

Assesment of Tobacco Addiction amongst the South Indian Student Community during the Pandemic- A Survey

R.Gokulakannan^{1*}, Dr. C. Sreeja^{2*}, Dr.S.Samyukta^{3*}, A.Gladson Samuel Raj^{4*}, Dr. Merlin Jayaraj^{5*}, Dr. Cyril Benedict. H^{6*}

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^{1*} Under Graduate student, Chettinad Dental College and Research Institute, Chennai-603 103, Tamil Nadu, India. Gokulakannanravi08@gmail.com

^{2*} Professor, Department of Oral and Maxillofacial Pathology, Chettinad Dental College and Research Institute, Chennai-603 103, Tamil Nadu, India. sreejacdcricri@gmail.com

^{3*} Post Graduate student, Department of Oral and Maxillofacial Pathology, Chettinad Dental College and Research Institute, Chennai-603 103, Tamil Nadu, India. Samyu26797@gmail.com

^{4*} Under Graduate student, Chettinad Dental College and Research Institute, Chennai-603 103, Tamil Nadu, India. Gladsonsamuel2000@yahoo.com

^{5*} Reader, Department of Oral and Maxillofacial Pathology, Chettinad Dental College and Research Institute, Chennai-603 103, Tamil Nadu, India. Merlinjayaraj.07@gmail.com

^{6*} Senior Lecturer, Department of Public health dentistry, Chettinad Dental College and Research Institute, Chennai-603 103, Tamil Nadu, India. cyrilbene@gmail.com

Corresponding Author:

Dr. S.Samyukta,

Chettinad Dental College and Research Institute, Rajiv Gandhi salai, Kanchipuram dist, Kelambakam,

Chennai- 603 103.Phone number: 9176672132

E-mail address: samyu26797@gmail.com

ABSTRACT:

Background: The Lockdown implemented due to COVID-19 pandemic has paralyzed the lives of many people who have been forced to stay at home in confinement. Tobacco addiction typically develops during adolescents. Availability of tobacco products, and lifestyle of students was greatly affected during the lockdown.

Objective: To analyse the effect of lockdown on the mental health, social behaviour and their varied addiction levels before and during the COVID 19 lockdown.

Materials and Method: This questionnaire survey was circulated to college students in different academic courses via google forms. The questionnaire was responded by 67 participants. The data was statistically analysed.

Results: 77.6% of the participants admitted that there is a decrease in the smoking frequency during the COVID-19 quarantine. There was a significant reduction in the frequency of smoking ($p=0.001$) from multiple times a day before the lockdown to 1 or 2 per day during the lockdown. 62.7% of the participants who saw a decline in their smoking frequency were happy about the change, but 7.5% of them were struggling with the change.

Conclusion: These findings suggest that the current scenario of restricted movement is a prime opportunity to help students in the process of quitting the habit.

Keywords: Addiction, Smoking, Mental health, COVID-19, Lockdown, Quarantine

INTRODUCTION:

Tobacco usage has transformed into one of the largest epidemics the public health sector has had to tackle in the past. It is indicated to be responsible for more than 8 million deaths, 7 million due to direct tobacco usage and 1.2 million due to inhalation of second-hand smoke, per year globally [1]. Undisputable evidence has proven that exposure to tobacco in any form or disguise, causes death, disease and disability [2]. Tobacco usage in

India is very complex with usage varying between smoking (bidi, cigarette, hookah, etc.) and smokeless forms (pan, pan-masala or gutakha, and mishri) across the various geographic, economic, sociocultural and religious sectors [3,4]. The complexity of the problem is further compounded by the fact that each of these different products are manufactured using different mixtures and manufacturing procedures resulting in products with varied levels of harmful biological effects [5]. Despite the overwhelming evidence indicating tobacco as a causative factor for various cardiovascular and respiratory disease including cancer, societal and legal restrictions imposed on the commodity, its addictive nature has made it difficult for people to quit its usage [6]. Nicotine present in tobacco causes a high level of psychological dependence in an individual with consistent usage, this leads them to believe that the act in itself is relaxing and helps with stress relief [6,7]. On an average only 6% of those attempting to quit the habit are able to refrain from smoking for more than a month [8]. And an alarming trend in the current population is the increased usage amongst adolescents in spite of constant propaganda against tobacco usage [9]. This indicates the need for a change in tobacco cessation protocol towards one that takes the psychology of the users into account as well [8].

The current pandemic COVID-19 caused by the SARS-CoV-2 virus has completely changed our lifestyles. Its nature of human-to-human transfer, via aerosols and droplets as made movement restrictions, social distancing and strict hygiene protocols the primary method of limiting the spread of the disease [10]. During the consistent spread of the disease across various countries in the world, it has been reported that smokers and COPD patients died at a rate 14 times higher than normal patients [11]. Another important component of the tobacco-COVID relationship is the increase in virus spread from infected asymptomatic smokers via salivary aerosols during the act or sharing of cigarettes, waterpipes, vape, and e-cigarettes [12,13]. This has led to a new and rejuvenated focus on the campaign for tobacco cessation. The public restrictions imposed on travel and large social gatherings to limit the spread of COVID-19 have indirectly led to the reduced the accessibility and consumption of substances such as tobacco. The ban on social celebrations and partying have also resulted in a decreased possibility of teenagers succumbing to peer pressure surrounding substance use [14].

Withdrawal symptoms amongst individuals addicted to any kind of substance are one of the main mental-health emergencies during the lockdown. There is also a possibility of newer behavioural addictions to develop in young teens during this period of social isolation. Hence the public need to be sensitized in regards to addiction-relation issues and mental health helplines need to be established to help the public deal with these issues [14]. In this study we tried to focus on student community, as they are more prone to addiction problems, to evaluate the changes in their addiction during this lockdown period and analyse the various changes in their behaviour.

MATERIALS AND METHODS:

The present study was conducted in our institution during 2020 for a period of 6 months. This survey was conducted amongst the student community between the age 17 and 24, which involves 67 participants from various courses such as BDS, MBBS, Engineering and from various Arts and science courses. The questions were structured in a multiple-choice format in English and the questionnaire was circulated among the student body through various online forums like WhatsApp, Instagram, Facebook etc. The questionnaire was structured with multiple choices, closed and open-ended questions to help us gain some insight into and evaluate the change in quality of the student's life, their mindset during this lockdown and their varied addiction levels to tobacco and other smoking products before and during the COVID 19 lockdown. Forms with incomplete data was excluded from the study. All the responses were collected, and tabulated in an excel sheet. The tabulated data was later statistically analyzed using SPSS software. Descriptive analysis and Chi-square test was done to assess the difference in tobacco addiction levels and its effects on the students' behaviour before and during the course of the lockdown.

RESULTS:

The survey questionnaire was distributed among 100 university students and 67 completely filled forms were received in return. The participants of this study were initially quizzed regarding the environment they lived in. In the present study the 67 participants were seen to have an uneven geographic distribution, with a maximum

number of students being from the urban areas (58.2%), followed by semi urban areas (35.8%) and finally rural regions (6%) (Fig:1). Students that were attending the academic institution from the hostel were very less (26.9%) (Fig:2).

When questioned regarding the use of any tobacco related products 70.1% of the study population agreed to having a smoking habit (Fig:3). More than half of the participants (56.7%) have only developed the habit 1-2 years ago while less than 6% of them seem to have developed the habit more than 10 years ago (Fig:4) Following this the participants were questioned regarding the effect of the lockdown due to the pandemic, had on their habit for which of majority of the subjects (77.6%) said that the frequency of smoking had decreased. A small percentage of individuals said that the lockdown either had no effect (19.4%) or that it had increased their smoking habit (3%) (Fig:5). Statistical analysis revealed a significant decrease in the frequency of smoking ($p=0.001$) from multiple times a day before the lockdown to 1 or 2 per day during the lockdown (Table 1). When questioned regarding the reason behind the sudden change in their habit 25.4% of 60% participants that responded said that the change was due to the unavailability of the product. This was followed by 14.9% who cited fear and anxiety as their reason, parents and friends had a positive influence for 10.4% and a very few (9%) consciously tried to quit by adopting physical activity or other new hobbies. The participants were then questioned on the various physical and mental health changes they faced during this period. 40.3% of the subjects noticed that they were physically healthier after their addiction levels dropped (Fig:6). Mentally more than half (62.7%) of the participants were happy to have the opportunity to try to quit the habit. On the other hand, 14.9% of the subjects dealt with withdrawal symptoms such as depression- stress (11.9%) and fear-anxiety (1.5%). 10.4% of the study population also reported to have displayed aggressive behaviour towards their friends or family members because of the lack of availability of tobacco. Finally, majority of the participants (62.7%) wanted to continue on the path to quit the habit even after the lockdown, whereas 7.5% of them were desperately waiting for the restrictions to be lifted so that they could feed their habit.

DISCUSSION:

COVID-19 is the infectious disease caused by SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2). Soon after the first cases of COVID-19 were publicly reported in Wuhan, China in late December 2019, the disease became one of the most severe pandemics in the twenty-first century. In about a year, there were over 100 million confirmed COVID-19 infection cases and 2 million deaths globally [1]. Lockdown that is implemented in most parts of the world as a restriction to control the spread of this dreadful disease, has affected lives of mankind in several ways. The routine and day to day activities of students, in particular, were impacted to a great extent. In this study, we attempted to assess the changes in pattern and frequency of cigarette smoking and also analyse the psychological effects of the same among student community.

In the current study, a gradual decrease in the frequency of smoking and addiction levels among students was noted. A majority of the participants were able to notice a significant decrease in the frequency of their habit. This is believed to be the consequence of reduced exposure and freedom to indulge in the habit. These results were in correlation with those obtained by H. Yang et al. who concluded that smokers in China on average reduced their tobacco consumption after the nationwide viral outbreak had been contained.

However, these results were contradictory to a few recent studies conducted by Nathalie Vanderbruggen et al. and Anne Koopmann et al. where they found that the frequency of the habit either remained the same (90.1%) or increased (45.8%) during the phase of the lockdown, respectively. This difference could be attributed to the wide variation in geography, routine and life style of people included in both these studies.

We also took into consideration the age of the participant, reason behind smoking and the extent of COVID 19 spread in their region. From these variables we were able to conclude that Most of the students initially start smoking out of curiosity which drags most of them into the vicious cycle of addiction. Many of the subjects in our study admitted that the lack of access to tobacco owing to the pandemic restrictions, has had profound effects on their mental health. Sudden abstinence in habitual drug users increases their urge, negative effects (lethargy, fear, anger, sadness) and decreases the positive effects (enthusiasm, joy, pride), which pushes them to relapse [18]. Hence, it is essential to create an efficient and accessible help line that could assist those experiencing withdrawal symptoms and prevent relapse.

LIMITATIONS:

The questionnaire for this study was self- structured and did not use any standard scales to measure the levels of addiction amongst the participants. Other contributing factors to a student's stress levels such as examinations, relationship with family and peers were not considered while assessing the mental health of the students.

CONCLUSION:

In Conclusion, based on all the responses we were able to see gradual decrease in the frequency of smoking and addiction levels among students. Awareness regarding the harmful effects of tobacco during the pandemic coupled with the lack of access to the product has made this lockdown the ideal time to quit the dangerous habit. Necessary steps must be taken by the government and educational institutions to guide and support those trying to quit the habit and most importantly ensure that those that have quit the habit do not relapse into the vicious cycle of addiction. This can be achieved by setting up helplines to connect those trying to quit with a counsellor to help fight the addiction. Friend and family also must be educated regarding the ways in which they can support their loved ones succeed in their struggles with tobacco addiction.

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TABLES AND GRAPHS:

Table:1 Assessment of change in the distribution of smoking status during the lockdown

		After						Total	P value
		Did not smoke	5-6	>10	1-2	7-8	3-4		
Before	Do not smoke	20	0	0	2	0	0	21	0.001
	5-6	0	1	0	4	1	1	7	
	> 10	0	1	4	0	0	0	5	
	9-10	0	0	1	0	0	2	3	
	1-2	2	0	0	13	0	1	16	
	7-8	0	0	0	2	0	0	2	
	3-4	1	0	0	8	0	3	12	
Total		23	2	5	29	1	7	67	

GRAPHS:

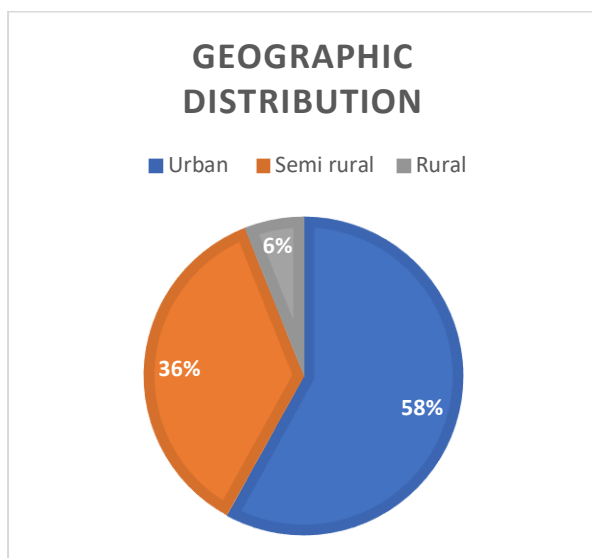


Fig: 1

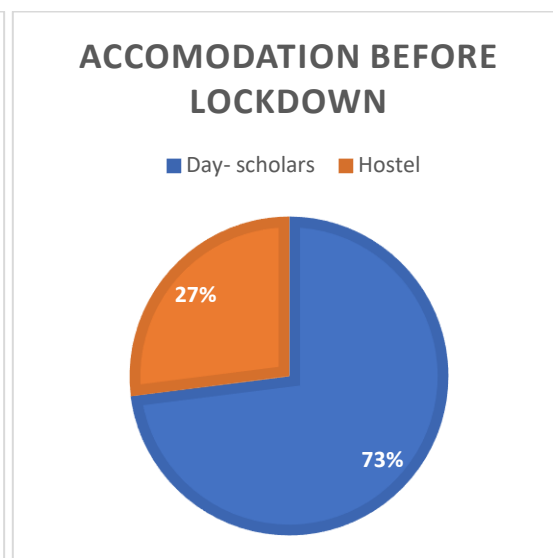


Fig: 2

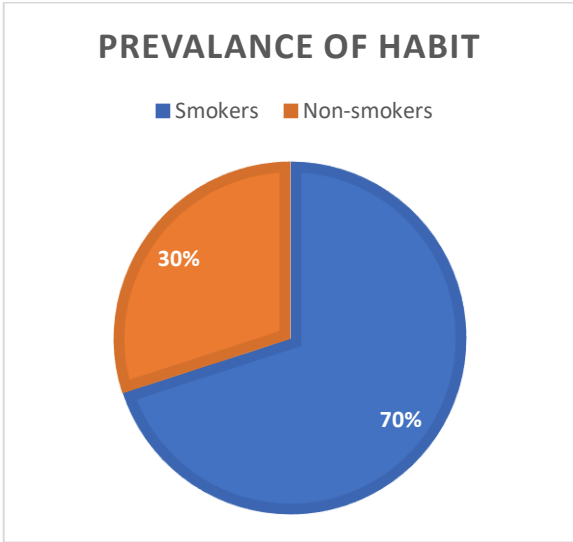


Fig: 3

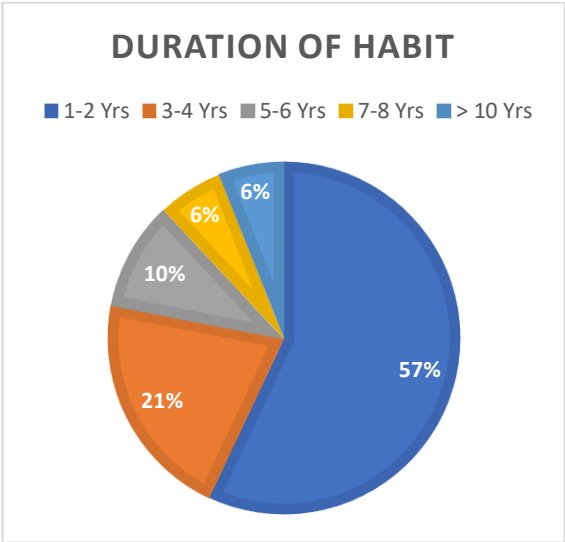


Fig: 4

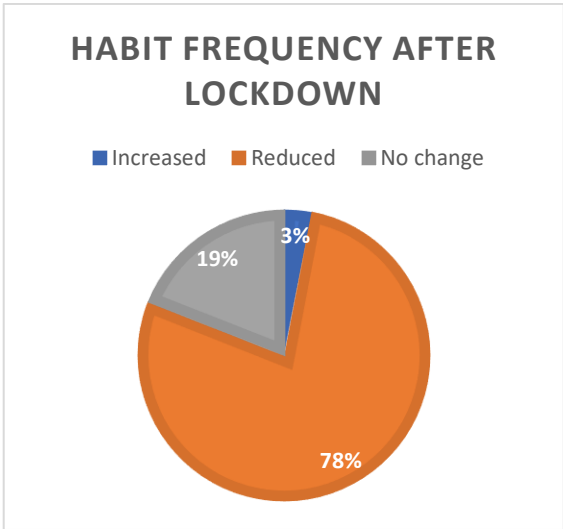


Fig: 5

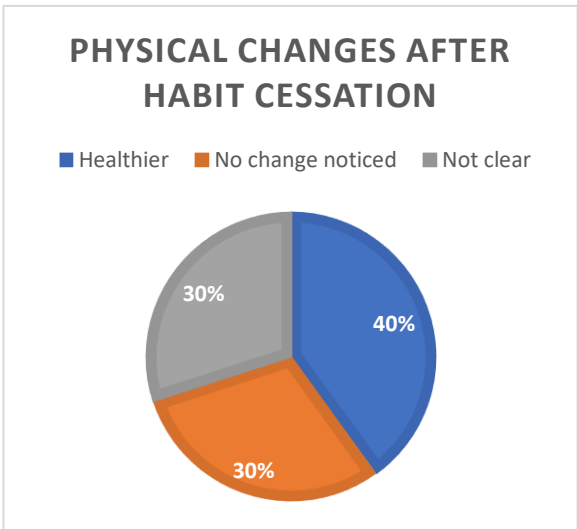


Fig: 6