



Perception, Beliefs, and Health Effects of Nicotine Pouches

Tamseel Awan ¹, Tabeer Awan ¹, Farah Khalid ², Imtesaal Awan ¹

THIS ARTICLE MAY BE CITED AS: Awan T, Awan T, Khalid F, Awan I. Perception, Beliefs, and Health Effects of Nicotine Pouches. *Khyber Med Univ J* 2024;16(2):177-8. <https://doi.org/10.35845/kmuj.2024.23352>

I: Dow University of Health Sciences, Karachi, Pakistan

Email: tamseel.awan@duhs.edu.pk

A relatively recent innovation in oral nicotine products is the nicotine pouch (NP). NPs are small pouches filled with white nicotine powder that a user inserts between the upper lip and gum, allowing the nicotine to be released.¹ In place of tobacco leaves, NPs are pre-portioned pouches, which are marketed like snus and are filled with white nicotine powder that has been extracted from tobacco leaves.² Nicotine pouches labeled as "tobacco-free" or "tobacco leaf-free" are marketed by companies and have undoubtedly increased in usage. These products, being relatively new, are promoted as safe by big businesses without any supporting evidence.

NPs, unlike Swedish snus and other conventional smokeless tobacco products, do not contain any tobacco leaf. Rather, nicotine salts are used in NPs, which provide larger quantities of nicotine than free-base nicotine in most smokeless tobacco products. NPs have been marketed as being cost-effective (comparable to a pack of cigarettes), convenient (since they can be used anywhere and do not require batteries or a device); and generally safe compared to other nicotine products. The worldwide NP market was worth USD 1.50 billion in 2021. According to industry projections, NPs will be worth USD 22.98 billion by 2030, based on consistent sales growth.³

According to industry-funded research, NPs are a "low-risk" product with lower in vitro toxicity than conventional tobacco products, partly due to the absence of tobacco leaf and combustion. However, public health experts are concerned about these products. Among these issues are NP businesses' aggressive and targeted marketing methods. Some NP producers may be using unethical marketing strategies, such as targeting people who do not use commercial tobacco and young people who are

particularly prone to nicotine addiction. This is especially noticeable in commercials using young adult models, as well as certain firms claiming their products as "flavor ban-approved" or "tobacco-free".⁴

NPs also include carcinogens (e.g., tobacco-specific nitrosamines; possibly high nicotine content; and/or similar quantities and delivery rates as other smokeless tobacco products) and adverse effects (e.g., nausea, hiccups, oral soreness, or irritation), according to current studies. As a result, there is still ambiguity about the immediate and long-term health hazards and public health impacts associated with NP.⁵

According to research done in the United States in 2021, while NP usage was low among US adults and commercial tobacco users, over half of this demographic was aware of these products, indicating that NP awareness is increasing. Furthermore, a sizable number of this group had supportive perspectives about such products, and having these positive beliefs is linked to susceptibility to greater levels of NP use.⁶

In the absence of any government legislation to prevent unethical marketing techniques, research on the Pakistani population demonstrates how young people are being enticed into nicotine addiction throughout the nation. The study had 1,749 participants, and their average age was 20.6 years. According to the study, these pouches may appeal to young people since they come in various flavors and may be used covertly. Moreover, 7% of respondents said they had been diagnosed with hypertension, and 6.6% said they had asthma. Nearly 40% of the individuals disclosed having a psychological disorder that had previously been diagnosed, and 53.2% said they were under stress. Around 40.0% of individuals were knowledgeable, but 50.6% had a

negative view of NPs. Overall, 17.2% of respondents said they used NPs. There was no difference in cigarettes used before and after starting the use of nicotine pouches, according to the findings. According to the study results, 10.0% of Pakistani youth now consume NP and have insufficient information about its contents. Furthermore, this data contradicts the popular belief that NPs aid in smoking cessation. There is little evidence available about the safety of NPs, and given their expanding use in the country, this study emphasizes the necessity for country-wide efforts to prevent this trend from becoming an addiction through education and regulated distribution.⁷

Another study was conducted in Lahore to assess dentistry students' understanding and perceptions of nicotine pouches and e-cigarettes, which are fast becoming popular in Pakistan. According to the survey, more than 70% of participants were aware of nicotine pouches and e-cigarettes. However, only a few of the participants had ever used them. Almost one-third of the respondents felt that nicotine pouches and e-cigarettes are less dangerous and addictive than ordinary cigarettes and can help people stop smoking. In general, participants were more aware of e-cigarettes and thought they were less dangerous and addictive than NPs, although NPs were believed to be a better choice to help people stop smoking.⁸

The perceptions and beliefs of individuals regarding nicotine pouches are complex and multifaceted. These beliefs play a substantial role in shaping user behavior, from initiation to continued use and even cessation attempts. Understanding these beliefs is essential for public health professionals, policymakers, and educators, as they can inform the development of targeted interventions and educational campaigns.

In summary, the topic of nicotine pouches, their perception, beliefs, and health effects, is of paramount importance in public health. As these products continue to gain popularity in Pakistan, we must engage in comprehensive research endeavors to shed light on the complex dynamics surrounding their use. Collaborative efforts between researchers, policymakers, and public health advocates will be crucial in formulating evidence-based policies and ensuring that individuals are equipped with accurate information to make informed choices regarding their health and nicotine use.

REFERENCES

1. Keogh A. Nicotine pouches. *Br Dent J* 2021;230(2):61-2. <https://doi.org/10.1038/s41415-021-2622-y>
2. Robichaud MO, Seidenberg AB, Byron MJ. Tobacco companies introduce 'tobacco-free' nicotine pouches. *Toba Control* 2020;29(e1):e145-6. <https://doi.org/10.1136/tobaccocontrol-2019-055321>
3. Grand View Research. Nicotine pouches market size worth \$22.98 billion by 2030. 2022. [Accessed on:]. Available from URL: <https://www.grandviewresearch.com/press-release/global-nicotine-pouches-market>
4. Murkett R, Rugh M, and Ding B. Nicotine products relative risk assessment: an updated systematic review and meta-analysis. *F1000Res* 2022;9:1225. <https://doi.org/10.12688/f1000research.26762.2>
5. Mallock N, Schulz T, Malke S, Dreiaek N, Laux P, Luch A. Levels of nicotine and tobacco-specific nitrosamines in oral nicotine pouches. *Toba Control* 2022;33(2):193-9. <https://doi.org/10.1136/tc-2022-057280>
6. Sparrock LS, Phan L, Chen-Sankey J, Hacker K, Ajith A, Jewett B, et al. Nicotine pouch: awareness, beliefs, use, and susceptibility among current tobacco users in the United States, 2021. *Int J Environ Res Public Health* 2023;20(3):2050. <https://doi.org/10.3390%2Fijerph20032050>
7. Nawaz MT, Hameed AN, Yasin F, Angez M, Gul K, Irfan O, et al. Knowledge, attitudes, practices, and prevalence of nicotine pouches in Pakistan: where do we stand? *Int J Community Med Public Health* 2023;10(6):2037-46. <http://dx.doi.org/10.18203/2394-6040.ijcmph20231679>
8. Manzar E, Zaidi AH, Muhammad A, Hassan H, Aziz MS, Anwar W, et al. Awareness and perception of nicotine pouches and e-cigarettes among dental students in Lahore. *Pak J Med Health Sci* 2021;15(12):3681-8. <http://dx.doi.org/10.53350/pjmhs2115123681>

CONFLICT OF INTEREST

Authors declared no conflict of interest, whether financial or otherwise, that could influence the integrity, objectivity, or validity of their research work.

GRANT SUPPORT AND FINANCIAL DISCLOSURE

Authors declared no specific grant from any funding agency in the public, commercial or non-profit sectors



This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International License.

KMUJ web address: www.kmuju.kmu.edu.pk

Email address: kmuju@kmu.edu.pk