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ORIGINAL ARTICLE

Sociodemographic Factors, Severity of Addiction and Substance-seeking Situations in Nicotine dependent Patients: A Retrospective Study

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ABSTRACT

Context: Nicotine use has become the most prevalent, most deadly, and most costly and yet the most ignored of the substance dependencies. With over 200 million nicotine consumers in India at present, it becomes important to address this health hazard and take up strong measures toward damage control.

Objective: The objective of the article is to assess the sociodemographic profile, severity of nicotine dependence, and common substance-taking situation in nicotine-dependent patients.

Materials and methods: This is a retrospective study of 100 nicotine consumers attending the deaddiction outpatient department at King Edward Memorial Hospital, Mumbai, Maharashtra, India. Relevant sociodemographic data were obtained using a predesigned proforma. Fagerstrom test to evaluate severity of nicotine dependence and the common substance-taking situations were noted from the proforma.

Results: Majority were male in the early adult age, secondary educated and had positive family history. The most common mode of consumption was smokeless (59%) form and schizophrenia (13%) was the most common comorbid psychiatry disorder. The severity of dependence was between low to medium. The main reason for starting nicotine consumption was peer pressure and factors for maintaining it were negative situations like unpleasant emotion and physical discomfort.

Conclusion: Adolescent age is a vulnerable period during which they are exposed to nicotine use. Appropriate strategies can be applied by knowing the drug-seeking situation.

Keywords: Negative situation, Nicotine, Peer pressure.

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INTRODUCTION

"Nicotine," which is commonly used in South and Southeast Asia and the Asia Pacific region for a long time, is now one of the leading preventable causes of death.[1,2] It kills nearly six million people annually, out of which five million deaths are due to direct nicotine consumption.[3] Nicotine use is a major cause of deaths from cancer, cardiovascular disease, and pulmonary disease and remains a leading cause of premature deaths.[4] It has become the most prevalent, deadly, costly, and yet the most ignored of the substance dependencies.[5]

India has a high incidence of tobacco chewing practice and this is one of the causes for India having the highest rate of oral cancer in the world.[6] The use of nicotine in India has varied patterns like smoking, chewing, snuffing and applying on gum.[7] The mode of consumption is governed by geographic area. In developing countries, cultural conditions, peer pressure, and family influences are the main factors behind use of nicotine among the youth.[8]

Moderate pricing in comparison to that in developed countries, easy accessibility, and advertisements and promotional activities by tobacco companies also have a role to play.[6] Studies have found significant associations of psychiatric comorbidity in nicotine-dependent patients.[9]

It has been found that among smokers, every year 70% want to quit smoking, but only 3% are able to successfully stop it.[10] Considering its high relapse, it becomes important to address the reason for consumption like as a fun, stress buster, habit or imitation. With over 200 million nicotine consumers in India at present, it is important to address this health hazard and take up strong measures toward damage control.[4] The study aimed to assess sociodemographic factors, severity of nicotine dependence and common substance-taking situation in nicotine-dependent patients. This knowledge will assist in taking appropriate steps either to prevent or decrease the intake of nicotine.

MATERIALS AND METHODS

A retrospective hospital-based analytical study was carried out among 100 consecutive nicotine-dependent patients who attended the deaddiction outpatient department at King Edward Memorial Hospital, Mumbai,

Maharashtra, India in the year 2009 to 2010. The study was conducted after exemption obtained from the Institutional Ethics Committee, Seth GS Medical College & King Edward Memorial Hospital and informed consent was excluded as it was a retrospective study. Outdoor proforma records of 100 consecutive nicotine-dependent patients were studied. Relevant sociodemographic factors, physical complaints and psychiatric comorbidity that were diagnosed using Diagnostic and Statistical Manual of Mental Disorders, Fourth edition – Text Revision criteria were collected from the proforma.

The common substance-taking situations were noted from the proforma and divided into three types of situations: (1) Negative situations, which included situations like physical discomfort and unpleasant emotion; (2) Positive situations like pleasant emotion, pleasurable time with others; and (3) Temptation situations like social pressure to consume, testing personal control.[11] Fagerstrom test was used to evaluate severity of nicotine dependence. It includes six questions in which two questions were rated on 4-level Likert scales from 0 to 3 and four questions on 2-point Likert scales from 0 to 1. Based on the total scores, it had four levels of severity: Very low 0 to 2, low 3 to 5, medium 6 to 7, and very high 8 to 10. Based on the Fagerstrom test score in the proforma, the severity of dependence was noted.[12] Analysis of data was carried out using Statistical Package for Social Sciences. Inferential statistics was applied depending on the nature and distribution of the data. Sociodemographic variables, severity of nicotine dependence and drug seeking situations were analysed using descriptive statistics like proportions, percentile and mean.

RESULTS

Majority of the 100 nicotine-dependent patients were males and the predominant age group was 21 to 40 years. The data showed that most of the patients were secondary educated, working in government services and were married; 73% of patients used to consume nicotine at workplace. Family history of nicotine consumption was present in 67% of patients and alcohol (38%) was the most common other substance used by them. Details of sociodemographic profile are given in Table 1. The smokeless form of nicotine (59%) was the most common mode of consumption like use of *masheri*, *gutkha*, and *mawa*, which was followed by the use of cigarette/beedi in 28%, and 13% consumed both forms of nicotine. The details of mode of consumption are given in Table 2. The duration of consumption of nicotine was for 10 to 19 years in 30% patients followed by 20 to 29 years of consumption in 28%, 0 to 9 years in 26% of patients, and then 16% consumed for 30 years and above.

Almost half the patients (46%) had physical symptoms in which common complaints were cough (10%), mouth ulcer (8%), gastric ulcer (7%), and oral cancer (4%). The details of physical symptoms are shown in Table 3; 38% of patients had comorbid psychiatric disorder in which schizophrenia was the most common (13%) followed

Table 1: Sociodemographic profile of nicotine-dependent patients

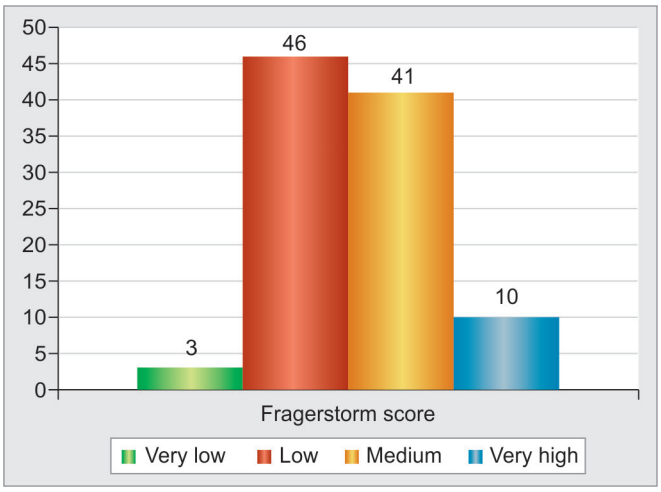
Variables	*Subjects (n = 100)*
Age (years)	
0–20	9
21–40	51
41–60	35
>60	5
Gender	
Male	84
Female	16
Education	
Illiterate	10
Primary	8
Secondary	60
Graduation	20
Masters	2
Work	
Self-employed	20
Daily wages	16
Service	44
Unemployed	20
Marital status	
Single	31
Married	65
Separated	3
Widow	1
Family history of nicotine use	
Yes	67
No	33
Other substance use	
Alcohol	38
Cannabis	2
Alcohol + cannabis	3
Alcohol + cannabis + brown sugar	2

Table 2: Mode of consumption in nicotine-dependent patients

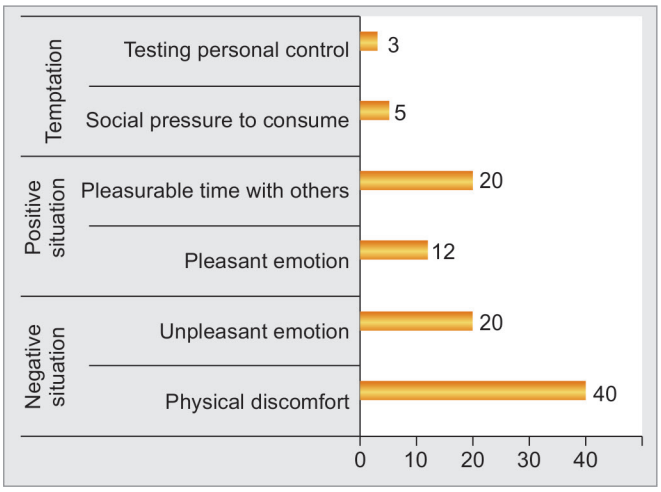
Mode of consumption	*Subjects*
Smoking (n = 28)	
Cigarette	24
Beedi	3
Combined	1
Oral (n = 59)	
Gutkha	18
Mawa	11
Masheri	30
Smoking and oral	13

Table 3: Physical symptoms in nicotine-dependent patients

Physical symptoms	*Subjects (n = 46)*
Cough	10
Mouth ulcer	8
Gastric ulcer	7
Combined (gastric + mouth ulcer)	17
Oral cancer	4



Graph 1: Severity of nicotine addiction using Fagerstrom test



Graph 2: Drug-seeking situations in nicotine-dependent patients

by mood disorders (11%). Based on Fagerstrom test, the severity of dependence was between low (46%) to medium (41%) followed by very high (10%) and then very low (3%). The details of severity of consumption are shown in Graph 1.

The major reason for starting nicotine consumption was due to peer pressure (90%) followed by interpersonal and work stressors (10%). Most (89%) patients consumed nicotine in all three situations (negative/positive/temptation). However, 60% of patients had negative situations like physical discomfort and unpleasant emotion as the main reason for consumption followed by positive situation (32%) like pleasant emotion, pleasurable time with others, and lastly temptation (8%) like social pressure to consume, testing personal control. The details are shown in Graph 2.

DISCUSSION

Majority of the nicotine-dependent patients in our study were in early adulthood, which is most likely due to the fact that the initiation of nicotine has been found to begin during adolescence.[13] This trend of early consumption has been found to be increasing, especially in developing nations like India. Factors implicated for this increasing trend include peer pressure, family history of nicotine dependence, and cultural traditions, such as inhalation through the nose as snuff, use of beedi (small flavored cigarette).[14] Majority of the study population was secondary educated, which is contrary to the finding by Rani et al,[15] where nicotine consumption was found mostly in uneducated patients. This difference in findings could be due to the fact that most patients were from urban population where the education level is higher compared with rural and more awareness about the adverse effects of nicotine use in them. The smokeless tobacco was the most common form of consumption. This result is similar to the findings of Malhotra et al,[16] whereas in Western countries, smoking has been found to be the commonest form of nicotine consumption.[17] This is probably due to the low cost of smokeless form of nicotine, the prevalent cultural traditions and easy accessibility of gutkha, masheri compared with other forms of nicotine.[14]

Psychiatric comorbidity is common in nicotine dependent patients[18] and our study had similar findings with more than one third sample had comorbid psychiatric disorders and Schizophrenia was the most common psychiatric comorbidity which is similar to the finding of Srinivasan and Thara study.[19] The severity of nicotine use in the sample studied was between low to medium dependence. These findings suggest that increased morbidity and mortality due to systemic disease and cancer is mostly due to severity of nicotine dependence as some patients in our study also suffered from lung disease and oral cancers. The main reason for starting nicotine consumption was due to peer pressure. These findings are similar to the study done by Malhotra et al and possible contributing factors could be novelty-seeking behavior, poor self-esteem, high need to conform, getting into bad company of friends, and lack of supervision by elders in adolescence.[15,20]

The main reason for continued consumption of nicotine was the negative situations like physical discomfort and unpleasant emotion. Almost half the sample size had physical symptoms like cough, gastric/oral ulcers and oral cancers and 38% had comorbid psychiatric disorders like schizophrenia and mood disorders which could be the reason for continued consumption in negative situations. This finding helps us in knowing the reason for increased consumption despite its knowledge and physical suffering. With this knowledge, we can use appropriate strategies to help people quit nicotine and also reduce relapse rates.

CONCLUSION

The results of our study showed adolescent age of starting consumption, smokeless form of nicotine more commonly used and long duration of consumption. The severity of dependence was between low to medium, which was associated with increase physical complaints like cough, mouth ulcer, and oral cancer. The negative situations like physical discomfort and unpleasant emotion were the common reasons for nicotine consumption.

RECOMMENDATIONS

The adolescent age is a vulnerable period during which they are exposed to use of nicotine. They require supervision by elders and advice regarding being part of a good peer group. It is also the responsibility of the dealer to make it inaccessible in shops for adolescents. Awareness about the physical harm, its tolerance, difficulties in quitting, and its impact on family and work has to be explained through educative programs in schools and colleges and among the general public. Our findings can be incorporated in the content of the awareness programmes by NGOs/Govt. Identifying the negative situation and forming alternative coping strategies needs to be prioritized before they resort to nicotine. This can not only increase awareness but also induce people to contemplate and attempt quitting. This will reduce health risks and thus illness expenses.

LIMITATIONS

The limitations of the study were small sample size and retrospective analysis. A cross-sectional study with use of validated scale could give better results.

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