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Review Of The Prevalence Of Substance Abuse, Its Effects On Health Among The Indian Tribals

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Abstract

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Introduction

Scheduled tribe is defined as "tribes or tribal communities or parts of or groups within tribal communities which the President of India may specify by public notification", as per Article number 342 of the Indian constitution. [1] The tribal community in India according to the 2011 census is 104.3 million , constituting 8.6% of the country's population. [2] Madhya Pradesh houses the largest tribal population (15 million). [1] Out of the eight states located in north-east India, four states have tribal population as their majority population, namely: Mizoram (94.5%), Nagaland (89.1%), Meghalaya (85.9%) and Arunachal Pradesh (64.2%), accounting for the largest concentration of tribal population in India. [3]

Proportion of tribal population living Below Poverty Line (Below poverty line is those that earn less than Rs. 816 in rural areas and Rs.1000 in urban areas, per month. This is based on the Tendulkar poverty line) [4] is seven times the national average[5].The literacy rate among the tribal populations is 59%, as compared to the national average of 74%. Only 10.7% of the tribal population have access to tap water, as against 28.5% of the non-tribal population. Nearly 75% of the tribal people lack access to toilets and thus have to defecate in the open. [1] Despite the economic progress the country has achieved in the past 3 decades, the tribal population continues to be marginalised and ostracized. [6]

NFHS-5 report shows disproportionately worse health and nutritional outcomes among the tribal population. Their access to healthcare is very limited, as they often live in inaccessible and difficult terrains like forests and hills. Tribal populations face the double burden of communicable diseases like leprosy, tuberculosis, malaria, and rising non-communicable diseases (NCDs) like hypertension, diabetes, and cancer, worsened by increasing substance addiction. 'Nourishing India's Tribal Children' report published by UNICEF stated that limited availability and accessibility to healthcare, low education and awareness levels, and poor living conditions increase the likelihood of undernourishment among tribal children: one of the leading reasons for their death. [7]

Rampant use of tobacco products has been known to be one of the biggest public health threats, as the leading cause of NCDs like cancers, respiratory and other systemic ailments. Smokeless tobacco has 3095 harmful chemicals of which 28 are carcinogens. According to the NFHS 5 factsheet, tobacco consumption among tribal population is 19% and 51% higher respectively among women and men when compared to others. The consumption of alcohol among scheduled tribe women also stands high at 6%. [8]

District sample surveys in Gadchiroli, by SEARCH between the years 2015 and 2016, found that 41% of tribal men spend Rs.80 crores for alcohol in the past

1 year, and 44% of tribal men, women and children spent Rs. 298 crore annually for tobacco.[9]

High morbidity including HIV in the North-East India could be ascribed to high consumption of drug, tobacco and alcohol abuse in the region.[1] Proximity of the region to the Golden triangle [10] infamous for the production of illegal opium, puts them at higher risk for substance addiction.[11]

Central India:

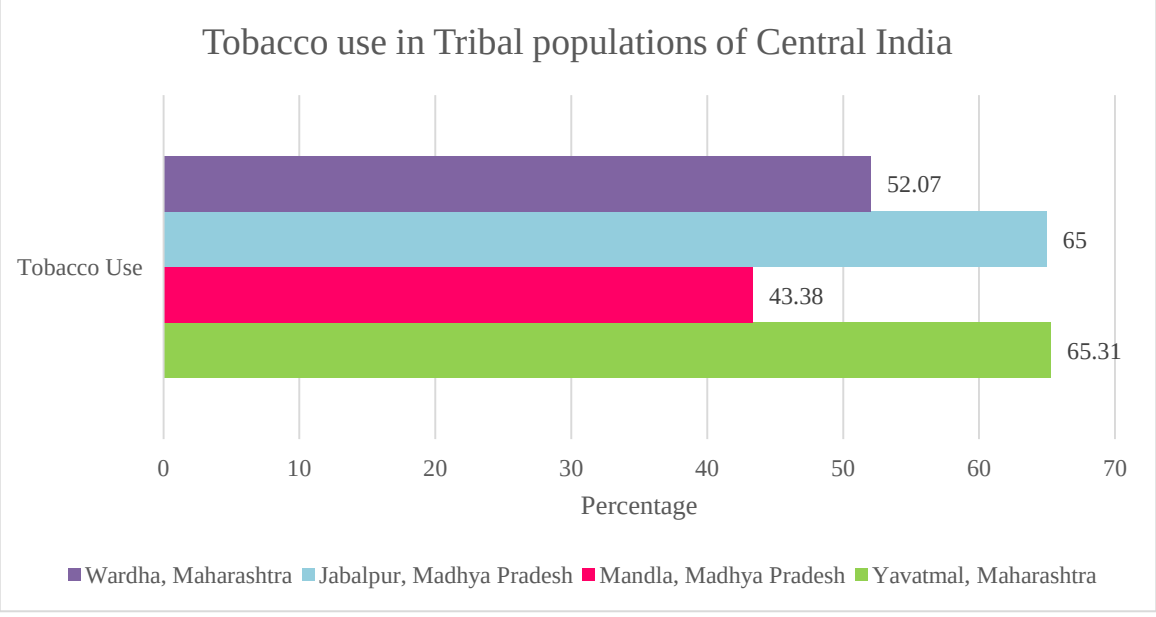
Adolescents residing in tribal areas of Yavatmal, Maharashtra, were found to consume large amounts of tobacco and its products. This region consisted of the Gond, Perdhan, Perkhi and Kolam tribes. 65.31% (Fig 1) of the male adolescents consumed tobacco, of whom 85.63% consumed smokeless tobacco. However, female adolescents consumed tobacco only in the smokeless form. The female members of the Kolam community started tobacco chewing at the age of 3 years. At the age of 11-15 years, the majority (47.5%) (Fig 1) of the Yavatmal tribal population started tobacco chewing. Customs of that region were the main reason for initiation and continuation of tobacco consumption. The female adolescents felt that consuming tobacco helped them relieve abdominal cramps, especially during their menstruation. Some of the reasons for pervasive use of tobacco among the study population include: easy access to tobacco products, indifference of family members towards their children's habits, and customs and cultural norms approving substance use. This shows the lack of implementation of the Cigarettes and Other Tobacco Products Act Amendment bill of 2007.[12]

Almost 70% of the population of tribal people residing in Mandla District, Madhya Pradesh consumed khaini or smokeless tobacco, closely followed by betel nut. Tobacco was initiated late at around 22 years of age. Illiteracy and being from Class V (lower class) of B G Prasad's socioeconomic scale were found to have a strong association with tobacco consumption. Involvement of family members and easy availability of tobacco products, were found to be contributing factors to the high consumption of tobacco by both the men and women.[13]

In the Kundam Block of Jabalpur, Madhya Pradesh, it was found the most commonly used form of tobacco was chewing. Children started using tobacco at 6-9 years. Parents encouraged children to use tobacco as a cure for tooth pain. [14]

A study conducted in Wardha, Maharashtra, found that adolescents used tobacco, mostly in the smokeless form. The age at which adolescents started smoking was calculated to be approximately 13 years. The common reasons for starting the use of tobacco was the urge to experiment and influence of family and friends. [15]

Fig 1: The above chart explains the prevalence of tobacco use by the indigenous population in Central India.



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Eastern India:

A hospital based study was conducted at Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS) out patient department. The study was a qualitative exploration of alcohol use in the tribal people of Jharkand. From the study, it was found that the age at which the women started consuming handiya (rice beer, brewed in their own homes) was 13 years. In the respondents' homes, all adults and children above the age of 15 years consumed alcohol. None of the participants of the study considered it as problematic, they rather thought it was a part of their culture and tradition. All the respondents felt that indigenous liquors have medicinal benefits and are not harmful to the body. [16]

A qualitative study was carried out in Sundargarh district of Odisha amongst women who were reported to have consumed alcohol during pregnancy. Alcohol Use Disorders Identification Test (AUDIT) by WHO was administered to the 20 participants. Focus group discussions were done with the family members and with the community leaders. Four categories of drivers that affected the consumption of alcohol during pregnancy emerged, namely: "customs, traditions, and rituals"; "indigenous, non-injurious and relaxant"; "curiosity, addiction, and lack of knowledge"; and "challenges for frontline workers". The reasons were that consuming alcohol was a tradition and was consumed during ceremonies. They also felt that their homemade alcohol was made from good quality rice and hence it was not harmful. Consuming alcohol was not considered taboo and was given even to guests and consumed during daily worship. The alcohol users were not aware of the harm it causes to the foetus. The community workers of that district mentioned that since the pregnant women feel that the drink is spiritual, they cannot give away the drink for 9 months. [17]

North Eastern India:

A study conducted in Arunachal Pradesh found that 31% of the respondents chewed and smoked tobacco, 30% consumed alcohol and around 5% of the respondents took opium. All these substances were consumed predominantly by men. 50.5% of the substance users were using more than one substance, as seen in Fig 2. Initiation age of tobacco, alcohol, and opium among male users were approximately 17, 11 and 22 years respectively. Whereas for women it was around 20, 14, and 15, respectively. Higher opium consumption was found to be associated with lower literacy levels and with people living in higher altitudes. Khamti and Singpho tribes reported high opium consumption while Tutsa tribe consumed higher amounts of alcohol in comparison to other groups. Proportion of women who used opium was found higher (10.3%) in Singpho tribe. Substance use was also found to increase with age. Tobacco consumption was higher among men while women reported higher consumption of alcohol. Social acceptance of opium is one of the reasons for its overuse. Opium is used for rituals, secret deals, etc, but its use is now declining due to legal restrictions. [18]

In Assam and Nagaland, drug abuse by drinking cough syrup containing codeine was studied. The study reported higher consumption in Assam (26.5%), than Nagaland (12.4%) (Fig 2). All the users were male. Highest number of users were reported from 21-25 age group. The users were introduced to this drug by friends, and each user consumed a minimum of one bottle per day, sometimes requiring more. Codeine's side effects included constipation and dizziness. Withdrawal symptoms were similar to heroine but milder. [19]

A study conducted in Nagaland found high heroin use among people aged 11-40. 395 addicts were registered, out of which 83.8% were found to be primary abusers of heroin (Fig 2). Heroin users, predominantly male, reported that friends influenced them the most to consume it. A very high school drop-out rate was found due to the heroin addiction. 90.3% of them were unemployed and over 95% of them had never been employed. 4.4 years was the mean duration of dependence on heroin. In case of unavailability of heroin, the addicts used codeine-containing cough syrups and tranquilizers, as short-term solutions.[11].

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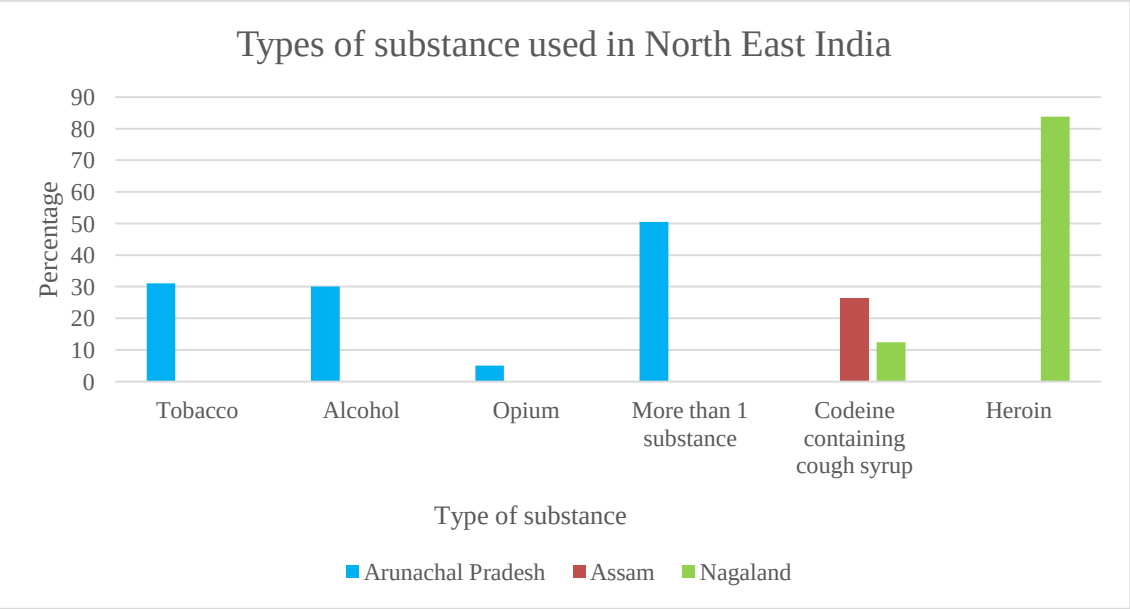
Fig 2: Column chart showing the type of substance used in the North Eastern states of India



Intravenous (IV) heroin use was reported in Manipur, a state with high unemployment rate despite a high literacy rate of 97%. Almost all of (96%) the IV drug users belonged to the 15-35 year age group. Heroin was taken by the users up to 14 times in a day. 97% of the users shared needles, mostly without sterilizing them. Surprisingly, around 95% of the users wanted to get de-addicted as they were unhappy and felt they were losing social status. The users obtained illegal drugs from local pharmacists and chemists. There was also no social disapproval of those addicted to drugs or alcohol.[20]

A trend analysis of the survey data obtained by the State Anti-Drug Prohibition Council Assam, was performed between 1976 to 1986 in Assam for opium addiction. It was found that several people started using opium at an early age but discontinued it as they grew older. No one was found reusing the drug after discontinuing once. Some of the reasons that caused them to discontinue opium use were increase in prices of the drug, family responsibility and poor economic conditions. [21]

South India:

The Koraga tribe reside in Kasaragod district, Kerala. It was found in a study among this tribe, that a woman's husband left her during her young days due to his alcohol addiction, which caused him never to return to his house or help with the needs of the house. During the time of the study, an instance of suicide was reported. He was a basket maker, who had only been married for a period of 3 years and had no children. Alcoholism and debt were found to be the reason for his suicide. In the Badiyadukka hamlet area, it was found that 80% of the youngsters (lowest age starting at 16 years) were into consuming large amounts of alcohol and went back to their homes extremely drunk every night. The Koraga tribal population had a higher school dropout rate when compared to the Badiyadukka population. The younger generation looked at the fathers or other relatives consuming alcohol, and then followed in their footsteps. This was seen because of exploitation of tribal labour by outsiders, in exchange for sub-standard liquor as their wages. In this tribe, alcohol, tobacco and other drugs that they consume is seen as normalcy and hence a large population of the tribes are also addicted. [22]

A cross sectional study was carried out among the indigenous tribes in Wayanad district, Kerala. 36135 people were involved in the study. From this study, it was found that 70.5% of the participants were women, and 21.4% of the enrolled participants were married. Current alcohol use among the study participants was found to be 17.2%, with more than 51% of the respondents mentioned alcohol use in their household. 18.8% of the participants reported current smoking. Betel quid was the most prevalent with 47.6% of the respondents consuming it. Cannabis also was prevalent in 3.5% of the participants' households. [23]

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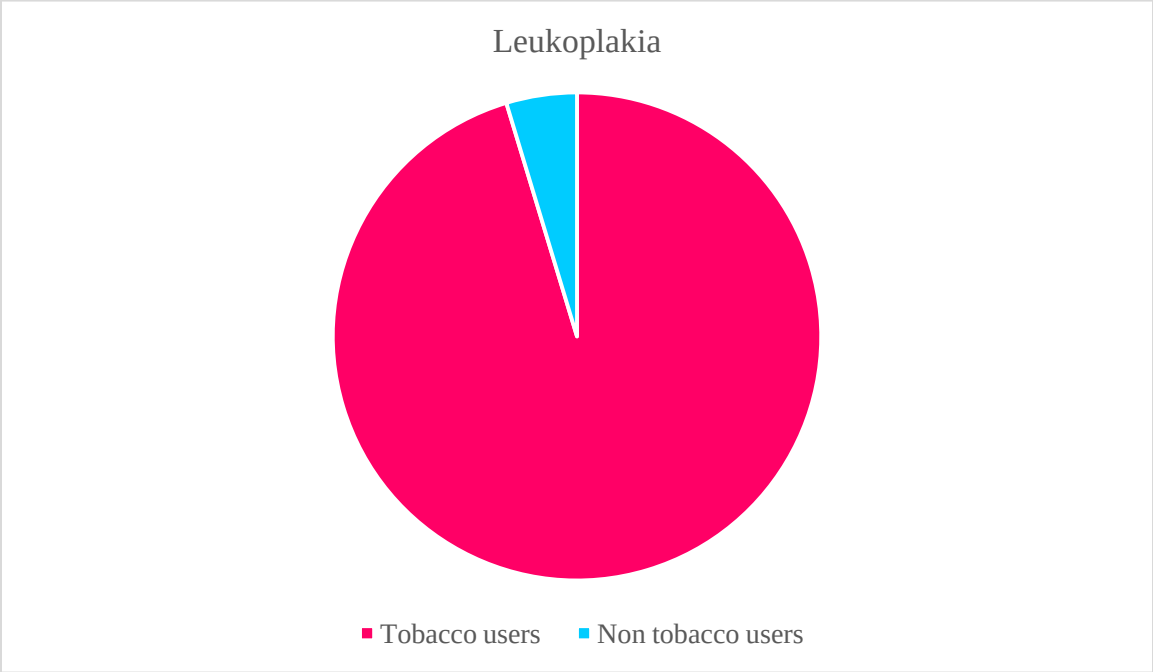
A study was carried out in hamlets of Chithalayath forest range in Wayanad. 317 individuals were chosen for the study and assessed for the prevalence of leukoplakia. Leukoplakia is a white lesion seen in the oral mucosa most commonly seen in tobacco users. The study found that clinical oral leukoplakia was found in 8.5% of the participants. The frequent tobacco chewers had a higher incidence of leukoplakia (65.2%) in comparison to non-frequent tobacco users (34.8%). (Fig 3) [24]

Fig 3: The prevalence of leukoplakia in Wayanad between tobacco users and non -users



Effects On Health And Well-Being:

The district plan of the government for Gadchiroli for the years 2015-2016 was Rs. 157 crores, and the money spent by the tribals for alcohol and tobacco was Rs. 298 crores, which was almost half of what the tribals were spending out of their pockets for tobacco and alcohol. This portrayed that tobacco and alcohol harm health of the people and also cause poverty. [9]

In a study conducted in Kundam, Madhya Pradesh, it was found that those individuals that consumed tobacco spent more money on hospitalization expenditure, which was majorly met by borrowing money. [14]

Tobacco chewing presents with a wide range of problems, especially in the oral cavity, oral cancer being the most common and serious of them. A study carried out in Kundam, showed that out of the 4542 participants, 82 people presented with submucous fibrosis, 92 persons with Chronic Obstructive Pulmonary Disease, 292 with hypertension, 43 with oral ulcers, and 144 of them with leukoplakia. [25]

The association between the tobacco consumption of Baiga tribes in Madhya Pradesh and its relation to oral health was studied. In the analysis, it was found that the burning mouth syndrome was the highest, followed by leukoplakia and Oral Submucous Fibrosis. All these diseases were found to be associated with tobacco use. [26]

Toddy is a type of liquor commonly seen in the state of Kerala, obtained from palm trees. This alcohol was found to be the main reason for quarrels in and between households. It sometimes led to men abandoning their wives. The peace of the colony also was disturbed as the houses were located close to each other. Most men would drink away their earnings, which led them to not having enough money even to pay for transport to reach the government medical center where they would obtain treatment free of cost. [6]

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Alcohol consumption was also proven to cause an increase in the prevalence of intimate partner violence. Those husbands that consumed alcohol daily or frequently were more likely to abuse their wife than their non-alcoholic counterpart. This was found in a study carried out in a slum area of West-Bengal. [27]

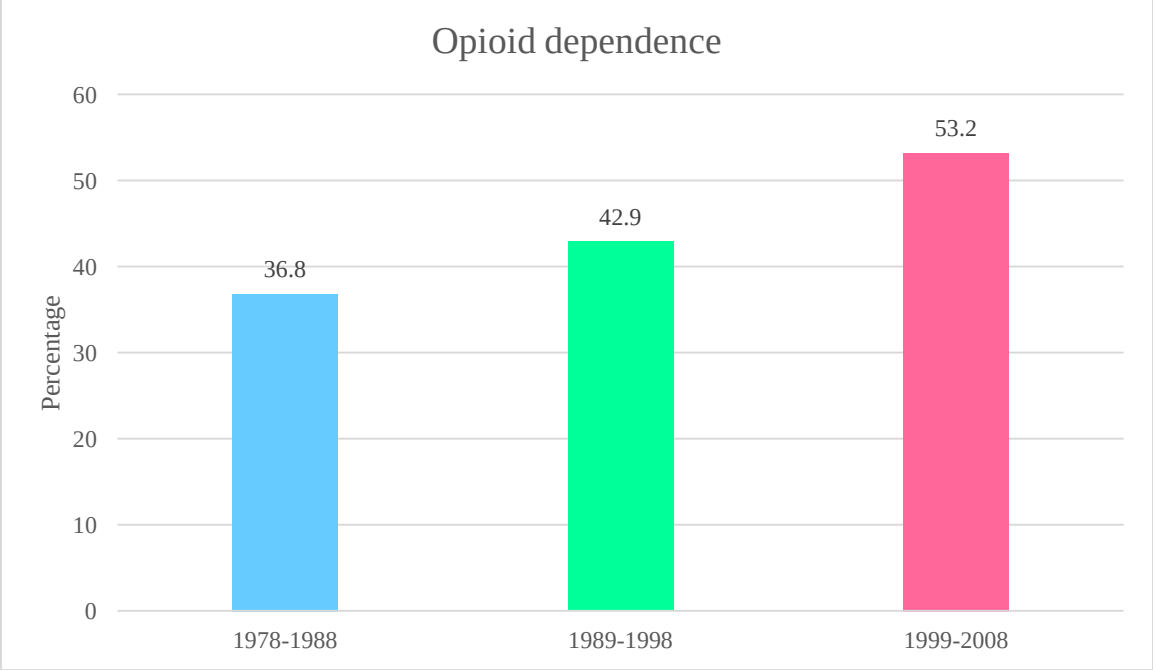
The consumption of codeine containing cough syrups was found to have long lasting effects on the mental health of people, especially among adolescents. This resulted in Post-Traumatic Stress Disorder. Most of these mental disorders go unnoticed due to the stigma associated with it, or lack of awareness on the same. [28]

The consumption of handiya (rice beer, brewed in their own houses), by the tribal men of Jharkand resulted in physical abuse of the wife. The men also showed assaultive behaviour and were aggressive to their wives. [16]

Discussion:

Substance abuse among the tribal populations was found to be very high when compared to the rest of the population. The most abused substances were tobacco, alcohol and drugs like heroin and opium. The North-eastern states of India were found to have a higher usage of drugs like opium and heroin. Some of the reasons for this increase in drug usage include: peer pressure, need to reduce emotional stress and cultural or social reasons approving or aften promoting their abuse. In a study carried out by the de-addiction centre of PGIMER Chandigarh, patients registered for de-addiction treatments were enrolled as the participants of this study. Based on the enrolment of patients for de-addiction over 3 decades, it was found that there was a rise in dependence of opioid users since the opioid users between 1978-1988 were 36.8%, in 1989-1998 the users were 42.9% and between 1999-2008 the users were 53.2%. (Fig 4).

Fig 4: The rise in opioid dependence over 3 decades



Similarly, there was an increase in the usage of tobacco and sedative depressants in the same study population. However, there was a decrease in alcohol dependence over the same 3 decades, among the participants of the study. [29] The large amount of consumption of tobacco and alcohol resulted in a high prevalence of non-communicable diseases, with cancers and stroke being the highest. A high prevalence of stroke also was found in substance users. [30] A large out of pocket expenditure was also seen in tobacco and alcohol users in the tribal population, which resulted in poverty. [9] Cancers, especially cancers of the oral cavity were found in tobacco users, which added to the disease burden of

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the population. [23] In the state of Jharkand, the population there consumed handiya as an accompaniment with food. The amount of food consumed is less and handiya itself helped them feel full. [34] This also resulted in a high prevalence of malnutrition. In Wardha district, Madhya Pradesh, when adolescents were asked about their knowledge about the ill-effects of tobacco, 69% had heard of the tobacco prevention message, but less than 1% of them could interpret it accurately. Radio was the most common source of information. Neither had the adolescents been contacted by any NGO, nor had they been to any tobacco prevention event. Around 50% of the adolescents were aware of the warning on the tobacco packet but they could not interpret it accurately. [15] The reasons that the tribal people use substances may range from peer pressure to social norms, but they are unaware of the harm that substance use does to their health and well-being. The ill effects of these substances should be discussed with and elaborated to them, so that they are enabled in dealing with the ill-effects and curtail the damage it causes to their health and well-being in general.

Recommendations To Control Substance Abuse:

1. An excise policy for tribal areas was formulated in 1976 prohibiting alcohol sale (commercial) in scheduled areas, allowing consumption of traditional liquor and home-made beverages. Further, the policy prescribed school and college curriculum to be inclusive of substance use prevention messages and proposed awareness sessions to be conducted for tribal leaders to support the substance users wean off from using alcohol and tobacco. [1]
2. It was found that minors could easily buy tobacco products. Prohibition of sale of tobacco products to minors, (31) proper implementation and enforcement of the Cigarettes and Other Tobacco Products Act (COTPA) amendment by not selling tobacco products close to educational institutions, increasing the taxation of tobacco products and promoting non-smoking in public places, along with fines if the rules are broken are some of the ways the COTPA amendment can be implemented properly.[12]
3. Education and awareness of the tribal population on the harmful effects of substance abuse on their health and well-being. [22] Mass media is a cost-effective measure to reach a wider population. But since it is a one-way method of communication, it initially might be effective, but does not aid in the long run. However, a personal or a group approach towards adolescents to help with their queries and doubts regarding the usage of drugs or other substances. Since children had incomplete knowledge, it would help in providing them with accurate and complete knowledge. [15]
4. Project MYTRI, an intervention aimed at Indian adolescents for preventing tobacco use, a partnership project by the University of Texas School of Public Health and Dissemination Among Youth, an NGO in Delhi. This intervention aimed to reduce the tobacco use rates among adolescents in the urban areas of India. The participants of this study included students from 16 schools in Delhi and 16 schools in Chennai. The intervention consisted of behavioural classroom curricula, school posters, a component involving parents and peer-led activism. At the end of the 2-year study duration, it was found that there was a decrease in the intention to smoke by 11% in the intervention group, and a decrease in the intention to chew tobacco by 28% in the intervention group. Utilization of these interventions in tribal schools can benefit them as well [32]
5. De-addiction programmes in towns or cities close to the tribal settlements.
6. Empowering women to reduce financial strain on the family: Enabling women to establish small cottage industries or home based businesses to help support their family. [22]
7. Careful and thoughtful administration of cough syrup by doctors along with restriction of over the counter sale of cough syrup. [19]
8. Building the capacity of local NGOs so that they can aid the implementation of government sponsored alcohol and tobacco control programmes and support communities in making villages alcohol and tobacco free [15] SEARCH worked towards the complete ban of alcohol by supporting the community and enabling Gadchiroli to become alcohol free. [33]

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9. Peer support groups to help in the reduction of addiction. Peer support refers to the involvement of people from the same condition/ situation to help each other non-professionally and non-clinically, to help one another recover from long term problems like addiction. A 12-step programme used for drug addictions and to recover from the co-occurring mental health disorders in the US, can also be implemented in India to help in deaddiction. [34]

Conclusion:

Substance abuse is the use of drugs or psychoactive substances in higher doses or amounts, that can cause an ill effect on the health of people. In the year 2016, the World Health Organization stated that 275 million people have used illicit drugs at least once. Some of the most commonly used drugs are alcohol, tobacco, heroin and codeine containing cough syrup. In India, 62.5 million people consume alcohol and approximately 53 million consume tobacco. Tobacco is considered as a major public health threat. The tribal population of India constitutes 8.6% of India's population. Substance abuse is highly prevalent in this population, with alcohol and tobacco being the most highly used substances. The usage of drugs like heroin and opium were more commonly seen in the North Eastern states of the country.

The primary reason given by the indigenous population of the country as to why their usage of substances were high was that it was customary or a part of their tradition. Some of the other reasons included peer pressure or that it helps them to reduce emotional stress. The high consumption of substance by these populations had an extremely high out of pocket expenditure, which led them to impoverishment. A large number of tobacco users developed leukoplakia, oral submucous fibrosis and oral cancers. Those that used heroin and opium developed mental health disorders. Many women were also domestically abused by their husbands' or partners when they were in their intoxicated state.

In order to reduce or control this public health issue, better policies can be developed by the government along with its proper implementation to curb the usage. In spite of there being policies which prevent the sale of tobacco and its products to minors, several minors are using tobacco due to its easy availability. The involvement of the government, local NGOs and other community based organizations with the indigenous people can help in reducing the use of substances, for example, SEARCH in Gadchiroli worked towards the complete ban of alcohol. De-addiction programmes close to the tribal settlements may also help in controlling the usage of substances. Education and awareness of the usage of substances and its ill effects on health to the younger generations will certainly beneficial towards the control and reduction of the over usage of substances.

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