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Prevalence, Pattern & Risk Factors of Tobacco Smoking among Male Adult Population of Hayatabad Peshawar Khyber Pakhtunkhwa Pakistan

Adeela Mustafa[1], Nadia Qazi[2], Rubina Shah[3], Waqas Mohyuddin[4], Rashid Ahmad[5], Owais Kareem[6], Muhammad Ishtiaq[7]*, Jawad Ali[8], Said Akbar Khan[9], Syed Shahmeer Raza[10], Muhammad Nasir Khabir [11]

[1]Adeela Mustafa-Assistant Professor, Department of Community Medicine & Public Health, Khyber Medical College, Peshawar, Pakistan

[2]Nadia Qazi-Assistant Professor, Department of Community Medicine & Public Health, North West School of Medicine, Hayatabad Peshawar, Pakistan

[3]Rubina Shah-Clinical Psychologist, Department of Community Medicine & Public Health, North West School of Medicine, Hayatabad Peshawar, Pakistan

[4]Waqas Mohyuddin-Assistant Professor, Department of Community Medicine, Nowshera Medical College, Nowshera, Pakistan

[5]Rashid Ahmad-Assistant Professor, Department of Medicine, Lady Reading Hospital/MTI Peshawar Pakistan

[6]Owais Kareem-Senior Registrar, Department of Psychiatry &Behavioural Sciences, Nishtar Medical University, Multan, Pakistan

[7*]Muhammad Ishtiaq-Professor &Head Of Department, Department of Community Medicine & Public Health, North West School of Medicine, Hayatabad Peshawar, Pakistan

[8]Jawad Ali-Assistant Professor, Environmental Science, Faculty of Life Sciences & Informatics, BUITEMS, Quetta, Balochistan, Pakistan

[9]Said Akbar Khan-Associate Professor, Department of Earth & Environmental Sciences, Bahria University, Islamabad, Pakistan

[10]Syed Shahmeer Raza-Lecturer, Department of Physiology, Khyber Medical College/KhyberTeaching Hospital, Peshawar, Pakistan

[11]Muhammad Nasir Khabir-PhD Scholar, Department of Zoology, University of Peshawar, Peshawar, Pakistan

Correspondence Author

[7]*Muhammad Ishtiaq-Professor &Head Of Department, Department of Community Medicine & Public Health, North West School of Medicine, Hayatabad Peshawar, Pakistan

Cell: +92-334-9121822; Email: drishtiaq250@yahoo.com

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ABSTRACT

Background: The prevalence of tobacco smoking is increasing day by day and itkills one third of its users. According to World Health Organization, 6.2 million deaths per year are attributed directly to tobacco smoking.

Objectives: To find the prevalence, pattern and risk factors of tobacco smoking among male adult population of Hayatabad District Peshawar Khyber Pakhtunkhwa Pakistan.

Study design: A cross-sectional descriptive study

Place and duration of study: Hayatabad district Peshawar Pakistan, from January 2020 to March 2020

Methods: After taking ethical approval, a cross-sectional study was conducted. Male adults of age more or equal to 18 were included in the study while those not permanent residents of district were excluded from the study. Samples were selected from two phases i.e. phase V & VII. A total of 385 male adults were included in the study based on 50% prevalence and 95% confidence interval. A structured was used to collect data and presented in form of tables.

Results: Out of 385 respondents, 39.48% had positive tobacco smokingstatus. Out of 152 current smokers, 71.71% were of age less than 30 years, 21.05% had no job, 37.50% were illiterate, 33.55% had monthly income of Rs. < 10000/ pm, 69.08% unmarried, & 54.61% living in joint family system.

Conclusion: The prevalence of tobacco smoking is increasing and the key factors were young age, parental factors, exposure to second hand smoke at workplace, friends appreciating smoking, unemployment, being in an educational institute, low monthly income, separate family setup, and unmarried. Moreover, there was need of comprehensive anti-tobacco smoking campaigns and mass awareness to reduce the mortality and morbidity among the communities.

Keywords: Prevalence, Tobacco, Parents, stress, education, awareness

INTRODUCTION

Globally, tobacco smoking is a risk factor of many communicable and non-communicable diseases [1]. It kills one third to half of its users [2]. According to World Health Organization(WHO), 6.2 million deaths per year are attributed directly to smoking and this value is expected to rise in future. If proper measures are not taken, by 2030 the rate will rise to 8 million deaths per year, of which 80% will occur in developing countries [3]. It is reported by WHO that among the smokers worldwide the ratio of male is 47% and female is

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12%. However, the percentage in developing countries varies from that of developed countries: 48% males and 7% females in developing countries whereas, 42% males and 24% females in developed countries are smokers [1].

Pakistan ranks 10th in overall tobacco producing countries [4] and this industry are continuously expanding 5% per annum [5]. A study conducted in 1990-1994 showed prevalence of 21.6% (36% males and 9% females) in people aged 15 and above [5]. The report given by WHO (2011) asserts the prevalence of active tobacco smokers to be 32.4% in males and 5.7% in females [2]. A study conducted in Karachi in the year 2002 reckoned 32.7% of the overall population to be tobacco smokers [6]. According to this study, the highest percentage was that of male college going students whose ages were between 21-25, which shows the prevalence of tobacco smoking to be higher in adults as compared to others. Further to this, a research was done in 2005, where the prevalence of smoking, exclusively focusing on adult population, was 13.7% [4]. Keeping in view the fluctuating results in adult population, a study was conducted in Peshawar among students of University of Peshawar showing the frequency of tobacco smoking was 15% [7].

Smoking is the risk factor of many diseases for instance coronary heart disease, peripheral vascular disease, cancers of mouth, throat, larynx, lungs, bladder and pulmonary emphysema [5]. Surprisingly, the non-smokers are prone to same hazards if exposed to second hand smoke butacute myocardial infarction and lung cancer are the most common risks in the passive smokers [8]. After being aware of the adverse effects of tobacco smoking, people continue to use tobacco all over the world. The environmental factors specified by the different researches include peer pressure, parental smoking [9, 10], sibling influence [10], uncle smoking [4], illiterate parents [1], non-working mothers [1, 9], low income [11, 12], social acceptability and marketing efforts [13], nuclear family setup [14] and governmental schooling [1, 4]. Whereas, the personal factors include self-confidence, relieving boredom, relaxation [15], old age, poor educational performance, availability to pocket money [16], spending leisure time outside home [4], illiteracy, being married and poor general health [5], adverse childhood experiences [17], mental illness [18] and nicotine dependence [19].

The tobacco smoking is highly prevalent in Pakistan and is causing many health issues. Each year large number of deaths are attributed to tobacco smoking for which immediate measures should be taken. Hence, the awareness programs for the cessation of smoking can be very effective in this respect. However, it is significant to find the determinants of smoking before

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designing any smoking cessation program. There has been plenty of research conducted on the federal, provincial as well as district level in Pakistan. However, looking at the drastic change in the prevalence and the changing factors of tobacco smoking (as mentioned above), there is a need to conduct a research in the present time. Thus this cross sectional study was conducted to assess the prevalence, pattern and risk factors of tobacco smoking among male adult population of Hayatabad District Peshawar Khyber Pakhtunkhwa Pakistan.

METHODOLOGY

After taking ethical approval from the Institutional Ethical Approval Committee, a cross-sectional study was conducted from January 2020 to March 2020, in Hayatabad Peshawar Pakistan, in which out of seven phases two were randomly selected. A total of 385 male adults were included in the study based on 50% prevalence and 95% confidence interval. The non probability consecutive sampling technique was used to select the participants. Male adults of age more or equal to eighteen (18) years were included while those not permanent residents of Hayatabad were excluded. Those who gave informed written consent were included and were assured that their identity and personal information will not be disclosed and will solely be used for the purpose of study. A self structured questionnaire was used to collect data. The questionnaire comprised of questions relevant to the demographics including; name, age, address, contact number, occupation, marital status and their family setup. Moreover, questions on the educational status and monthly income of the respondents as well as of their parents. The status of current tobacco cigarette smoking, past cigarette smoking and number of cigarettes smoked per day was also inquired. In order to find out the factors responsible for smoking tobacco cigarettes, questions like parental smoking, sibling smoking, permission of smoking at home and second hand smoke at work place were asked. Moreover, the reasons for tobacco smoking were investigated. The point of view of respondents about the harmful effects of tobacco smoking was also inquired. After data collection, data was entered and analyzed by SPSS 23.0, finally data was presented in form of tables.

RESULTS

Table No. 1. Frequency of Tobacco Smoking Among the study participants (n=385)

	Response	Frequency	Percentage
Tobacco Smoking	Yes	152	39.48

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	No	233	60.52

Table No. 2. Frequency of Demographics of the Study Participants (n=385)

Variable	Response	F (385)	Percentage	F(152)	Percentage
Age in years	< 30	249	64.68	109	71.71
	30 to 40	93	24.16	28	18.42
	40 to 50	29	7.53	11	7.24
	> 50	14	3.64	4	2.63
Occupation	No Job	85	22.08	32	21.05
	Govt	94	24.42	21	13.82
	Pvt	109	28.31	32	21.05
	Others	97	25.19	67	44.08
Educational status	Literate	279	72.47	95	62.50
	Illiterate	106	27.53	57	37.50
Monthly Income of Respondents	< 10000	123	31.95	51	33.55
	10 to 20000	142	36.88	49	32.24
	> 20 000	120	31.17	52	34.21
Marital Status	Married	163	42.34	47	30.92
	Unmarried	222	57.66	105	69.08
Parents Occupation	No Job	59	15.32	22	14.47
	Govt	91	23.64	35	23.03
	Pvt	124	32.21	51	33.55
	Others	111	28.83	44	28.95
Parents Educational Status	Literate	279	72.47	93	61.18
	Illiterate	106	27.53	59	38.82
Respondents Parents Monthly Income	< 10000	51	13.25	20	13.16
	10 to 20000	137	35.58	47	30.92
	> 20 000	197	51.17	85	55.92
Parents condition	Both alive	195	50.65	58	38.16
	Both dead	13	3.38	6	3.95
	Father alive	68	17.66	27	17.76
	Mother alive	109	28.31	61	40.13
Type of family setup	Joint	224	58.18	83	54.61

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	Separate	161	41.82	69	45.39

Table No. 3. Tobacco Smoking Determinants among the Study Participants of Hayatabad Peshawar Pakistan (n=385)

Variables	Response	Frequency	Percentage	Frequency	Percentage
Using tobacco in any other form (385)	Yes	206	53.51	133	87.5
	No	179	46.49	19	12.5
If yes, in which form (206)	Snuff	162	78.64	91	93.81
	Tobacco pipes	19	9.22	3	3.09
	Chewing tobacco	8	3.88	2	2.06
	Cigar	17	8.25	1	1.03
Think smoking is harmful to health (385)	Yes	337	87.53	131	86.18
	No	48	12.47	21	13.82
Passive Tobacco Smoking at work place (385)	Yes	237	61.56	105	69.08
	No	148	38.44	47	30.92
If yes, who (237)	Parents	69	29.11	31	34.83
	Brothers	14	5.91	2	2.25
	Relatives	104	43.88	34	38.20
	Friends/ Colleagues	25	10.55	20	22.47
	Servant	25	10.55	2	2.25
	Friends	145		87	
Addicted to other drugs (385)	Yes	129	33.51	36	23.68
	No	256	66.49	116	76.32
If yes, to which one (129)	Chars	84	65.12	28	77.78
	Hashish	11	8.53	1	2.78
	Cocaine	3	2.33	0	0.00
	Alcohol	27	20.93	5	13.89
	Opium	4	3.10	2	5.56

Table No. 4. Tobacco Smoking Determinants among the Study Participants of Hayatabad Peshawar Pakistan (n=385)

Variables	Response	Frequency	Percentage
Past history of Tobacco Smoking (385)	Yes	97	25.19

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	No	288	74.81
Number Of Cigarettes Smoked Per Day (152)	1 to 5	93	61.18
	6 to 10	33	21.71
	11 to 15	15	9.87
	16 to 20	8	5.26
	> 20	3	1.97
Places For Smoking (152)	At home	11	7.24
	Friend's place	84	55.26
	Public places	107	70.39
	At work	83	54.61
	Any other	41	26.97
Tried to quit smoking in past 12 months (152)	Yes	97	63.82
	No	55	36.18
Anti-Smoking Media Messages (385)	A lot	247	64.16
	Few	43	11.17
	None	95	24.68
Received help or advice regarding tobacco smoking (385)	Yes, from a professional	157	40.78
	Yes, from a friend	75	19.48
	Yes, from a family member	87	22.60
	No	66	17.14

Table No. 5. Reasons of Tobacco Smoking among the Participants of Hayatabad Peshawar Pakistan (n=385)

Reason for Tobacco Smoking	f	%age
Good taste	75	19.48
Habit	81	21.04
Relaxation	101	26.23
Concentration	47	12.21
Relief stress	93	24.16
Inspired by someone	14	3.64
Satisfaction	76	19.74
Relief craving	45	11.69
Get attraction	31	8.05
Impression	27	7.01
Look cool/ Smart	20	5.19
None of these	37	9.61

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DISCUSSION

Result of this study shows that out of the sample population, 152 (39.48%) were current tobacco cigarette smokers and was less than studies conducted in District Peshawar,which showed 48.4% [20]. Moreover, our study results are more as compared to a study done in Karachi, which showed 32.7% [6] and another conducted in Peshawar University students which showed 27% prevalence status among the participants [21].Furthermore, another study revealed the prevalence of tobacco use as 29.4% and thus our study results were more as compared this study [22] (Table No 1).

However, results of a study conducted in rural Sindh among male adults found a high prevalence of 55% of current tobacco cigarette smokers [23]. Many studies showed that prevalence of tobacco smoking more in Pakistan. In our study, the high prevalence of the tobacco smoking was found in 18-30 years of age group with majority being college or university students. This age range was considered the most susceptible for the indulgence of tobacco use. Similar results were reported by other studies as well, with 40% tobacco using population in the age group of 25-44 years [24] and in college going male students belonging to 21-25 years [6] (Table No 2).

Moreover, our study illustrated high prevalence of tobacco smoking in educated population as compared to the uneducated. On the contrary, a similar study reported high prevalence of smoking in uneducated population which suggests the difference between their and our study methodologies [25]. Furthermore, many studies conducted in colleges and universities showed higher frequency of tobacco smoking and thus suggested high prevalence among the educated communities as was reported by our study results [6, 7,27]. According to our study results, 82.89% of the tobacco users were smoking 1-10 cigarettes and same findings were reported by many international studies [23,26].

A study conducted in 2006, reported that tobacco smokers were more exposed to second hand smoke as compared to non-smokerswhich is evident from our study results showing 69.08% exposed and 30.92% not exposed (Table No 3). Moreover, many international studies revealed that due to tobacco smoking of siblings or/ and parents, the tobacco smoking prevalence was high [21, 28], as reported by our study results (Table No 3)

In our study, 86.18% of tobacco use replied that it harmful to health, and similar findings were reported a study conducted in 2012 in which 87.9% respondents agreed to the harmful

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effects of smoking [25]. Due to the knowledge of harmful effects of tobacco smoking,63.82% tried to quit this hazardous habit and around 83.86% had received advice from friends, family members and health professionals and only 17.14% received no help or advice regarding tobacco smoking [6,28]. Moreover, in our study, 75.32% of participants received antismoking awareness and health education (Table No 4).

In our study,53.51% of the smokers were also using tobacco in other forms, most popular of which was snuff followed by tobacco pipes, chewing & cigar, and was supported by many international studies [20, 25, 29]. Among the other drugs the most popular drug was chars after which alcohol, hashish and opium were used. Moreover, in a study conducted among the students of District Banu also confirmed the use of such drugs in our community [7].

In our study results, the tobacco smoking replied that the most common reasons for initiation of tobacco smoking was for relaxation, relief craving, satisfaction, better taste, and concentration etc (Table No 5).

CONCLUSIONS

From our study results, it was concluded that the prevalence of tobacco smoking was increasing and the important determinants of tobacco smoking were stress, parental smoking, sibling smoking, exposure to second hand smoke at workplace, friends appreciating smoking,unemployment, educational institute, monthly income, separate family setup, and unmarriedetc. Moreover, the socio-economic determinants like parental education, parental monthly income, and parental current tobacco smoking were the variables showing significant relationship with tobacco smoking. Furthermore, most of the study participantssmoked1-5 cigarettes per day; most popular tobacco product used were cigarettes, followed by snuff, cigar, tobacco pipes and chewing tobacco. Addiction regarding the different forms of drugs showed that the most commonly used drug was chars. Moreover, we also assess the reasons of tobacco smoking starting and also assessed the tobacco smoking users regarding its hazardous health effects and ever tried to quit smoking.

REFERENCES

1 Hossain S, Hossain S, Ahmed F, Islam R, Sikder T, Rahman A. Prevalence of tobacco smoking and factors associated with the initiation of smoking among university students in Dhaka, Bangladesh. Central Asian journal of global health. 2017;6(1).

2 Iqbal S, Barolia R, Ladak L, Petrucka P. Smoking cessation interventions in South Asian countries: protocol for scoping review. BMJ open. 2020 Feb 1;11(2):e038818.

3 AlMulla A, Hassan-Yassoub N, Fu D, El-Awa F, Alebshehy R, Ismail M, Fraser CP. Smoking cessation services in the Eastern Mediterranean Region: highlights and findings from the WHO Report on the Global Tobacco Epidemic 2019. Eastern Mediterranean Health Journal. 2020;26(1):110-5.

4 Kumar SG, Subba SH, Unnikrishnan B, Jain A, Badiger S. Prevalence and factors associated with current smoking among medical students in coastal South India. Kathmandu University Medical Journal. 2011;9(4):233-7.

5 Asif HM, Akhtar N, Sultana S, Ahmad K, Qureshi T, Ateeb M, Hussain A. Prevalence and factors related to cigarette smoking initiation and use among university students of Bahawalpur Pakistan: a cross sectional study. RADS Journal of Pharmacy and Pharmaceutical Sciences. 2017 Sep 6;5(3):11-6.

6 Zhang M, Liu S, Yang L, Jiang Y, Huang Z, Zhao Z, Deng Q, Li Y, Zhou M, Wang L, Chen Z. Prevalence of smoking and knowledge about the hazards of smoking among 170 000 Chinese adults, 2013–2014. Nicotine and Tobacco Research. 2019 Dec;21(12):1644-51.

7 Maula F, Adil M, Zaman S, Nadeem M, Zeb A, Nawaz K, Ali S. The trends of tobacco use among medical and non medical students in District Bannu. Gomal Journal of Medical Sciences. 2012 Jan 1;9(2).

8 Ross CP, Lin J, Hefner K, Waters AJ. Use of electronic cigarettes in the United States service member and Veteran populations: A narrative review (2019). Military Psychology. 2020 May 4;33(3):169-81.

9 Rozi S, Mahmud S, Lancaster G, Zahid N. Peer Pressure and Family Smoking Habits Influence Smoking Uptake in Teenage Boys Attending School: Multilevel Modeling of Survey Data. Open Journal of Epidemiology. 2016 Aug 10;6(03):161.

10 Shah N, Siddiqui S. An overview of smoking practices in Pakistan. Pakistan journal of medical sciences. 2015 Mar;31(2):467.

11 Ilhan MN, Arikan Z, Kotan Z, Tunçoğlu T, Pinarci M, Taşdemir A, Ay B, Kocak N. Prevalence and socio-demographic determinants of tobacco, alcohol, substance use and drug misuse in general population in Turkey. Archives of Neuropsychiatry. 2016 Sep;53(3):205.

12 Pampel FC, Krueger PM, Denney JT. Socioeconomic disparities in health behaviors. Annual review of sociology. 2010 Aug 11;36:349-70.

13 Zhao X, Prandstetter K, Jansen E, Hahlweg K, Schulz W, Foran HM. Interparental Relationship Adjustment, Parenting, and Offspring's Cigarette Smoking at the 10-Year Follow-up. Family process. 2020 Jun;60(2):523-37.

14 Sami N, Noorani SS, Lakhani LS, Ghouse A, Valliani S. Smoking practices and nicotine dependence among adolescents in Pakistan. JPMA. The Journal of the Pakistan Medical Association. 2013 Oct;63(10):1260-5.

15 Pradhan MR, Patel SK. Correlates of tobacco quit attempts and missed opportunity for tobacco cessation among the adult population in India. Addictive behaviors. 2019 Aug 1;95:82-90.

16 George RM, Thomas T. Perceptions and practice of tobacco use among adolescents of Mangalore city. Journal of Indian Association of Public Health Dentistry. 2018 Jul 1;16(3):242.

17 Rahman KM, Tareque MI. Determinants of cigarette/bidi smoking among youth male in rural Mymensingh of Bangladesh: A cross-sectional study. Plos one. 2020 Dec 28;15(12):e0244335.

18 Lê Cook B, Wayne GF, Kafali EN, Liu Z, Shu C, Flores M. Trends in smoking among adults with mental illness and association between mental health treatment and smoking cessation. JAMA. 2014 Jan 8;311(2):172-82.

19 Serrano-Alarcón M, Kunst AE, Bosdriesz JR, Perelman J. Tobacco control policies and smoking among older adults: a longitudinal analysis of 10 European countries. Addiction. 2019 Jun;114(6):1076-85.

20 Ahmad F, Boeckmann M, Khan Z, Zeeb H, Khan MN, Ullah S, Dreger S, Haq ZU, Forberger S. Implementing smokeless tobacco control policy in Pakistan: a qualitative study among Naswar supply chain actors. Tobacco Control. 2020 Sep 1;30(5):548-52.

21 Zaman M, Irshad E, Ashraf S. Frequency And Trends Of Cigarette Smoking Among Peshawar University Students. Pakistan Journal of Chest Medicine. 2015 Jun 24;11(3).

22 Jabar Ali MF, Gul AM, Shahzeb SF, Hafizullah M. Frequency of Tobbaco use in Different Occupational Groups of Peshawar. International Journal of Pathology. 2012;10(1):9-12.

23 Allen L, Williams J, Townsend N, Mikkelsen B, Roberts N, Foster C, Wickramasinghe K. Socioeconomic status and non-communicable disease

behavioural risk factors in low-income and lower-middle-income countries: a systematic review. The Lancet Global Health. 2017 Mar 1;5(3):e277-89.

24 Naz S, Naz S, Saqib MA, Bashir F, Rafique I. Prevalence of Smokeless Tobacco Use in Pakistan Insight from the Global Adult Tobacco Survey Pakistan (GATS Pakistan-2014). J Pakistan Med Assoc. 2018 May 1;68(5 Suppl 2):S7-12.

25 Gilani SI, Leon DA. Prevalence and sociodemographic determinants of tobacco use among adults in Pakistan: findings of a nationwide survey conducted in 2012. Population health metrics. 2013 Sep 3;11(1):16.

26 Eticha T, Kidane F. The Prevalence of and Factors Associated with Current Smoking among College of Health Sciences Students, Mekelle University in Northern Ethiopia. PloS one. 2014 Oct 23;9(10):e111033.

27 Simons-Morton BG, Farhat T. Recent findings on peer group influences on adolescent smoking. The journal of primary prevention. 2010 Aug 1;31(4):191-208.

28 Anzar W, Afaq A, Baig QA, Baig EA, Panhwar M, Taheer TB. Social Life Habits Regarding Smoking And Its Perceived Consequences Among Different Professionals Of Karachi: A Comparative Study. Pakistan Oral & Dental Journal. 2020 Jun 29;41(2):93-6.

29 Jan A. Prevalence and patterns of tobacco use in the rural areas of District LakkiMarwat. Northwest Journal of Medical Sciences. 2017 Feb 8;1(3).