

Tobacco Dependence, Willingness to Change Behaviour among Tobacco Users Attending Tertiary Care Hospital's De-Addiction Clinic

Vikram Singh¹, Mahaveer Singh²

¹Assistant Professor, Department of Psychiatry, Shri Kalyan Government Medical College and Attached Hospital, Sikar, Rajasthan, India

²Senior Medical Officer, District Hospital Tonk, Rajasthan, India

Received: 30-10-2022 / Revised: 30-11-2022 / Accepted: 30-12-2022

Corresponding author: Dr Vikram Singh

Conflict of interest: Nil

Abstract

Introduction: In India, smoking is a major contributor to many respiratory illnesses and avoidable deaths. Due to a lack of information on the severity of the tobacco use problem, tobacco cessation programmes could not be developed or implemented around the Hill areas. In this study, tobacco users who visit a de-addiction clinic at a tertiary care teaching hospital will have their nicotine dependency and readiness to alter behaviour assessed.

Materials and Procedures In this research, 100 tobacco users from a government hospital's addiction clinic in Sikar, Rajasthan, India were included on purpose throughout the course of six months. Information was gathered using a standardised personal and clinical profile sheet, the revised smokeable and smokeless Fagerstrom Test for Nicotine Dependence, and the Willingness to Change Questionnaire. To produce the results, descriptive and inferential statistics were applied.

Results: As per this study population, tobacco use started at an early age. The study's participants chose bidi over all other types of smokable tobacco. According to the FTND scale, the majority of participants fell into the category of heavy nicotine dependency and were in the contemplation phase of quitting cigarettes (compared to the users who were in the action stage).

Conclusions: Most subjects were at a high degree of nicotine dependency. While highlighting the need for need-based intervention and aided follow-up programmes for tobacco, it is important that willingness to alter behaviour to stop or reduce tobacco use.

Keywords: Nicotine Dependence, Willingness, Tobacco.

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

Introduction

Consumption of tobacco is a major health issue in India and is likely to cause many diseases. In our country, the population of poor people is more than 40 Crores. Tobacco consumption in these people is more common than in others. Due to the consumption of tobacco people's illness and the mortality rate is very high, especially in

India. There are a number of diseases which arise due to the consumption of Tabaco like Asthma, Mental diseases, periodontal diseases, stroke and cancer etc. In India tobacco is primarily consumed in the form of smoking and chewing. The tobacco consumption rate is more prone in men as compared to women. Around 50% of the men

population and 20% of women population consumes tobacco products. The way of tobacco consumption is different worldwide. China is the top consumer of tobacco. After China, India comes in second place in tobacco consumption. India is one of the most consumers of tobacco products in the world.

In India, in the hill area, most tobacco is consumed in raw form due to the scarcity of tobacco products and their manufacturing units. Tobacco farming in these areas is very common and it is very difficult to stop this activity. For preventing the use of tobacco consumption multiple drugs and personnel communication method is very successful. Although to get the best results, a group of people are selected for implementing this method.

In the present scenario, multiple peoples want to stop their addiction to tobacco consumption considering its bad effect on their health. Data shows that the percentage of initiation for quitting tobacco is high but when it comes to maintaining this process this percentage gets reduced. Every day, a number of people attempt to stop the consumption of tobacco but only people get to succeed in maintaining this process for a long time period. Actually, these people who want to quit tobacco need personal guidance on regular basis as well as they need regular motivation to keep away the tobacco consumption. At present, a number of digital services are available which can encourage and help them in quitting tobacco consumption. Before guiding or giving any suggestion it is useful to collect the data of the targeted community about the amount and consumption pattern of tobacco. This study is carried in a clinic in North India to understand the behaviour of tobacco consumers regarding their patterns, dependence and willing to stop tobacco consumption.

Materials and Methods

The study was planned in the psychiatric department's de-addiction clinic of a tertiary care government hospital in Sikar, Rajasthan, India. These types of clinics are specialized to give proper advice and help for people who are addicted to the consumption of tobacco and are willing to leave it permanently.

In this study, a total of 100 people were selected who are addicted to tobacco consumption.

Sociodemographic and clinical profile sheet

Social and Demographic data of the patient's Age, sex, Education marital status, religion, number of family members, and Monthly income are collected in the questionnaire given to each of the participants of the study.

Additionally, data on tobacco consumption are collected including the age when they started tobacco consumption, how many times they consume the products, which type of product they are willing to take, the reason behind the initiation of tobacco consumption, willingness to stop the tobacco consumption, how many times they tried to stop the use of tobacco, their knowledge about the hazards of the tobacco, history of any illness.

Nicotine dependence status

People who are taking part in the study were separated in Nicotine Dependence (FTND-Smoking version) by The Fagerström Test and in Nicotine Dependence (FTND-smokeless by the Modified Fagerström Test. In both methods, 1–10-point scale is used to rate nicotine dependence, where a score >3 or 4 indicates low-moderate nicotine dependence.

Willingness to Change Questionnaire

A questionnaire was provided to the study participants (Candidates) who are willing to quit the use of tobacco. The provided questionnaire has satisfactory internal uniformity and confidentiality and is used various times for similar candidates in the past. The questionnaire basically contains three types of information namely,

Pre-contemplation stage: Candidates who are not willing to quit the use of tobacco).

Contemplation stage: Candidates who are not sure and have some confusion to quit the use of tobacco.

Action and maintenance stage: Candidates who had reduced or stopped tobacco consumption.

Every Candidate was asked to give their response on a 5-point rating scale; strongly disagree (-2), disagree (-1), unsure (0), agree (+1), and strongly agree (+2). The total score of the scale was calculated for each candidate. During the study, the Privacy and confidentiality of each candidate were ensured. A written consent form was collected from each candidate who is taking part in the study.

All collected data were analysed statistically. All candidate's data were presented in different forms like frequency, percentage etc.

Results

Sociodemographic profile

The total number of candidates who take part in this study was 100. In the Study, Male candidates were higher (90%) with an average age of 48.03 (± 13.21) years. Most of the Candidates who take part in the study were married (92%). The Educations status of the maximum number of candidates was only up to the intermediate level (81%). Most of the candidates who take part in the study

were doing jobs and belongs to villages or small towns. Most of the candidates belong to a joint family (72%) (Table- 1).

As per the data, there is no direct link between the socio-demographic profile and the willingness to quit tobacco.

Tobacco use profile

The mean age at which the most of candidates initiated the consumption of tobacco was observed at 21.36 ± 5.73 years. The average BMI of the candidates was observed to be 21.28 ± 2.37 . Most of the candidates use tobacco in the form of smoking (48%) while others use Tobacco in the smokeless form (24%) or in both forms (28%).

For smoking, candidates use the Bidi (22%) and Cigarette (36%) while for the non-smoking method, they mostly use the Khaini/gutkha (15%). The rate of smoking per day was very high, around 52% of candidates were using the Bidi or Cigarette 11 – 30 units per day

In the same way, the tobacco consumption rate in the smokeless candidates was found to be more than 2 packets in 36 candidates.

The main reason behind the starting of Tobacco consumption was observed to be peer pressure (96%). Medical illness was observed in 96% of candidates while 4% of candidates were observed to be Psychiatry ill. Nearly 95% of candidates were having a history of Psychiatry illness.

As per the data maximum number of candidates (81%) were ready to stop the use of tobacco then 12% were unsure and still, 7% of candidates were not ready to stop the consumption of tobacco. Among all the reporting candidates, Around 72% of candidates were found to be unhealthy (Table- 2).

Nicotine dependence status

In the candidates to find the dependency on nicotine two common tests, are used as Fagerström Test - FTNDS-Smoking version – for Nicotine Dependence, and the modified Fagerström Test - FTNDS-smokeless.

In all candidates using the test, it was found that approx. 41% (smoking) & 38% (Smokeless) candidates fall in the category of very high dependency on nicotine (Table-3).

Willingness to change behaviour

The motivation to quit tobacco use was measured using the willingness to change questionnaire. Based on this questionnaire, it helps to classify the participants into three stages (1) pre-contemplation, (2) contemplation, and (3) action stage.

More than half (57.7%) of subjects were in the contemplation stage of change. Approximately half (42.28%) of the participants were in the action stage, determined to quit and take a move forward for a new beginning of life (Figure 1).

Table 1: Sociodemographic profile of the Candidates

Variables	No. of Candidates	Willingness to quit Tobacco			
		Contemplation	%	Action	%
Gender					
Male	90	46	90.20	44	89.80
Female	10	5	9.80	5	10.20
Marital status					
Unmarried	8	6	10.53	2	4.65
Married	92	51	89.47	41	95.35
Education status					
Up to intermediate	81	48	81.36	33	80.49
Graduate and above	19	11	18.64	8	19.51
Religion					
Hindu	75	42	73.68	33	76.74
Non-Hindu	25	15	26.32	10	23.26
Occupational status					
Business	15	6	10.53	9	20.93
Private job	40	25	43.86	15	34.88
Others*	45	26	45.61	19	44.19
Types of family					
Nuclear	28	18	28.13	10	27.78
Joint	72	46	71.88	26	72.22
Habitat					
Rural	74	43	72.88	31	75.61
Urban	26	16	27.12	10	24.39

Table 2: Tobacco use profile of the Candidates

Variables n (%)	No. of Candidates
BMI (kg/mg2)	21.28 ±2.37
Age of tobacco initiation (years),	21.36 ±5.73
Types of tobacco use	
Smoking	48

Smokeless	24
Both	28
Types of smoking use	
Bidi	22
Cigarettes	36
Types of smokeless tobacco use	
Khaini/Gutkha	15
Hatigola	9
Others#	18
Frequency of smoking use (per day)	
<10	41
11-20	36
21-30	16
>31	7
Frequency of smokeless tobacco use	
1 packet/day	6
2-3 packets/day	12
>3 packets/day	24
Reason for initiation	
Peer pressure	96
Others†	4
Reason for relapse	
Peer pressure	22
Others**	78
Readiness to quit tobacco products	
Ready	81
Somewhat ready	12
Not ready	7
Tobacco-related complications	
Medical illness\$	96
Psychiatry illness	4
History of illness	
Medical illness\$	5
Psychiatry illness	95
Surgery	
Status of perceived self-efficacy status (self-reported)	
Healthy	28
Unhealthy	72

Table 3: Tobacco dependence status in Candidates

Level of dependence	Smoking	Smokeless
---------------------	---------	-----------

	(FTNDS)	(FTNDS ST)
Very low-low (0-4)	9	8
Medium to high (5-7)	2	2
Very high (8-10)	41	38

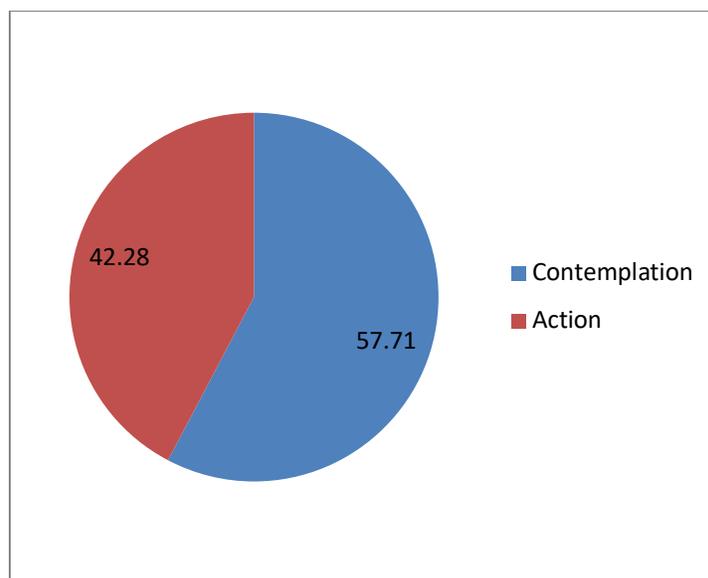


Figure 1: Willingness to change behaviour in tobacco users

Discussion

This study was carried out at the psychiatric department's de-addiction clinic of a tertiary care government hospital in Sikar, Rajasthan, India. Most of the candidates were males (90.0%) with an average age of 48.03 (± 13.21) years. Most of the candidates were involved in the job and have taken nil or very less education. Married people are more prone to tobacco consumption. These data are based on the study carried out at the tertiary care hospital. For tobacco consumption smoking was the most preferred method as compared to others. Majorly used product for smoking was Bidi and cigarette while smokeless Khaini and Gutkah were preferred.

As per the study, people start the consumption of tobacco products at an early age and it becomes normal among college-going, students.

This study reveals that the fondness to use tobacco is not affected by the socio-demographic profile of the patients.

However, the study data shows that more patients want to quit the consumption of tobacco and its products.

Conclusion

As per the study, it was found that the due to some peer pressure or bad guidance people start to consume tobacco products at a very early stage. However, this type of practice is very uncommon in women patients. As the patient feels complications in the body they start to think about quitting the tobacco. At this time this type of patient needs proper care and guidance for help in quitting tobacco. Besides Therapeutic treatment, personnel counselling and monitoring of individuals will help in the improvement of a tobacco-free society.

Limitations

This study has some limitations due to the nature and size of the collected data. Data from different areas and different sizes may affect the result.

References

1. World Health Organisation. Tobacco; 2021. Available from: <https://www.who.int/news-room/fact-sheets/detail/tobacco>.
2. UNDP. Poverty Reduction and Livelihoods Promotion. Available from: <http://www.in.undp.org>.
3. Tata Institute of Social Sciences (TISS), Mumbai and Ministry of Health and Family Welfare G of I. Global Adult Tobacco Survey GATS 2 India; 2021. Ahmed FM, Peeran SV. Review article: Significance and determinants of tobacco use: A brief review. *Dent Med Res* 2020; 4:33-8.
4. Subramanian SV, Nandy S, Kelly M, Gordon D, Davey Smith G. Patterns and distribution of tobacco consumption in India: Cross-sectional multilevel evidence from the 1998-9 national family health survey. *BMJ* 2020; 328:801-6.
5. World Health Organisation (WHO). Tobacco or Health: A Global Status Report. Geneva: WHO; 2020.
6. Saha I, Islam K, Paul B, Som T. Nicotine dependence and its correlates among the adult tobacco users in a slum of Burdwan district, West Bengal, India. *J Fam Med Prim Care* 2019; 6:813-8.
7. Global Adult Tobacco Survey (GATS) India. International Institute of Population Sciences, Mumbai. New Delhi: Ministry of Health & Family Welfare, Government of India; 2018.
8. Mishra GA, Pimple SA, Shastri SS. An overview of the tobacco problem in India. *Indian J Med Paediatr Oncol* 2017; 33:139-45.
9. Kumar R, Kataria N, Radhakrishnan DM, Niraj K. Clinicoepidemiological profile of stroke patients in the Himalayan Subcontinent – A retrospective study. *Natl J Physiol Pharm Pharmacol* 2020; 11:17-22.
10. Kuddus M, Ginawi IA, Al-Hazimi A. Cannabis sativa: An ancient wild edible plant of India. *Emirates J Food Agric* 2013; 25:736-45.
11. Juyal R, Bansal R, Kishore S, Negi KS. Socio-demographic characteristics of substance abusers among intercollege students in a district of Uttarakhand. *JK Science* 2008; 10:116-9.
12. Hatsukami D, Jensen J, Allen S, Grillo M, Bliss R. Effects of behavioral and pharmacological treatment on smokeless tobacco users. *J Consult Clin Psychol* 1996; 64:153-61.
13. Haddad L, Corcoran J. Culturally tailored smoking cessation for arab american male smokers in community settings: A pilot study. *Tob Use Insights* 2013; 6:17-23.
14. Babb S, Malarcher A, Schauer G, Asman K, Jamal A. Quitting smoking among adults — United States, 2000–2010. *Morb Mortal Wkly Rep* 2017; 65:1457-64.
15. Whittaker R, McRobbie H, Bullen C, Rodgers A, Gu Y. Mobile phone-based interventions for smoking cessation. *Cochrane Database Syst Rev* 2016; 4:1-52.
16. Bricker JB, Mull KE, McClure JB, Watson NL, Heffner JL. Improving quit rates of web-delivered interventions for smoking cessation: Full-scale randomized trial of WebQuit.org versus Smokefree.gov. *Addiction* 2018; 113:914-23.
17. Debnath DJ, Kakkar R. Modified BG Prasad Socio-economic Classification, Updated – 2020. *Indian Journal of community health* 2020; 32:124-5.

18. Heatherton TF, Kozlowski LT, Frecker RC, Fagerström KO. The Fagerström Test for Nicotine Dependence: A revision of the Fagerström Tolerance Questionnaire. *Br J Addict* 1991; 86:1119-27.
19. Hatsukami DK, Stead LF, Gupta PC, Sekhsaria H. Tobacco addiction: Diagnosis and treatment dorothy. *Lancet* 2008; 371:2027-38.
20. Ebbert JO, Severson HH, Croghan IT, Danaher BG, Schroeder DR. A randomized clinical trial of nicotine lozenge for smokeless tobacco use. *Nicotine Tob Res* 2009; 11:1415-23.
21. Haokip HR, Kumar R, Rawat VS, Sharma SK. Efficacy of standard nicotine replacement therapy (NRT) versus videoassisted nurse-led NRT on tobacco cessation: A randomized controlled pilot trial; 2021;9:141-6.
22. Jhanjee S, Balhara YP, Sethi H. Tobacco use among drug dependent patients in treatment setting. *Delhi Psychiatry J* 2009; 12:247-51.
23. Buckley TC, Mozley SL, Holohan DR, Walsh K, Beckham JC, Kassel JD. A psychometric evaluation of the Fagerström Test for Nicotine Dependence in PTSD smokers. *Addict Behav* 2005; 30:1029-33.
24. Rollnick S, Heather N, Gold R, Hall W. Development of a short 'readiness to change' questionnaire for use in brief, opportunistic interventions among excessive drinkers. *Br J Addict*. 1992; 87:743-54.
25. Prochaska JO, DiClemente CC. The transtheoretical approach. In: *Handbook of Psychotherapy Integration*. 2nd ed. New York, NY, US: Oxford University Press; 2005;147-71.
26. IBM Corp. IBM SPSS Statistics for Windows: Version 23.0. 2011: IBM Corp, Armonk, NY, USA.
27. Din NU, Khan AW, Suhaff AA, Hussain Z, Ganai AM, Ahmad MS, *et al*. Socio-demographic & clinical profile of patients with substance use disorders seeking treatment. A hospital-based study. *Res Med Eng Sci* 2019; 7:808-14.
28. He H, Pan L, Cui Z, Sun J, Yu C, Cao Y, *et al*. Smoking prevalence, patterns, and cessation among adults in Hebei Province, Central China: Implications from China National Health Survey (CNHS). *Front Public Health* 2020; 8:177.