

## Social and Family Influence on Initiation of Smokeless Tobacco Addiction: Report from A Tertiary Care Hospital in Karachi.

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### ABSTRACT

**Objective:** This study aims to assess the family and social influence on the initiation of tobacco chewing among tobacco addicts visiting Dr. K.M Pfau civil hospital, Karachi.

**Methodology:** A cross-sectional study was conducted at Dr. K.M Pfau civil hospital Karachi. Two groups were compared, 65 tobacco chewers who were classified as group 1, 65 more people of similar age and gender who abstained from all tobacco use were classified as group 2. Data was collected using a questionnaire about tobacco chewing addiction in parents, siblings and friends from both groups. The data was analyzed using SPSS.

**Results:** In group 1, there were 65 tobacco chewers and in group 2, there were 65 healthy controls of alike age and gender who had no addiction. In group 1, 40% individuals had tobacco chewer parents, 14% individual's siblings were tobacco chewers and 18% had both tobacco chewer parents and siblings. In group 2, 11% individuals had parents who were tobacco chewers, 18% had tobacco chewer siblings and 71% of the individual did not have a tobacco chewing habit in the family. This shows tobacco chewing habits are more common in people with parents and siblings having these habits rather than people who have no addiction in the family.

**Conclusion:** Compared to non-user families, subjects of tobacco-using families had a greater prevalence of tobacco use. These findings provide guidance for creating effective tobacco reduction plans that reduce tobacco use.

**Keywords:** Smokeless Tobacco, Tobacco Use Initiation, Social Influence, Family Influence, Addiction

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### INTRODUCTION:

Tobacco is derived from plants of Genus Nicotiana. It is one of the most commonly used substance of addiction in world. The major component of tobacco is nicotine which is extracted from the leaves of these plants. Nicotine, the addictive compound in tobacco, mimics a natural brain chemical called acetylcholine. It floods the reward system with dopamine, creating a temporary feeling of pleasure. This "reward" reinforces nicotine use, despite its harmful effects on the body, like raising blood pressure and heart rate. People get addicted to it, which leads to its repeated consumption.<sup>1</sup> One of the main avoidable causes of early mortality, disability and illness worldwide is tobacco consumption. There is a strong relationship between smokeless tobacco use and oral potentially malignant diseases. There are more than 30 carcinogens present in smokeless tobacco.<sup>2</sup> Its use also proves to be a substantial contributor to the incidence of malignancies of the upper aerodigestive tract.<sup>3</sup> The mutagenic impacts of tobacco are subject to the frequency and duration of its utilization and their effects are sped up with simultaneous usage of two or more agents.<sup>4</sup>

More than 90% of oral carcinomas are pronounced to be related to the usage of tobacco products.<sup>5</sup> In one research, the loss of life from tobacco is assessed to reach more than 8 million each year by 2030 and 1 billion individuals can die because of tobacco in the 21st century.<sup>6</sup> The Global

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Adult Tobacco Survey (GATS) 2014 reported that 23.9 million citizens of Pakistan use any form of tobacco. 31.8% of men while 5.8% of women are tobacco consumers.<sup>7</sup> A worrying situation has arisen globally due to the rising usage of smokeless tobacco. Pakistan is the second most common country after India where smokeless tobacco is consumed.<sup>8</sup> Numerous research revealed that there is a considerable connection between sibling and parental tobacco addiction and the beginning of smoking in adolescents. Children's principles, mindsets, etiquette and habits are shaped by their families, who also have the most immediate and long-lasting influence on their education and psycho-intellectual development. Data has shown that the likelihood of addiction in individuals is high in those who saw their parents and siblings using it.<sup>9</sup>

In Pakistan, various forms of tobacco are used. Its consumption varies from region to region. Studies have also shown that individuals who grew up around tobacco addicted parents are more likely to start taking tobacco at a younger age than those who weren't.<sup>10</sup> One of the reasons for adopting this habit is a lack of knowledge about the hazards and diseases caused by tobacco.<sup>11</sup> Therefore, it is important to determine the factors responsible for the initiation of tobacco chewing habits so that strategies can be created to control its usage at an early stage. There is currently not much information available on how the home's atmosphere affects tobacco addiction in Karachi. Consequently, we have made an effort to ascertain the customs and trends of tobacco use in both tobacco-using and non-using families. We also determine the influence of parents and siblings on children's tobacco use of both tobacco users and non-users in this city.

#### **METHODOLOGY:**

A cross-sectional study was conducted at Dr. K.M Pfau Civil Hospital Karachi. In this study, two groups were compared. It included 65 patients visiting the OPD complex of Dr. K.M. Pfau Civil Hospital Karachi who were tobacco chewers and were classified as group 1. 65 more people of similar age and gender who abstained from all tobacco use were requested to participate and were classified as group 2. This sample size was calculated by taking reference from a similar previous study.<sup>7</sup> All participants belonged to similar socioeconomic status as patients visiting government sector hospital are usually from middle to low socioeconomic backgrounds. Approval was granted from Institutional Review Board of Dow University of Health sciences with reference number: IRB-3046/DUHS/approval/2023/32. The study was conducted from 1<sup>st</sup> January 2023 to 2<sup>nd</sup> June 2023. After taking written and informed consent, data were collected from the participants using a questionnaire about tobacco chewing addiction in parents, siblings and friends from both groups. Reasons were inquired for initiating this habit. The questions were adjusted to gather information on sociodemographic elements from eligible individuals. The questionnaire was in English as well as Urdu. The questions

were directly asked from the participants by the interviewer and confidentiality was ensured. The data was analyzed using Statistical Package for Social Sciences (SPSS) version 24. The data was expressed as percentages. Frequencies of both groups were compared using the CHI square test. P-values less than 0.05 was considered statistically significant for all analyses.

**Inclusion Criteria:** Patients visiting OPD of the civil hospital for any reason and are addicted to tobacco for group 1

Patients who are not addicted to any form of tobacco for group 2. Age between 30 to 75 years. Gave written and informed consent to participate in the study. Both genders. **Exclusion Criteria:** Critically or severely ill patients Pregnant females Children.

#### **RESULTS:**

In group 1, there were 65 tobacco chewers and in group 2, there were 65 healthy controls of alike age and gender who had no addiction. Each group had 51 males (78.5%) and 14 females (21.5%). The patients were between the ages of 30 to 75 years with a mean age of 43.25 years. The basic sociodemographic characteristics are shown in Table 1, 26 (40%) individuals had tobacco chewer parents, 9 (14%) individual's siblings were tobacco chewers and 12 (18%) had both tobacco chewer parents and siblings. 18 (28%) individuals had no tobacco chewing habit in their family. In group 2, 7 (11%) individuals had parents who were tobacco chewers, 12 (18%) had tobacco chewer siblings and 46 (71%) of the individual did not have a tobacco chewing habit in the family. This shows tobacco chewing habits are more common in people with parents and siblings having these habits rather than people who have no addiction in the family (p value <0.001). (Table 2) Group 1 individuals had 36 (55%) friends addicted to tobacco but only 29 (45%) had no friends who chewed tobacco. Group 2 individuals had 12 (18%) tobacco chewer friends, while 53 (82%) did not have any friends who chewed tobacco. Hence, people who have friends who chewed tobacco are more likely to become addicted to tobacco (p value <0.001). (Table 2). The maximum number of individuals, 38 (58.5%), started this habit between the ages of 16 and 30. 15 (23.1%) started this habit at 15 years and below. 10 (15.4%) started chewing tobacco between 31 to 45 years and 2 (3%) started this habit after 45 years. This shows majority of the people take up this addiction in adolescence. (Table 1)

Group 1 was asked why this habit was initiated, and 22 (33.8%) replied that they liked the taste.<sup>19</sup> (29.2%) picked this habit due to pressure from friends and family. 15 (23.1%) said that this addiction helps them relax mentally and physically, and 9 (13.8%) said it helps them concentrate on work. (Table 2)

#### **DISCUSSION:**

Pakistanis consume tobacco at a rate that is among the highest in the world and is one of the top fifteen nations in

the world for the high incidence of diseases linked to tobacco use. Recent estimates show that among persons 15 years of age and older, 5.5% of women and 27.0% of men are reported daily tobacco product users.<sup>12,13</sup> Our study showed that tobacco chewing habit is higher in individuals with tobacco chewing parents and siblings than nonusers. According to research, addiction to tobacco appears to "run in the family" and children who grow up in households where tobacco use is a habit may emulate it in their conduct as adults based on what they have seen and experienced at home. The risk of addiction may also be influenced by variables including gender, race, developmental stage, and social milieu. Thus, an individual's susceptibility or aversion to such addictions is influenced by both nature and upbringing.<sup>14</sup> Research showed that a history of substance use in the home, poor parental supervision, parental acceptance of its use and family disputes are the predictors of permanent tobacco product use.<sup>15</sup> Its associations with socialization, family customs, and cultural legacy sustain its use over generations.<sup>16</sup> In one study it was mentioned that children being asked to purchase and bring tobacco products from stores for the family members at home and leniency for handing over such products to the child when asked for, play a role in the initiation of tobacco by the child.<sup>12</sup> Policies should be introduced to concentrate on educating children as well as their families about the hazards of tobacco and thereby

preventing its usage.<sup>17</sup> Research demonstrates that parental disapproval of smoking reduces the likelihood of adolescents taking up smoking. Initiatives at the family and community levels should concentrate on strengthening parental and older sibling opposition to tobacco use while reducing potential intergenerational influences. Parents and other adult family members should set positive examples by making responsible choices.<sup>18</sup>

There have been intricate relations between sociocultural elements and tobacco use that affect patterns of usage as well as the acceptance or rejection of tobacco by various segments of society. Our study reveals that addiction to tobacco is more prevalent among those with friends addicted to tobacco. It is stated in a study that peers and friends have a great impact on the commencement of tobacco. In several Southeast Asian nations, the social structure makes use of smoke-free tobacco to facilitate various forms of gathering and interaction. Smokeless tobacco usage persists as a cultural practice. It is also utilized in various American and European nations as a less dangerous alternative to cigarettes. Most often, the main reason for adopting this habit is intra-group communication. They usually deliberate smoke-free tobacco as the norm and continue its practice in social meetings.<sup>19</sup>

Our analysis revealed that most individuals began chewing

Table 1: Sociodemographic Characteristics

Characteristics	Categories	Group 1(n=65)		Group 2(n=65)		P value
		Frequency	Percentage	Frequency	Percentage	
Age	30-45 years	43	66.2%	43	66.2%	-
	46-60 years	19	29.2%	19	29.2%	
	60-75 years	3	4.6%	3	4.6%	
Gender	Male	51	78.5%	51	78.5%	-
	Female	14	21.5%	14	21.5%	
Education	Uneducated	8	12%	3	5%	0.18
	Primary	17	26%	11	17%	
	Secondary	16	25%	20	31%	
	Metric	24	37%	31	48%	
Occupation	Unemployed	23	35%	8	35%	0.002
	Employed	42	65%	57	65%	
Habitat	Urban	50	77%	56	86%	-
	rural	15	23%	9	14%	

Table 2: Social Factors influencing Tobacco use

Parameters	Group 1 n=65		Group 2 n=65		P value
	Frequency	Percentage	Frequency	Percentage	
Individuals having tobacco user parents	26	40%	7	11%	<0.001
Individuals having tobacco user siblings	9	14%	12	18%	<0.001
Individuals having tobacco user parents and siblings	12	18%	0	0%	<0.001
Individuals having no tobacco user in the family	18	28%	46	71%	<0.001
Individuals with tobacco addicted friends	36	55%	12	18%	<0.001
Individuals with no tobacco addicted friends	29	45%	53	82%	<0.001

tobacco during their teenage years. Adolescence is the developmental period that is particularly susceptible to peer and social pressure as well as parental influence. Youth's initiation of tobacco is predicted by the use of family members and friends.<sup>20</sup> Much earlier research has demonstrated that as adolescents get older, there is a significant increase in tobacco consumption. This is consistent with the prevalence of tobacco product usage being two or three times higher at age 15 than at age 13. The rising rate of tobacco use among teenagers as they become older may be partially attributed to trying new adventures during adolescence and a need for unique experiences as they grow from kids to adults.<sup>21,22</sup> Even though Pakistan forbids the sale of smokeless tobacco to minors, its increased popularity is concerning.<sup>23</sup> The increasing drug usage rate with age underscores the importance of implementing effective tobacco control measures and providing comprehensive education in schools and colleges.

WHO Framework Convention on Tobacco Control (WHO FCTC) is created by World Health Organization. It is concerned about the expansion in the overall production and utilization of smoked and smokeless tobacco items. The international FCTC aims to safeguard current and future generations against the deleterious effects of tobacco use and exposure to smoke on health, society, the environment, and the economy by establishing a set of global guidelines outlining the risks associated with tobacco use and prohibiting its use in all forms.<sup>24</sup> It addresses the social and economic drifts of an effective tobacco demand reduction plan.<sup>25</sup> It was discovered that, compared to nations that had not joined the FCTC, the prevalence of teenage tobacco addiction tended to decline more among ratified nations. National implementation and enforcement of the regulatory measures that the FCTC mandates or that the WHO MPOWER package recommends can lead to a decline in the demand for tobacco products, including among teenagers.<sup>16</sup>

Tobacco control laws should be enforced by legislative action and health promotion initiatives. The prohibition of tobacco advertisement, the increase in tobacco costs, banning these products in the workplace and the provision of free cessation aids are all tobacco control strategies. Consequently, healthcare strategies directed at families as a whole are likely to be more effective in devising tobacco control plans. It is important to gather information on the attitudes, convictions, and views of the community on SLT in order to support the creation of successful, culturally aware cessation programs. It is not only crucial to enforce such schemes that are designed for the lessening of smokeless tobacco but to analyze the effects of such policies to comprehend the burden and trajectory of smokeless tobacco use.

The study's primary limitations lie in its restricted scope and data collection methods. The small sample size drawn solely from patients limits generalizability, and excluding healthy controls hinders establishing a clear contrast. Additionally,

focusing solely on family history overlooks potential environmental and socio-economic factors influencing tobacco use. Furthermore, its emphasis on smokeless tobacco within a single Karachi hospital restricts generalizability to the broader Pakistani population and various tobacco types. Notably, excluding smoking from the analysis underestimates the total burden of tobacco use, potentially misrepresenting its impact. These limitations underscore the need for comprehensive studies encompassing larger, diverse populations, various tobacco types, and diverse data collection methods, including the inclusion of healthy controls and environmental/socio-economic factors, to fully grasp the complex dynamics of tobacco use and inform effective reduction strategies.

## CONCLUSION:

The current study not only affirms higher tobacco use among siblings and parents in tobacco-user families compared to non-user families, but also highlights a significantly higher prevalence among children. However, these findings represent a specific demographic at a single facility. Further research encompassing diverse ethnicities, larger populations, and broader geographic regions is crucial to refine effective tobacco reduction strategies. While this study offers valuable insights, our fight against tobacco dependence demands continued investigation and comprehensive interventions.

### Authors Contribution:

**Munira Tahir:** Conception, design, analysis and interpretation, drafting the manuscript, revising it critically

**Tariq zahid khan:** Conception and design, revising it critically

**Tehmina Junaid:** Acquisition of data analysis and interpretation

**Rajesh Vasandani:** Acquisition of data analysis and interpretation

**Mohammad Hussain Rizvi:** Acquisition of data analysis and interpretation

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