

## The Risk of Hookah Using during COVID-19

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### ABSTRACT

The rapid spread of the new Coronavirus, which causes the disease “COVID-19”, in various parts of the world has caught the attention of the people of the world and research has been a spotlight on it, especially after the World Health Organization classified it as a global pandemic. Research indicates that smokers, especially hookah smoking, which has become a widespread habit throughout the world, are more susceptible to severe complications from COVID-19 and death. The aim of this paper is to review some of the research that mentioned hookah during the COVID-19 period.

We find that hookah smoking is a clear and influential risk factor in the spread and exacerbation of the disease. The articles showed that the level of awareness and knowledge were influential in continuing or stopping the use of hookah. Most studies have shown a low level of awareness in different societies about the risk of hookah consumption, especially during the COVID-19 pandemic.

**Keywords:** Hookah; Smoking; COVID-19; Pandemic; Toxic chemicals

## INTRODUCTION

Hookah smoking is a prevalent practice from the past in Asia, the Middle East, and Africa, but it has become a popular social activity among youth and adults in many countries worldwide [1]. Hookah is also known as narghile, argileh, and goza [2]. A hookah is a water pipe that burns specially-made tobacco mixed with different flavors [3]. The shapes and sizes of hookahs vary, which attracts young people [4]. The mixture of tobacco found in the hookah is burned using charcoal [5]. Modern forms of hookah have been created, such as steam stones and battery-operated hookah pens, all of which contain inhaled vapor [6]. There is a fallacy that shisha is less harmful than cigarettes [7]. The availability of different flavors that attract users is also one of the main reasons for its spread [2,5]. In fact, hookah users are exposed to the risk of infection, cancer, and lung disease as COVID-19. This is due to the presence of toxic chemicals [6]. Hookah is one of the main sources of tobacco addiction due to the presence of nicotine [8]. Nicotine levels in hookahs vary greatly depending on the type of tobacco used [9]. COVID-19 is an infectious disease that primarily attacks and weakens the lungs [10,11]. The research indicates that smokers are more susceptible to exposure to it [12,13], as the World Health

Organization stated that smokers develop serious complications from COVID-19 and die [11,14]. Hookah smoking is considered a risk factor for the transmission of COVID-19 [15]. This review paper aims to review the risk of hookah in research during COVID-19.

## LITERATURE REVIEW

### The risk of hookah in articles during COVID-19

If we review the article that we published in 2023, the risk of hookah smoking and sharing hookah pipe during the COVID-19 pandemic, we found that 33.30% of the participants smoked hookah, while those who smoked hookah and cigarettes together were 44.70%. Also, 22.70% were sharing hookah with others before the outbreak of the COVID-19 pandemic, and the majority (70.80%) said that stopping sharing hookah may reduce the risk of the spread of COVID-19 among people. The percentage of people who share hookah with others reduced to (8.40%) after the outbreak of the COVID-19 pandemic. Most participants (95.10%) believe that stopping smoking will improve people's general health and reduce the risk of spreading diseases and (90.20%) of the participants said they knew that transmission of the COVID-19 virus may occur by sharing

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hookah pipes. We found that the level of awareness and knowledge changes depending on some of the social and demographic characteristics of the participants. However, we found that awareness of the risks of hookah use during the pandemic and the risks of sharing a hookah and its impact on the spread of COVID-19 was low [16].

Šljivo, et al. [17], conducted a study aimed at evaluating the impact of the COVID-19 pandemic on the consumption of cigarettes, hookah and marijuana among undergraduate students of Bosnia and Herzegovina. They found evidence of risky behavior among hookah smokers during the COVID-19 pandemic. COVID-19 has a positive impact on intentions and attempts to quit smoking, among cigarette and hookah smokers, while negatively affecting attitudes toward non-smokers.

Pilati, et al. [18], wrote an article focusing on the risks to hookah users in the presence of COVID-19. They said that hookah users share mouthpieces, which causes the exchange of saliva contaminated with many bacteria into the shared water pipes. Reports also mentioned the presence of tuberculosis due to the exchange of mouthpieces. Although there is no research on the presence of coronavirus in hookahs, the virus has already been shown to be present in self-collected saliva in 91.7% of patients with COVID-19. They concluded that these considerations may contribute to creating a much worse perspective on the COVID-19 pandemic among hookah users.

Ghamari, et al. [19], published a study to characterize the risk of COVID-19 adverse effects among individuals who are cigarette smokers and hookah users. They found 211 PCR-positive patients, 28 (13.3%) were cigarette smokers and 40 (19%) were hookah users. Severe COVID-19 occurred in 17 (11.6%) and deaths in 27 (12.8%) patients. In this study, hookah users had 3.9 times higher odds for ventilation therapy needs, compared with non-hookah users. They concluded that hookah user tobacco smokers were associated with adverse outcomes among COVID-19 patients in Iran.

Bashirian, et al. [20], use Protection Motivation Theory (PMT) to estimate the influencing factors of hookah smoking during the COVID-19 pandemic. They found that hookah use among participants was 41.8% before the COVID-19 pandemic, which decreased to 35%. They concluded that the PMT constructs were significantly associated with preventive behaviors against COVID-19. Their recommendations were to design educational programs based on this theory. Focusing on the role of the media in increasing people's knowledge of COVID-19 preventive behaviors.

## DISCUSSION

Baghernezhad, et al. [21], conducted a study to identify preventive behaviors around the spread of Coronavirus (COVID-19). Their results recorded the highest results for preventive behavior for not using hookah and cigarettes (78%) and the lowest percentage for exercise behavior (16%). Given the low level of preventive behaviors during COVID-19, their study emphasized the need to design educational and supportive programs to improve and implement COVID-19 prevention behaviors.

Badran, et al. [22], reviewed the correlation between hookah tobacco use and oxidative stress and determined the disease potential of hookah use. The evidence in this review pointed to oxidative stress as a major contributor to diseases caused by hookah smoke. Addiction, exposure to secondhand smoke, and lifestyle are additional health factors associated with hookah use. They recommend developing the process of smoking cessation with societal awareness of its risks and spreading awareness through social media to dispel the fallacy that smoking a hookah is safer than smoking cigarettes. Establish and implement strict regulatory policies on hookah tobacco in schools and public places.

Alavi, et al. [23], conducted research aimed at exploring the relationship between COVID-19 and quitting hookah among female smokers, they found that 13% of women were able to successfully stop smoking hookah during the pandemic. Single women were more likely to quit hookah (95% CI 1.09-5.23) as were women of high socioeconomic status (95% CI 4.28-24.01). Fear of the spread of COVID-19 infection was the reason for stopping or limiting hookah. While entertainment was the main obstacle to the successful cessation of hookah. They concluded that the Coronavirus (COVID-19) has directly and indirectly contributed to the reduction or cessation of hookah smoking. The factors in stopping smoking hookah were the fear of worsening symptoms, and the closure of cafes and the removal of hookah gatherings from the city.

## CONCLUSION

In this short review of some of the literature published during COVID-19, we find that hookah smoking is a clear and influential risk factor in the spread and exacerbation of the disease. Hookah smoking has become a widespread habit in many societies. COVID-19 has proven its ability to spread rapidly among individuals, and societal behaviors such as hookah and the lack of knowledge and awareness among people were the main reasons for its spread. The literature we mentioned and others in the COVID period have highlighted these behaviors. This review aims to raise community awareness about the risk of using hookah and its impact on the spread of dangerous diseases such as COVID-19.

The articles we mentioned in this review showed that the level of awareness and knowledge was an important factor and changed according to some social and demographic characteristics, but it was influential in continuing or stopping the use of hookah. Most studies have shown a low level of awareness in different societies about the dangers of hookah consumption, especially during the COVID-19 pandemic.

## RECOMMENDATIONS

We stress the importance of raising the level of societal awareness of the dangers of hookah consumption in general and its consumption in particular during COVID-19. Intensive, scientifically directed awareness campaigns must be carried out through social media to educate smokers and educate them about the relationship between smoking and the spread of the Coronavirus (COVID-19). Emphasis must be placed on the

danger of sharing hookah with others, as this leads to the spread of viruses and diseases. Encouragement to quit smoking must be part of continuous health awareness and education programs, because repetition and constant reminders may be beneficial.

## CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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