistical tools were used.

Outcome measures:

The study's findings help to develop an important document of the occurrence of various physical disorders, particularly neurological disorders, due to alcohol consumption among the poor tea tribe community in order to initiate some suitable solution through social awareness, medical supports, and so on to uplift their socio-cultural context.

The study's findings have important implications for both health policy on alcohol use and the profit-making tea industry. According to the study, up to 66% of patients with chronic alcohol use of people who abuse alcohol suffer from alcoholic neuropathy.

The cause is multifactorial, stemming from both nutritional deficiencies and the direct toxic effects of alcohol metabolism on neurons. Pain, paraesthesia, and ataxia in the distal lower extremities are common symptoms, which interfere with daily life and activities.

The data analysis in this regard revealed that tea garden workers suffer from all of these issues that can be the cause of alcoholic neuropathy, as a result of their socioeconomic status, as well as their working environments and habits, which can lead to alcoholic neuropathy and have a variety of effects on their daily activities.

It has also been discovered that fatigue is a common symptom associated with neuropathic pain (NP) and can have a negative impact on psychosocial functioning, physical endurance, and quality of life, affecting daily activity.

Following an investigation, it was discovered that the majority of tea garden workers suffer from alcoholic neuropathy, but due to their negligence, they have yet to seek treatment.

5. Conclusion

The study sought to determine the prevalence of substance abuse among tea garden workers in the Assam district of Golaghat. The current study discovered that the rates of substance consumption among tea garden workers in Assam's Golaghat district are extremely high (68.42).30.36% of those who provided information began drinking before the age of 15.74.1% of those who drank alcohol spent less than Rs.50 per day on alcohol.

Because of the various effects of alcohol on the body, these patients should be managed by a multidisciplinary team. The treatment of alcoholic neuropathy is inadequate. The treatment is based on abstinence from alcohol and nutrient replacement. Unfortunately, patient compliance is low, and the condition frequently worsens, resulting in a low quality of life. Even in patients who have stopped drinking, residual neuropathy is common.

This study demonstrates the scope of the problem of substance abuse among tea garden workers, which leads to a vicious cycle of poverty and illness. The fact that nearly a third of those who provided information began drinking before the age of 15 emphasises the critical need for youth counselling, health education, and awareness.

The study concluded that alcoholic neuropathy has a significant impact on the social lives of tea workers, both economically and physically.

It is time to launch an aggressive campaign against alcohol use among tea workers in order to reduce the health risks and lifestyle choices associated with the substance. The sociocultural context of the community should be considered in public health strategies.

References

- [1] Junaid Khan and Subhojit Shaw: Socio-economic context of alcohol consumption and the associated risky behavior among male teenagers and young adults in India, *Journal of substances*, 10 Dec 2021
- [2] Hazarika NC, Biswas D, Narain K, Kalita HC, Mahanta J. Hypertension and its risk factors in tea garden workers of Assam. *Natl Med J India* 2002; 15: 63-8.
- [3] Kann L, Kinchen SA, Williams BI, et al. Youth risk behavior surveillance – United States, 1999. State and local YRBSS Coordinators. *J Sch Health* 2000; 70: 271-85.
- [4] Selvan MS, Kupad AV. Primary prevention: why focus on children & young adolescents? *Indian J Med Res* 2004; 120: 511-8.
- [5] Kotwal A, Thakur R, Seth T. Correlates of tobacco-use pattern amongst adolescents in two schools of New Delhi, India. *Indian J Med Sci* 2005; 59: 243-52.

- [6] Bhuyan B & Sharma A. Journal for advanced research in applied sciences. Vol 5; (3), Mar 2018 435-437
- [7] Koike H, Iijima M, Sugiura M, Mori K, Hattori N, Ito H, Hirayama M, Sobue G. Alcoholic neuropathy is clinicopathologically distinct from thiamine-deficiency neuropathy. *Ann Neurol.*2003; 54: 19–29.
- [8] Koike H, Sobue G. Alcoholic neuropathy. *Curr Opin Neurol.*2006; 19: 481–6
- [9] Bosch EP, Pelham RW, Rasool CG, Chatterjee A, Lash RW, Brown L, Munsat TL, Bradley WG. Animal models of alcoholic neuropathy: morphologic, electrophysiologic, and biochemical findings. *Muscle Nerve.*1979; 2: 134–44
- [10] Monforte R, Estruch R, Valls-Solé J, Nicolás J, Villalta J, Urbano-Marquez A. Autonomic and peripheral neuropathies in patients with chronic alcoholism. A dose-related toxic effect of alcohol. *Arch Neurol.*1995; 52: 45–51.
- [11] Palliyath S, Schwartz BD. Peripheral nerve functions improve in chronic alcoholic patients on abstinence. *J Stud Alcohol.*1993; 54: 684–6.