

Prevalence and Pattern of Smoking in Pakistan

Pages with reference to book, From 64 To 66

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Abstract

Objective: To determine the prevalence and pattern of smoking amongst Pakistanis. Sampling Design: A two stage stratified sample design was adopted for the survey, Primary Sampling Units (PSU's) and Secondary Sampling Units (SSU's).

Setting: Urban and Rural, Pakistan 1990- 94.

Subjects: Stratified systematic sample of 9441 males and females aged 15 years and above.

Main outcome measures: Smokers were defined as, subjects who were currently smoking and who had smoked ≥ 100 cigarettes/beedis or chillum/huqqa in their life time.

Results: In Pakistan 21.6% (36% males and 9% females) of 9441 subjects were smokers. In urban areas it was 20.7% and in rural 22.0%, males were predominant in both urban and rural areas. Proportion of smokers who used cigarette/beedi were significantly higher in 'males (60%) while chillum/huqqa were more in females (62%). Prevalence increased with age upto 64 years, after which it declined but in urban females it continued to rise with age. Among both males and females; illiterate, married individuals with poor general health were more likely to smoke. These factors were 2 to 3 times more in males and 2 to 5 times more in females who were more likely to be smokers than those who were literate, single individuals with good general health. Conclusion: Smoking was more prevalent in illiterate, married persons and those with poor general health (JPMA 48:64, 1998).

Introduction

The Tobacco industry in Pakistan is expanding at a rate of 5% per year¹ and Pakistani cigarettes have amongst the highest levels of tar and nicotine in the world². In addition to cigarettes, tobacco is smoked in unique local ways which include "beedi" (tobacco rolled in dry leaves), "Huqqa" comprises of a clay pot (chillum) containing burning coal over a layer of tobacco fixed to a water containing pot with two pipes, one for smoking and the other for filtering the smoke through water. Cigarette smoking or tobacco use has been very strongly associated with a wide range of diseases including cancers of mouth, throat, larynx. lungs, bladder, emphysema and coronary heart disease. This study reports the prevalence and patterns of smoking as recorded in a survey carried out on a stratified systematic sample of adults (15 years and above) during 1990-94.

Subjects and Methods

During a National Health Survey of Pakistan a structured questionnaire was used to obtain data on smoking, in relation to age, sex, literacy, marital status and general health in urban and rural population of Pakistan. The sampling frame of National Health Survey of Pakistan (NHSP) consisted of all urban and rural areas of the four provinces (Punjab, Sindh, NWFP and Balochistan) as defined in 1981 population census³ using a two stage (Primary Sampling Units and Secondary Sampling Units) stratified sample design. The primary sampling units (PSU 's) in the urban areas were enumeration blocks and in rural areas they were mouzas/dehs/villages. Eighty PSU's were drawn, of these 32 were urban and 48 from rural areas. Sample of 30 households from each PSU's were selected using systematic sampling technique by random start. The calculated sample size consisted of 2400 house-

holds, However, when the systemic sample was drawn, there were preliminary 2359 households in 80 PSU's. The overall household non-response was 2.1%⁴. The population covered in 2395 sampled households was 19747. Out of them 18322 individuals could be examined. Out of 18322 subjects 8881 (48,5%) were infants and children (under 15 years) and 9441 (51.5%) were adults (15 years and above). Smoking information was taken from both sexes in urban and rural population of Pakistan. Respondents who were currently smoking and who had smoked ≥ 100 cigarettes or beedis or Chillum/Huqqa in their life time were defined as smokers. The data was entered and analyzed on computer package "Epi. Info 5.1", the differences in smoking prevalence between groups were compared with χ^2 -test.

Results

Smoking Prevalence and Associations

Overall, 21.6% of 9941 subjects were smokers. In the study population as a whole and in urban and rural groups, proportion of males were significantly higher than females ($P < 0.001$) (Table 1).

Table I. Prevalence (%) of smoking according to sex in urban and rural population of Pakistan.

	Urban	Rural	Total
Males	1607 (34.4%)	2808 (36.8%)	4415 (36.0%)
Females	1783 (8.4%)	3243 (9.3%)	5026 (9.0%)
Total	3390 (20.7%)	6051 (22.0%)	9441 (21.6%)

Males had a significantly higher prevalence than females ($P < 0.001$).

Cigarette/beedi smoking was significantly more in males and chillum/huqqa in females ($P < 0.001$) (Figure 1).

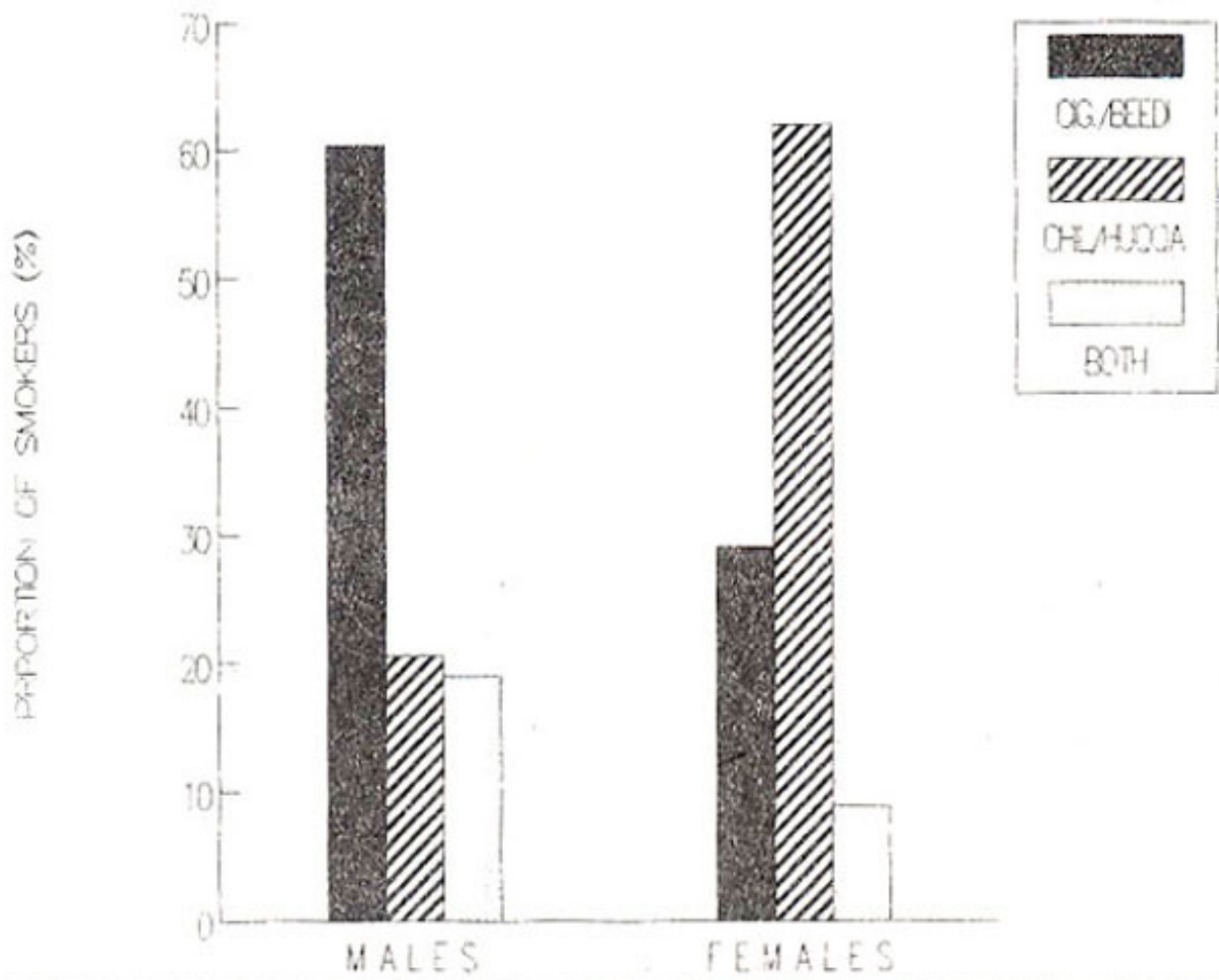


Figure 1. Proportion of smokers who used either cigarette/beedi or huqqa/ chillum and both according to sex.

Males smoking cigarette/beedi were significantly more in urban and female smokers of chilluinhuqqa in rural population (p

Table II. Proportion of smokers who used cigarette/beedi, chillum/huqqa and both according to sex in urban and rural population of Pakistan.

Sex	Type of smoking	Urban		Rural	
		No	(%)	No	(%)
Males	Cigarette/beedi	422	(76.3)	535	(51.8)
	Chillum/huqqa	55	(10.0)	271	(26.2)
	Both	76	(13.7)	227	(22.0)
Females	Cigarette/beedi	51	(34.2)	80	(26.6)
	Chillum/huqqa	91	(61.1)	188	(62.4)
	Both	7	(4.7)	33	(11.0)
Total	Cigarette/beedi	473	(67.4)	615	(46.1)
	Chillum/huqqa	146	(20.8)	459	(34.4)
	Both	83	(11.8)	260	(19.5)

Significant difference $P < 0.01$ in urban and rural.

Prevalence of smoking increased with the age upto 64 years amongst males, after which it declined, while in urban females it continued to increase with age, while it declined in rural females (Figure 2).

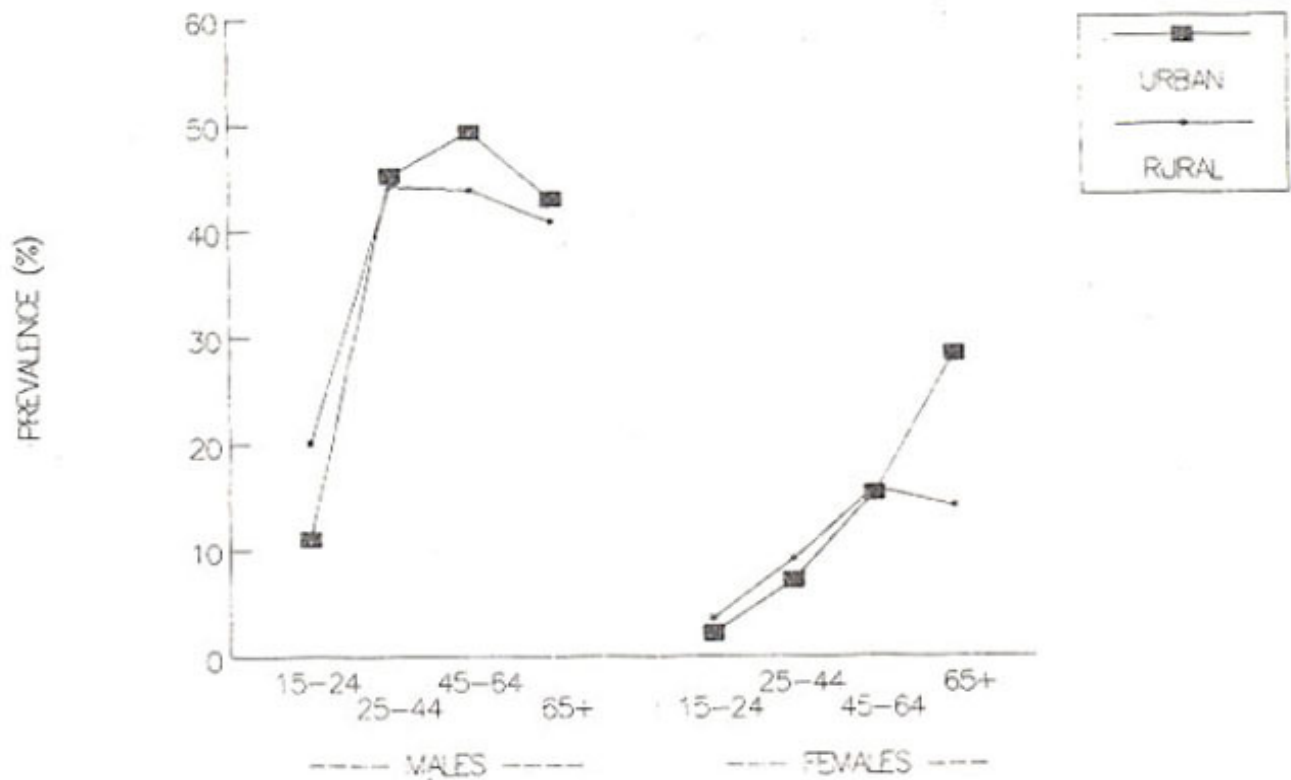


Figure 2. Prevalence (%) of smokers specific for age and sex in urban and rural population. Respondents who were currently smoking and who had smoked ≥ 100 cigarette/beedi or chillum/huqqa in their lifetime were defined as smokers.

The average age of onset for cigarette smokers was 18 years in males and 24 years in females, while for chillum/huqqa smokers it was 20 years in males and 29 years in females. Male cigarette users smoked on an average times per day. The prevalence of smoking was univariately associated with literacy, marital status and general health condition ($p < 0.001$). Smoking was more prevalent in illiterate, married with poor general health in both sexes. The presence of these factors were 2 to 3 (odd ratio) times more in males and 2 to 5 (odd ratio) times more in females who were smokers than those who were literate, single and had good general health (Table III).

Table III. Prevalence and odds ratio of smoking in males and females according to literacy, marital status and general health condition.

Variables	No. of subjects	Prevalence(%)	Odds Ratio	(95% C.I.)
Males:				
Literacy:				
Literate	2062	(27.5)	1.00	
Illiterate	2138	(43.5)	2.03	(1.78-2.31)
Marital status:				
Single	1328	(19.4)	1.00	
Married	2692	(43.0)	3.31	(2.82-3.87)
Separated, divorced, widowed	202	(45.5)	3.66	(2.66-5.04)
General Health:				
Good	2133	(29.8)	1.00	
Fair	1620	(40.4)	1.59	(1.39-1.83)
Poor	625	(46.1)	2.01	(1.67-2.42)
Females:				
Literacy:				
Literate	965	(2.2)	1.00	
Illiterate	3739	(10.2)	5.13	(3.23-8.23)
Marital status:				
Single	941	(2.4)	1.00	
Married	3287	(9.2)	4.07	(2.60-6.41)
Separated, divorced, widowed	514	(16.2)	7.69	(4.67-12.74)
General Health:				
Good	1139	(5.6)	1.00	
Fair	1965	(8.3)	1.53	(1.12-2.09)
Poor	1888	(11.6)	2.22	(1.64-2.99)

C.I.= Confidence Intervals.

Discussion

This, population based study reports the prevalence of smoking in Pakistani adult population aged 13

years and above which was 21.6% during 1990-94. These rates were higher in males (36%) than females (9%). Among cigarette smokers average age at onset of smoking was 18 years in males, 24 years in females and in chillum/huqqa smokers the average age at onset was 20 years in males and 29 years in females. In Delhi (Urban India) 13558 subjects aged 25-64 years were studied. The overall prevalence of smoking was 24.5%, with males being 45% and females 7%⁵. In Pakistan, smoking habits have been reported in a few studies comprising of different population groups⁶⁻⁸. The frequency of smoking in male medical students was 21.3% in Karachi⁷ while and 22.4% male college students were smoker in Peshawar⁸. The average age at the start of smoking was 17 years amongst students in Karachi⁷ which is almost similar to the present study. The most vulnerable ages for cigarette consumption are 10 through 18 years, when most users start smoking and become addicted to tobacco⁹. It was observed that in both sexes literate, single individuals with good general health were significantly less likely to be smokers than those who were illiterate, married and had poor general health.

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