

## LETTER

## Primary Care

# Nicotine dependence levels in pre and during pandemic and its correlations with COVID-19 phobia among healthy men during controlled social life: A sample of primary care population

To the editor,

Tobacco use an important cause of cardiovascular and lung diseases may exacerbate clinical manifestations of COVID-19. Recent evidences indicate that, increased clinical manifestations in COVID-19 patients with smoking compared to non-smokers resulted in intensive care treatment and mechanical ventilation.<sup>1-3</sup> Smoking makes individuals prone to complications of COVID-19, due to decreased levels of angiotensin-converting enzyme 2, the host receptor of the virus.<sup>4</sup> This situation draws attention to the men with two times higher smoking rates than women in Turkey.<sup>5</sup>

On the other hand, uncontrollable COVID-19 cases, have led to coronaphobia, referred to wig out being infected by coronavirus.<sup>6</sup> Coronaphobia may effect nicotine addiction levels during controlled social life in pandemic. This research letter aimed to determine nicotine dependence levels in pre and during pandemic and its correlations with COVID-19 phobia among men during controlled social life.

Family health centres based, prospective study was conducted in the Black Sea Region of Turkey with volunteer 472 healthy men smokers between February and October 2020. Those under smoking cessation treatment and infected with COVID-19 were excluded from the study. This follow-up study was started in February 2020 and completed on 11 March 2020 when the first coronavirus cases were reported in Turkey. Due to the lockdowns, the second process was carried out between June and October 2020 via an online questionnaire including Fagerström Nicotine Dependence Test (FTND)<sup>7</sup> and Coronafobia scale.<sup>8</sup>

In this study, there was a decrease in nicotine addiction levels from pre-pandemic to during controlled social life in pandemic

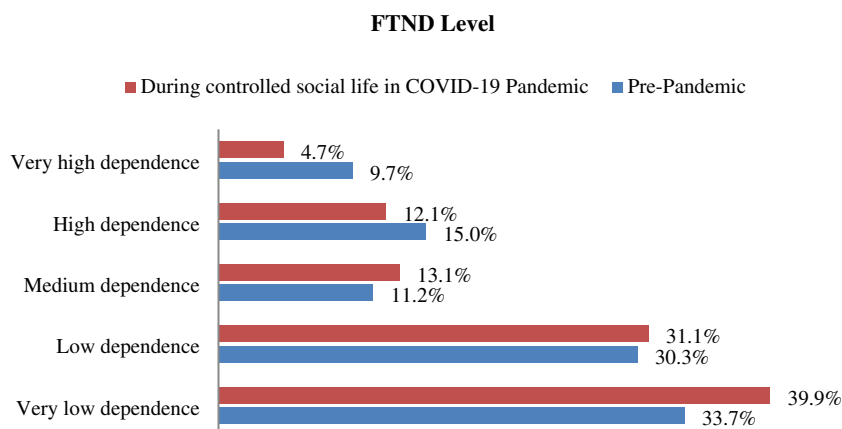
(Figure 1). There was a strong correlation between FTND scores of two periods and COVID-19 phobia (Table 1). This result can be explained with the result of a USA study which reported that a quarter of smokers reduced thier tobacco products use, and more than a third increased their motivation to quit due to pandemic.<sup>9</sup>

This positive step may grow out due to 'stay at home policy' that smoking behaviour may be adjusted to family life and as a reaction of COVID-19 phobia. On the other hand, in controlled social life, citizens are asked to adopt a cautious lifestyle. Wearing a mask, ensuring hand hygiene and obeying the social distance rule are among the rules of the strategy. This strategy parallels to smoking bans and can constrain individual and collective smoking behaviour.

As a matter of fact, it was reported in a Vietnam study that fear of COVID-19 was higher among smokers, especially overusers.<sup>10</sup> COVID-19 phobia may be another motivator reason for low dependence and quit smoking. Fear of getting infected with COVID-19 may propel some smokers to quit. Pandemic period is an unmissable opportunity to try and quit smoking.

**TABLE 1** Correlation analysis among FTND scores and COVID-19 phobia among study participants

Variables	FTND score during pandemic	
	Coefficient	P-value
Pre-pandemic FTND score	0.84	0.000
COVID-19 phobia	0.47	0.032



**FIGURE 1** Comparison FTND level pre-pandemic and during controlled social life

This study had some limitations as follows: (1) study consisted of men registered in two urban FHC's population; (2) smokers under the treatment of smoking cessation were not included.

## DISCLOSURE

The author report no actual or potential conflicts of interest.

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## REFERENCES

1. Changeux JP. Nicotine addiction and nicotinic receptors: lessons from genetically modified mice. *Nat Rev Neurosci.* 2010;11:389-401. PMID: 20485364.
2. Liu W, Tao ZW, Wang L, et al. Analysis of factors associated with disease outcomes in hospitalized patients with 2019 novel coronavirus disease. *Chin Med J (Engl).* 2020;133:1032-1038. PMID: 32118640.
3. Vardavas CI, Nikitara K. COVID-19 and smoking: a systematic review of the evidence. *Tob Induc Dis.* 2020;18:20. PMID: 32206052.
4. Oakes JM, Fuchs RM, Gardner JD, Lazartigues E, Yue X. Nicotine and the renin-angiotensin system. *Am J Physiol Regul Integr Comp Physiol.* 2018;315:R895-R906. PMID: 30088946.
5. Global Adult Tobacco Survey, Fact Sheet, Turkey; 2016. [https://www.tobaccofreekids.org/assets/global/pdfs/en/GATS\\_Turkey\\_2016\\_FactSheet.pdf](https://www.tobaccofreekids.org/assets/global/pdfs/en/GATS_Turkey_2016_FactSheet.pdf). Accessed October 09, 2020
6. Zarghami M. Psychiatric aspects of coronavirus (2019-nCoV) infection. *Iran J Psychiatry Behav Sci.* 2020;14:e102957.
7. Fagerström KO, Kunze M, Schoberberger R, et al. Nicotine dependence versus smoking prevalence: comparisons among countries and categories of smokers. *Tob Control.* 1996;5:52-56. PMID: 8795860.
8. Arpacı I, Karataş K, Baloğlu M. The development and initial tests for the psychometric properties of the COVID-19 Phobia Scale (C19P-S). *Pers Individ Dif.* 2020;164:110108. PMID: 32394993.
9. Klemperer EM, West JC, Peasley-Miklus C, Villanti AC. Change in tobacco and electronic cigarette use and motivation to quit in response to COVID-19. *Nicotine Tob Res.* 2020;22:1662-1663. PMID: 32343816.
10. Nguyen HT, Do BN, Pham KM, et al. Fear of COVID-19 Scale-Associations of its scores with health literacy and health-related behaviors among medical students. *Int J Environ Res Public Health.* 2020;17:4164. PMID: 32545240.