

# Knowledge and practices regarding cigarette smoking among adult women in a rural district of Sindh, Pakistan

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## Abstract

**Objective:** To determine the prevalence of cigarette smoking and to obtain information on socio-demographic factors and attitude regarding cigarette smoking among adult women in a rural district of Sindh Province, Pakistan.

**Methods:** A cross sectional community based survey was done in a rural district of Sindh province of Pakistan using a two stage cluster sampling design. A pre tested questionnaire was used to interview 502 adult women (aged 18- 60 years) from the study site. The study was approved by the ethical research committee and informed consent was taken from participants.

**Results:** A total of 502 women were interviewed for this study. Approximately 71% of women were illiterate and 44 % of women were in the age group of 18-24 years. A high number (10%) of adult women were smokers. Age at initiation among women (18-24 years) was 42%. A significant difference for questions regarding smoking effects on health ( $p = 0.02$ ) and knowledge regarding smoking causes respiratory disease ( $p = 0.02$ ) was observed in this survey.

**Conclusion:** It was concluded that the prevalence of smoking among women is on the rise in this rural district of Pakistan. Young age at initiation is an important finding that needs to be addressed (JPMA 58:664; 2008).

## Introduction

Tobacco is the single largest cause of disability and death in modern era. According to World Health Organization, smoking alone is responsible for 3 million deaths world wide. It is predicted that based on current prevalence world wide smoking will be responsible for almost 10 million deaths by the year 2030.<sup>1</sup> The real danger is that seventy percent of mortality burden would occur in the developing countries.

More than seventy thousand published papers have already identified the carcinogenic nature of smoking but still the prevalence is increasing, especially in the developing countries. Pakistan, the sixth most populous country in the world, consists of four provinces - (Punjab, Sindh, Baluchistan, North West Frontier) and federally administered northern areas with more than 50% population living in rural areas. This study focuses on rural areas because a large majority of population still lives in these far off areas.<sup>2</sup>

In Pakistan, few studies have reported smoking

habits in different population groups. The earliest study, conducted in Karachi in 1983 reported a prevalence of 21% among male medical students with average age of initiation at 17 years.<sup>3</sup> Another study conducted in 1995 reported a smoking prevalence of nearly 17% among male medical students as compared to 4% among female medical students in Karachi.<sup>4</sup> Merchant et al. found 30% prevalence in a squatter settlement of Karachi with a median household income of \$140 per month.<sup>5</sup> Parental smoking was identified as one of the factors in a study conducted in peri urban Sindh.<sup>6</sup> More recently, a cross-sectional survey in rural Sindh found a prevalence of 55% among adult males.<sup>7</sup> The National Health Survey of Pakistan reported a prevalence of 5% smoking among women in rural areas of Pakistan.<sup>8</sup>

There is very scarce data available regarding knowledge and practice among women especially in rural areas. The objective of the present study was to determine the prevalence and knowledge and practices regarding smoking among women in a rural district of Pakistan.

## Methods

The study was conducted in district Khairpur, one of the geographically larger rural districts of Sindh. This study focused on views and practices of women regarding tobacco primarily smoking. This survey was restricted to adult women aged 18 to 60 years. Only those women residing in the area for at least one year were included. A two stage cluster sampling design was used to identify 502 women in district Khairpur. The survey was conducted using a structured pre-tested questionnaire to conduct interviews. A modified version of the questionnaire developed by the World Health Organization was used in this study.<sup>9</sup> Ethical approval of the study was taken from the Ethics Committee of the Aga Khan University. The interviews were conducted after obtaining an informed consent in local language. The survey field staff was selected from district Khairpur and provided with the training necessary to execute the survey. The questionnaire elicited information on knowledge of health risk associated with tobacco and practices about smoking tobacco among respondent. Other variables like age, occupation, education, income, marital status and reason for initiation of tobacco smoking were also enquired.

Smoker was defined in this survey as a person who had smoked more than 100 cigarettes in his life time.<sup>9</sup> A person who either did not smoke or smoke less than 100 cigarettes in their lifetime was labeled as non smoker. In the analyses, age was categorized into intervals of 18-24, 25-34, 35-44, and 44 plus years; marital status was categorized as married or unmarried; occupation was categorized as housewife, farmer and service. Household income was categorized 0-5000, 5001-10,000 and > 10,001 Pakistani rupees (PKR) (US\$ 1 = PKR 60).

To ensure quality control during the survey, the investigator and field supervisors carried out continuous field checking for completeness and consistency of the questionnaire. Once data were collected the questionnaires were coded, edited and entered. A double entry validation check was run for internal consistency.

Descriptive analysis was done to describe the overall population and the socio-demographic character of the participants. Chi square test was used to see the distribution of categorical variables which were statistically significant form each other.

## Results

A total of 502 women aged 18- 60 years were interviewed in this survey. All of the women who were invited consented to participate in the survey. In this study 71% of women were illiterate (Table I). Nearly 37% of women were in the age group of 24- 35 years of age.

**Table 1: Percentage distribution of selected socio-demographic characteristics among women in district Khairpur Sindh, Pakistan.**

Variable	N=502	
	(n)	Percentages (%)
<b>Age in years</b>		
18-24	71	14
25-34	188	37
35-44	145	29
> 44	98	20
<b>Education</b>		
Illiterate	357	71
1-5 years of schooling	70	14
6-10 years of schooling	47	9
11-12 years of schooling	14	3
> 12 years of schooling	14	3
<b>Occupation</b>		
Housewife	446	89
Farmer	30	6
Service	26	5
<b>Marital Status</b>		
Married	357	87
Never married	42	8
Widow/divorced/separated	23	5
<b>Household income (Pak rupees)</b>		
0-5000	285	57
5001-10,000	172	34
> 10,001	45	9

Majority of the women were housewives (89%). Regarding household income, 57% of households were in the bracket of 1-5000 Pak rupees, (1 US\$ = 60 Pak rupees).

A high number (10%) of adult women were smokers (Table 2). Majority of smokers (42%) started smoking between 18-24 years age. Twenty three percent of the current smokers cited peer pressure as the main reason for

**Table 2: Selected characteristics of current smokers among women in Khairpur District, Sindh, Pakistan.**

Smoking prevalence	(n=502)	(%)
Smokers (> 100 cigarette in lifetime)	52	10
Non Smokers	450	90
<b>Characteristics of smokers</b>	<b>(n=52)</b>	
Current smokers	43	82
Ex smokers	09	18
<b>Age at initiation</b>		
<b>(current smokers only)</b>	<b>(n=43)</b>	
18-24	18	42
25-34	7	16
35-44	9	21
> than 44	9	21
<b>Reason for initiation</b>		
<b>(current smokers only)</b>	<b>(n=43)</b>	
Peer pressure	10	23
Stress	14	33
Others (feel good, easy availability)	19	44
<b>Attitude towards quitting smoking</b>		
<b>(current smokers only, Not successful)</b>	<b>(n=43)</b>	
Ever tried to quit	9	21
Need any help for quitting	13	30
Tried to stop by themselves	21	49

**Table 3: Knowledge regarding health effects of smoking among women in district Khairpur, Sindh, Pakistan.**

KNOWLEDGE	Smoker		Non-Smoker		P-value
	n	%	n	%	
<b>Smoking is addictive</b>					
Yes	3	5.8	30	8.5	1.00
No	49	94.2	411	91.5	
<b>Smoking affects your health</b>					
Yes	6	11.5	8	1.8	<0.001
No	46	88.5	432	96	
<b>Smoking affects health of others</b>					
Yes	6	11.5	37	8.2	0.421
No	46	88.5	412	91.8	
<b>Smoking can cause heart diseases</b>					
Yes	7	13.7	10	2.8	<0.001
No	44	86.3	412	91.2	
<b>Smoking can cause respiratory diseases</b>					
Yes	4	7.7	8	1.8	0.02
No	48	92.3	442	98.2	
<b>Smoking can cause stroke</b>					
Yes	13	25.0	93	20.7	0.47
No	39	75.0	356	79.3	
<b>Smoking is harmful to foetus</b>					
Yes	7	13.5	24	5.3	0.02
No	45	86.5	425	94.7	

\*Fischer exact was used where cell value was less than 5

initiation. A large majority (30%) attempted to quit smoking on their own but were unsuccessful.

A significant difference was observed between smokers and non-smokers for questions regarding smoking effects your health ( $p<0.001$ ) and effect on foetus ( $p=0.02$ ), while knowledge regarding smoking causes respiratory disease ( $p=0.02$ ) and heart diseases ( $p<0.001$ ) was also statistically significant. (Table 3).

## Discussion

The prevalence of smoking is on a rise despite of the fact that numerous scientific studies had reported morbidity and mortality associated with it.<sup>10</sup> In addition statistics showed that in developing countries the prevalence of tobacco consumption was continuously increasing.<sup>11</sup> This study found 10% of women currently smoking tobacco. This is higher than what is reported earlier in national estimates for women in rural Sindh<sup>8</sup> and also with other published data regionally.<sup>12</sup> This progressively increasing prevalence, keeping in mind the deleterious effects of smoking on health is an alarming situation and might be labeled as a tobacco epidemic for a resource constraint country.<sup>13</sup>

A high proportion of women reported knowledge about adverse effects of cigarette smoking on respiratory diseases and cardiac diseases whereas some of the questions that dealt with knowledge were not statistically significant. This is comparable to the earlier published data among medical students in Karachi<sup>14</sup> and Syria<sup>15</sup> but surprisingly very high for

the reported data among women in the province.<sup>16</sup>

A good epidemiologic design and high response rate are major strengths of this study, which are generalizable. Age at initiation was one of the major strengths that has never been reported for rural women of the country. A higher percentage of women with age at initiation below 24 years was observed, which is similar to a study done in Ukraine where age at initiation among women was found to be 18 years.<sup>17</sup> Peer pressure and stress were the two major factors responsible for smoking initiation that have been cited earlier in literature also.<sup>18</sup> As a contrast when quitting smoking pattern was considered, it was found that a majority of women tried to quit themselves. This elicits the need to develop smoking cessation sessions which can later be incorporated in the existing health system of the province.

This research reported a very high illiteracy rate of nearly 70 percent among participants, coinciding with education for adult women more recently in Rawalpindi<sup>19</sup> and also with the national data.<sup>20</sup> Keeping in view that a large majority of household earn less than 5000 Pak rupees, a higher prevalence of smoking among women with limited access to health resources could result in severe health inequalities in years to come.

Recall bias might be one of the limitations of the study in reporting information on smoking among participants. Furthermore, the cross-sectional nature of the study did not allow us to judge causality.

## Conclusion

It was concluded that smoking among women is on the rise in this rural district of Sindh. Young age at initiation among women is one of the main findings which is a guide in developing future tobacco control policies for the district in particular and the country as whole.

## Acknowledgements

This study was conducted through a research grant SM 060710 via University Research Council, Aga Khan University, Karachi, Pakistan. The authors are indebted to the local community and field staff in rural areas. Gratitude is extended to the study supervisors, Syed Irshad Ali, Qasid Khaskheli and Sikander Shaikh for their dedicated work.

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