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Pattern of Tobacco Use among Outdoor Depressed Patients Reported for Private Psychiatric Consultation at Karachi

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Abstract

Objective: To estimate the pattern of tobacco use among outdoor, depressed patients reported for private psychiatric consultation at Karachi.

Method: This observational study is based on cases reported at a private psychiatric clinic in Karachi from 1stJanuary, 2012 to 31st December 2012. A total of 178 patients, consecutively diagnosed as Depressive disorder according to ICD-10 were selected. All patients were male and their age range was from 18 years to 70 years. Their mean age with standard deviation was 36.16 ± 12.01 years. Informed consent, in all the patients, was taken. Approval from IRB (Institutional Review Board) Jinnah Postgraduate Medical Centre, Karachi was obtained. The approved protocol was used in the study overseeing the ethical and legal aspects of the clinical investigations. Data was tabulated and analysed using SPSS version 20. Descriptive statistics were used to describe the data.

Results: Total number of depressed patients screened was1445. Out of these 178 patients was using tobacco. Their average age ± SD were 36.16 ± 12.01 years .The age range was from 18 to 70 years. Out of 178 cases, 139(78.1%) cases were married, 28(15.7%) were unmarried, and 6(3.4%) had second marriages, and the rest were engaged, divorced or separated. Their ethnic languages were Pushto (65.7%); Urdu (12.4%), Punjabi (5.1%), Sindhi (7.3%), Balochi (3.4%), and the rest were from other ethnic languages. The pattern of tobacco use was, smoking only (32.58%), chewing Paan (37.07%), using Naswar (14.60%), while the rest (15.73%) chewed and smoked in combination.

Conclusion: This study revealed that depressive disorder has co-morbidity of tobacco use invariably among younger married males. Contrary to the western pattern, majority of the cases were using tobacco in forms other than smoking only.

Keywords: Tobacco; Smoking; Chewing; Depression

Introduction

The relationship of Depression and tobacco use has been debated and is a matter of concern. Depression may lead to smoking in order to reduce the symptoms of lack of energy and lethargy which is one of the major symptoms of depression as per ICD-10 (International Classification of Diseases Tenth Version) of WHO. There are researchers who suggest that the association is the other way around, i.e., smoking may lead to depression. A part from this association the new development in the understanding of psycho pharmacology of anti-depressants at cytochrome p450 in the enzyme context. There is great concern regarding the efficacy and the harmful effects of simultaneous use of nicotine.

A recent study by Boden et al. concluded that there is a cause-effect relationship between cigarette smoking and depression in which tobacco use increases the risk of symptoms of depression. In a large longitudinal study, Kang and Lee showed that smoking caused depression. Shahab and West reported evidence from a cross-sectional survey that ex-smokers feel happier following cessation [1].

Cigarette smoking may have effects on the human brain similar to those of antidepressant drugs, and this may explain the high rate of smoking among depressed people and their resistance to quitting. They found that the brains of long term smokers had neurochemical abnormalities similar to the brains of animals treated with antidepressant drugs [2].

The relationship between cigarette smoking and depression may be a factor in the development of subsequent dependence on other drugs [3].

Ex-smokers overwhelmingly reported being happier, than, when they were smoking. There are many possible reasons for this finding, including self-justification, but it provides at least a partial reassurance to would-be quitters that quality of life is likely to improve if they succeed [4].

When examining smoking, quantity and rates of nicotine dependence were similar for those with and without major depression among non-daily smokers. Yet, among daily smokers, rates of nicotine

dependence were consistently higher among those with major depression compared to those without [5].

There is evidence suggesting that prolonged use of nicotine may exert antidepressant action via nicotinic receptors. Memory improvement and antidepressant effects following joint administration of Venlafaxine and nicotine may depend on nicotinic interactions with mono-aminergic systems and it may represent a new therapeutic approach to smoking cessation [6].

Adjustment for confounding factors revealed persistent significant ($P<0.05$) associations between nicotine-dependence symptoms and depressive symptoms. Structural equation modelling suggested that the best-fitting causal model was one in which nicotine dependence led to increased risk of depression [7].

This preliminary study was conducted to see the pattern of tobacco use among depressed patients, keeping in mind the psychosocial and cultural aspects especially the various modes of using tobacco in the forms of chewing, smoking and others.

Patients and Method

This observational study is based on all consecutive cases at a private psychiatric clinic in Karachi from January 2012 to December 2012.

A total of 1445 adult cases were screened of which 178 patients fulfilled the diagnostic criteria of F32 (Depressive disorder and F17 (Mental and behavioural disorders due to use of tobacco), according to ICD-10.

Informed consent, in all the patients, was taken. Approval from IRB (Institutional Review Board), Jinnah Postgraduate Medical Centre, Karachi was obtained. The approved protocol of the clinical study was followed keeping in mind the ethical aspects. Data was tabulated and analysed using SPSS version 20 for Descriptive statistics.

Results

From a total 1445 cases screened, 178 patients fulfilled the diagnostic criteria of F32 (Depressive disorder) and F17 (Mental and behavioural disorders due to use of tobacco), according to ICD-10.Their average ages were 36.16 with a standard deviation of 12.01 years.
The age range was from 18 to 70 years as shown in Table 1.

Age	In years
Mean	36.163
Std. Deviation	± 12.010
Range	50
Minimum	20
Maximum	70

Table 1: Data related to age, n=178.

Their marital status was: married 28(15.7%) unmarried, 3(1.7) were engaged, 2(1.1%) were divorced and 63.4%) had second marriage, 2(1.1%) cases were divorced/separated and rest of the 139(78.1%) cases were married, as shown in Table 2.

Marital status	Frequency	%	Cumulative Percent
Single	28	15.7	15.7
Engaged	3	1.7	17.4
Married	139	78.1	95.5
Divorced/Separated	2	1.1	96.6
Remarried (>1 wife)	6	3.4	100

Table 2: Marital status distribution, n=178.

Of the total number of patients, 22(12.4%) were Urdu speaking, 09(5.1%) were Punjabi, 13(7.3%) were Sindhi, 06(3.4%) were Balochi, 117 (65.7%) patients were Pushto and 11(.6%) spoke other languages.

As far as the tobacco use was concerned, only 58(32.58%) were smoking, 26(14.60%) were using Paan (preparation combining tobacco and betel leaf) with Naswar (a moist, powdered tobacco snuff) and 66(37.07%) were using Naswar only, rest of the people were using tobacco in all forms. Data is depicted in Figure 1.

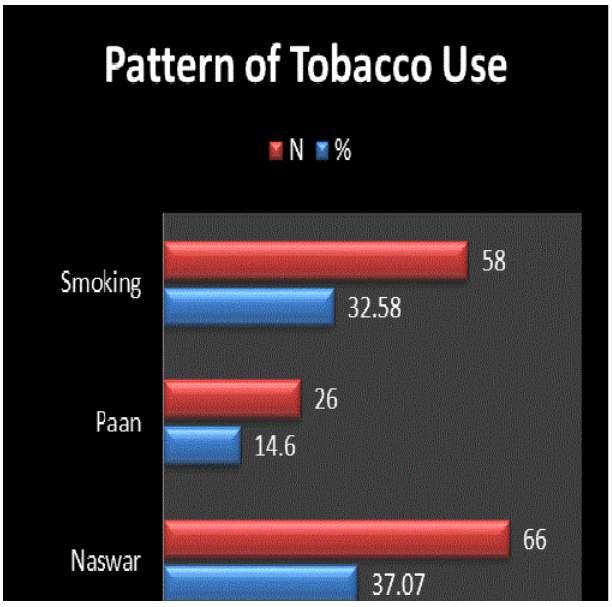

Figure 1: Pattern of tobacco use, n=178.

Discussion

This study revealed that the pattern of tobacco use is different in this part of the world as only 25% of its use was in the form of smoking. About 75% of the tobacco use was in forms other than smoking, i.e., 32% was using Paan and 35% as Naswar and rest were using in combination. Therefore the term used in western country "smoking cessation clinic" must be replaced with "tobacco cessation clinic" in developing country like Pakistan. In other countries both gender are involved but in our study only males having depressive disorder were using tobacco. Smoking was strongly related to mortality and to ill health, with similar relative effects in the middle-aged and the elderly [8]. All tobacco users had increased heart rate and blood pressure, with

a tendency towards a greater overall cardiovascular effect despite evidence of development of some tolerance to effects of nicotine with use of smokeless tobacco [9]. The results of the present study are comparable with the National data that tobacco use is very common in Pakistan with approximately 34% of men and 12.5% of women using tobacco in some form on regular basis. Most tobacco use increases with age. The highest levels of smoking and chewing habits are in men and women of 65 years of age and over. As this study revealed that cigarette smoking is almost nil amongst depressed females in any age group. Men in all age groups commonly use cigarettes and beedis. Twenty-nine per cent of men smoke cigarettes/beedi on regular basis with the highest percentage (40%) falling in the 25-44 years age group [10]. Adjustment for confounding factors revealed persistent significant ($P<0.05$) associations between nicotine-dependence symptoms and depressive symptoms. Structural equation modelling suggested that the best-fitting causal model was one in which nicotine dependence led to increased risk of depression [11]. Ceren Z Ataturk and his colleagues in his study found that 22% were smokers and 33% had depressive symptoms. The prevalence of depressive symptoms was significantly higher in smokers (42.9%) than in non-smokers (29.5%). Respondents with depressive symptoms had increased odds of smoking even after adjusting for socioeconomic and cultural factors (OR=2.68, 95% CI=1.45-4.97) [12]. Thirty-nine per cent of students had smoked a whole cigarette in their life time, whereas 25% had smoked 100 or more cigarettes in their lifetime. Overall, 23% of students (31% male and 6% female) were classified as current smokers and their average age and standard deviation of smoking initiation was 17(2.7) years (17(2.6) for males and 16 (2.9) females). Nicotine addiction and stress were the most common reasons given by students for why they smoked (53% and 50%, respectively) [13].

Use of tobacco has been declared as diagnostic entity by the ICD-10 of WHO. Studies on smoking mainly from the developed countries noted higher rates of smoking by psychiatric patients, especially those with schizophrenia, when compared to the general population. Some studies indicated that smoking could have some positive effects on the clinical state in schizophrenia and depression through neurotransmitter mechanisms. Such observations could be misinterpreted if one does not consider the enormous morbidity and mortality associated with smoking. Studies on smoking by psychiatric patients are few from developing countries where socio- cultural and familial factors influence smoking behaviour [14]. Cigarette smokers frequently describe the anxiolytic and antidepressant effects of smoking, but evidence suggests that cigarette smoking may itself increase negative effects, so that the causal direction of this association remains unclear [15].

Study conducted by Prabha S et al. Nicotine Dependence Among Psychiatric Patients showed that forty-three per cent were married and living with their spouse, 9% were married and living apart, 43% were not married, 2% were divorced, and 3% widowed. The most common primary diagnosis was mood disorder (n=464; 47%) with 309 diagnosed with bipolar/mania and 155 with depressive disorder; next most frequent was the psychotic disorders (n=388; 39%) and 136 (14%) were diagnosed with neurotic and other disorders [16].

In one of the studies by TN Srinivasan, and K Parthasarathy the total numbers of patients assessed were 687 of which 510 patients were having psychiatric disorders and the control group was made up of 177 medically ill with no psychiatric disorder. In the psychiatric group there were 286 with schizophrenia, 84 with major affective disorders and 140 with no psychotic disorders [17].

Patients who achieved abstinence from smoking showed a risk of developing depressive episodes similar to those who failed to achieve abstinence. As expected, patients who had a history of depression were more likely to experience depressive episodes after treatment for smoking cessation [18].

The prevalence of depressive symptoms was significantly higher in smokers (42.9%) than in non-smokers (29.5%). Respondents with depressive symptoms had increased odds of smoking even after adjusting for socioeconomic and cultural factors (OR=2.68, 95% CI=1.45-4.97) [19].

Short Comings of the Study

It is basically a hospital based study so it may not be a true representative of the community.

Conclusion

This study revealed that depressive disorder has co-morbidity of tobacco use invariably among male cases. The pattern is more common, among productive age (36.16 ± 12), predominantly in married (78.1%) and it does not spare educated population (67%).Contrary to West, this study revealed that other patterns of tobacco use (Pan, Naswar, etc.) are more common than smoking alone(32.58%).

Recommendation

Larger study at community level should be carried out regarding tobacco use.

The policy maker needs to concentrate to implement the existing law regarding use of tobacco that is more vulnerable to serious complications.

As ICD-10 is deficient in detailed description of tobacco use, form and pattern of tobacco use such as chewing paan/naswar must be incorporated with appropriate codes.

The term "**Smoking cessation clinic**" must be replaced with "**tobacco cessation clinic**" in developing country to represent the 90% of the world population.

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