

## Pattern of Cigarette Smoking in Psychiatric Patients Admitted at AFIMH

Muhammad Ihsan, Omer Jalal\*, Muhammad Omer\*\*, Chaudhary Ali Nawaz\*\*\*

Department of Psychiatry, Combined Military Hospital, Muzaffarabad/National University of Medical Sciences (NUMS) Pakistan, \*Department of Psychiatry, Combined Military Hospital Mangla/National University of Medical Sciences (NUMS) Pakistan\*\*Department of Psychiatry, Combined Military Hospital, Abbottabad/National University of Medical Sciences (NUMS) Pakistan, \*\*\*Department of Psychiatry, Combined Military Hospital, Skardu/National University of Medical Sciences (NUMS) Pakistan

### ABSTRACT

**Objective:** To determine the frequency of cigarette smoking in patients admitted at AFIMH.

**Study Design:** Cross sectional study.

**Place and Duration of Study:** Armed Forces Institute of Mental Health, Rawalpindi Pakistan from Dec 2014 to Jun 2015.

**Methodology:** All patients meeting the inclusion criteria admitted to Armed Forces Institute of Mental Health (AFIMH) Rawalpindi for two or more days during the study period for any psychiatric disorder were enrolled in the study. The demographic and study variables such as the age, gender, cigarette smoking pattern and psychiatric diagnosis were recorded on the study Proforma.

**Results:** Out of a total of 108 cases of psychiatric illness, 91(26%) were male while 17(15.74%) were females. The mean age was found to be 32.68±11.34 years. Smoking status of the patients was calculated as current smokers 46(42.59%) former smokers 29(26.85%) and nonsmokers 33(30.56 %)

**Conclusion:** We concluded that the frequency of cigarette smoking is high in psychiatric inpatients. Therefore, it is recommended that smokers with psychiatric disorders should be identified and provided with evidence based smoking cessation services. However, it is also required that every psychiatric setup should devise and implement smoke free policies with appropriate leadership and support strategies for psychiatric patients and staff.

**Keywords:** Cigarette smoking, Frequency, Psychiatric inpatients.

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### INTRODUCTION

Tobacco causes nearly 6 million deaths each year and is considered the single most preventable cause of death in the world. It also results in excess health care costs and lost productivity causing billions of dollars of economic loss annually.<sup>1</sup> Epidemiological studies in developed world have revealed higher rates of cigarette smoking in psychiatric patients as compared to general population.<sup>2,4</sup> A study conducted in the Turkish largest mental health center by revealed a 70% smoking rate in psychiatric inpatients.<sup>2</sup> Another Brazilian study found that 47.3% patients admitted in psychiatric hospital were current smokers and 23.4% were ex-smokers/former smokers.<sup>5</sup>

Globally, psychiatrists have traditionally been reluctant to address cigarette smoking in their patients because of several factors. First, there is a concern that tobacco cessation could interfere with their patients' treatment. Secondly, some mental health care facilities have been using tobacco privileges as reward. Finally,

some mental health care providers assume that their patients who use tobacco do not want to or cannot quit. However, recent developments suggest that these concerns largely are unfounded. Psychiatric patients who smoke cigarettes are as interested in quitting as other smokers and are able to quit successfully and benefit from evidence based cessation interventions. However, many psychiatrists regard smoking as a phenomenon belonging to area of physical health outside of their influence and responsibility.<sup>6</sup>

It is important to recognize that cigarette smoking fulfils the physiological, behavioral and social characteristics of a dependence syndrome.<sup>7</sup> It is one of the leading causes of preventable morbidity and mortality in general population as well as in the subgroup of people with mental illness.<sup>8</sup> Moreover, tobacco smoking also deserves attention in relation to treatment for mental disorders. Due to shared metabolism of some antipsychotic medicines and hydrocarbon agents in tobacco smoke, smokers require generally higher doses of antipsychotic drugs, thus potentially making them less effective resulting in higher doses, increased economic cost and more side effect burden.<sup>9</sup> Cigarette smoking, hereafter referred to as smoking is

**Correspondence:** Dr Muhammad Ihsan, Department of Psychiatry, Combined Military Hospital, Muzaffarabad Pakistan

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the largest single risk factor for premature death in developed countries. Approximately one fifth of the deaths in the United States are attributable to smoking, and 28% of the smoking-attributable deaths involve lung cancer, 37% involve vascular disease, and 26% involve other respiratory diseases.<sup>10</sup>

However, literature search at this point in time did not yield any study to determine the smoking frequency in the psychiatric patients in any mental health facility of Pakistan. The rationale of this study is based on the fact that the rate of cigarette smoking in psychiatric patients living in Pakistan has not been explored. This study will highlight this neglected behavioral problem responsible for excess morbidity and mortality in this vulnerable subgroup of population so that strategies can be devised to help them at clinical as well as institutional/ hospital levels.

### METHODOLOGY

The cross sectional study was conducted from December 2014 to January 2015 at Armed Forces Institute of Mental Health (AFIMH) Rawalpindi Pakistan.

**Inclusion Criteria:** Patients aged 18-70 years of age of either gender admitted to Armed Forces Institute of Mental Health (AFIMH) Rawalpindi Pakistan, for two or more days during the study period for any psychiatric disorder were included.

**Exclusion Criteria:** Patients who were passive smokers, had disorganized speech or thought content, smoked tobacco in hand-rolled cigarettes, cigars, pipes and cigarillos, smoked any other substances e.g. herbal cigarettes or marijuana and consumed tobacco products by other means e.g. chewing were excluded.

Sample was calculated using the WHO sample size calculator and the following parameters were used; confidence level =95%, population proportion=23.4%, precision =8%. The data was collected by face to face interview of the enrolled patients and recorded on the study proforma along with other study variables. Qualitative variables like gender, marital status, education, and smoking status were measured as frequencies and percentages. Quantitative variable such as age was presented as mean and standard deviation.

### RESULTS

Patients were distributed according to age showing that 86(79.63%) were between 18-40 years while 22(20.37%) were between 41-70 years of age, Mean±SD was calculated as 32.63±11.40 years (Table-I).

Patients were distributed according to gender showing that 91(84.26%) were male while 17(15.74%) were females (Table-II).

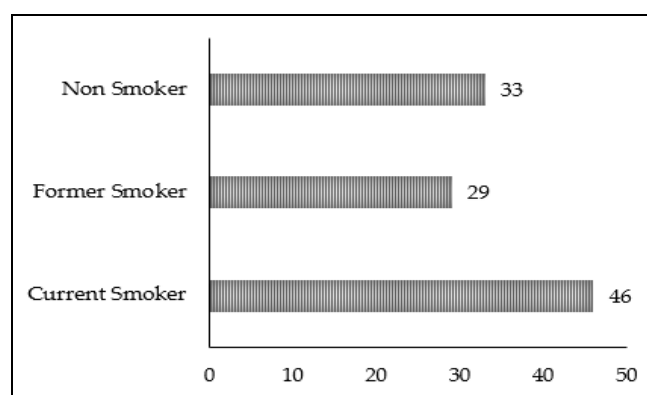
**Table-I: Age Distribution (n=108)**

Age(in years)	No. of patients	%
18-40	86	79.63
41-70	22	20.37
Total	108	100
Mean±SD	32.63±11.40 yrs	

**Table-II: Gender Distribution (n=108)**

Gender	No. of patients	%
Male	91	84.26
Female	17	15.74
Total	108	100

Smoking status of the patients was recorded as 46(42.59%) with current smoker, 29(26.85%) were ex-smokers while 33(30.56%) were non smokers (Figure-1).



**Figure: Smoking status of the patients (n=108)**

### DISCUSSION

Smoking is one of the leading causes of preventable morbidity and mortality in general population as well as in the subgroup of people with mental illness.<sup>8</sup> It is important to recognize that cigarette smoking fulfills the physiological, behavioral and social characteristics of a dependence syndrome.<sup>7</sup> We planned this study on the fact that the rate of cigarette smoking in psychiatric patients living in Pakistan has not been explored. This study may highlight this neglected behavioral problem responsible for excess morbidity and mortality in this vulnerable subgroup of population so that strategies can be devised to help them at clinical as well as institutional/hospital levels. More than 400 000 deaths per year and 30% of all cancers in the United States are attributable to smoking. Lung cancer is the largest single cause of cancer-associated mortality and is the most common cause of smoking-related mortality in the United States.<sup>11</sup> The attributable risk from smoking for oral, pharyngeal, and esophageal cancers is substantial, although less than that for lung cancer. The attributable risk from both smoking and alcohol consumption accounts for

the majority of both oral and pharyngeal cancers and of esophageal cancer.<sup>12</sup> Smoking prevalence in men worldwide is higher than it is in the United States, while smoking prevalence among women worldwide is usually less than the prevalence in men, although it has equaled or exceeded that in men in some northern European countries.<sup>13</sup>

In our study, out of 108 cases of psychiatric illness, 86(79.63%) were between 18-40 years while 22(20.37%) were between 41-70 years of age, Mean±SD was calculated as 32.68±11.34 years, 91(84.26%) were male while 17(15.74%) were females, smoking status of the patients was recorded as 46(42.59%) with current smoker, 29(26.85%) were former-smokers while 33 (30.56%) were non-smokers.

Tanriover O *et al.* found the overall smoking rate of 70% in psychiatric inpatients in one of the oldest and the largest mental health centre in Turkey.<sup>2</sup> Another research study conducted in Brazil demonstrated that 47.3% patients admitted in psychiatric hospital were current smokers and 23.4% were ex-smokers/former smokers.<sup>5</sup> These findings of high smoking prevalence among psychiatric inpatients correspond to our study.

Soltly H and others evaluated cigarette smoking, nicotine dependence, and motivation for smoking cessation in psychiatric inpatients and recorded that 55% were current cigarette smokers and 17.5% were former smokers, these findings are also close to our findings.<sup>11</sup>

Yan-Min Xu and others investigated the prevalence rate of cigarette smoking and its sociodemographic and clinical correlates in Chinese schizophrenia inpatients receiving antipsychotic monotherapy and recorded that the prevalence rate of current smoking was 40.6% in their study.<sup>12</sup>

Tanriover O and colleagues determined the rate of smoking in a sample of psychiatric in-patients with diagnoses of schizophrenia, bipolar disorder and major depression and to examine factors related to smoking status and the level of dependence in this population.<sup>12</sup> They concluded that the frequency of cigarette smoking and nicotine dependence among psychiatric inpatients was high, posing a high risk for smoking related diseases including cancers; therefore there should be counseling on tobacco control and smoking cessation programming targeting this population.

Ioannis Michopoulos,<sup>14</sup> in a recent study revealed that despite the fact that smoking is a crucial morbidity factor among psychiatric patients, little progress has been made in order to reduce smoking during

psychiatric hospitalization. They recorded that from 330 admitted patients, 170(51.5%) were smokers; they were monitored for their smoking habits and encouraged by the nursing staff to reduce smoking. The mean number of cigarettes per day at admission was 32.2(sd 22.1) and upon discharge 14.1(SD 14.8) ( $t=11.7$ ,  $p<0.001$ ).

Morbidity and mortality attributable to smoking would decline in the future if reductions in smoking prevalence were to be observed. However, despite dramatic declines in adult male smoking prevalence in the United States observed from the 1960s through the 1990s,<sup>15,16</sup> the decline in current adult smoking prevalence slowed by about 1990,<sup>17</sup> and recent surveys of current smoking in youth, defined as cigarette use on at least one of the last 30 days preceding the survey, show a statistically significant increase (from 27.5% in 1991 to 36.4% in 1997).<sup>18</sup> The prevalence of current smoking among adults in the United States, defined as smoking daily or smoking on some days, is now about 23% in women and 27% in men and is statistically significantly higher in those less than 65 years of age; in those with 9-11 years of education; in those below the poverty threshold; in whites, blacks, and American Indians/Alaskan Natives; and in military veterans.<sup>17</sup> Projected demographic and smoking prevalence trends suggest that the absolute number of current smokers in the United States, about 47 million individuals in 1995, will continue to increase, especially in those below the poverty threshold, in those with less than 13 years of education, and in those greater than or equal to 65 years of age.<sup>17-18</sup>

Most of the smokers, 142 (83.5%), managed to reduce their cigarette consumption per day. Diagnosis did not affect the reduction or increase in mean number of cigarettes per day. The only factor that predicted reduction in mean number of cigarettes per day was the female sex. Their findings indicate that seriously mentally ill psychiatric inpatients despite negative preconceptions and stereotypes respond well to simple measures aiming to reduce their smoking and modify their behaviour.<sup>18</sup>

This hypothesis should also be evaluated in our patients because this method also aims to reduce cigarette smoking, however, further trials are required to determine these findings.

In summary, our study highlighted this neglected behavioral problem responsible for excess morbidity and mortality in this vulnerable subgroup of population.

## CONCLUSION

It is concluded that the frequency of cigarette smoking is high in psychiatric inpatients. So, it is recommended that smokers with psychiatric disorders should be identified and provided with evidence based smoking cessation services. However, it is also required that every psychiatric setup should devise and implement smoke free policies with appropriate leadership and support strategies for psychiatric patients and staff.

**Conflict of Interest:** None.

## Author's Contribution

Following authors have made substantial contributions to the manuscript as under:

MI: & OJ: Data acquisition, concept, data analysis, data interpretation, critical review, approval of the final version to be published.

MO & CAN: Study design, drafting the manuscript, data interpretation, critical review, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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