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Tobacco: Filling The Gap Of Silence

Kulkarni Bhagyashree¹, Kaushik Biswas²

Assistant Professor, Department of Forensic Psychology, Government Institute of Forensic Science, Nagpur, India¹

U.G Student, Department of Forensic Psychology, Government Institute of Forensic Science, Nagpur, India²

ABSTRACT: “Addiction is a primary, chronic, neuro-biological disease with genetic, psycho social and environmental factors influencing its manifestations”. Tobacco chewing is a habit, stress buster and style statement. It’s inclusive of long term and short term effects. Betel quid is a favored form of tobacco chewers that includes betel nut, lime, catechu and tobacco. The current study of researchers was undertaken to enlighten population about grave effects of ‘kharra’ chewing and, also individual ingredients that make up a betel quid of ‘kharra’, and its side effects. The goal was to determine how lethal the combination of all ingredients put together and chewed. Data of around 400 people was collected for ‘kharra’ chewing, a popular form of tobacco chewed by citizens of Nagpur city, Maharashtra state. A questionnaire and an inventory were developed for this purpose, one being, general awareness regarding tobacco, it’s utility in society, disadvantages and awareness in the age group of 18-40 in Nagpur city with a sample of 100 (M) and 100 (F). The second being an inventory about habits related to ‘kharra’ consumption of the tobacco chewers. It was ascertained from the current study that psycho social, demographic, economic, peer and family acquaintance, life style adaptations all led to increased use of ‘kharra’ chewing of tobacco in the population of Nagpur city.

KEYWORDS: Tobacco, Betel nut, Kharra, Nagpur, Stimulant, Nicotine, Addiction, Therapy, Oral sub mucous fibrosis (OSMF), Cancer.

I. INTRODUCTION

“We are what we repeatedly do. Excellence, then, is not an act, but a habit.”- Aristotle

Definition and scientific basis of tobacco: Tobacco is a product prepared from the leaves of the tobacco plant by curing them. The plant is part of the genus *Nicotiana* and of the Solanaceae (nightshade) family. While more than 70 species of tobacco are known, the chief commercial crop is *Nicotiana Tabacum*. The more potent variant *Nicotiana Rustica* is also used around the world.

Tobacco contains the alkaloid nicotine, which is a stimulant. Dried tobacco leaves are mainly used for smoking in cigarettes, cigars, pipe tobacco, and flavored shisha tobacco. They can be also consumed as snuff, chewing tobacco and dipping tobacco. Tobacco is a green, leafy plant that is grown in warm climates. It is dried, ground up, and used in different ways. It can be smoked in a cigarette, pipe, or cigar. It’s chewed (called smokeless tobacco or chewing tobacco) or sniffed through the nose (called snuff). **Nicotine** is the chemical that makes tobacco addictive or habit forming. Once we smoke, chew, or sniff tobacco, nicotine goes into our bloodstream, and our body wants more. The nicotine in tobacco makes it a drug. When we use tobacco, it changes our body in some way. Because nicotine is a stimulant, it speeds up the nervous system, so we feel like we have more energy.

Origin: The English word "tobacco" originates from the Spanish and Portuguese word "Tabaco". The precise origin of this word is disputed, but it is generally thought to have derived at least in part, from Taino, the Arawakan language of the Caribbean. In Taino, it was said to mean either a roll of tobacco leaves or to *tabago*, a kind of Y-shaped pipe used for sniffing tobacco smoke. However, perhaps coincidentally, similar words in Spanish, Portuguese and Italian were used from 1410 to define medicinal herbs believed to have originated from the Arab.

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History of Tobacco: Tobacco has a long history in the U.S. It was the first crop grown for money in **North America**. Virginia grew tobacco as a cash crop. By the 1800's, many people had begun using small amounts of tobacco. Some chewed it. The first commercial cigarettes were made in 1865 by Washington Duke on his 300-acre farm in Raleigh, North Carolina. His hand-rolled cigarettes were sold to soldiers at the end of the Civil War. Everything changed during World War I (1914-18) and World War II (1939-45). Soldiers overseas were given free cigarettes every day. At home production increased and cigarettes were being marketed to women too. More than any other war, World War II brought more independence for women. Many of them went to work and started smoking for the first time while their husbands were away. By 1944 cigarette production was up to 300 billion a year. Service men received about 75% of all cigarettes produced. The wars were good for the tobacco industry. Since WW II, there have been six giant cigarette companies in the U.S. In 1965 the Congress of the U.S. passed the Cigarette Labeling and Advertising Act. It said that every cigarette pack must have a warning label on its side stating "Cigarettes may be hazardous to your health." Since the 1980's, federal, state, local governments, and private companies have begun taking actions to restrict cigarette smoking in public places. The warning labels were the first step. Tobacco companies cannot advertise cigarettes on television or radio. It is against a law that was passed by Congress in 1971. Many cities across the U.S. do not allow smoking in public buildings and restaurants. Since 1990, airlines have not allowed smoking on airplane flights in the U.S. that are six hours or less. State taxes on cigarettes have increased.

Types of Tobacco: 1. **Aromatic fire-cured** is cured by smoke from open fires. In the United States, it is grown in northern middle Tennessee, central Kentucky, and Virginia. Fire-cured tobacco grown in Kentucky and Tennessee is used in some chewing tobaccos, moist snuff, some cigarettes, and as a condiment in pipe tobacco blends. Another fire-cured tobacco is Latakia, which is produced from oriental varieties of *N. tabacum*. The leaves are cured and smoked over smoldering fires of local hardwoods and aromatic shrubs in Cyprus and Syria.

2. **Bright leaf tobacco** is commonly known as "Virginia tobacco", often regardless of the state where it is planted. Prior to the American Civil War, most tobacco grown in the US was fire-cured dark-leaf. Sometime after the War of 1812, demand for a milder, lighter, more aromatic tobacco arose. Ohio, Pennsylvania and Maryland all innovated with milder varieties of the tobacco plant. Farmers discovered that Bright leaf tobacco needs thin, starved soil, and those who could not grow other crops found that they could grow tobacco. Confederate soldiers traded it with each other and Union soldiers, and developed quite a taste for it. At the end of the war, the soldiers went home and a national market had developed for the local crop.

3. **Burley tobacco** is an air-cured tobacco used primarily for cigarette production. In the U.S., burley tobacco plants are started from pelletized seeds placed in polystyrene trays floated on a bed of fertilized water in March or April.

4. **Cavendish** is more a process of curing and a method of cutting tobacco than a type. The processing and the cut are used to bring out the natural sweet taste in the tobacco. Cavendish can be produced from any tobacco type, but is usually one of, or a blend of Kentucky, Virginia, and burley, and is most commonly used for pipe tobacco and cigars.

5. **Criollo tobacco** is primarily used in the making of cigars. It was, by most accounts, one of the original Cuban tobaccos that emerged around the time of Columbus.

6. **Dokha** is a tobacco originally grown in Iran, mixed with leaves, bark, and herbs for smoking in a *midwakh*.

7. **Turkish tobacco** is a sun-cured, highly aromatic, small-leafed variety (*Nicotiana tabacum*) grown in Turkey, Greece, Bulgaria, and Macedonia. Originally grown in regions historically part of the Ottoman Empire, it is also known as "oriental". Many of the early brands of cigarettes were made mostly or entirely of Turkish tobacco; today, its main use is in blends of pipe and especially cigarette tobacco (a typical American cigarette is a blend of bright Virginia, burley, and Turkish).

8. **Perique** was developed in 1824 through the technique of pressure-fermentation of local tobacco by a farmer, Pierre Chenet. Considered the truffle of pipe tobaccos, it is used as a component in many blended pipe tobaccos, but is too strong to be smoked pure. At one time, the freshly moist Perique was also chewed, but none is now sold for this purpose. It is typically blended with pure Virginia to lend spice, strength, and coolness to the blend.

9. **Shade tobacco** is cultivated in Connecticut and Massachusetts. Early Connecticut colonists acquired from the Native Americans the habit of smoking tobacco in pipes, and began cultivating the plant commercially, though the Puritans referred to it as the "evil weed". The Connecticut shade industry has weathered some major catastrophes,

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including a devastating hailstorm in 1929, and an epidemic of brown spot fungus in 2000, but is now in danger of disappearing altogether, given the increase in the value of land.

10. **White burley** air-cured leaf was found to be milder than other types of tobacco. In 1865, George Webb of Brown County, Ohio planted red burley seeds he had purchased, and found a few of the seedlings had a whitish, sickly look, which became white burley.

11. **Wild tobacco** is native to the southwestern United States, Mexico, and parts of South America. Its botanical name is *Nicotiana rustica*.

12. **Y1** is a strain of tobacco cross-bred by Brown & Williamson in the 1970s to obtain an unusually high nicotine content. In the 1990s, the United States Food and Drug Administration used it as evidence that tobacco companies were intentionally manipulating the nicotine content of cigarettes.

Population Tobacco rules: Prevalence of tobacco consumption is reported by the World Health Organization (WHO), which focuses on smoking (not smokeless chewing tobacco) due to reported data limitations. Smoking has therefore been studied more extensively than any other form of consumption.

1. Smoking is generally five times higher among men than women; however, the gender gap declines with younger age. In developed countries smoking rates for men have peaked and have begun to decline, and also started to stall or decline for women.

2. Smoking prevalence has changed little since the mid-1990s, before which time it declined in English-speaking countries due to the implementation of tobacco control. However, the number of smokers worldwide has increased from 721 million in 1980 to 967 million in 2012 and the number of cigarettes smoked increased from 4.96 trillion to 6.25 trillion because of population growth.

3. In Western countries, smoking is more prevalent among populations with mental health problems, with alcohol and drug problems, among criminals, and among the homeless.

4. As of 2002, about twenty percent of young teens (13–15) smoke worldwide. 80,000 to 100,000 children begin smoking every day. Half of those who begin smoking in adolescent years are projected to go on to smoke for 15 to 20 years.

5. The World Health Organization (WHO) states that "Much of the disease burden and premature mortality attributable to tobacco use disproportionately affect the poor". Of the 1.22 billion smokers, 1 billion of them live in developing or transitional economies. Rates of smoking have leveled off or declined in the developed world. In the developing world, tobacco consumption is rising by 3.4% per year as of 2002.

6. The WHO in 2004 projected 58.8 million deaths to occur globally, from which 5.4 million are tobacco-attributed, and 4.9 million as of 2007. As of 2002, 70% of the deaths are in developing countries.

7. **It is predicted that 1.5 to 1.9 billion people will be smokers in 2025.**

Maximum Production: China is the world's leader in tobacco production, with 3.2 million tons of tobacco, followed by Brazil and India. China's production income per annum for tobacco is \$5,028,355,000. Around the peak of global tobacco production, 20 million rural Chinese households were producing tobacco on 2.1 million hectares of land. While it is the major crop for millions of Chinese farmers, growing tobacco is not as profitable as cotton or sugarcane, because the Chinese government sets the market price. While this price is guaranteed, it is lower than the natural market price, because of the lack of market risk. **China National Tobacco Corporation** is a Chinese state-owned manufacturer of tobacco products. It enjoys a virtual monopoly in China, which accounts for roughly 30% of the world's total consumption of cigarettes, and is the world's largest manufacturer of tobacco products measured by revenues.

Hazards related to Tobacco: 1. There are more than **4000** chemicals in tobacco smoke, of which at least 250 are known to be harmful and more than 50 are known to cause cancer. **Tobacco is the second major cause of death in the world**, after cardiovascular disease, and is directly responsible for about one in ten adult deaths worldwide, equating to about 6 million deaths each year. **Cigarettes kill half of all lifetime users.** Half die in middle age - between 35 and 69 years old. No other consumer product is as dangerous, or kills as many people. **Tobacco kills more than AIDS, legal drugs, illegal drugs, road accidents, murder, and suicide combined.**

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2. Tobacco kills more men in developing countries than in industrialized countries, and it is likely that deaths among women will soon be the same. While 0.1 billion people died from tobacco use in the 20th century, ten times as many will die in the 21st century. If current trends continue, **tobacco use could kill more than eight million people per year by 2030, and up to one billion people in total in the 21st century.**

3. Tobacco use leads most commonly to diseases affecting the heart, liver and lungs. Smoking is a major risk factor for heart attacks, strokes, chronic obstructive pulmonary disease (COPD) (including emphysema and chronic bronchitis), and cancer (particularly lung cancer, cancers of the larynx and mouth, and pancreatic cancer). It also causes peripheral vascular disease and hypertension. The effects depend on the number of years that a person smokes and on how much the person smokes. Starting smoking earlier in life and smoking cigarettes higher in tar increases the risk of these diseases. Also, environmental tobacco smoke, or secondhand smoke, has been shown to cause adverse health effects in people of all ages. Tobacco use is a significant factor in miscarriages among pregnant smokers, and it contributes to a number of other health problems of the fetus such as premature birth, low birth weight, and increases by 1.4 to 3 times the chance of sudden infant death syndrome (SIDS). Incidence of erectile dysfunction is approximately 85 percent higher in male smokers compared to non-smokers.

Acts and Laws related to Tobacco: The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 or COTPA, 2003 is an Act of Parliament of India enacted in 2003 to prohibit advertisement of, and to provide for the regulation of trade and commerce in, and production, supply and distribution of cigarettes and other tobacco products in India. This Act was enacted by the **Parliament** to give effect to the Resolution passed by the 39th World Health Assembly, urging the member states to implement measures to provide non-smokers protection from involuntary exposure to tobacco smoke.

Provisions: The Act prohibits smoking of tobacco in public places, except in special smoking zones in hotels, restaurants and airports and open spaces. Places where smoking is restricted include auditoriums, movie theatres, hospitals, public transport (aircraft, buses, trains, metros, monorails, taxis,) and their related facilities (airports, bus stands/stations, railway stations), restaurants, hotels, bars, pubs, amusement centers, offices (government and private), libraries, courts, post offices, markets, shopping malls, canteens, refreshment rooms, banquet halls, discothèques, coffee houses, educational institutions and parks. Smoking is allowed on roads, inside one's home or vehicle. The meaning of open space has been extended to mean such spaces which is visited by public, and includes open auditorium, stadium, and bus stand.

1. Advertisement of tobacco products including cigarettes is prohibited. No person shall participate in advertisement of tobacco product, or allow a medium of publication to be used for advertisement of tobacco products. No person shall sell video-film of such advertisement, distribute leaflets, documents, or give space for erection of advertisement of tobacco products. However, restricted advertisement is allowed on packages of tobacco products, entrances of places where tobacco products are sold. Surrogate advertisement is prohibited as well under the Act.

2. Tobacco products cannot be sold to person below the age of **18 years**, and in places within **100 meters radius** from the outer boundary of an institution of education, which includes school colleges and institutions of higher learning established or recognized by an appropriate authority.

3. Tobacco products must be sold, supplied or distributed in a package which shall contain an appropriate pictorial warning, its nicotine and tar contents. Cigarette packets are required to carry pictorial warnings of a skull or scorpion or certain prescribed pictorial warnings along with the text **SMOKING KILLS and TOBACCO CAUSES MOUTH CANCER** in both Hindi and English.

4. The Act also gives power to any police officer, not below the rank of a sub-inspector or any officer of State Food or Drug Administration or any other officer, holding the equivalent rank being not below the rank of Sub-Inspector of Police for search and seizure of premises where tobacco products are produced, stored or sold, if he suspects that the provision of the Act has been violated.

5. A person who **manufactures tobacco products** fails to adhere to the norm related to warnings on packages on **first conviction** shall be punished with up to **2 years** in imprisonment **or** with fine which can extend to **Rs. 5000**, in

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case of **subsequent conviction** shall be punished with up to **5 years** in imprisonment or with fine which can extend to **Rs. 10000**.

6. A fine up to **Rs. 200** can be imposed for **smoking in public place, selling tobacco products to minors, or selling tobacco products within a radius of 100 meters** from any educational institution.

7. A person who **advertises tobacco products** shall on **first conviction** be punished with up to **2 years** in imprisonment or with fine which can extend to **Rs. 1000**, in case of **subsequent conviction** shall be punished with up to **5 years** in imprisonment or with fine which can extend to **Rs. 5000**.

8. The Act repealed The Cigarettes (Regulation of Production, Supply and Distribution) Act, 1975

9. The owner/manager/in-charge of a public place must display a board containing the warning "No Smoking Area - Smoking here is an offence" in appropriate manner at the entrance and inside the premises. In place where tobacco products are sold must display appropriate messages like "Tobacco Causes Cancer" and "**Sales of tobacco products to a person under the age of eighteen years is a punishable offence**".

Ingredients: Cigarettes, cigars, and pipe tobacco are made from dried tobacco leaves. Other substances are added for flavor and to make smoking more pleasant. The smoke from these products is a complex mixture of chemicals produced by burning tobacco and its additives. Tobacco smoke is made up of thousands of chemicals, including at least 70 known to cause cancer. These cancer-causing chemicals are referred to as *carcinogens*. Some of the chemicals found in tobacco smoke include nicotine (the addictive drug that produces the effect people are looking for and one of the harshest chemicals in tobacco smoke), hydrogen cyanide, formaldehyde, lead, arsenic, ammonia, radioactive elements, such as uranium, benzene, carbon monoxide, nitrosamines, polycyclic aromatic hydrocarbons (PAHs).

Many of these substances cause cancer. Some cause heart disease, lung disease, or other serious health problems, too. Most of the substances come from the burning tobacco leaves themselves, not from additives included in cigarettes (or other tobacco products). Radioactive materials in the tobacco leaves are used to make cigarettes and cigars. These materials come from the fertilizer and soil used to grow the tobacco leaves, so the amount in tobacco depends on the soil the plants were grown in and the type of fertilizers used. These radioactive materials are given off in the smoke when tobacco is burned, which smokers take into their lungs as they inhale. This may be another key factor in smokers getting lung cancer.

Short Terms effects of consuming tobacco: It doesn't take very long for chewing tobacco to start to have negative side effects. Because it injects nicotine directly into the bloodstream through the mouth, it starts the addiction process right away. Some people will become severely addicted after just a few uses, while others will be more resistant. But eventually, any user will suffer addiction to the nicotine within the tobacco. **Nicotine is an integral part of tobacco. Chewing tobacco causes immediate symptoms like bad breath, gingivitis, staining of teeth, mouth sores (extremely common), cavities and mouth ulcers.** Those who use tobacco can quickly say goodbye to beautiful smiles and the full use of their mouth. Parts of their mouths will become extremely sore and tender, and it may make it difficult for them to eat certain foods. It also erodes their senses of taste and smell. Its overpowering effects essentially dull their senses and make it difficult for users to enjoy the foods they ate. It also causes nausea and dizziness after a single use. Leads to decreased athletic ability, as users will no longer be able to function as they used to and push themselves as hard as they used to without feeling sick, they experience higher blood pressure that leads to many long-term health problems. Some of the short term problems of consuming tobacco include addiction to nicotine, limited lung growth and function if used in youth, elevated heart rate, chronic cough, increased incidence of bronchitis, increased incidence of asthma and more severe asthma etc.

Long term effects of consuming tobacco: Short-term effects lead to development of more serious long-term ones. Heart disease, cardiac arrest and other similar conditions can be caused by high blood pressure. The decreased athletic ability of many users can cause them to be at risk for diabetes, even if the disease was not previously in their family. Chewing tobacco for a long term purpose leads to cancer. This cancer affects most parts of the body that accommodate the chewing tobacco that includes the mouth, gums, throat, larynx, pancreas and stomach, among others. The digestive system of an individual is affected to a larger extent. Tobacco does cause a wide variety of devastating cancer; however, tobacco kills even more people through heart disease and stroke than it does through cancer! About 181,000

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people die each year in the United States from smoking-related heart disease and stroke, and about 158,000 die from smoking-related cancer. The remainders of the smoking-related deaths, 123,000, are from lung diseases other than cancer.

Chewing tobacco leads to birth defects (chewing of tobacco during pregnancy can lead to miscarriage, low birth rate, pre mature birth, learning and behavior problems later in childhood, infant death syndrome), reproductive damage (abnormal sperm cell, impotence, difficulty maintaining pregnancy, menstrual disorder and early menopause), lung and heart diseases, cancer and tobacco kill.

Excerpts: Cancer experts have found out that consumption of plain betel nuts (in any form) is as harmful as consuming tobacco, gutka or paan. People's College of Dental Science and Research Centre, Bhopal, Dr Shaji Thomas said, "Our studies have found that there is a rampant use of areca nut, popularly known as betel nut or Supari, in northern states like Uttar Pradesh, Bihar and Madhya Pradesh. As supari is being consumed along with other ingredients like tobacco leaf, katha and lime, the combination becomes deadly and is extremely harmful." Against the popular myth that consuming betel nut would do no harm, studies have proved that supari is much more harmful than tobacco, he added. People who consume supari or tobacco should consume more fruits because that helps in production of anti-oxides which promote body repair mechanism. "According to the statistics of cancer registry, five years back Bhopal was at the top in terms of oral cancer patients while Lucknow was second. The situation is alarming as 60 % of cases are of oral cancer, though mortality rate has drastically come down because of the surgery, he said. "Moreover, the case of detection of oral cancer at younger age, like 16 years, is what is a concern as in a recent study conducted in six schools of Bhopal, from class 6 to 11, we found that 30 % students were addicted to either betel nut or gutka and among these 1.7% cases were of oral cancer.

Betel nut: Betel nut is the seed of a type of palm tree. It has a long history of being chewed for its mood-enhancing effects in many parts of Asia and the Pacific. Modern research shows many health risks associated with its use, including oral cancer, an incurable jaw disorder, and reproductive issues.

The **areca nut** is the seed of the areca palm. Arecoline (the primary psychoactive ingredient which is similar to nicotine), contribute to histologic changes in the oral mucosa. Poor people, who may eat only every other day, use it to stave off hunger pangs. Pan Masala with a small quantity of tobacco is called gutka. The easily discarded, small plastic supari or gutka pouches are a ubiquitous pollutant of the South Asian environment. There has recently been a controversial ban on selling and chewing betelnuts and spitting buai pekpek in Port Moresby. In Guam and the neighboring Northern Mariana Islands, betel and areca nut chewing is a social pastime as a means to extend friendship, and can be found in many, if not most, large gatherings as part of the food display.

In Taiwan, bags of 20 to 40 areca nuts are purchased fresh daily by a large number of consumers. The habit of chewing betel nut is often associated with blue-collar labour industries such a long-haul transportation, construction, or fishing. Workers in these labour-intensive industries use betel nut for its stimulating effect, but it also becomes a tool for socializing with co-workers. For example, studies have shown chewing betel nut is prevalent among taxi, bus and truck drivers, who rely on the stimulating effect of betel nut to cope with long work hours. For these reasons, oral cancer has been identified as a leading cause of death in professions with high betel nut-chewing rates.

In the Philippines, chewing the areca nut and betel leaf was a very widespread tradition in the past. Now, though, this tradition is almost dead among the urban people in the cities and big towns, and has largely been replaced by gum and tobacco. Nowadays, older people are the only ones chewing betel nuts. But in rural areas, betel nut-chewing is very much alive.

Possession of betel nut or leaf is banned in the UAE and is a punishable offense.

History of Betel nut: Betel nut has a long history in South and Southeast Asia and the Pacific Basin. In Guam and other Pacific islands, its use can be traced back as far as 2,000 years.

A habit passed down through generations, chewing betel nut is a time-honored custom for 10-20 percent of the world's population. Today, the World Health Organization (WHO) estimates that around 600 million people use some form of betel nut. It is one of the most popular psychoactive substances in the world, in fourth place after nicotine, alcohol, and

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caffeine. But while betel nut is an important cultural and social tradition in many countries, growing evidence points to serious health effects from regular use.

Betel quid: This term is often used with insufficient attention which contains betel leaf, areca nut and slaked lime when it is to be mixed with tobacco. Spices like cardamom, saffron, cloves and seed, sweeteners are added according to local preferences. 'Quid' is defined as, a substance or a mixture of substances usually placed in the mouth, but which constitutes two basic ingredients tobacco or areca nut in raw, manufactured or processed form. Areca nut is known colloquially in Hindi as '*supari*' in India, '*puwak*' in Sri Lanka, '*mac*' Thailand, '*pinang*' in Malaysia, '*daka*' in New Guinea. The major constituents of the nut are carbohydrates, fats, proteins, crude fibers, poly phenols, alkaloids and mineral matters. The elemental composition of it comprises of sodium, magnesium, chlorine calcium, vanadium, manganese, copper and bromide. Trace elements in betel quids include fibro genic, mutagenic and toxic effects of areca nut, the copper content in samples of raw and processed areca nuts was reportedly higher i.e. in Indian settings 2.5 times that of the raw nut.

Application: People chew betel nut for the energy boost it produces. This is likely due to the nut's natural alkaloids, which release adrenaline. It may also result in feelings of euphoria and well-being. Some traditional beliefs hold that it may offer relief for a range of ailments, from dry mouth to digestive problems. A study in the South East Asia Journal of Cancer points to the lack of follow-up studies. It also says that more research is needed to confirm any of the betel nut's benefits.

Oral cancer and other dangers: The WHO classifies betel nut as a **carcinogen**. Many studies have shown a **link between betel nut use and cancer of the mouth and esophagus**. A study in the Journal of the American Dental Association reports that betel nut users are at a higher risk for oral sub mucous fibrosis. This incurable condition can cause stiffness in the mouth and eventually the loss of jaw movement. An early study published in the American Society for Clinical Nutrition found a strong connection between betel nut and an increased risk of cardiovascular disease, metabolic syndrome, and obesity. Betel nut may interact with other drugs or herbal supplements. It could cause toxic reactions in the body or reduce the effects of medications. More testing is needed to determine just how betel nut affects other drugs. Regular betel nut use may also lead to dependency and withdrawal symptoms. The U.S. Food and Drug Administration (FDA) do not consider betel nut safe for chewing or eating. It has placed the nut on its Poisonous Plants Database. A fact sheet on betel nut with tobacco issued by the Centers for Disease Control and Prevention (CDC) warns of the following medical conditions associated with betel nut use with tobacco:

1. Oral sub mucous fibrosis
2. Oral cancer
3. Addiction
4. Reproductive issues, including low birth weight in newborns.

Slaked lime or calcium hydroxide is added to tobacco or in 'kharra' mixture along with betel nut. It is often combined with areca nut and catechu. Chewing habits are very common in low income, low education participants and in individuals with a manual occupation or retirees (*hashibe et al., 2003*). According to study 89% of Indian population chewed betel quid with tobacco, 11% chewed betel quid without tobacco and 0.4% chewed only tobacco (*Thomas et al., 2003*).

Mixture of Tobacco and betel nut and its effects: The effects of chewing a quid containing areca nut and tobacco on periodontal tissue and oral hygiene status. A significantly higher number of quid-chewers suffered bleeding from the gums, halitosis, and difficulty in opening the mouth and swallowing solid food, a burning sensation in the soft tissues, and ulcers in the oral cavity than non-chewers. Age, sex and smoking adjusted odds ratios for quid-chewers against non-chewers using logistic regression analysis indicated that, in general, chewers were at significantly higher risk for various oral complaints and periodontium status. The present data indicate that chewing quid comprising areca nut and tobacco has adverse effects on periodontal tissues, oral hygiene and incidence of oral lesions. Tobacco is a greater

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cause of death and disability than any single disease. It is known to be a probable cause of about 25 diseases. Men who smoke are 22 times and women who smoke are 12 times more susceptible to die from lung cancer. People who chew tobacco have very high rate of mouth cancer. Betel nut is added to tobacco for chewing purpose from a very longer period of time. Betel chew causes more saliva to be produced than usual. The chew releases chemicals including nicotine. Oral cancer is significant health problem in the Asian countries where a combination of betel nut and tobacco is chewed together. Together they are responsible for causing periodontal disease. Together they have stimulant and relaxation effect on an individual. Their combination increases addictive properties and health risks. They cause pre-cancerous lesions in the mouth usually appearing in red or white patches in the mouth or throat. Also oral cancer, cancer of esophagus and stomach cancer. It also increases the risk of pregnancy problems and the most important it causes nicotine addiction which is one of the hardest to quit.

Sex Typing: Sociological theories of sex typing, or the classification into gender roles illustrates the ways in which tobacco companies have manipulated their advertisements to impact sex typing (Burns 2010.p.472). Tobacco companies used advertisements to promote cigarettes and other tobacco product among both women and men, eg: they portrayed women smoking cigarette and using other tobacco products, as physically attractive and successful in all types of social interactions. The companies use advertisements to inculcate the concept that cigarette smoking and tobacco products were morally appropriate and desirable behaviors. Role model theory describes this process as that in which, the actors become the role models for those who watch these. Commercials do increase their desires to engage in tobacco products. Children easily identify with models in advertisements and this aids observational behavior. Companies also responded to women health concerns by introducing slim, low-tar cigarettes in order to create the illusion of a healthier cigarette. They also used knowledge female smoking patterns to promote cigarette brands that featured traditional female preferences. Companies targeted men by showing smokers engaged in desirable masculine-oriented activities.

II. CASE STUDY

Case Study 1

Name: Raj Chavhan.

Age: 22 years.

Gender: Male.

Family members: Father, Mother, Sister.

Personal information: Sleep- Normal.

Appetite- Normal.

Occupation- Student.

Addiction- Chewing quid of Kharra.

Age at the time first began tobacco consumption: 16.

Relationship with parents: Normal.

Relationship with siblings: Normal.

Educational background: B.Sc.

Jobs: Student.

Drug Abuse: None.

Psychological state of mind: Normal.

Interpretation: Mr. Sanjay Yadav was addicted to kharra and consumed the same for eight years, for three times a day. His complaint was that he was experiencing wheezing and an increased breathing rate, however, no allergy was reported. Moreover, stiffness in muscle and mouth, excessive sweating, anxiety, mouth dryness, irregular blood pressure was also noted.

Case Study 2

Name: Pankaj Bawankar.

Age: 19 years.

Gender: Male.

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Family members: Mother, Sister, Brother.

Personal information: Sleep- Normal.

Appetite- Normal.

Occupation- Student.

Addiction- Chewing quid of Kharra.

Age at the time first began tobacco consumption: 13.

Relationship with parents: Dysfunctional.

Relationship with parents: Rivalry.

Educational background: 12th Pass.

Jobs: Student.

Drug Abuse: None.

Psychological state of mind: Normal.

Interpretation: Mr. Pankaj Bawankar was apparently alright, but before ten days of checkup, he had developed fever, accompanied by chills and rigor, increase in body temperature, feeling of giddiness, drowsiness, and anxiety along with seasonal variations. Apparently on the 15th day he started developing dry cough.

Case Study 3

Name: Amrita Devi.

Age: 45 years.

Gender: Female.

Family members: Husband, Son, two daughters.

Personal information: Sleep- Disturbed.

Appetite- Normal.

Occupation- Farmer.

Addiction- Chewing quid of Kharra.

Age at the time first began tobacco consumption: 23.

Relationship with family: Normal.

Educational background: 8th Pass.

Jobs: Farmer.

Drug Abuse: None.

Psychological state of mind: Normal.

Interpretation: Mrs. Amrita Devi had good health conditions, but started feeling low seven days before the scheduled date of checkup. On the third day, she noticed increase in the body temperature, accompanied by chest pain and dry cough. Moreover, feeling of giddiness, anxiety and nausea was also observed.

Case Study 4

Name: Madan Rao More.

Age: 76 years.

Gender: Male.

Family members: Son, Daughter in law, Grandchild.

Personal information: Sleep- Disturbed.

Appetite- Unbalance.

Occupation- Retired.

Addiction- Cigarette (4-6 per day).

Age at the time first began tobacco consumption: 30.

Educational background: 12th Pass.

Jobs: Retired.

Drug Abuse: None.

Psychological state of mind: Normal.

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Interpretation: Mr. Madan Rao More had been smoking since last thirty six years. He reported several times problem of breathing, asthma, chest pain and dry cough. Moreover, after studying the reports of hospital, it was evident that he needs to quit smoking as soon as possible.

Case Study 5

Name: Sangita Bawankule.

Age: 36 years.

Gender: Female.

Family members: Son, husband, mother-in-law.

Personal information: Sleep- Normal.

Appetite- Unbalance.

Occupation- Maid.

Addiction- Chewing quid of Kharra.

Age at the time first began tobacco consumption: 20.

Educational background: illiterate.

Jobs: Maid.

Drug Abuse: None.

Psychological state of mind: Normal.

Interpretation: Mrs. Sangita Bawankule is from a well to do family. However, her health started deteriorating at thirty four years of age. She complained that she had pain in her mouth and while swallowing. The breath was awful, drooling and dryness in mouth was also observed. Moreover, there were white patches and sores in few areas of her mouth. Upon further diagnosis it was sure that she had developed oral cancer.

Overview of the case studies: Physical parameters observable in individuals chewing tobacco range from anxiety, blood pressure, stiffness in muscles of the mouth, increase in body temperature, nauseating feelings, sometimes accompanied by loss of appetite. Further elevations reflect drowsiness, dry cough, chest pain, breathing issues, dryness in mouth and asthma. Prolong usage reflects white patches and soared areas in the mouth, difficulty in opening the mouth, digestive issues, hypertension, lung diseases and cancer due to chewing of 'kharra'.

III. DISCUSSION

Tobacco consumption is an ardent concern for the global population. An initiative for studying the aspect of 'kharra' chewing in the population of Nagpur region, state of Maharashtra was undertaken. In Nagpur, tobacco is locally sold by the nomenclature "Kharra". Samples of Kharra were collected from various areas of Nagpur city viz: Ramdaspath, Khamla, Sadar, Gittikhadan, Sonegaon, Chinchbhuvan, Sitabuldi, Seminary Hills, Civil lines, Gokul peth, Jaitala, Madhav nagar etc. and regions around Nagpur city like: Chandrapur, Yavatmal, Gondia, Bhandara, Kalmeshwar, Kampthee, Katol, Khapri, Butibori, Hingna, Hinganghat etc.

Also a survey method was implied to gather information about habit & addiction related to tobacco consumption in the form of chewing 'Kharra' and to some extent smoking. Main emphasis was however on the chewing aspect of the Quid. Altogether a sample of a population of 400 was generated. Two tests were developed for this purpose. The first test was regarding the awareness in the general population, its pros & cons. It was a sentence completion test, where stems were provided as a lead to gather information. The second test that was developed was a questionnaire. It consisted of 15 questions. It was a questionnaire regarding the population who consume 'kharra' on a daily basis and has either become habit or addiction for them. This way for both the tests a sample of 100 each of male – female aged between the age group of 18-40 was collected. Participants who took the awareness test ranged from responses like most are unaware of laws related to tobacco consumption to attributing that tobacco consumption begins as early as 10 years continued up to 80 years. Trends like tobacco chewing whether in rural or urban highlighted facts like excess leisure time, lack of job opportunities, physical labor, lack of quality education in rural areas to lifestyle stressors, style, passion, peer, social groups, jealousy, anxiety, aggression, inferiority complex, stressful work hours, relationship

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issues, financial background, competitive edge, meeting & standing up to global demands are some of the notable factors in urban areas.

The second inventory was about habits related to tobacco consumption. Observations included tobacco as a stress reducer. This was very much evident in cab chauffers, security personnel, labor class, truck drivers, small scale retailers etc. their preference was for chewing 'kharra' was minimum 5 times a day. Among the others, the masses are aware of disadvantages of chewing 'kharra', yet they cannot do without chewing it for a day. This helps them keep psychologically engaged and they find it difficult to give up this habit. There were found a few cases, who would skip a meal, but not compromise over 'kharra' chewing. It's a kind of a fell good factor and adds a happiness quotient. Some have even tried looking for similar alternatives in taste and aroma and in most cases families, friends and relatives are aware of the chewing habit in adults. However, in teenagers secrecy is maintained.

Tobacco is the dried leaves of the cultivated plant *Nicotiana tabacum*, a native of North and South America (*Nicotiana rustica*). The derivation of the word tobacco comes from the West Indian (Caribbean) word and Spanish tobacco (Tobago or tobah) which actually refer to the pipe or tube with which the Indians smoked the plant. It is smoked or administered the oral and nasal cavities such as via snuff or chewing tobacco. The most well-known constituent that causes the acute Psychopharmacological properties of tobacco is Nicotine, and this has been found to be a major component in tobacco smoke that is responsible for nicotine addiction. Metals and inorganic substances like Molybdenum, Potassium, Calcium, Magnesium, Sodium, Arsenic, Titanium, Barium, Strontium, Lithium, Nitrates, Iodine, Chloride sulphates, Oxalates and Fluorine. The present study targeted tobacco consumption in the chewing quid of tobacco mainly in the kharra form available in Nagpur city and in and around areas.

Kharra, a combination of tobacco, arecanut (Supari), lime (Chuna) and Catechu has different names. It's popular in the vidarbha region and also in cities like Pune, Mumbai, and Aurangabad of Maharashtra State.

On site documentation in the video form was done regarding how Kharra was actually prepared manually and with the help of machine. A local vendor shop preparing and selling kharra in the region Sahakar nagar in Nagpur was chosen for the purpose.



Fig. 1 Images (a) Packet of 'Kharra' (b) Areca nut ('supari') (c) Pouring of slaked lime ('chuna') upon tobacco leaves during the preparation of 'kharra'

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(a)



(b)

Fig. 2 Images (a) 'kharra' making machine (b)'kharra' in its raw form as seen on site after removal from processing machine (c)'kharra' ready for sale

Procedure for, asking Kharra as found onsite included ingredients like dry tobacco leaves in packets, arecanut, lime, and Catechu. The first step involved removing dry tobacco leaves from the packets. It was around 3-5 packets that were spread on a sheet, to which a table spoon of lime paste was mixed. After mixing it was put in a sort of idli- maker (a south Indian dish) for thorough mixing and grinding. Approximately 50 minutes time was given for this purpose. To

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this concoction was added small pieces of betel nut and this mixture was again set for grinding for 30 minutes. The product derived at the end of this stage is what is popularly known as Kharra which is then ready for sale. Fresh kharra is prepared minimum twice daily once in the morning and the other in the afternoon or evening depending upon the demand or requirement of the customers. Minimum kharra concoction is prepared thrice daily. The mixture contains betel nut (arecanut) as one of the main ingredients along with tobacco. Betel nut is unsafe when chewed for long term or in high doses. Some of the chemicals in betel nut are considered to be associated with cancer. Eating betel 8-30 grams can cause death. It makes the mouth, lips and stool turn red and can cause stimulant effects similar to caffeine and tobacco use also causing vomiting, diarrhea, gum problems. Increased saliva, chest pain, abnormal heart beats, low blood pressure, shortness of breath and rapid breathing, heart attack, coma and death. Betel nut chewing has been claimed to produce a sense of well-being euphoria, heightened alertness, sweating, salivation, a hot sensation in the body and increased capacity to work. It leads to habituation, addiction and withdrawal. Mechanisms underlying these effects remain poorly understood. Arecoline, the major alkaloid of Areca nut has been extensively studied and severe effects of betel chewing are thought to be related to the actions of this Para sympathomimetic constituent. Betel chewing may produce complex reactions and interactions. In the presence of lime, arecoline and guvacoline in Areca nut are hydrolyzed into arecaidine and guvacine, respectively which are strong inhibitors of GABA uptake. Piper betle flower or leaf contains aromatic phenolic compounds which have been found to stimulate the release of catecholamines in vitro. Thus, betel chewing may affect parasympathetic, GABAergic and sympathetic functions. EEG shows widespread cortical desynchronization indicating a state of arousal. In, autonomic function test, both the sympathetic skin response and RR interval variation are affected. Betel chewing also increases plasma concentrations of norepinephrine and epinephrine. These results suggest that betel chewing mainly affects the central and autonomic nervous system. Addiction is a primary, chronic, neurobiological disease with genetic, psycho-social and environmental factors influencing its development and manifestations. It is characterized by behaviors that include one or more of the following impaired control over drug use, compulsive use, continued use despite harm and craving. Addiction is the more widely used term for what the APA and WHO refer to in their technical and diagnostic documents as "dependence". Addiction has both psychological and physiological impact on an individual.

Nicotine dependence is a complex disorder and is difficult to overcome. Motivation to kick the habit is one of the most important factors in chewing tobacco. It is interrelated to a variety of hereditary, physiological, environmental and psychological variables. Factors like the intensity of the withdrawal syndrome is one of the principal contributing causes for maintaining the habit.

Discomfort increases at early night, and the most significant complaints refer to increased compulsivity, irritability, anxiety, and difficulty in concentrating, agitation, and a sensation of sleepiness or dullness as well as hostility reactions. Most studies show that the use of nicotine results in a period of weight loss. Cessation of the use of the drug results in an acute period of weight gain, followed by a return to levels similar to those observed in controls. Excessive weight gain generally follows alterations in behavior and Personality patterns, frequently manifested as depression, abstinence, self-punishment, irritability and aggression. Weight gain, together with increased Stress intensifies the impulse to eat, perpetuating the vicious cycle. Traces of neuroticism can make tobacco chewers sensitive to the properties of nicotine. There is a strong evidence of an association between tobacco consumption and a Personality factor characterized as the need to experience stimulating sensations (sensation seeking).

Sensation seeking is a dimension defined as the "search for new, varied, complex and intense sensations and experiences, together with the predisposition to take physical, social, legal and financial risks in order to have such experiences". This dimension comprises facets such as a lack of inhibition, the search for emotions (enthusiasm), the need for adventure, need for new experiences, and susceptibility to boredom. The existence of the sensation seeking dimension is also substantiated by biological findings. Individuals with high score in this factor present low levels of cortical stimulation. It is supposed that individuals with pronounced traits of this characteristic are chronically under stimulated and therefore tend to be sensitive to nicotine.

It is supposed that the sensation seeking factor predisposes the individual to engaging in dangerous activities. This Personality has been associated with participating in risky experiences, radical sports, criminal activities, professional choices, risky sexual behavior, smoking, alcoholism, use abuse of illicit drugs, and, gambling. There seems to be a strong association between the sensation seeking factor and traits of impulsivity. The definition of impulsivity incorporates elements such as the tendency to get into situations or rapidly respond to stimuli for potential

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reinforcement, without much planning and without considering the potential risks of punishment or loss of gratification.

Another theoretical model of approaching the issue of the relationship between tobacco chewers and Personality was formulated in a study conducted in 1985. The authors propose five major Personality factors: neuroticism, extroversion, conscientiousness, openness to experiences and agreeableness. Nicotine interferes with the functioning of neurotransmission systems and exerts various neuroendocrine effects, which, together with the other effects of nicotine, can influence the psychopathological profile and patient responsiveness to treatment. Chewing of tobacco can help as a sort of self-medication to relieve feelings of sadness or negative mood. There is evidence that the use of nicotine interferes with neurochemical systems, which in turn affect neural circuits, such as reinforcing mechanisms association with mood regulation. It is interesting to note that, in contrast with OCD, frontal lobe activity is reduced in individuals with Schizophrenia. It is argued that the low consumption of tobacco in individuals with OCD 1 can reflect a subjacent genetic factor, possibly related to serotonergic and cholinergic systems. Personality traits such as impulsive and risky behavior, extroversion, unconventional behaviors, and antisocial tendencies, are related to tobacco consumption and precede the initiation of the habit.

Psychosocial determinants can also affect this association. Individuals with OCD are frequently more isolated in school. However, less socially competent young adults might start chewing tobacco due to peer pressure in early adolescence. Tobacco consumption might reflect the institutionalization process, as well as the tedium and low impulse control presented by individuals with Schizophrenia. The hypothesis of the use of tobacco as self-medication stands out. Tobacco consumption can improve concentration, reduce unpleasant hyper stimulation experienced by individuals with Schizophrenia and promote one of the few available pleasures for many individuals with the disease. It is also possible that nicotine related to withdrawal syndrome, while improving the processes of attention and concentration. Tobacco consumption during pregnancy can constitute a risk factor for the subsequent appearance of this problem in the affected child. Prospective studies carried out with ethnically distinct populations reveal that the consumption of tobacco during pregnancy is associated with a greater incidence of criminal or violent behavior in adult life among males.

There is strong evidence that Personality traits are influenced by determinants of genetic and neurobiological nature, among other factors. The most widely accepted concept is that variations observed in Personality characteristics are due, at least in part to the activity of neurotransmitters. The role of mechanisms of transmission and capture of neuroregulators such as dopamine and serotonin, noradrenalin and norepinephrine stands out. In addition genetic and neurobiological factors can also act in the predisposition to personality disorders and psychopathological profiles.

However, in contrast to the effort to understand the genetic determinants of the risk of alcoholism and chemical dependence in general, there are still a relatively small number of studies in the literature focusing on the genetic mediation of the associations among Personality, Psychopathology and tobacco chewing.

Studies show that women have a harder time trying to quit smokeless and have less success with abstinence programs than men. Nicotine has different effects on mood in women compared to men. Women who quit may have greater anxiety and stress than men who quit. Women are not as physically dependent on nicotine as men, but they are more addicted to the actual behavior of smokeless, which is the more powerful deterrent to quitting. This may be the reason why nicotine replacement, which only reduces cravings, tends not to be effective in women. Women may fear weight gain after quitting more than men. Women trying to quit may miss the feeling of control associated with smokeless tobacco more than men. There's a perceived social disapproval of women using smokeless tobacco. 38% of women in the study said that they could not use smokeless tobacco in the presence of certain people and another 25% cited social disapproval as a drawback, a significant percentage of women in the study said the relaxing and calming effects and pleasure they associate with smokeless tobacco use are advantages of using these products.

Tobacco is a greater cause of death and disability than any single disease. People who chew tobacco have very high rates of mouth cancers. It is the single greatest modifiable risk factor for cardiovascular disease and the leading cause of death in women. In the US. Tobacco use causes endothelial damage and platelet aggregation, contributing to thrombosis. The antiestrogen effect of tobacco use accelerates menopause. Premature menopause increases the risk of cardiovascular disease and increases the risk of Osteoporotic fracture independent of bone mineral density score. Girls progress faster to nicotine dependence than boys. Unique risk factors for girls include early puberty, life transitions, eating disorders, family moving, physical and sexual abuse. There are certain cultures in which betel nut is combined

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with tobacco to chew which increases its addictive properties and its health risks. The risks for certain cancers increases greatly when mixed with tobacco. Betel nut and tobacco increases the risk of tooth damage, staining teeth black or even causing them to fall. They both when used in combination format cause nicotine addiction, one of the hardest to quit. Betel chew causes more saliva to be produced than usual, and so the user is forced to spit this out frequently. The chew releases chemicals including nicotine. Additionally, lime use attacks compounds in the betel nut, causing the production of oxidants (Substances that cause cancer). Lime also causes uncontrolled cell growth (again a risk for cancer). It would seem, from evidence so far that the worst combination (the one most likely to cause oral cancer) is tobacco, lime and betel. Without tobacco the chew is slightly less dangerous, and less dangerous still is a chew without tobacco or lime. Chewing betel nut also causes periodontal disease (disease of the gums). It is thought that lime is responsible mainly for this effect. Four out of 10 cases of cancer among men in Mumbai are related to tobacco use. Among women, one in six are caused by tobacco. Data released by the Mumbai Cancer Registry (MCR), maintained by the Indian Cancer Society, reported an increase in cancer cases from 12.090 in 2010 to 13.564 in 2014. The data was collected from 137 medical centers, including primary, secondary and tertiary care hospitals, nursing homes and diagnostic facilities in greater Mumbai.

IV. CRIME AND TOBACCO

The illicit tobacco trade has taken centre stage in the EU debate lately. It is very difficult to measure other clandestine activities in general. Smugglers are actually very creative when it comes to concealing the goods they are attempting to traffic. Potential tobacco product violations include: sales to minors, flavored cigarette sales, illegal marketing and advertising, distribution of free samples of tobacco products except in limited circumstances. Placement of cigarette or smokeless tobacco product vending machines in prohibited areas (or providing access to self-service or direct access of tobacco products in prohibited areas. Sale of cigarettes in packages of less than 20. Huge tax differentials between states and inadequate enforcement have led to a flourishing black market for cigarettes. Criminals exploit price difference for illegal profit. For a long time, smokers crossed borders to get lower-priced cigarettes for personal use. Criminals are moving into the tobacco-smuggling business in an organized way, because the profits are huge and the risks are low.

Gangs are seeing the profit potential of tobacco, using stolen identities and fake credit cards to buy cigarettes in large quantities, then smuggling them along the tobacco road. Black market cigarettes are becoming a preferred currency of crime, offering a new way to launder money, finance illegal drug transactions or support other illegal activity. The longer the problem continues the more deeply embedded black market cigarettes become in professional crime organizations.

While the illegal trade is oftentimes carried out by individuals trying to save money by buying illegal tobacco for personal use, it is carried out on a large-scale commercial level and has been linked to organized crime. Criminals are willing to work in the illegal tobacco market because the potential economic benefits have, under current law, far exceeded the associated risks of getting caught (Report of commission on Illegal Tobacco Commonwealth of Massachusetts.)

Cigarettes are a legal product, and are easy to obtain, transport and sell on the open market. Because tobacco smuggling is so lucrative, yet penalties for smuggling tobacco are lenient in most states, illicit tobacco trade is a relatively low-risk crime. Law enforcement intelligence reports have indicated that gangs and other organized crime rings have increasingly begun to focus their efforts on cigarette trafficking as a source of revenue. The profit margins on black market cigarettes are now greater than for cocaine, heroin or illegal firearms. Habitual presence of organized crime may lead to increase in attendant crimes-robberies, burglaries, credit card fraud and money laundering.

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Table 1: Oral hygiene status of the chewers and non-chewers:

Oral hygiene status	Non-chewers-197	Chewers-168
Good	97 (49.24)	25 (14.88)
Fair	78 (39.59)	113 (67.26)
Poor	22 (11.17)	30 (17.86)
Total	197	168

Table 2: Distribution of subjects according to their complaints:

Complaints of subjects	Non- Chewers (197)	Chewers (168)
Bleeding gums	52 (26.40)	67 (39.88)
Bad odor (halitosis)	67 (34.01)	98 (58.33)
Difficulty in opening mouth	2 (1.02)	38 (22.62)
Difficulty in swallowing	0 (0.0)	17 (10.12)
Burning sensation of soft tissue	1 (0.51)	47 (27.98)

Many criminals are adding cigarette smuggling to illegal drugs, firearms and prostitution, and are shifting to illegal tobacco smuggling operations have even been linked to numerous terrorist organizations globally. Cigarettes were potentially the largest trafficking operation worldwide involving a legal commodity

The black market in tobacco involves criminal gangs producing counterfeit cigarettes, cross border smuggling and large scale tax evasion. With weak penalties for criminals, poor border controls, low arrest rates and tobacco taxes creating disparity between neighboring countries, it's a problem that's set to grow. Some governments are unaware of how bad the problem is and do not acknowledge its link to tax levels. Legitimate retailers often small or family businesses are also damaged as smugglers and criminals steal their trade, while rules for retailers to prevent sales to children are undermined by illegal sales away from the eyes of the authorities. Illicit trade is not just the work of small operators. Organized crime is increasingly dominant. Just one shipping container full of trafficked cigarettes could earn a criminal gang more than US\$ 1 million.

Interpol, the international police organization, says gangs that traffic drugs, arms and people are also behind the illicit cigarette and alcohol trade. Governments should establish workable tax regimes and economic policies that do not create conditions that encourage illicit trade, with strong border controls and effective laws to fight the black market.

V. CONCLUSION

Tobacco companies knew quit early on the addictive nature of their product. 'Kharra' is one such byproduct which happens to be a native origin of Nagpur city, consumed by approximately 90%. The combination in which it is consumed is more hazardous than consuming tobacco alone. Nicotine and betel nut leave a psychological dependency. Betel chewing keeps an individual occupied in thoughts. Betel quid chewing when associated with a coping mechanism to deal with lifestyle stressors, relationship issues, work related stress, emotional insecurity, frustration, failure, academic issues, peer pressure, financial burdens are some of the reasons for tobacco addiction. The current research focused upon enlightening people to have a self introspection about the negative consequences of 'kharra' chewing, which has almost sunk in deep into their blood and is consumed like a daily vegetable. Natives are also making this

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product so popular and spreading it in neighboring cities and states and some even carry it abroad for their fellow friends. It's from small children to old age people that 'kharra' has entered in every bodies house, local streets, and chewing of 'kharra' is more than like a sort after friends in disguise, then an actual friend. Where catharsis is done by a counseling session or a therapy, people confine to chewing of 'kharra' as an aid or means to find relief from stressful and negative thoughts. It's not only the government efforts or any other private NGOs because the locus of control for habit of 'kharra' chewing is eliminated with internal locus of control.

REFERENCES

1. Abstract, <http://books.google.co.in>
2. Tobacco definition and scientific name, http://healthliteracy.worlded.org/docs/tobacco/Unit1/2history_of.html
3. Tobacco and its origin, <https://en.wikipedia.org/wiki/Tobacco>
4. History of tobacco, http://healthliteracy.worlded.org/docs/tobacco/Unit1/1what_is.html
5. Types of Tobacco, https://en.wikipedia.org/wiki/Types_of_tobacco
6. Excerpts, <http://timesofindia.indiatimes.com/home/science/Consumption-of-plain-betel-nut-can-also-cause-cancer/articleshow/11419007.cms>
7. Betel nut, https://en.wikipedia.org/wiki/Areca_nut, www.healthline.com/health/betel-nut-danger#cancer-risk4, www.ncbi.nlm.nih.gov/pmc/articles/PMC4080659/
8. Mixture of tobacco, betel nut and its effect, <https://www.ncbi.nlm.nih.gov/pubmed/18403885>, <http://pacificcancer.org/pacp-resources/food-nutrition-physical-activity/spc-tobacco-betel-nut-chewing.pdf>, http://www.healthvermont.gov/sites/default/files/documents/2016/12/HPDP_betelnut_tobacco_fs.pdf
9. Crime and Tobacco, www.bat.com/theman
10. Discussion, www.thenewtobaccoroad.com/Pages/Problem.aspx, http://www.scielo.br/scielo.php?pid=S1806-37132007000500016&script=sci_arttext&tlng=en, <https://www.euractiv.com/section/trade-society/interview/olaf-official-tobacco-smuggling-major-source-for-organised-crime/>, <https://www.killthecan.org/facts-figures/women-and-smokeless-tobacco-use/>, <https://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Tobacco-Use-and-Womens-Health>, www.tobaccofreemaine.org