



ASSESSING AND COMPARING WITHDRAWAL SYMPTOMS AND TRIGGERING FACTORS AMONG SMOKING AND SMOKELESS TOBACCO USERS

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ABSTRACT

The study aims to evaluate and compare the withdrawal symptoms and triggering factors experienced by users of smoking and smokeless tobacco products. Tobacco addiction remains a significant public health concern, with both smoking and smokeless tobacco use leading to substantial health risks. Understanding the withdrawal symptoms and triggers that affect users is crucial for developing effective cessation strategies. This review analyzes data from various clinical studies and surveys to identify common and unique withdrawal symptoms between smoking and smokeless tobacco users. Key withdrawal symptoms include irritability, anxiety, difficulty concentrating, and cravings while triggering factors encompass stress, social situations, and habitual routines. The comparison highlights similarities, such as nicotine dependence, and differences, such as the intensity and duration of withdrawal symptoms. Smokeless tobacco users often report more localized oral discomfort, whereas smokers experience more respiratory-related issues. The findings underscore the need for tailored cessation programs that address the specific withdrawal symptoms and triggers of each user group. Enhanced understanding of these factors can lead to more personalized and effective interventions, ultimately reducing the health burden associated with tobacco use.

KEYWORDS: Tobacco cessation program, Smoking, Triggering Factors, withdrawal

INTRODUCTION

In the year 1600, the Portuguese brought tobacco to India. Throughout the age of European colonization, tobacco was mostly imported. Only when the country was under British rule was investment in tobacco growing, processing, and export promoted. Tobacco was widely used in India before the country obtained its independence because of government-supported farming techniques. While smoking was once considered the primary means of ingesting tobacco, other ways of doing so emerged throughout time.

Among the many health problems caused by tobacco use, oral disorders are among them. Tobacco is smoked in many forms, including cigarettes, bidis, cigars, pipes, and hookahs. It is also used in smokeless forms, such as chewing tobacco, snuff, and snuff. Any person who uses tobacco products in any way is called a "tobacco user."

World Health Organization (WHO) reports that "up to half of tobacco users die from the drug." Tobacco usage is responsible for the deaths of about 8 million people annually, including over 1 million people who do not smoke but who are exposed to secondhand smoke. The majority of the world's 1.3 billion smokers—80%—call low- and middle-income nations home. A total of 22.3% of the global population smoked in 2020, with 36.7% of men and 7.8% of women engaging in this habit. The leading cause of preventable mortality, disability, and disease in the United States is tobacco smoking, according to the CDC. The 2019 data shows that there are 34 million adult smokers in the US. Daily, there are around 1,600 underage smokers, and an extra 235 start smoking often. More than 16 million Americans have a smoking-related ailment, and 58 million individuals who do not smoke are exposed to secondhand smoke.

LITERATURE REVIEW

Aslam (2021) During the 1900s, smokeless tobacco (ST) use was common, particularly in African and Asian nations; Pakistan had an estimated 47% ST user population. Consequently, the purpose of this research was to examine a range of behavioral and psychological characteristics of ST consumers as well as the possible reasons why people start ST. Research Approach: An impoverished section of Surjani town in Pakistan's West district of Karachi was the site of the research. The research recruited 150 subjects, all of whom are current or former users of ST products like betel nuts, gutka, and oral snuff. On the other hand, control subjects were those who did not take ST. Exclusion criteria for participation in the research included a history of smoking, current or past addictions, using medicine to treat a chronic illness (such as diabetes or hypertension), or experiencing any behavioral or psychiatric issues. Addiction, nicotine dependency, and stress levels were assessed using a standardized questionnaire based on the Modified Hassles scale. Interviews were carried out by personally visiting participants at their homes after they were briefed on the study's goals. To evaluate the data, SPSS version 16.0 was used. The results showed that two of the most significant reasons for starting to use ST were curiosity and peer pressure. 36% of ST users were classified as being in the second stage of addiction, while 25% were determined to be in the final stage of addiction. Among the most common emotions reported by those who took part in the research were annoyance, anger, headache, and lethargy. Because of the euphoric state caused by the ST, ST users had lower stress levels than the control group. An elevated risk of obesity was identified in almost 30% of the customers. Conclusion: Compared to the West, Pakistan has seen a greater increase in the usage of smokeless tobacco due to the availability and affordability of this addictive substance. Curiosity and peer pressure are factors that may lead someone to start using smokeless tobacco.

Deolia (2018) Tobacco use, which results in both physiological and psychological reliance on nicotine, is one of the most ubiquitous addictive behaviors on a global scale. The purpose of this research was to quantify the psychological and physiological effects of smoked and

smokeless tobacco. Research Tools and Procedures: Five hundred smokers and five hundred people who use smokeless tobacco products took part in the poll. Each participant filled out a standard questionnaire that included questions on their physical dependency (the modified Fagerstrom Test for Nicotine dependency, or mFTND) and their psychological dependence (the American Psychiatric Association Scale).

A person's physical and mental reliance on smoked and smokeless tobacco was assessed by adding up their scores. The prevalence of physical and psychological reliance was checked by descriptive analysis. Researchers examined the relationships between participants' ages, genders, and levels of education using a chi-squared test. The results showed that compared to females, men were more likely to chew tobacco. Among those who used smokeless tobacco, 16.3% of men and 6.7% of women were extremely dependent, whereas among those who used smoked tobacco, 35.65% of men and 50% of women were highly dependent. Smokeless tobacco users had a 66.42% male dependency rate and a 56.17% female dependence rate on the American Psychological Scale for nicotine dependence; smoked tobacco users had a 16.59% male dependence rate. In sum, our research shows that nicotine dependency and smoking are both common. Nicotine dependency was more common in men than in women, according to our findings. Similarly, those with less education were more likely to be dependent on nicotine.

Abdullahi (2023) Tobacco that is not smoked but instead inserted in the mouth or nose is called smokeless tobacco. Chewing tobacco, snuff, and snus are some of the forms it may take. Although it may seem like a healthier option, smokeless tobacco is just as dangerous as regular tobacco. The Hodon District of Mogadishu is home to an alarmingly high rate of juvenile smokeless tobacco usage in Somalia. Teens in Somalia's Hodan District are the subject of this article, which examines the dangers of smokeless tobacco usage. The purpose of this research is to examine the negative impacts of smokeless tobacco use among Somali youth in Mogadishu.

Yu (2016) Worldwide, smokeless tobacco (ST) use is on the rise. There are several public health issues related to ST use, including an increased risk of acquiring chronic illnesses such as diabetes, hypercholesterolemia, and myocardial infarction. Investigating ST's toxicity is crucial. Results from a study that aimed to assess the long-term effects of a smokeless tobacco extract (STE) in Sprague-Dawley (SD) rats that lasted 184 days are presented here. There was a wide range of nicotine levels used to match the treatment group to the control group. The rats were administered STE orally in doses of 3.75 mg-nicotine/kg body weight/day for 184 days, with a 30-day recovery period in between. The dosages of nicotine were 7.50 mg-mid-dose and 15.00 mg-high-dose. Body weight, feed intake, clinical observations, histology, and anatomic and clinical pathology (including organ weights) were some of the variables that were assessed.

Animals in the mid-dose and high-dose groups had lower body weights as well as lower weights of their organs, including the heart, liver, and kidney. Additionally, esophageal, gastric, liver, kidney, and lung damage were mild and reversible when exposed to STE.

MATERIALS AND METHODS

Participants:

All adult tobacco users living in the villages are considered part of the population in this research. Adults in the chosen villages of Mappedu, Thiruvallur District, Tamil Nadu, who used tobacco in any way (smoking or not) were considered part of the accessible population. Both the smoking and smokeless groups were comprised of adult tobacco users who had used either smoking or smokeless tobacco for at least a year before the study. A non-probability purposive selection strategy was used to choose adult tobacco users who fulfilled the inclusion criteria. For this reason, a total of 100 adult tobacco users were chosen, with 50 smokers and 50 smokeless smokers assigned to each group.

Methodology

After describing the significance of the research to the President of Mappedu Village, formal approval to perform the study was gained. Participants were given a thorough explanation of the research techniques (interventions) and their advantages before they were asked to provide their informed permission. Preliminary testing was placed on that very day. All subjects were instructed to fast for 12 hours before blood testing. The survey inquired as to whether or not the participants were willing to give up tobacco use. A set of motivational treatments called the 5Rs was put in place for those who were unwilling to stop. These interventions included relevance, risk, rewards, roadblocks, and repetition. If needed, the ready-to-leave evaluation was repeated.

As part of the program, participants learned how to cope with withdrawal symptoms and what may set them off. To assist participants, in controlling their tobacco use, we gave them diaries to document withdrawal symptoms and things that cause them. After the test, I comforted the individuals in both groups and collected baseline data on withdrawal and trigger symptoms. The second post-test was administered to both groups on the seventh and fifteenth days after quitting smoke using the same instrument and following the same protocol.

Statistical analysis

Using median and percentile data, we examined withdrawal and trigger symptoms. Kruskal-Wallis one-way ANOVA on ranks with Dunn's test for posthoc multiple comparisons was used to analyze the medians (pre-test, post-test 1, and post-test 2). For statistical purposes, a probability of 0.05 or below was deemed significant. The statistical analysis and graph charting was done using SigmaPlot 14.5 version (Systat Software Inc., San Jose, USA).

RESULTS

Effectiveness of Tobacco Cessation Programme on withdrawal symptoms and triggering factors among Smoking Tobacco Users: Table 1 shows the normal distribution of withdrawal and trigger symptoms, including the median, 25th, and 75th percentiles. In the post-test, post-test 2, and post-test 3 of the smoking tobacco user cohort, the median withdrawal symptoms were 6, 4, and 1 (score), respectively. Kruskal-Wallis one-way ANOVA found statistically significant differences ($P < 0.001$). When post-test 1 and post-test 2 were compared, there was a significant difference ($P < 0.001$). Using Dunn's Method with post-hoc multiple comparisons, there was a significant difference ($P < 0.001$) between the post-test 1 and the post-test 3. There was also a statistically significant result in post-test 2 and post-test 3 ($P < 0.001$). Smoking tobacco users had a progressive reduction in withdrawal symptoms and triggers. Withdrawal and trigger symptoms decreased by 5 scores between post-test 1 and post-test 3, demonstrating the positive impact of the tobacco cessation program's coping mechanisms.

Table 1: Effectiveness of Tobacco Cessation Programme on Withdrawal Symptoms and Triggering Factors Smoking Tobacco Users (n = 48)

S.No.	Comparisons	Median	25th percentile	75th percentile	Kruskal Wallis one-way ANOVA
1	Post-test 1	6	6	6	H = 117.504
	Post-test 2	4	3	5	P < 0.001
	Post-test 3	1	1	1	
	Comparisons		Difference of Ranks		Dunn's Method
2	Post-test 1		90.895		Q = 10.584
	Post-test 3				P < 0.001
3	Post-test 1		37.653		Q = 4.407
	Post-test 2				P < 0.001
4	Post-test 2		53.242		Q = 6.199

	Post-test 3				P < 0.001
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The 'F', 'Q', and 'P' values are by Kruskal Wallis one-way ANOVA on ranks with posthoc Dunn's test.

Effectiveness of Tobacco Cessation Programmewithdrawal symptoms and triggering factors among Smokeless Tobacco Users

Table 2 shows the normal distribution of withdrawal symptoms and their triggers, including the median, 25th, and 75th percentiles. In the first three tests, the median scores for withdrawal and trigger symptoms were seven, four, and one, respectively. Kruskal-Wallis one-way ANOVA found statistically significant differences ($P < 0.001$). When post-test 1 and post-test 2 were compared, there was a significant difference ($P < 0.001$). Making a comparison between the post-test 1 and the post-test 3 also yielded significant results ($P < 0.001$). There was a statistically significant relationship between the post-test and post-test 3, as determined by Dunn's Method with post-hoc multiple comparisons ($P < 0.001$). Smokeless tobacco users showed a progressive reduction in withdrawal and trigger symptoms. Withdrawal and trigger symptoms decreased by 6 points between post-tests 1 and 3, demonstrating the positive impact of the tobacco cessation program's coping mechanisms.

Table 2: Effectiveness of Tobacco Cessation Programme on withdrawal symptoms and triggering factors among Smokeless Tobacco Users

S.No.	Comparisons	Median	25 th percentile	75 th percentile	Kruskal Wallis one-way ANOVA
1	Post-test 1	6	6	7	H = 125.136
	Post-test 2	4	3	4	P < 0.001
	Post-test 3	1	1	1	
	Comparisons		Difference of Ranks		Dunn's Method
2	Post-test 1		94.033		Q = 11.040
	Post-test 3				P < 0.001
3	Post-test 1		46.000		Q = 5.485
	Post-test 2				P < 0.001
4	Post-test 2		48.033		Q = 5.728
	Post-test 3				P < 0.001

The 'F', 'Q', and 'P' values are by Kruskal Wallis one-way ANOVA on ranks with posthoc Dunn's test.

CONCLUSION

This study lends credence to the idea and highlights the advantages of including coping mechanisms in the tobacco cessation program, as well as treating withdrawal symptoms and triggering variables.

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