

## **SMOKELESS TOBACCO (NASWAR) “A RISK FACTOR FOR ORAL CANCER AND ITS LEGISLATION IN PAKISTAN”**

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Smoke less tobacco or chewing tobacco ( snuff, Naswar etc-) is mostly consumed in Afghanistan, Pakistan, India, Iran and Russian federations. It is held in the mouth inside the cheek between the gums and cheeks or lips in the form of lump, pinch or dip for extended period of time. Snuff is moist powdered available in the form of pouches. Popular brands are Banuu and Mardan brands. Sun and heat dried tobacco leave in powdered form , slaked lime, ash, flavoring agents and coloring agents are mixed together. Then water is added and the mixture is packed in pouches. It has a very pungent and power full smell, resembling that of a fresh bale of coastal hay and has a subtle flavors when it mixes with saliva. The nicotine effects can occur within 5 minutes after its intake producing a slight burning sensation on the inner mucosa and tongue.

Smokeless tobacco is one of the major risk factor associated with many of oral and systemic disease in particular with oral Squamous cell carcinoma.<sup>1,2,3</sup> Tobacco contains more than 3000 carcinogens and the most common group is nicotine and N- nitrosamines. The 5-15 years chewing tobacco habit causes high frequency mutation in codons 12, 13 and 61 of H-ras, K-ras and N-ras oncogenes and also causes keratosis of oral mucosa making favored conditions to develop carcinoma.<sup>4</sup> Pakistan has one of the highest incidence rates of oral cancer in the world.<sup>5</sup> It is the most common cancer among men and the second most common cancer among women in the country.<sup>6</sup> Tobacco use and alcohol consumption are considered as the leading modifiable risk factors for oral cancer and account for over 70% of the population attributable fraction for oral cancer.<sup>7</sup> A World Health Organization report from 2001 suggests that Pakistan has one of the lowest per capita consumption of alcohol in the world which might be due to a public ban on consumption and sale of alcohol.<sup>8</sup> Tobacco, therefore, seems to be a major reason for the high incidence of oral cancer in Pakistan, this is substantiated by recent evidence from systematic reviews of literature pertaining to South Asia which implies that smokeless tobacco is one of the main

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factors responsible for a high incidence of oral cancer in the region.<sup>9,10</sup> Results from the Global Youth Tobacco Survey, carried out recently in Pakistan, show that 5.3% (approx. 4.2 million) of the country's youth currently use smokeless tobacco products and another 4.7% were past users.<sup>11</sup> The results from Global Youth Tobacco Survey are particularly alarming because the survey sample consisted of school going children aged 13–15 years. Evidence shows that a social disparity exist with regards to both oral cancer incidence and smokeless tobacco use i.e., People from low socioeconomic status, and lower or no education level, are at a higher of oral cancer and having an smokeless tobacco habit.<sup>12</sup> This could imply, that potentially the actual prevalence of smokeless tobacco use might even be higher among the youth of Pakistan, given that the national literacy rate is just 46%.<sup>13</sup>

Pakistan is a signatory of the WHO's Framework Convention for Tobacco Control since 2005, and has taken significant steps to curb smoking in the country.<sup>14</sup> Article 16 of the Framework Convention for Tobacco Control states, “Each Party shall adopt and implement effective legislative, executive, administrative or other measures at the appropriate government level to prohibit the sales of tobacco products to persons under the age set by domestic law, national law or eighteen”, an intervention aimed at curbing the use of tobacco among minors. However, the results of the Global Youth Tobacco Survey and evidence from more recent studies suggest that tobacco control in Pakistan may be lagging in its effectiveness to reduce the prevalence of tobacco products use among minors.<sup>15,16</sup> A 2014 research article explored public policy gaps with regards to Smoke Less Tobacco control in four Asian countries including Pakistan, by conducting a review of policy documents and interviews with key informants, one of the findings of this study was that, “the sale of smokeless tobacco to and by minors is prohibited in Pakistan”.<sup>17</sup> The dichotomy between the alarming prevalence of Smokeless Tobacco use among minors in Pakistan and the reported findings of the aforementioned policy review study warranted a review of the Government of Pakistan policies to identify, how the issue of sale to and by, and consumption of Smokeless Tobacco by minors has been addressed in these policy documents. The “section 8” of the 2002 Ordinance only focuses on “smoking tobacco” products sales to and by minors without mentioning smokeless tobacco. On the contrary, the monitoring tool designed to assess the implementation of the same ordinance

assesses the sale of both smoking and other forms of tobacco, to and by minors, which implies a disconnect between the two documents. The 2002 ordinance also puts a selective ban on the sale of any tobacco products to any age group i.e., only inside and in the near vicinity (50 m) of educational and public sector institutions, and renders these public and educational buildings "smoke free". This would technically imply that a person, irrespective of age, can consume smokeless tobacco within these institutions. Additionally, given that 54% of Pakistan's population is not literate the potential applicability of the section 9 of the ordinance may only be limited to half of the country's population.<sup>13</sup> In Sindh province there is a selective ban on manufacture and sale of Gutka but other forms of Smokeless Tobacco are still manufactured and sold. In Khyber Pakhtunkhwa both children and adolescents are not allowed to work in the manufacture or processing of Naswar but there are no provisions for prohibition of sale of Naswar to and by minors.

With regards to the difference between our finding and those reported by Khan et al. I believe that the basis on which they concluded that "In Pakistan, the sale of Smokeless Tobacco to and by minors is prohibited", are too vague and open to interpretation, to draw a solid conclusion from. Firstly, "section 9" of the 2002 ordinance puts only a "geographically limited" ban/prohibition on the sale of tobacco products in, or in the near vicinity of selected public/private buildings. Given that section 8 of the ordinance only prohibits sale of cigarettes and other smoking substances (not Smokeless Tobacco) to and by minors, thus, technically a minor could sell or buy an Smokeless Tobacco product at a 51 m distance from the institutions/buildings mentioned in the ordinance.

From these findings it is evident that there are gaps regarding children and particularly "adolescents", in the Smokeless Tobacco control policies of Pakistan. Adolescence is considered one of the most vulnerable age groups for tobacco uptake and therefore shall be one of the primary targets of a tobacco control policies and interventions.<sup>18</sup> From the review of the official documents of the Government of Pakistan, we can also infer that most of the focus is on the supply side i.e., manufacture and sale of tobacco products, with no legislations regarding the demand side i.e., Possession, use, and purchase (PUP) of tobacco products by minors. Sufficient evidence exists that Possession, use, and purchase laws aimed at reducing access to tobacco products are an effective adjuvant to any tobacco control measures.<sup>19</sup>

From the results and discussion I can conclude that a differential focus with regards to smoking and smokeless tobacco products exists in the current tobacco control policies in Pakistan. There is also some evidence that the tobacco industry as well as some part of the scientific community suggest smokeless tobacco

use as means of harm reduction, which might lead to an increase in the uptake of smokeless tobacco products in Pakistan. As such, this warrants a non-differential focus on both smoking as well as smokeless tobacco products from the Government of Pakistan and calls for fashioning of legislative measures, aimed to curb both the sale and consumption of smokeless tobacco products among minors.

## REFERENCES

1. Critchley JA, Unal B. Health effects associated with smokeless tobacco: a systematic review. *Thorax*. 2003;58(5):435–43.
2. Lee PN, Hamling J. Systematic review of the relation between smokeless tobacco and cancer in Europe and North America. *BMC Med*. 2009;7:36.
3. Boffetta P, Hecht S, Gray N, Gupta P, Straif K. Smokeless tobacco and cancer. *Lancet Oncol*. 2008;9(7):667–75.
4. Saranath D, Chang SE, Bhoite LE et al. High frequency mutation in codons 12 and 61 of H-ras oncogene in chewing tobacco- related to human oral carcinoma in India. *BJC* (63); 9191: 573-578.
5. De Camargo CM, Votu L, Guerra-Yi M, Chapuis F, Mazuir M, Curado MP. Oral cavity cancer in developed and in developing countries: population-based incidence. *Head Neck*. 2010;32(3):357–67.
6. Ferlay J, Soerjomataram I, Ervik M, Dikshit R, Eser S, Mathers C et al. Cancer Incidence and Mortality Worldwide: sources, methods and major patterns in GLOBOCAN 2012. *Int J Cancer*. 2015; 136(5): 359-86.
7. Radoi L, Paget-Bailly S, Cyr D, Papadopoulos A, Guida F, Schmaus A et al. Tobacco smoking, alcohol drinking and risk of oral cavity cancer by subsite: results of a French population-based case-control study, the ICARE study. *Eur J Cancer Prev*. 2013;22(3):268–76.
8. World Health Organization Alcohol per capita consumption, patterns of drinking and abstention worldwide after 1995. appendix 2. *Eur Addict Res*. 2001;7:155–157.
9. Khan Z, Tonnies J, Muller S. Smokeless tobacco and oral cancer in South Asia: a systematic review with meta-analysis. *J Cancer Epidemiol*. 2014;2014:394696.
10. Guha N, Warnakulasuriya S, Vlaanderen J, Straif K. Betel quid chewing and the risk of oral and oropharyngeal cancers: a meta-analysis with implications for cancer control. *Int J Cancer*. 2014;135(6):1433–43.
11. Fact sheets Pakistan—Karachi C. Global Youth Tobacco Survey (GYTS). Geneva: World Health Organization. 2013.
12. Conway DI, Petticrew M, Marlborough H, Berthiller J, Hashibe M, Macpherson LM. Socioeconomic inequalities and oral cancer risk: a systematic review

and meta-analysis of case-control studies. *Int J Cancer.* 2008;122(12):2811–9.

13. Latif A. Alarming situation of education in Pakistan. Press International Report. 2011. Available at <http://www.closer2you.net/educationEN.pdf>. accessed-18Nov2016.
14. World Health Organization. WHO Report on the Global Tobacco Epidemic, 2013: Enforcing Bans on Tobacco Advertising, Promotion and Sponsorship. Geneva: WHO; 2013.
15. Khan JA, Amir Humza Sohail AM, Arif Maan MA. Tobacco control laws in Pakistan and their implementation: a pilot study in Karachi. *J Pak Med Assoc.* 2016;66(7):875–9.
16. Siddiqi K, Scammell K, Huque R, Khan A, Baral S, Ali S, Watt I. Smokeless tobacco supply chain in south asia: a comparative analysis using the WHO framework convention on tobacco control. *Nicotine Tob Res.* 2016;18(4):424–30.
17. Khan A, Huque R, Shah SK, Kaur J, Baral S, Gupta PC, Cherukupalli R, Sheikh A, Selvaraj S, Nargis N, Cameron I, Siddiqi K. Smokeless tobacco control policies in south asia: a gap analysis and recommendations. *Nicotine Tob Res.* 2014;16(6):890–4.
18. Nishtar S, Mirza Z, Mohamud KB, Latif E, Ahmed A, Jafarey NA. Tobacco control: National Action Plan for NCD Prevention, Control and Health Promotion in Pakistan. *J Pak Med Assoc.* 2004;54(12 Suppl 3):S31–41.
19. Jason LA, Hunt YM, Adams ML, Pokorny SB, Gadireaju PB. Strengthening communities' youth access policies may facilitate clean indoor air action. *Prev Chronic Dis.* 2007;4(4):A113.

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