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HERBAL CIGARETTE AS ALTERNATIVE TO SMOKING

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ABSTRACT

Herbal cigarettes, perceived as a safer alternative to traditional tobacco cigarettes, still pose health risks due to toxic chemicals like carbon monoxide, polycarbonates, and N-nitrosamines in their smoke. Research indicates similar or higher mutagenicity compared to traditional cigarettes, and while some herbal medications show promise in aiding smoking cessation, further studies are needed to standardize and compare them to conventional therapies.

A. INTRODUCTION

breathing in and out the smoke from burning plants, mainly tobacco products like cigarettes, cigars, and pipes. It's a big health problem, with about 1.1 billion smokers around the world, leading to more than 8 million deaths each year. Out of these, 7 million deaths are directly from tobacco, while others are from secondhand smoke.Using tobacco can cause serious health issues like heart disease, different types of cancer, diabetes, and strokes. The global tobacco market was worth about $849.9 billion in 2021, mainly because more people are smoking in developing countries. Nicotine, the addictive part of tobacco, makes it hard for many people to quit.Cigarette smoke contains around 5000 different chemicals, with 44 known to be harmful to cells and DNA. Some of the most dangerous chemicals in tobacco smoke include nicotine, certain cancer-causing substances, carbon monoxide, formaldehyde, and benzene. Recently, more smokers have been trying to quit.[1,2]

B. FOR THE CURRENT REVIEW

The review on smoking looks at ways to help people quit smoking. This is important because smoking causes serious health problems like heart disease and strokes. One part of the review studies how implementation intentions (II) can help smokers change their habits and quit. It also focuses on preventing teenagers from starting to smoke. Some methods, like behavior changes and medicines, can help with this. The review mentions that having a good tax system for tobacco products can lower smoking rates, especially for low-income people. Lastly, it highlights the need for doctors to get training on how to help patients quit smoking. Trained doctors are more successful in helping their patients quit.[3]

C. REASON BEHIND WHY MEN SMOKE CIGARETTES

- **Social and Cultural Factors**
  1. Peer pressure: Men may start smoking due to social pressure from friends, colleagues, or family members.
  2. Cultural influence: Smoking may be deeply ingrained in certain cultures or communities, making it a normalized behavior.
  3. Masculinity: Smoking may be associated with traditional masculine norms, such as toughness, independence, or risk-taking.[4]
- **Psychological Factors** [5,6,7]
  1. 1.Stress relief: Men may use smoking as a coping mechanism for stress, anxiety, or emotional distress.
  2. Mood enhancement: Nicotine can stimulate the brain's reward system, releasing feel-good chemicals like dopamine.
  3. Self-medication: Some men may smoke to self-medicate for underlying mental health issues, such as depression or ADHD.
- **Environmental Factors**
  1. Availability: Cigarettes are widely available and easily accessible, making it convenient for men to start or continue smoking.
  2. Marketing: Tobacco companies often target men with appealing advertising and promotional campaigns.
  3. social environment: Men may be exposed to smoking in their workplace or social environment, increasing their likelihood of smoking.
- **Personal Factors**
  1. Curiosity: Some men may try smoking out of curiosity or to experiment with new experiences.
  2. Rebellion: Smoking can be a way for men to assert their independence or rebel against authority. 3. Weight control:

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Some men may smoke to control their weight, as nicotine can suppress appetite.

• **Other Factors**

1. Family history: Men with a family history of smoking may be more likely to start smoking themselves.
2. Mental health: Men with mental health conditions, such as schizophrenia or bipolar disorder, may be more likely to smoke.
3. Substance abuse: Men who abuse other substances, such as alcohol or illicit drugs, may be more likely to smoke.[8]

D. WHAT ARE HERBAL CIGARETTE[9,10,11]

Herbal cigarettes are often viewed as a safer alternative to traditional tobacco products, but a review of the literature reveals important considerations. These cigarettes are composed of various herbs and plants, which can include ingredients like mint, clove, and other botanicals. While they do not contain nicotine, the smoke produced can still release harmful substances and carcinogens that can negatively impact lung health and overall well-being. Many users perceive herbal cigarettes as a safer option, which can lead to increased consumption and potential health risks. Research findings are mixed; some studies suggest they may be less harmful than regular cigarettes, while others indicate they still pose significant health threats. The lack of regulation in the herbal cigarette market means that product quality can vary widely, further complicating the assessment of their safety. Overall, while herbal cigarettes might appear to be a healthier choice, they are not without their dangers, and users should approach them with caution.

E. Cigarettes Brands in India

- Royal Swag: Known for its blend of 100% natural ingredients like tulsi, mulethi, and other carefully selected herbs. Royal Swag offers a sophisticated and smooth smoking experience, catering to those seeking an alternative to traditional tobacco products.[1]
- Organic Smokes: Offers Ayurvedic herbal blends crafted to support smoking cessation. The brand stands out in the market for its commitment to Ayurvedic principles and organic ingredients.
- Nirdosh: A pioneer in the herbal cigarette industry in India, with products deeply rooted in Ayurveda. Nirdosh herbal cigarettes are crafted using traditional Ayurvedic ingredients like tulsi, ginger, turmeric, and other herbs known for their detoxifying and healing properties.
- Honeyrose: An internationally acclaimed herbal cigarette brand offering a rich and flavorful smoking experience. Honeyrose provides a smooth, aromatic sensation, making it a favorite among smokers who seek a more refined experience.
- Ecstacy Herbal Cigarettes: A luxury herbal cigarette brand offering exotic herbal blends. Ecstacy offers a unique and upscale smoking experience, catering to individuals who seek a more indulgent, sensory-rich experience.

F. INGREDIENTS OF HERBAL CIGARETTES [12,13,14]

• **Ingredients**

1. **Tulsi**

(Holy Basil): Known for its medicinal properties, tulsi is used in Ayurveda for its antiinflammatory and detoxifying effects. Believed to help cleanse the respiratory system when used in herbal cigarettes. Tulsi is perhaps one of the best ex. of Ayurveda's holistic lifestyle approach to health. Tulsi tastes hot and bitter and is said to penetrate the deep tissues, dry tissue secretions and normalize kapha and vata. Daily consumption of tulsi is said to prevent disease, promote general health, wellbeing and longevity and assist in dealing with the stresses of daily life. Tulsi is also credited with giving luster to the complexion, sweetness to the voice and fostering beauty, intelligence, stamina and a calm emotional disposition. In addition to these health-promoting properties, tulsi is recommended as a treatment for a range of conditions including anxiety, cough, asthma, diarrhea, fever, dysentery, arthritis, eye diseases, otalgia, indigestion, hiccups, vomiting, gastric,

.



Figure 01: Tulsi

2. **Mint**

Adds a refreshing, cooling sensation to herbal cigarettes. Often included for its ability to soothe the throat and provide a calming, pleasant aroma.Mint, a member of the Lamiaceae family, has been used for centuries in traditional medicine and as a culinary herb. Its essential oils, particularly menthol and menthone, are responsible for its characteristic flavor and aroma. Mint has been shown to have numerous health benefits, including respiratory health, digestive health, stress relief, and antimicrobial properties. As an expectorant, mint can help relieve respiratory issues such as bronchitis and asthma. Its digestive enzymes may aid in digestion and alleviate symptoms of irritable bowel syndrome (IBS). The aroma of mint has also been shown to reduce stress and anxiety, while its essential oils exhibit antimicrobial

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activity, potentially reducing the risk of infections. With its refreshing flavor and potential health benefits, mint is a popular ingredient in herbal Cigarettes providing a cooling Sensation



Figure 02: Mint

3.Clove:

1. A powerful spice with a rich, spicy flavor. Commonly used in herbal cigarettes for its antimicrobial properties and ability to aid in respiratory health.Clove is the dried, unopened flower bud of the Syzygium aromaticum tree, native to Indonesia, and has been used for centuries in traditional medicine Clove's essential oils, particularly eugenol, are responsible for its characteristic flavor, aroma, and medicinal properties, with eugenol making up about 70-90% of clove's essential oils. Clove has several health benefits, including analgesic and anti-inflammatory properties, antimicrobial properties, and antioxidant properties, which can potentially relieve pain, reduce inflammation, reduce the risk of infections, and promote overall health.



Figure 03: Clove

4. **Rose Petals**

Used for their subtle, sweet fragrance. Believed to have a calming effect on the body and mind, helping to relieve stress and anxiety. Rosé petals, with their sweet and floral flavor, are sometimes used in herbal cigarettes, particularly those marketed as "nicotine-free" or "herbal blends". Rose petals contain various bioactive compounds, including flavonoids, phenolic acids, and terpenoids, which may contribute to their potential health benefits, including anti-inflammatory, antioxidant, and antimicrobial properties. Studies have suggested that rose petals may help reduce stress and anxiety, improve mood, and promote relaxation, making them a popular ingredient in herbal cigarettes and other herbal remedies.



Figure 04: Rose petals

5. **Lemongrass**:

Often used in traditional herbal medicine, lemongrass has a refreshing citrusy scent. Known for its ability to reduce stress and aid digestion. Lemongrass, a tropical herb with a citrusy flavor, is commonly used in herbal cigarettes for its potential health benefits and refreshing taste. Lemongrass contains citral, a compound with anti-inflammatory, antioxidant, and antimicrobial properties, which may help reduce anxiety and stress, improve sleep quality, and alleviate respiratory issues. Studies have shown that lemongrass may also exhibit anti-cancer properties and protect against oxidative stress. As a result, lemongrass is often combined with other herbs, such as peppermint and ginger, in herbal cigarettes to create unique flavor profiles and potential health benefits.



Figure 05 : Lemongrass

G.Side effects of Tobacco smoking

Smoking poses numerous debilitating side effects. Respiratory issues, such as chronic obstructive pulmonary disease (COPD), emphysema, and lung cancer, are common. Smoking also increases the risk of heart disease, strokes, and cardiovascular disease. Various types of cancer, including throat, mouth, and bladder cancer, are linked to smoking. Additionally, smoking leads to gum disease, tooth loss, and other oral health issues, as

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well as premature aging and wrinkles. Pregnancy complications, such as low birth weight, miscarriage, and sudden infant death syndrome (SIDS), are also associated with smoking. Secondhand smoke exposure poses serious health risks to nonsmokers, especially children and those with pre-existing conditions. Smoking cessation is crucial to prevent these risks. Quitting smoking can significantly improve health outcomes and reduce the risk of smoking-related diseases.[15]

H. BENEFITS OF HERBAL SMOKING

1. Reduced nicotine intake: Herbal cigarettes do not contain nicotine, making them a popular choice for those trying to quit smoking.
2. Antioxidant properties: Many herbal cigarette ingredients, such as tulsi and rose petals, have antioxidant properties that may help protect against cell damage.
3. Anti-inflammatory effects: Ingredients like clove and lemongrass have anti-inflammatory properties that may help reduce inflammation [16]

I. Calculation

Sr.No	Ingredients	Quantity %	Uses
1	Clove	1.5g	Analgesic
2	Mint	2.5g	Refreshing
3	Lemongrass	2g	Decongestant
4	Tulsi	2g	Calming
5	Rose petals	2g	Soothing



Figure 06: Sample prepared

J.ORGANOLEPTIC PROPERTY AND EVOLUTION TEST[17,18]

1.Organoleptic property

Table No.02

Ingredient	Expected Aroma/Taste	Role in Blend
Mint	Cool, fresh, mentholic	Refreshing Effects, smoothness'
Clove	Spicy, warm, pungent	Adds depth and warmth, throat hit
Rose petals	Floral, sweet	Aroma enhancement, smooth fragrance
Tulsi	Herbal, slightly spicy	Calming aroma, medicinal notes
Lemongrass	Citrusy, lemony	Freshness, balances other strong notes

2.Drying Behavior

Method Used: Air drying and oven drying (at 40-50°C)
Duration: 24-48 hours (depending on the herb) Changes Observed:
Mint: Shrivels, becomes crisp, loses some aroma.
Clove: No major change; retains oil and aroma.
Rose Petals: Becomes brittle, retains mild aroma.
Tulsi: Shrinks and becomes crumbly.
Lemongrass: Dries out, becomes stiff

3.Grinding & Particle Size Distribution

Method Used: Manual or mechanical grinder
Ideal Size: Medium-coarse cut (0.5-1 mm)
Evaluation:
Over-grinding causes powder which blocks airflow.
Under-grinding leads to uneven burn.
Sieve Analysis (Optional):
O 70% of material retained on 0.5 mm mesh for ideal burn.

4. Blend Uniformity

Mixing Ratio (suggested):
Mint: 20%
Clove: 10%
Rose Petals: 20%
Tulsi: 25%
Lemongrass: 25%
Test: Visual and manual check to ensure no clumping or ingredient separation.
Result: Blend appears homogeneous with even distribution.

5. Rolling & Fill Characteristics

Rolling Ease: Good with properly dried and blended material.
Fill Weight: 0.5-0.7 grams per cigarette (standard hand-roll).
Firmness: Moderate pressure gives firm yet flexible roll.
Draw Resistance: Smooth airflow without blockage (pass test).

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6. Combustion Characteristics

Table No. 03

Parameter	Observation
Ignition	Easy with a match or lighter
Burn Rate	Medium-slow (ideal for herbal blend)
Burn Uniformity	Consistent burn along the paper
Ash Residue	Fine, light grey to white ash
Smoke Character	Light herbal aroma, no chemical odor
Irritation	Throat or eye iratation reported

7. Shelf-Life/Storage Test (Basic Assessment)

Storage Conditions: Room temp (25°C), 60% RH
Observation Time: 30 days
Findings:
No fungal growth
Slight fading of rose and mint aroma
Cigarettes retained structural integrity

CONCLUSION

Herbal cigarettes are a complex and multifaceted issue. While they may offer some potential health benefits, they also pose unknown health risks. More research is needed to fully understand the effects of herbal cigarettes and to inform regulation and policy.

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