Published online in http://ijam.co.in ISSN No: 0976-5921

International Journal of Ayurvedic Medicine, Vol 14 (4), 2023; 1021-1025

Prevalence and health impact of tobacco addiction among Health workers of DMIMS along with de-addiction awareness using Ayurveda modalities – A cross-sectional study

Research Article

Chaitali Chaudhari[1], Renu Rathi[2*] Prasad Yewale[3]

1. Intern, 2. Professor & HOD, 3. Assistant Professor, Department of Kaumarbrihtya,
Mahatma Gandhi Ayurveda College, Hospital & Research Centre, Salod(H),
Datta Meghe Institute of Higher Education and Research, Wardha. India.

Abstract

Background: Tobacco use is the second major cause of death and the fourth most common health risk factor affecting the world. Medical professionals have a critical role in the process of smoking cessation both as adviser sand behavioral models for the citizens. In India, tobacco use is quite rampant with every fourth adult person in the country reported to be using it.The perception of the harmful effects of tobacco is also considerably low as only 35.1% of smokeless tobacco users and49.3%of tobacco users thought it to be harmful in are centpan- India survey. Materials & Methods: It is across-sectional study among100 health care workers of DMIMS, Wardha which was conducted using a WHO questionnaire, Power Point presentation was shown and was completed within an interval of 15 days. Observation & Result: It is observed from the study that there was total of 83 health care workers who were consuming tobacco regularly. 69.2% tried to quit this addiction in their past life and 49 health care workers stated a history of withdrawal symptoms. Discussion: After looking at the vision of the health care workers(health care workers),the proper guidance has been provided in order to quit. The habit by means of Ayurved modalities. Conclusion: The interpretation derived from the study is that among100 participants75% were 3rd and 4th class health care workerss (wardboy–attendant).They were influenced by their surroundings to have tobacco-related products which subsequently turned into a habit and then into an addiction that was now difficult to curb.

Keywords: Tobacco addiction, Health care workers, De-addiction, Ayurveda, Questionnaire.

Introduction

Tobacco use is the second major cause of death and the fourth most common health risk factor affecting the world. Medical professionals have a critical role in the process of smoking cessation both as advisers and behavioral models for the citizens.In India, tobacco use is quite rampant with every fourth adult person in the country reported to be using it.The use of tobacco is unwarranted as it is known to increase the risk of various communicable diseases like pneumonia, tuberculosis etc as well as a non-communicable disease like asthma, Chronic Obstructive Pulmonary Disorder (COPD), lung cancer etc.As health experts and promoters, health care workers (health care workers) have an important role to play in curbing the global tobacco epidemic (1). health care workers (nurses, brothers, ward boy – attendants) working to promote smoking cessation and treat tobacco dependence in their patients, following evidence-based tobacco cessation guidelines (2,3). The WHO Framework Convention on Tobacco Control (FCTC) Article 14 focuses on the importance of healthcare workers being role models for society and they are setting a perfect example by quitting such habits(4).

As per World Health Organization(WHO) addiction means the process of having the constant will and being unable to withdraw the mind from that constant provoking urge to have it and is dependent on as a habit; unable to do without a thing, especially the condition of taking a drug habitually and being unable to give it up without ensuring its adverse effects.In India, the use of tobacco is quite rampant with an average of every fourth adult person in the country (28.6%) having been reported to be using it (5). The perception of the harmful effects of tobacco is also considerably low as only 35.1% of smokeless tobacco users and 49.3% of tobacco users thought it to be harmful in a recent pan-India survey(6). The prevalence of tobacco use is higher, indiscriminate spitting of tobacco juice by smokeless tobacco users (which can be a mode of COVID-19 spread), while lower risk perception (lower tobacco quitting behaviour) are prevailing major challenges of tobacco.(7) The role of health care workers in tobacco control is indisputable.They can actively advice and counsel their patients for tobacco cessation. Moreover, their

*** Corresponding Author:**
Renu Rathi
HOD, Department of Kaumarbrihtya,
Mahatma Gandhi Ayurveda College, Hospital & Research Centre, Salod(H), Datta Meghe Institute of Higher Education and Research, Wardha. India.
Email Id: rbr.226@gmail.com

concerned behaviour related to tobacco (i.e.,quitting, discouragement etc.) can influence the concerned behaviour of many.(4) Therefore, this survey was designed to elicit tobacco use patterns and quitting behaviour of health care workers (nurses, brothers, ward boy–attendants) of DMIMS. The findings of the study helped us to get identification of barriers and enable soft tobacco quitting behaviour among health care workers.

Aim & objective

To assess the prevalence and health impact of tobacco addiction among Health workers of DMIMS along with de-addiction awareness using Ayurveda *(sadvritta, dincharya, yoga, pranayam).*

Objectives

- To assess the patterns of smokeless and smoked tobacco habits among Health care workers of DMIMS, Wardha,Maharashtra
- To evaluate the impact on physical, mental & social health due to tobacco products.
- To estimate the awareness of deaddiction by Ayurveda pharmacological & non- pharmacological interventions like counselling, *sadvritta, yoga and pranayama*.
- PPT presentation was shown which enhances the power of delivering a message and creating awareness among healthcare workers to make them quit the habit.

Material and Methods

The study was conducted using a questionnaire that consists of general information of individual, basic habits related to tobacco consumption, and personal attitudes related to smoking. The questionnaire was validated and made on the basis of theoretical knowledge, literature review, and prior experience along with Ayurveda modalities like *sadvritta, pathya-apathya sevan, yoga and pranayama.*

Place of the study

Health care workers of DMIMS, Wardha, Maharashtra.

Study design

A Cross-sectional study.

A sample size of the study

100 adult health care workers of DMIMS, Wardha, Maharashtra were selected for the study.

Inclusion criteria

- The Health care workers of DMIMS, Wardha, Maharashtra of the 21-60 years age group who have a habit of tobacco consumption in various forms like ghutka or other smokeless form was included irrespective of their gender, socio-economic status, caste and religion.
- Staff who gave consent were included in this cross-sectional study.

Method of awareness, education and counselling

The questionnaire was pre-validated and based on WHO guidelines.(7) A total of 100 adults were interviewed as per the questionnaire. The collected data was validated and analysed properly through pie diagrams. They were educated using Powerpoint presentations which helped in enhancing the power of delivering the message and creating awareness among healthcare workers so that they could quit the habit.The key points included in presentation includes pictures of diseases generated due to tobacco, views of cancer patients were shown to them, the workers were made aware about ill-effects of the habit and how it will affect their family.

Observations & Results

The observational study was held among 100 adult health care workers. The distribution was done based on age, gender, religion, type of family and socioeconomic status all of these are shown in Tables no 1 to 4 respectively.

Table 1: Distribution of study based on age

Age	No of adults	Percentage
20-30	29	29%
31-40	62	62%
41-50	9	9%

Table no 1 shows distribution of data based on age which is statistically present as 29% adult were between 20-30 age group, 62%were between 31-40 age group and 9% adult were between41-50 age group. Thus, the health care workers which were included in the study are young and adult between 20-50 age group.

Table 2: Distribution of study on the basis of gender

Gender	No of adults	Percentage
Male	68	68%
Female	32	32%

Table no 2 shows distribution of data based on gender. It includes 68% male while 32% female.

Among them 67 male consumes tobacco during working hours, while 16 female health care workers.

Table 3: Distribution of study based on religion

Religion	No of adults	Percentage
Hindu	39	39%
Muslim	3	3%
Christian	-	-
Buddhism	58	58%

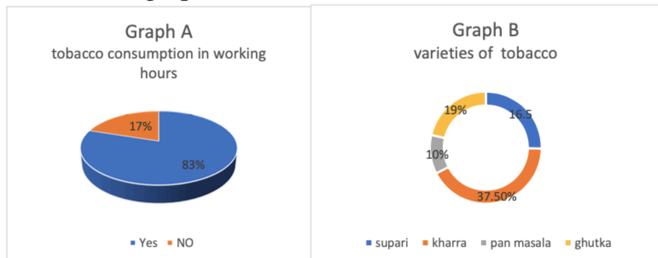
Table no 3 defines distribution of data based on religion so 39% were Hindu, 3% Muslim, 58% Buddhist.

Table 4: Distribution of study based on socio-economic status

Socio-economic status	No.of adults	Percentage
Middle class	62	62%
Upper middle class	23	23%
Lower middle class	10	10%
Lower class	5	5%

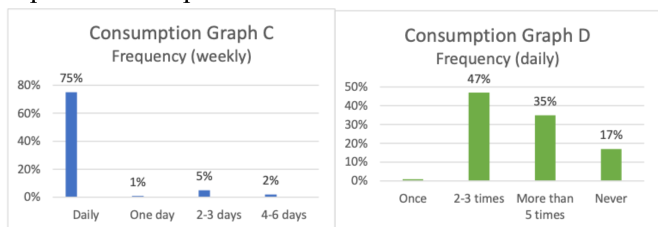
Table no 4 describes the distribution of data based on socioeconomic status as 62% Middle class, 23% Upper middle class, 10% Lower middle class, 5% Lower class.

Health care workers were asked if they consumed tobacco during working hours or not. If they use to consume then the form of tobacco was asked. That data is shown in graph A.



Out of 83 addictive health care workers, 16.5% had habit of consumption of smokeless supari pouch. 37.5% were addicted for consumption of Kharra, while 10% & 19% were habitual for pan masala and Gutka consumption respectively.Percentage of this study is as shown in Graph A and B.

Frequency of tobacco use and its craving on weekly and daily basis in tobacco addictive health care workers was also studied. The observation of study is depicted in Graph B.



There was total 83 health care workers who were consuming tobacco regularly.As per the graph C depicts 75% of them were consuming on daily basis and 7% (5%+2%) consumes 2-3 days and 4-6 days respectively and1% consumes one day in a week while 17% never consumes tobacco.

Graph D shows frequency of tobacco consumption on daily basis as1% consumes daily once, 47% consumes daily twice or thrice, 35% consumes more than 5 times in a day while 17% never consumes tobacco.

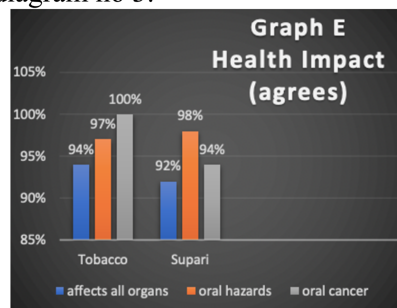
As per survey, the first question was asked to health care workers, "Does the habit of tobacco consumption turns into addiction?" and answers noted - all 100 participants gave their response as 50 % were completely agree, 32 % strongly agreed to the question while 17% partially agreed and 1% responses as their opinion disagrees to the question.

The second question asked–"Is it hard to quit such habits?" To which 93% health care workers agrees(23% strongly agrees, 39% agrees and 31% partially agrees) with the question while 7% disagrees (5% disagree and 2% strongly disagrees) the question.

The next question was asked "Does it show impact on body?" to which 23% strongly agrees, 35% agrees and 36% partially agrees while 5% disagree and 2% strongly disagreeing the question.The next two questions were asked with respect to oral cancer and its oral hazards as "Are such habits responsible for oral problems and causative factor for cancer and teeth disorders?" to which 98(21% strongly agree,31% agree,45% partially agree) and 100(20% strongly agree,35% agree,45% partially agree) respectively to the questions.

Further 5 questions were asked regarding my present in society like-"Does it affect all age group irrespective of gender?" to which 11 disagrees while 89 health care workers agrees. "Does it help to keep energetic during working hours?" - 19 disagrees and 81 agrees. "Does it help with digestion?"-85 agrees and 15 disagrees."Does it help with constipation?"– 80 agrees and 20 disagrees."Does the habit help to build relations in the society?"–77 agrees and 23 disagrees.

The second page was about supari related question. First question asked was "Can we eat supari along with *kharra, ghutka, paan masala*?" To which 24 % strongly agrees, 56% and 13% completely and partially agrees the question while 7% disagrees the question. The next question was asked "Does it show impact on body?" to which 92 health care workers agrees and 8 disagrees the question.The next two questions were asked with respect to oral cancer and its oral hazards of supari to which 94% and 98% health care workers agrees respectively to the questions as shown in diagram no 3.



The Graph E shows difference between the health impact caused by tobacco and supari respectively as per the knowledge of the population selected.

The third page of the questionnaire was related to "How many attempts made to quit this addiction?"– 69.2% tried to quit this addiction in their past life.Among them 70.7% tried1-2 times and 29.3 % tried 3-4 times to quit the addiction.

Then next question asked was- "What is the reason to resume the habit?" so almost 49 health care workers told they experienced constipation, headache, irritation, nausea & vomiting, unable to concentrate and desire to have alcohol. We focused on every individual who wishes to quit this addiction and take care of the thing that others should not get influenced by such hazardous habitsPower point presentation shown to them for creating awareness who consumes tobacco continuously. They were made aware about their responsibilities towards society as they are health care workers. They were oriented with Pathya-Apathya, Ayurveda interventions, hygiene, Yoga-Pranayamam, Sattvavaajya chikitsa described by Acharyas in the classical texts.(6) This presentation made them aware and changed their way of thinking as they came to

know about that this addiction can harm their family and childrens.

Discussion

The rate of tobacco consumption in India continues to increase day by day. The constant evaluation of tobacco consumption patterns will help in developing effective tobacco control interventions. Most of the large studies have limitations because one member of the family provides abrupt information. But, community-based studies where data collection is done from each of the participants in a given time become a better source of information to understand the views.(8) In India, the poor to middle class even some of the upper-class personnel have the same tendency regarding tobacco consumption. Thus, it became a necessity to conduct such surveys not only among certain sectors but it should be conducted in society irrespective of occupational gradation. In India which forms 92% of the working people are laborers, both rural and urban, where health warnings and smoke-free policies are displayed beyond that they continue to have it.(8) Studies have shown that people have a widespread understanding of tobacco-related harm but less knowledge about the specific consequences of use. Works zones are important areas for the promotion of tobacco cessation. It's preferably and easy to counsel to quit thereby but, they get the support of each other, else it's difficult to get rid of any habit with accompanied people who don't want to quit.(9)

There is no evidence for the enhancement of tobacco-related education and prevention or cessation training in health care curriculum. Supplementary education about tobacco will be beneficial to everyone. (McKay,2015)(10) It is important because health professionals have a greater role to play; studies have shown that tobacco users have been provided with cessation advice by health professionals, but as the levels of cessation advice have been low, consumption has continued.(11-13)The overall prevalence of tobacco consumption was43.4%. Among tobacco users, smokeless tobacco was used by more than half of the cleaning staff (53.2%) reason could be easier to start with or to get influenced by peers for stress relief or so-called other benefits as there is no smell after consumption. Nursing orderly preferred smoked form i.e., cigarette (41%) in Haryana as it is quite common to smoke hookah practice, they think it increases their socialising in society. Smoking as a means of socialising and relaxation was consistently discussed as the main reason for continued use in everyday life. Working condition was a compelling factor for housekeeping staff leading to feeling like a companion and avoidance of boredom in monotonous work pattern. (14)

As per the study,32.6% of the health care workers were ever tobacco users while 23.4% and 16.9% were current and daily tobacco users. During the COVID-19 pandemic, 51.7% and 43.1% of health care workers cut down the frequency and amount of tobacco use respectively while for 24.1% of COVID- 19 pandemic exerted no effect on their tobacco use.Presence of vulnerable population at home [adjusted odds ratio(AOR): 17.5 (95% confidence interval(CI):3.3–92.2)], ever tobacco quit attempt [AOR: 13.5 (95% CI:2.7–67.7)] and history of COVID-19 disease [AOR: 5.1 (95% CI:1.3–20.7)] significantly determined reduced tobacco use (60.3%) during the pandemic. Similarly, reduced tobacco use during the pandemic [AOR: 4.8 (95% CI:1.7–13.5)] and perception of both smoking and smokeless tobacco form to be harmful for COVID-19 [AOR: 4.8 (95% CI:1.7–13.5)] were the independent correlates.(4)

Globally, it is observed that consumption of alcohol, tobacco, or drug is common among medical and paramedical personnel in spite of their professional knowledge.(8) In India, it is also known that such practice usually starts during the period of training in medical institution, with equally contributing factor being easy availability of such substances (personal experiences and observations).(17) The gender and income differences in tobacco use among health care workers appear to reflect the global pattern of the tobacco epidemic in the general population(19). According to the International Agency for Research on Cancer (IARC) monograph, there is sufficient evidence in humans that tobacco smoking causes cancer of the lung, oral cavity, nasopharynx, oropharynx and hypo-pharynx, nasal cavity and paranasal sinuses, larynx, oesophagus, stomach, pancreas, liver, kidney(body and pelvis),ureter, urinary bladder, uterine cervix and bone marrow (myeloid leukaemia).(18) The barrier is the health professional's own use of tobacco.The Global Health Professional Students' Survey revealed that 13.5% of male medical and11.4%of dental students used tobacco.The use of tobacco among practicing health professionals is also high. In a study in Kerala, 15% of male medical school faculty, 13% physicians, and 14% of medical students reported tobacco use. (20)To the best of our knowledge, this is the first study of its kind in assessing the prevalence of tobacco related habit among healthcare workers of DMIMS, Maharashtra. In this study, an attempt was made to assess the prevalence of tobacco habits among health care workers.The results of this work will be instrumental in assessing the prevalence of tobacco related habits.This will help in formulating strategies to achieve tobacco free society.Our cross sectional descriptive study carried out among health care workers (nurses, brothers, ward boy – attendants) of DMIMS.The researchers were fully aware of the fact that ours being a hospital based study, it can not reflect the true magnitude of the tobacco problem in the community.

Conclusion

The interpretation derived from the study is that among100 participants75% were 3rd and 4th class health care workers (ward boy–attendant).They were influenced by the surrounding to have tobacco related products which subsequently turned into a habit and then into addiction which was now difficult to curb.These classes of workers are mostly involved in physical activities, their body suffers from physical

fatigue so to sustain such long term duty schedule without fix regimen they opt for such ways. It was noted that most of them use it as a timepass media to cover the working hours. Almost 49 health care workers stated about withdrawal symptoms. So, to get control over such symptoms they were advised to take ayurvedic treatment.They were timely counselled to not perform intellectual blasphemy, made aware about personal oral hygiene and to take care of patient's hygiene too and told to follow *sadvrita*.(7)

Conflicts of interest: There are no conflicts of interest.

References

1. WHO. WHO Tobacco Free Initiative. The Role of health professionals in tobacco control: WHO; 2005 [http://www.who.int/tobacco/resources/publications/wntd/2005/bookletfinal_20april.pdf.
2. Raw M, Anderson P, Batra A, Dubois G, Harrington P, Hirsch A, Le Houezec J, McNeill A, Milner D, Poetschke L, Zatonski W. WHO Europe evidence based recommendations on the treatment of tobacco dependence. Tobacco control. 2002 Mar;11(1): 44.WHO. Guidelines for implementation of Article 14 of the WHO Framework Convention on Tobacco Control WHO;2010[http://www.who.int/fctc/Guidelines.pdf?ua=1.
3. Mohite VR, Hiremath P.A Study to assess the Prevalence of Tobacco use among Class Fourth Workers of Krishna Institute of Medical Sciences University Karad, Maharashtra, India. International Editorial Advisory Board. 2015 Jan;7(1):120..
4. Naik BN, Biswas B, Singh C, Pandey S, Nirala SK, Chaudhary N. Tobacco use pattern and quitting behavior among healthcare professionals during the COVID-19 pandemic: Insights from a pan India online survey. Clin Epidemiol Glob Health.2021 Oct-Dec; 12: 100838. doi: 10.1016/j.cegh.2021.100838. Epub 2021 Jul 30. PMID: 34693078; PMCID:PMC8519579.
5. Global Adult Tobacco Survey (GATS)Second round, India (2016- 17) Accessed https://ntcp.nhp.gov.in/assets/document/surveys-reports-publications/Global-Adult-Tobacco-Survey-Second-Round-India-2016-2017.pdf, Accessed 20th Oct 2020Google Scholar
6. Rathi RB, Rathi BJ. Ayurveda perspectives toward prevention and management of nicotine and alcohol dependence: A review. Journal of Indian System of Medicine. 2020 Jan1;8(1):14.
7. Rathi RB, Rathi BJ. Randomised Controlled trial on Ayurveda Interventions with Nicotex chewing Gum for De-Addiction of Tobacco Products in School Going Children of Salod and sawangi,Wardha-Study protocol.Annals of the Romanian Society for Cell Biology. 2021 Feb1:3388-95.
8. Mohan P, Lando HA, Panneer S. Assessment of tobacco consumption and control in India.Indian Journal of Clinical Medicine.2018 Mar2;9:1179916118759289
9. Stewart T, Formica MK, Meija AMA, Wang D, GerardM. A tobacco cessation intervention with rural medically underserved blue-collar employees: a quasi experimental study. Safety Health Work.2016;7:293–298
10. McKay AJ, Patel RK, Majeed A. Strategies for tobacco control in India: asystematic review. PLoS ONE. 2015;10:e0122610.doi:10.1371/journal.pone.0122610
11. WHO. WHO, Centers for Disease Control and Prevention and the Canadian Public Health Association(Global Tobacco Surveillance System Data (GTSSData)),2013. http://nccd,cdc.gov/GTSSData/default.aspx
12. SinghP,KumarR.Assessment of the effectiveness of sustained release bupropion and intensive physician advice in smoking cessation. Lung India. 2010;27:1– 38. doi:10.4103/0970-2113.5925.
13. Thankappan KR, Pradeep Kumar AS, Nichter M. Doctor's behavior and skillsfor tobacco cessation in Kerala.Indian JMedRes.2009;129:249–255.PMID:19491416
14. Prasad N, Singh M, Pal RK, Joseph J. Tobacco use among health care workers of tertiary care center of Faridabad, Haryana, India. Clinical Epidemiology andGlobal Health. 2020 Jun1;8(2):394-8.
15. Holani SR, Rathi RB, Rathi B. Survey Study to assess the awareness and health impact of tobacco addiction in children of Zilla Panchayat Schools of Wardha. Journal of Indian System of Medicine. 2020 Jan1;8(1):41.
16. Kasat V, Joshi M, Somasundaram KV, Viragi P, Dhore P, Sahuji S. Tobacco use, its influences, triggers, and associated oral lesions among the patients attending a dental institution in rural Maharashtra, India. Journal of International Society of Preventive& Community Dentistry. 2012Jan;2(1):25.
17. Sachdeva S. Tobacco, Alcohol, and Drug Consumption Practices among Medical and Paramedical Students in a Government Medical College of New Delhi, India. J Indian Assoc Public Health Dent. 2020 Jun25;18:161-7.
18. Mishra GA, Pimple SA, Shastri SS. An overview of the tobacco problem in India. Indian Journal of Medical and Paediatric Oncology. 2012 Jul; 33(03):139-45
19. Nilan K, Mc Keever TM, Mc Neill A, Raw M, Murray RL. Prevalence of tobacco use in healthcare workers: A systematic review and meta-analysis. PloS one. 2019 Jul 25;14(7): e 0220168.
20. Murthy P, Saddichha S. Tobacco cessation services in India: Recent developments and the need for expansion.Indian journal of cancer. 2010 Jul1; 47 (Suppl1):S69-74.

*****