Pattern of Tobacco Use and Perceived Risk of COVID-19 Following Tobacco Use among the COVID-19 Patients of a Tertiary Health Care Institution in Eastern India

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Original Article

Abstract

Background: COVID-19 presented an unprecedented situation in which behavioural factors including tobacco use were believed to increase the risk of morbidity and mortality. The objective of the present study was to find the tobacco use pattern among the COVID-19 patients and the perceived risk of developing severe COVID-19 following tobacco use.

Methods: This hospital-based, cross-sectional, analytical study was conducted among 300 COVID-19 patients at the All India Institute of Medical Sciences (AIIMS), Patna, India, during November and December 2020 using a semi-structured, pretested questionnaire. Descriptive and univariate analyses were performed using statistical software and the results were presented as proportion and percentage.

Findings: About 27% and 16% of the COVID-19 patients were ever and current tobacco users, respectively. Quit attempts were found to have increased during the COVID-19 pandemic. A majority (65%) of current tobacco users had reduced their amount of tobacco use. Nearly 2 in every 3 patients perceived high risk of developing severe COVID-19 following tobacco use. Perceived risk was significantly higher among tobacco non-users, patients who were aware of the ill health effects of tobacco use, and patients who had noticed anti-tobacco messages or had been advised to quit tobacco. Among the current tobacco users, a significantly higher proportion of patients who perceived high risk of developing severe COVID-19 following tobacco use had made quit attempts or had reduced tobacco consumption during the pandemic (76.7% vs. 40%; P = 0.032).

Conclusion: A high proportion of COVID-19 patients believed that tobacco use aggravated the COVID-19 condition. Increased quit attempts and reduction in tobacco consumption during this pandemic is a positive sign for tobacco control.

Keywords: Tobacco use cessation; COVID-19; Health risk appraisal; Pandemics

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Introduction

The coronavirus 2 (SARSCoV-2), which is a novel acute respiratory syndrome causing coronavirus disease (COVID-19), emerged in Wuhan, China, and has spread worldwide.[1] The COVID-19 pandemic poses a serious extraordinary challenge to science and technology worldwide. The uncertainty and non-predictivity of severe acute respiratory syndrome coronavirus 2 (SARS CoV-2) infection and COVID-19 has generated fear, panic, and mental agony among people.[2,3] As of December 2020, about 100 million COVID-19 cases and 0.2 million deaths have been reported across 215 countries worldwide.[4] The first documented case of COVID-19 in India was reported on 30 January 2020. By December 2020, India had reported about 10 million COVID-19 cases and 0.15 million deaths.[5] In India, national level measures such as prevention of gatherings along with social distancing, promotion of hand hygiene along with improvement of respiratory hygiene, surveillance and contact tracing of cases/suspects, and strict nationwide lockdown were adopted to contain and control the COVID-19 pandemic. At the individual level, all efforts were made to identify and protect the vulnerable population and recognize the risk factors which lead to poor outcome of COVID-19.

Risk factors for poor outcome in patients with COVID-19 include older age, male sex, hypertension, diabetes, cardiovascular disease, respiratory disease, and other chronic diseases.[6] Persons with lower immunity are at increased risk for developing COVID-19. Smoking is an established risk factor for several chronic diseases, including cardiovascular disease and chronic obstructive pulmonary disease (COPD), which appear to be risk factors for severe COVID-19 and its adverse outcome.[7,8] Though any organ can be affected, the lungs are primarily affected. There is extensive evidence for the negative impact of tobacco use on lung health and its causal association with a plethora of respiratory diseases.[9] Smoking is also detrimental to the immune system and its responsiveness to infections, making smokers more vulnerable to infectious diseases.[10] Previous studies have shown that smokers are twice as likely as non-smokers to contract influenza and have more severe symptoms, and a higher mortality rate was observed among smokers in the previous Middle East Respiratory Syndrome (MERS) CoV outbreak.[11] Therefore,

smoking/tobacco use has been suspected to be a risk factor for contracting and developing severe SARS CoV-2 infection and a risk factor for severe COVID-19. The results of studies performed in western nations have demonstrated the positive association between smoking and severity of COVID-19.[6,12-17] A meta-analysis including only a few studies has reported the lack of role of smoking in the progression to severe COVID-19.[18] However, other systematic reviews and meta-analyses including several studies, case reports, and case series have also reported the progression to severe COVID-19 among smokers.[12,16,17,19,20]

There is a dearth of literature on the role of smoking/tobacco use in contracting/developing severe COVID-19 in India. Hence, we conducted this study to understand the pattern of tobacco use and perceived risk of developing severe COVID-19 among COVID-19 patients attending a tertiary health care institution in an eastern state of India.

Methods

Study design, duration, and ethics: A hospital-based, cross-sectional design was adopted in this study, and it was carried out during the months of November and December 2020. The ethical approval for this study was obtained from the Institute Ethics Committee (No. AIIMS/Pat/IEC/2020/635) of the tertiary health care institution.

Study setting: The tertiary health care institution is an Institute of National Importance (INI) in India and is engaged in providing state of the art and comprehensive tertiary level health care to the people in the region.

The study was conducted at the Flu Clinic, functioning in the INI during this COVID-19 pandemic. The Flu clinic is attached to the Department of Community and Family Medicine of the INI where initial assessment and admission of the patient occurs as soon as he/she arrives. Then, the patients are referred to different wards or ICUs depending upon the severity of their condition and bed availability.

Study population: The study population included all the COVID-19 patients who had referred to the Flu Clinics of the INI during the study period and satisfied the inclusion and exclusion criteria. Patients aged 18 years and above, and with documented history of COVID-19 were included. The information on tobacco use status of very seriously ill patients, who were on the ventilator and were not able to talk, was

obtained from the accompanying family member/relative whenever possible. Efforts were made to obtain the information on perceived risk of developing COVID-19 during their stay or at their discharge. Those severely ill patients who died during the course of treatment before perceived risk could be obtained were excluded.

Sample size and sampling technique: Considering the prevalence of tobacco use among the general population to be 26% (GATS-2_Bihar),[21] the minimum sample size was calculated to be 296 using OpenEpi software (version 3.2) at 5% absolute precision and 95% confidence interval (CI) (5% alpha error). Final sample size was calculated to be 326 after considering a 10% non-response rate. Consecutive sampling was adopted for recruiting the participants until the required sample size was achieved.

Study tool and technique: The study tool was a pre-tested, semi-structured questionnaire. It consists of 3 sections. The first section contains a demographic characteristics form including items on name, age, gender, education, occupation, and type of family. The second section contains items regarding the tobacco use behaviour of the participants and tobacco use status, forms of tobacco use, duration of tobacco use, change in tobacco use during the COVID-19 pandemic, quit attempts, and advice on quitting tobacco use. Section 3 contains items on the risk perception of tobacco use for developing COVID-19, category of COVID-19 patients, etc. The severity of COVID-19 was assessed on admission and during the hospitalization period. The highest category was considered as the final severity status of the COVID-19 patient.

A participant who had used tobacco products in the preceding 1 month from the date of the interview was considered as current tobacco user. Assessment of severity of COVID-19 (Table 1) was based on the guidelines issued by the Ministry of Health and Family Welfare, Government of India.[22]

The study toll was developed in English with reference to the manual of the National Family Health Survey. Further inputs for the study tool were taken from the researchers in the field of tobacco research. The developed tool was translated into Hindi (local language) and pre-tested among the general patients who attended the out-patient department of our institute. The modified version was back translated into English. After face validation from faculty members of our department (Department of Family and Community Medicine), the final tool was prepared both in English and Hindi.

The information collected was entered into MS Excel and statistical analysis was performed using SPSS software (version 20, SPSS Inc., Chicago, IL, USA). The quantitative variables were expressed as mean (SD) or median (IQR) depending on normality distribution. The categorical variables were expressed as proportion and percentages. The association between tobacco use and severity of COVID-19 was assessed using chi-squared test. The independent factors for perceived risk of developing COVID-19 or contracting the infection were identified using multivariable logistic regression analysis. The p-value of 0.05 was considered as statistically significant. For this study, the severity of COVID-19 was classified as serious (moderate and severe COVID-19) and non-serious (mild and asymptomatic COVID-19).

Results

The present study was conducted at the All India Institute of Medical Sciences (AIIMS), Patna, India, an INI. A total of 300 COVID-19 patients were enrolled during the study period. Most of them (39%) were elderly and a majority of them (72%) were men. Almost three-fifths of the patients had studied beyond the 10th class and a majority of them (54%) belonged to the nuclear family. About two third of the COVID-19 patients were not serious.

Table 1. Severity of COVID-19

Severity	Description
Asymptomatic	Documented positive, but no symptoms or signs
Mild disease	Symptomatic patients meeting the case definition for COVID-19 without evidence of viral pneumonia or hypoxia
Moderate disease	Adolescent or adult with clinical signs of pneumonia (fever, cough, dyspnoea, and fast breathing), but no signs of severe pneumonia, including $SpO_2 \geq 90\%$ on room air
Severe disease	Adolescent or adult with clinical signs of pneumonia (fever, cough, dyspnoea, and fast breathing) plus one of the following: respiratory rate > 30 breaths/minute, severe respiratory distress, or $SpO_2 < 90\%$ on room air

About 27% were ever tobacco users and 16% current tobacco users (Table 2).

Table 2. General characteristics of study participants

Variable	Groups	n (%)
Age (year)	< 40	73 (24.3)
	40-60	111 (37.0)
	> 60	116 (38.7)
Gender	Female	85 (28.3)
	Male	215 (71.7)
Education	No formal education	21 (7.0)
	Studied up to class 10	98 (32.7)
	Studied beyond class 10	181 (60.3)
Family	Nuclear	163 (54.3)
	Joint	137 (45.7)
Severity of	Asymptomatic	18 (6.0)
COVID-19	Mild	175 (58.3)
	Moderate	73 (24.3)
	Severe	34 (11.4)
Ever	Yes	82 (27.3)
tobacco user	No	218 (72.7)
Current	Yes	49 (16.3)
tobacco user	No	251 (83.7)

About 37% of male and 3% of female patients were ever tobacco users (P < 0.001). Approximately 37% of the male and 31% of the female patients had severe COVID-19 disease. Proportionate severe COVID-19 had the highest rate among the elderly (47%) (Figure 1).

The majority of the current tobacco users were using smokeless tobacco products (58%) and 63% of them had smoked for more than 10 years.
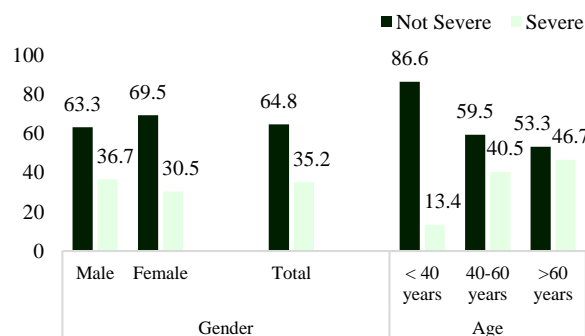

Figure 1. Gender-Age distribution of COVID-19 patients in our study (n = 300)

Nearly three-fourths of the current tobacco users were using tobacco products 5 times or less a day. Nearly 90% of the current tobacco users were aware of the ill effects of tobacco use. Only two-thirds of the current tobacco users had thought of quitting during this pandemic. About 69% of the current tobacco users had attempted to quit tobacco. Although 73% have been advised to quit or had seen anti-tobacco messages, only 65% had reduced their consumption of tobacco products. None had stopped using tobacco products (Table 3).

Although about 21% of the patients had no knowledge in this regard, the majority of the patients (64%) perceived increased risk of contracting COVID-19 infection and developing severe COVID-19 following tobacco use.

Table 3. Current tobacco use pattern and behaviour among the study participants (n = 49)

Variable	Groups	n (%)
Type of tobacco products used	Smoking forms	15 (30.6)
	Smokeless forms	29 (59.2)
	Both	5 (10.2)
Duration of tobacco use (in year)	≤ 5	7 (14.3)
	6-10	11 (22.4)
	> 10	31 (63.3)
Frequency of tobacco use	≤ 5	36 (73.5)
	> 5	13 (26.5)
Ever thought of quitting	Yes	33 (67.3)
	No	16 (32.7)
Thought of quitting during the pandemic	Yes	35 (71.4)
	No	14 (28.6)
Any quit attempts during the pandemic	Yes	34 (69.4)
	No	15 (30.6)
Reduced tobacco use	Yes	32 (65.3)
	No	17 (34.7)
Advised to quit tobacco during this pandemic	Yes	37 (75.5)
	No	12 (24.5)
Awareness of the ill effects of tobacco use	Yes	45 (91.8)
	No	4 (8.2)

Table 4. Association of factors with perceived risk in our study (n = 236)

Variable	Groups	Perceived risk of developing COVID-19		χ^2	P
		No [n (%)]	Yes [n (%)]		
Gender	Male	28 (15.8)	149 (84.2)	0.548	0.459
	Female	7 (11.9)	52 (88.1)		
Age (year)	< 40	5 (7.5)	62 (92.5)	4.759	0.093
	40-60	16 (20.3)	63 (79.7)		
	> 60	14 (15.6)	76 (84.4)		
Education	Non formal	3 (21.4)	11 (78.6)	0.718	0.698
	Up to class 10	8 (12.7)	55 (87.3)		
	Beyond class 10	24 (15.1)	135 (84.9)		
Type of family	Nuclear	19 (14.2)	115 (85.8)	0.104	0.747
	Joint	16 (15.7)	86 (84.3)		
Ever tobacco user	No	20 (11.6)	152 (88.4)	5.150	0.023*
	Yes	15 (23.4)	49 (76.6)		
Non-user	No	25 (12.8)	171 (87.2)	3.943	0.040*
	Yes	10 (25.0)	30 (75.0)		
Awareness of harmful effects	Not aware	6 (33.3)	12 (66.7)	5.282	0.020*
	Aware	29 (13.3)	189 (86.7)		
Notice tobacco messages or advised	No	21 (29.6)	50 (70.4)	17.484	< 0.001*
	Yes	14 (8.5)	151 (91.5)		
Severity of COVID-19	Not severe	18 (11.8)	135 (88.2)	3.24	0.072
	Severe	17 (20.5)	66 (79.5)		

*Statistically significant

Perceived risk was significantly higher among patients who had no history of tobacco use, were aware of the harmful effects of tobacco use, and had noticed anti-tobacco messages or had been advised to quit tobacco use. Though statistically not significant, the perceived risk of developing severe COVID-19 was higher among women, younger individuals, individuals with education up to the 10th class, individuals who belonged to a nuclear family, and individuals who had not had severe COVID-19 (Table 4). Having noticed anti-tobacco messages or been advised to quit tobacco during this pandemic were found to be the independent factors for perceived risk of contracting/developing severe COVID-19 [Adjusted odds ratio (OR): 5.61; 95% confidence interval (CI): 2.49-12.63].

Among current tobacco users, 9 individuals were not sure of increased or decreased risk of severe COVID-19 due to tobacco use. Among current tobacco users, perceived risk was higher among smokers and chronic tobacco users (> 10 years). A significantly higher proportion of current tobacco users who perceived the development of severe COVID-19 following tobacco use had thought of quitting tobacco (80% vs. 40%; P = 0.017), reduced their consumption of tobacco (76.7% vs. 40.0%; P = 0.032), and had attempted to quit during this pandemic (76.7% vs. 40.0%; P = 0.032) (Table 5).

Proportionately more patients with serious COVID-19 were ever tobacco users (29.0% vs. 26.4%; P = 0.635). Nevertheless, a greater proportion of patients with non-serious COVID-19 were current tobacco users (17.6% vs. 14%; P = 0.419). Among the current tobacco users, duration of tobacco use and frequency of daily tobacco use were not found to be associated with the severity of COVID-19. Among the current tobacco users, a proportionately greater number of serious COVID-19 patients had attempted to quit (73.3% vs. 61.8%; P = 0.433) and had reduced their use of tobacco products (73.3% vs. 67.6%; P = 0.691).

Discussion

In this facility-based study, nearly two-thirds of the participants expressed increased risk of contracting and developing severe COVID-19 following tobacco use. Concern for developing COVID-19 was higher among women, and younger and highly educated patients. Nearly 1 in every 4 and 1 in 6 patients were ever and current tobacco users, respectively. The perceived risk of developing severe COVID-19 was significantly lower among patients who were tobacco users (ever/current). Patients, who had knowledge of the harmful effects of tobacco and who had noticed anti-tobacco messages or were advised to quit, had significantly higher perceived risk of contracting severe COVID-19.

Table 5. Association of tobacco use behaviour of current tobacco users with perceived risk of developing severe COVID-19 (n = 40)

Variable	Groups	Perceived risk of developing COVID-19		χ^2	P
		No [n (%)]	Yes [n (%)]		
Type of tobacco products used	Smokers	1 (7.7)	12 (92.3)	3.77	0.152
	Smokeless tobacco user	7 (30.4)	16 (69.6)		
	Dual user	2 (50)	2 (50.0)		
Duration (year)	≤ 5	1 (16.7)	5 (83.3)	4.171	0.124
	6-10	0 (0)	8 (100)		
	≥ 11	9 (25.0)	17 (65.4)		
Ever thought of quitting tobacco	No	5 (50.0)	9 (30.0)	1.319	0.251
	Yes	5 (50.0)	21 (70.0)		
Ever thought of quitting tobacco during the COVID-19 pandemic	No	6 (60.0)	6 (20.0)	5.714	0.017[*]
	Yes	4 (40.0)	24 (80.0)		
Reduced the amount/number of tobacco products used during the COVID-19 pandemic	No	6 (60.0)	7 (23.3)	4.596	0.032[*]
	Yes	4 (40.0)	23 (76.7)		
	Aware	9 (25.0)	27 (75.0)		
Attempted to quit tobacco	No	6 (46.2)	7 (53.8)	4.596	0.032[*]
	Yes	4 (14.8)	23 (85.2)		

[*]Statistically significant

More than 90% of current tobacco users were aware of the ill effects of tobacco use on health and about three-fourths of the patients were advised by health professional to quit tobacco use. The thought of quitting tobacco was found to have increased during the COVID-19 pandemic among current tobacco users. Nearly two-thirds of current tobacco users had made unsuccessful attempts at quitting during this pandemic, but had reduced the amount they consumed. Quit attempts and reduced tobacco use were found to be more common among current tobacco users who perceived higher risk of developing serious COVID-19 following tobacco use.

Demographic characteristics of the study participants: The proportion of tobacco users among the COVID-19 patients in our study was similar to that in the general population in the study by the Tata Institute of Social Sciences (TISS).[21] Reddy et al. also reported a similar prevalence of tobacco use (25.6%) among COVID-19 patients.[6] However, a wide variation in the prevalence of tobacco use among COVID-19 patients (1.4% to 28.6%) was reported in studies around the world.[6,23-26] The high prevalence of tobacco use among men and higher number of COVID-19 patients including severe patients being men points towards the plausible contribution of tobacco use towards the development of serious COVID-19 in our study. This sex predisposition might be associated with the much higher smoking rate in men than in women. Our findings are consistent with findings from other studies that have reported the male sex predisposition of COVID-19 infection with history of smoking.[25,27]

Tobacco use pattern and behaviour among the study participants: Although 90% of the current tobacco users were aware of the ill effects of tobacco use, only two-thirds of them had thought of quitting during this pandemic. Hence, a more focused health behaviour change intervention is required. However, a good sign is the increase in the proportion of tobacco users who have thought of quitting tobacco during the pandemic compared to the pre-pandemic time. This is also evident from the high perceived risk of developing severe COVID-19 among the tobacco users. This opportunity needs to be seized to motivate tobacco users to quit.[28,29] About two-thirds of current tobacco users had attempted to quit tobacco and had reduced their consumption of tobacco products during this pandemic. This motivated interest shown by current tobacco users is a good sign of receptivity to advice and tobacco cessation efforts. Only about three-fourths of tobacco users have reported noticing anti-tobacco messages or being advised by health professionals to quit tobacco use. More health professionals need to be involved in the tobacco free initiative and should reach out to each tobacco user at every opportunity.[30-32]

Similar tobacco quitting intentions among tobacco users have been reported in other studies.

In an online survey in the United States, nearly 70% of tobacco users had reported tobacco quitting intention.[29] However, in contrast to our study, far more tobacco users were reported by Kowitt et al. to have increased their consumption of tobacco.[29] A similar online survey also reported tobacco quitting intentions among tobacco users.[33] A study in Italy also reported the intention to quit tobacco use among exclusive tobacco cigarette users during this pandemic.[34] A few other studies on smokers have also reported far more quitting intention during this pandemic.[35-38] Another online survey among tobacco users also reported quitting intention during the pandemic despite increased consumption.[39] During the pandemic, many countries including India went into lockdown. The National Directives under National Disaster Management Act issued an order on the complete ban on the sale of tobacco and alcohol during the pandemic in India.[40] The reduction in the consumption of tobacco use could be the effect of the lockdown during the pandemic and warrants further investigations among tobacco users through focussed group discussions or in-depth interviews. The increased tobacco consumption despite quitting intention could be due to stress and anxiety, and the "stockpiling" effects of lockdown during the pandemic.[29,33,39,41]

Association of factors with perceived risk: Nearly two-thirds of the patients perceived increased risk of contracting COVID-19 infection and developing severe COVID-19 following tobacco use. Lack of knowledge might be the reason for nearly a quarter of patients responding "do not know". These people need to be educated on the various harmful effects of tobacco use and how tobacco use is an added disadvantage for their health risk during this pandemic. This information can be useful for policymakers and tobacco control advocates to help and improve the tobacco quit movement among tobacco users and reinforce the prevention of tobacco initiation among non-users. Perceived risk was significantly higher among patients who had no history of tobacco use, were aware of the harmful effects of tobacco use, and had noticed anti-tobacco messages or had been advised to quit tobacco use. Low perceived risk of developing serious COVID-19 may be the reason that tobacco users are continuing the usage of tobacco. A similar finding was reported among smokers in an online survey from Iran.[42] However, the higher rate of perceived risk among tobacco users who were aware of the ill effects of tobacco use and who had seen anti-tobacco messages or were advised to quit tobacco is a good sign. This showed that if tobacco users are appropriately and adequately informed about the harmful effects of tobacco use, they are more likely to quit tobacco due to the felt need. Another interesting finding is that current tobacco users who perceived a high risk of developing severe COVID-19 following tobacco use had started to reduce their consumption of tobacco and had attempted to quit during the pandemic albeit without success. In an online survey in Iran, ex-smokers reported to have stopped smoking and be motivated to continue abstaining from smoking due to perceived risk of developing COVID-19.[42] Hence, tobacco users who are motivated to quit not only in our study, but elsewhere need to be provided with adequate and appropriate help to quit and this is the right time to intervene.[28]

Streck et al.[35] and Klemperer et al.[33] also noted that participants who believed that smoking is a risk for COVID-19 were four times more likely to report increased intensity of quitting attempt. In a study on smokers from 5 countries, a large proportion of Indian individuals believed there was a high risk of developing COVID-19 following smoking and vaping.[39]

A much larger percentage of ever tobacco users had severe COVID-19 than current tobacco users in our study. A study in Italy also reported no role of current smoking behaviour in the severity of COVID-19.[43] Gupta et al. also provided similar evidence of high risk of severe COVID-19 among tobacco users in their extensive review.[44] In contrast to our findings, few previously published researches have reported a higher rate of severe COVID-19 among current tobacco users than former tobacco users.[6,23,25,26,45] More and more evidences have been reported across the world for the important role of tobacco use, irrespective of ever or current, in developing severe COVID-19 diseases.

Implication for practitioners, policymakers, and public health organizations: According to GATS-2, nearly 50%-55% of tobacco users in India had shown interest in quitting tobacco use, but less than half of the tobacco users had been advised to quit by health professionals.[21] As noted in our study, a much greater number of tobacco

users have shown quit intention and attempt during this pandemic COVID-19, but none have been successful. A support system in the form of advice and assistance by health professionals would definitely make the tobacco users' quit attempt a reality. The current pandemic situation provides an excellent opportunity for helping tobacco users quit tobacco use.[28] Information therapy provided through health personnel was demonstrated to be a motivation against tobacco addiction or any other substance abuse.[46,47]

The policymakers and public health agencies involved in tobacco control activities need to ensure the constant flow of messages to tobacco users regarding tobacco cessation and other aspects of tobacco control. As noted in our study, tobacco users who have seen anti-tobacco messages in different media or who have been advised to quit had high perceived risk of developing severe COVID-19. Moreover, those with high perceived risk of developing severe COVID-19 have made more quit attempts during the pandemic. A tailor-made tobacco control message during this extraordinary time can act as a magic bullet. The pandemic is an added advantage to strengthening tobacco cessation interventions in the country.[28] The interest shown by the patients with a history of tobacco use places policymakers in an advantageous position that has never been seen before. This opportunity needs to be seized, and appropriately and adequately addressed to help reduce the burden of tobacco use.

Conclusion

A substantial proportion of COVID-19 patients were tobacco users. In addition, 2 in every 3 patients had perceived risk of developing severe COVID-19 following tobacco use. Perceived risk of developing severe COVID-19 was lower among tobacco users, indicating the need for a tailor-made tobacco control campaign. Decreased tobacco consumption and increased quit attempts due to the pandemic provides a golden opportunity to consolidate and intensify tobacco cessation and tobacco control activities.

Limitations: The study population may not be the actual representation of the whole of India. As the present study was cross-sectional in nature, risk (Odds ratio) or temporality could not be assessed. Some participants might not have revealed their current tobacco use status due to national directives on the ban to sell tobacco products. However, we believed this number would be negligible as we had adopted anonymity, confidentiality, and privacy during patient interviews. A very small proportion of very severely affected COVID-19 patients could not be enrolled and needed to be excluded from the study as their views on perceived risk was not elicitable.

Despite its limitations, this study is one among a handful of studies, which have investigated tobacco use and COVID-19 in India. This study provides important information regarding readiness of tobacco users to quit tobacco.

The COVID-19 pandemic has provided us with the opportunity to consolidate and intensify tobacco cessation efforts and bring in a greater change in behaviour of tobacco users by quitting. The pandemic has been a blessing in disguise with regards to the strengthening of tobacco control activates.[48]

Conflict of Interests

The Authors have no conflict of interest.

Acknowledgements

Authors' Contribution

Conceived the project: BNN; involved in the designing of the study: BNN, SP, CMS, and SKN; performed the data collection: PK and MV; involved in data management: BNN, PK, and MV; performed the statistical analysis: BNN, PK, and MV; drafted the manuscript: BNN, PK, and MV. All authors were involved in the editing of the manuscript. BNN, SP, and CMS approved the final version to be published.

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الگوی مصرف دخانیات و خطر درک شده کووید ۱۹ به دنبال مصرف دخانیات در میان بیماران مبتلا به کووید ۱۹ در یک مؤسسه مراقبت‌های بهداشتی عالی در شرق هند

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مقاله پژوهشی

چکیده

مقدمه: کووید ۱۹ وضعیت بی‌سابقه‌ای را ایجاد کرده است که در آن عوامل رفتاری از جمله استعمال دخانیات، خطر ابتلا و مرگ و میر را افزایش می‌دهد. هدف از انجام پژوهش حاضر، پیدا کردن الگوی مصرف دخانیات در بین بیماران مبتلا به کووید ۱۹ و خطر درک شده ابتلا به فرم شدید این بیماری به دنبال مصرف دخانیات بود.

روش‌ها: این مطالعه تحلیلی- مقطعی مبتنی بر بیمارستان، بین ۳۰۰ بیمار مبتلا به کووید ۱۹ در مؤسسه علوم پزشکی آل‌ایندیا، پاتنا، هند، طی نوامبر و دسامبر سال ۲۰۲۰ با استفاده از یک پرسش‌نامه پیش‌آزمون شده نیمه ساختار یافته انجام شد. داده‌ها با استفاده از آمار توصیفی و تک متغیره در نرم‌افزار مورد تجزیه و تحلیل قرار گرفت و نتایج به صورت نسبت و درصد ارایه گردید.

یافته‌ها: حدود ۲۷ درصد از بیماران مبتلا به کووید ۱۹ تاکنون تجربه استفاده از دخانیات را داشتند و۱۶ درصد در حال حاضر مصرف‌کننده دخانیات بودند. مشخص شد که تلاش برای ترک در طول همه‌گیری کووید ۱۹ افزایش یافته است. اکثر مصرف‌کنندگان فعلی دخانیات (۶۵ درصد)، میزان مصرف دخانیات را کاهش دادند. تقریباً از هر سه بیمار، دو نفر خطر ابتلا به فرم شدید کووید ۱۹ به دنبال مصرف دخانیات را درک می‌کردند. خطر درک شده در میان افرادی که دخانیات مصرف نمی‌کردند، بیمارانی که از عوارض ناشی از مصرف دخانیات آگاه بودند و بیمارانی که به پیام‌های ضد دخانیات توجه می‌کردند یا به آن‌ها توصیه شده بود که دخانیات را ترک کنند، بیشتر بود. در میان مصرف‌کنندگان فعلی دخانیات، درصد قابل توجهی از بیمارانی که خطر بالای ابتلا به فرم شدید کووید ۱۹ را به دنبال مصرف دخانیات درک می‌کردند، اقدام به ترک نمودند یا مصرف دخانیات را در طول همه‌گیری کاهش دادند (۷۶/۷ در مقابل ۴۰/۰ درصد، ۰/۰۳۲ = P).

نتیجه‌گیری: درصد بالایی از بیماران مبتلا به کووید ۱۹ مصرف دخانیات را موجب تشدید وضعیت کووید ۱۹ دانستند. افزایش تلاش برای ترک و کاهش مصرف دخانیات، نشانه مثبتی در طول این همه‌گیری نسبت به کنترل دخانیات می‌باشد.

واژگان کلیدی: قطع مصرف دخانیات؛ کووید ۱۹؛ ارزیابی خطر سلامتی؛ همه‌گیری‌ها

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