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A Qualitative Inquiry on Smokers' Perceptions of Smoking Cessation during Covid-19



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Abstract

Background: This qualitative exploratory study explores smokers' perspectives regarding smoking cessation processes amid the COVID-19 pandemic.

Methods: Purposive sampling was employed to conduct semi-structured interviews with cigarette smokers visiting cardiac and pulmonary clinics at a tertiary care hospital in Karachi, Pakistan. Thematic analysis was performed to identify themes from the participants' responses.

Results: Three themes emerged from the thematic analysis. These were smoking cessation facilitators, smoking cessation barriers, and COVID-19 impacts on smoking cessation. Awareness and education, threat of acquiring health problems, religious beliefs and family or support system behave as smoking cessation facilitators. While, role modeling, associating smoking to stress relief, and cigarette dependency were major barriers to smoking cessation or prevention. There were mixed perceptions regarding association of cigarette smoking and COVID-19. However, some of the participants shared feelings of fear for being vulnerable to COVID-19 and its complications.

Conclusion: The findings of this study generated significant recommendations for providing effective and optimal smoking cessation interventions such as not missing the teachable moment for smoking cessation counselling, anti-smoking smoking efforts from religious perspectives, and strict implementation of anti-smoking regulations in the country.

Keywords: Cigarette smoking, smoking cessation, cardiovascular disease patients, respiratory disease patients, COVID-19, nurse-led intervention

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Introduction

COVID-19 catalyzed a global health crisis that led to extensive human suffering on one hand while others turned their fear into an opportunity to take control of their health. During the outbreak of COVID-19, cigarette smoking practices were seen to either increase or decrease. Patients with a history of smoking were identified as having an increased risk of developing COVID-19 infection with severe or critical symptom presentations. Additionally, smokers were more likely to experience disease progression requiring mechanical ventilation(1). Some countries, such as South Africa and India, banned the sale of tobacco products during the lockdown periods of COVID-19 (2).

Pakistan is one of the largest tobacco consuming countries globally and the 7th largest flue-cured tobacco producer, placing the Pakistani population at risk for developing associated diseases (3). The Global Adult Tobacco Survey (2014) (3) reported a significant rise in annual consumption of cigarettes in Pakistan from 292 cigarettes per capita in 1994 to

406 in 2007. The rising trends of smoking consumption peaked in urban and rural areas among males at 26.1%, and 24.1% respectively, whereas for females the prevalence was 7.7% and 3.1% respectively (4). In some countries, including Pakistan, patients with diagnosed cardiac or respiratory diseases were observed to persist with their smoking behavior.

An extensive literature search did not identify a single study respecting smoking cessation status among patients in Pakistan during the COVID-19 pandemic. The Pakistan Ministry of Health (2019) (5) has developed guidelines that recommend brief intervention strategies in order to achieve up to 5% tobacco cessation rates pre-pandemic. Consequently, many anti-tobacco policies and programmes have been initiated at the national level to promote smoking cessation, but ground-level interventions, such as anti-tobacco cells for smoking cessation, have not yet been developed. Further understanding of the socio-cultural norms and attitudes of smokers will enable healthcare professionals to design appropriate smoking cessation interventions that could effectively reduce cigarette smoking in patients with smoking associated health risks.

The purpose of this study was to explore the smokers' perceptions regarding the impact of COVID-19 on smoking cessation among respiratory and cardiac patients in Karachi, Pakistan. This study addressed the following questions:

1. What are the perceptions regarding factors affecting smoking cessation during COVID-19 of smokers attending clinics of a tertiary care hospital in Karachi, Pakistan?
2. What are the impacts of the COVID-19 pandemic on smoking cessation intentions among smokers attending clinics of a tertiary care hospital in Karachi, Pakistan?

Methodology

Study Design

This study was designed as a qualitative explorative study.

Study Duration and Setting

The study was conducted in the outpatient cardiac and pulmonary clinics of a private tertiary care hospital in Pakistan between April 2020 and September 2021.

Sampling method

Purposive sampling was used to recruit patients from both clinics.

Inclusion and exclusion criteria

The study included cardiac disease or respiratory disease adult patients who currently smoked and were able to understand Urdu or English. Patients with active signs or symptoms of COVID-19 were not interviewed until fully recovered.

Data Collection and Analysis

The final sample size was decided on the basis of data saturation. Redundancy in the statements was observed on 17th interview. However, to ensure data saturation, we stopped interviews on 18th participant and hence the final sample size was 18. Demographic data were obtained using the World Health Organization's STEPS instrument for Non-Communicable Disease Risk Factor Surveillance (6). Semi-structured interviews were conducted in English or Urdu in a place where safe distancing and other COVID protocols were in place, and participants' privacy and comfort were ensured. The length of the interview ranged from between 40 to 50 minutes. Interviews were recorded and transcribed into English. Content not conveying clear meaning or incomplete meaning or requiring verification was clarified through re-contacting with the relevant study participant through Member checking. Data were analyzed by rigorously going through every fragment of the transcript multiple times, a process which yielded several codes. The codes were compared, analyzed, and expanded to categories, which were subsequently reduced to themes. The themes and categories were discussed amongst the research team, which included a mix of research-expert and subject-expert health professionals.

Theoretical Framework

The Trans-Theoretical Model (TTM) of Health Behavior Change describes behavioral change accomplished after processing through six specific and discreet stages to

achieve the desired outcome. According to Prochaska and colleagues (7-8), the stages are:

- 1) Precontemplation: When smokers are resistant to and do not intend to bring about a change in smoking behavior.
- 2) Contemplation: This stage indicates that smokers intend to stop smoking in the next six months at least.
- 3) Preparation: This is the stage in which smokers indicate the intention to quit smoking and have a ready plan to act upon.
- 4) Action: This stage is whereby smokers have started making modifications to their behavior over the previous few months.
- 5) Maintenance: The stage where smokers' health behavior is challenged and they make efforts to avoid the relapse and maintain new healthy habits.
- 6) Termination: This is the stage where it is confirmed that people will not return to their old habit of smoking.

The TTM Model allows for the integration of the social constructs affecting health behaviors such as the cultural norms around smoking in Pakistan including smoking profile, socio-economic status, ethnicity, income, family ties, role modeling effects, living circumstances, expenses, and guidance in Islam on smoking.

Ethical review statement

An ethical approval for this study was obtained from the Aga Khan University Hospital's Ethical Review Committee. To allow direct recruitment of appropriate patients for the study, permission from the relevant authorities within the study setting was taken. Furthermore, to preserve patients' privacy and confidentiality, informed consent was obtained from every participant after explaining the aim, process, time required, and benefits of involvement in the study. Voluntary participation, right of refusal, and withdrawal at any point and time, without any fear of penalty or coercion were explained to all participants.

Results

A total of 18 participants agreed for interview, including 17 males and one female. The demographic characteristics of the participants are presented in Table 1.

The subsequent content analysis of the interview data identified three emergent themes from a category set as shown in Figure 1.

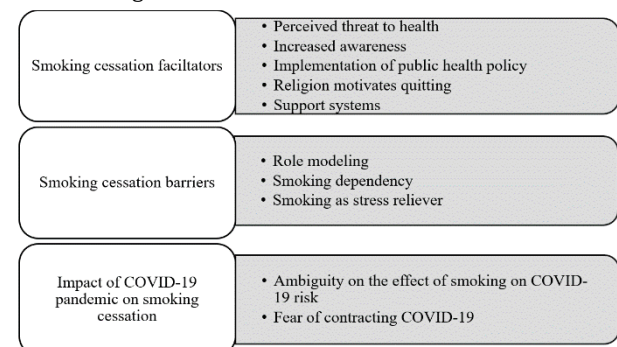


Figure 1: Themes and Categories

Table 1: Participants' demographic information

Subject	Status	Frequency (n=18)	Percentage
Gender	Male	17	94.4%
	Female	1	5.6%
Age (in years)	20-29	4	22.22%
	30-39	1	5.6%
	40-49	4	22.22%
	50-59	6	33.33%
	60-69	3	16.66%
Marital status	Married	14	77.78%
	Single	4	22.22%
Education	Below Matriculate	1	5.6%
	Matriculate	1	5.6%
	Intermediate	2	11.11%
	College/university	8	44.44%
	Post graduate	6	33.33%
Age when first started smoking (in years)	Less than 10	1	5.6%
	10-19	6	33.33%
	20-29	8	44.44%
	30-39	2	11.11%
Cigarettes/day	0-10	10	55.56%
	11-20	8	44.44%
Attempted to quit smoking during the past 12 months	Yes	10	55.56%
	No	8	44.44%

Theme one: Smoking Cessation Facilitators during COVID-19

Based on the participants' responses, the following five categories surfaced, relating to factors that promote or facilitate smoking cessation.

Category (i). Perceived threat to health

Most of the participants identified that when health is disturbed, an intention to quit smoking arises because there is a fear of disease and complications, especially relating to potentially fatal diseases like COVID-19 and CVD. One of the participants stated,

I had tested positive [COVID-19], those days I had stopped smoking, as I recovered, I started again. I think may be people stop for the time being and start again.

Other participants stated that when they were diagnosed with cardiac disease, they quit smoking for a period of time. One participant stated,

In the past, I quit smoking for about 4 years, in 2007, when I got a mild attack. For which, my angioplasty was done.

Category (ii). Increased awareness/education through different strategies.

Education and awareness were identified as the most important factors. One participant commented,

I think, people do not know about it [COVID and smoking both hit the respiratory system], so they might keep doing it (smoking). Educated people will avoid it definitely.

Similarly, one participant understood how advertisements worked as a strategy to increase awareness regarding smoking cessation. This participant stated:

Awareness has increased now-a-days because of advertisements, and even when children watch movies on Netflix, if somebody smokes there is always a tag line stating that it's harmful and therefore shouldn't be done. So, it does have an impact... This dangerous picture put on cigarette packets [see supplementary material I] is a good thing

because it creates fear.

Category (iii). Implementation of public policies and laws against smoking

Many participants favored policy restricting places for smoking, as these efforts assisted in smoking cessation. One participant stated,

Smoking restricted areas reduce the number of cigarettes one consumes overall.

Another participant asserted:

I can't smoke as much as I used to smoke. Consider, I go out, I notice that it is restricted or not allowed, I will not smoke there, and even if I will go there to smoke then I'll smoke once. I won't go there again and again to smoke; neither, do I think, I'll be in the mood to do so. So it does help.

Category (IV). Religion motivates to quit smoking

Many participants shared that religion served as an excellent motivator to avoid cigarette smoking over the longer term. One participant explained this in context as follows:

Religion is another thing that, at times, stops me though for a temporary period, but... yeah! Like, for example, in Ramadan, at the time of fasting, we are not supposed to do it (smoking). It is prohibited so we naturally do not.

Similarly, another participant described his experience as follows,

There is no religion which tells you to take drugs. They take you towards spirituality... So, if your attachment is not materialistic...so you will not take support of material things.... So, I believe that religion can make a very big difference.

Category (v). Support system

In the Pakistani culture, families encourage their smoking members to avoid smoking. Also, smokers tend to avoid cigarettes in front of their family members.

This is evident through the following participant's response:

Since it's my habit not to smoke in front of my family. I don't do it at home, out of respect for my family and being afraid of them ...He (grandson) never liked to sit on my lap saying that he could feel the smell of cigarette that he disliked ... all of my family members tell me not to smoke and this made me think to quit.

Theme two: Smoking Cessation Barriers during COVID-19

There were three categories that described participants' views regarding factors that hindered their smoking cessation efforts.

Category (i). Role modeling increases smoking practices

According to most of the participants, the presence of other smokers, especially in the family, or around in the gatherings of friends or society, influenced people's smoking practices. This happened more often in the COVID-19 period when people were confined to their homes.

One participant said,

The cigarettes thrown by my uncle, were picked up by me and I used to have them.

Another participant shared,

I have them [cigarettes] with my friends. I also see my father smoking and also boys in my street and society, so seeing them motivated me to have it.

Category (ii). Failure to overcome dependency

Many participants claimed that they had become habituated to smoking. They felt that the dependency was strong.

One of the participants said,

If I am going somewhere in a car or sitting doing nothing, though I have no plan to smoke yet my hands go towards cigarette and I do it...It kind of gives me pleasure.

However, many participants associated smoking with taking of meals, evident by the following statement,

I feel a greater desire (to smoke) after breakfast.

Moreover, some participants reported feeling distressed when they did not consume cigarettes. For example, one of them revealed his dependency as follows:

If I don't take it, then I feel like something is lost ... yeah or as if there is some stress that's not sorted out as yet.

Similarly, another added,

In the initial fasting days, I feel a kind of heaviness (bharipan) and dizziness.

Then afterwards, I get settled.

Another participant shared,

As soon as the prayer (Maghrib) time ends, the craving starts again, that now I need a cigarette.

Category (iii). Smoking as a stress reliever.

Many participants reported that the cigarette was a primary choice for them when they were under stress.

One participant reported,

I believe when there is a situation when you have to think a lot, or you are tensed, at that time smoking increases.

Participants also described the increased workload as a reason for increased smoking.

One participant stated:

Now I take cigarettes only during work load. So, in that case if you get restless then you need some support. I knew that this was not a support, but, psychologically, I started to feel that when I smoked, I felt better during stress.

Theme Three: Impact of COVID 19 on Smoking Cessation

Smokers were not clear about the association of smoking with increased health risks due to of COVID-19. Responses were aligned with two categories as follows:

Category (i). Ambiguity related to smoking and COVID

According to some of the participants, they had heard that those who smoke a particular amount of cigarettes do not get infected by COVID-19. One of the participants boasted about being a smoker and how smoking provided immunity against COVID-19 infection. One participant stated the following,

Mmmm no, because there were rumors that smokers don't get COVID-19, so I was starting to feel safe.

Some participants' perspectives aligned with these floating rumors about smoking being a preventive factor rather than a risk factor. One participant, when asked about the impact of COVID-19 on smoking, stated that:

COVID-19 didn't influence me, unfortunately I have tested positive, those days I have only reduced smoking, and as I recovered, I started again. I think may be people stop for the time being and start again.

Category (ii). Fear of COVID-19

Some participants in the current study shared that when they got infected with COVID-19 or when they felt respiratory signs and symptoms, they quit smoking without delay due to fear of complications related to COVID-19. However, according to them, this cessation period did not last for long as they relapsed to smoking as soon as they felt better. One of the participants shared,

Unfortunately, I had tested positive, those days I had reduced smoking, as I recovered, I started again. I think may

be people stops for the time being and starts again.

Similarly, another participant responded to the question of COVID-19 impact on smoking behavior as,

Temporary, it could be [stop smoking once they get symptomatic] but once they recover, they start again.

Discussion

The study explored smokers' perceptions of smoking cessation before and during the COVID-19 pandemic among cardiac and respiratory disease patients. The analyzed data yielded three primary themes.

The changes in smoking behavior that occurred when participants were diagnosed with either a CVD or a respiratory condition like TB are aligned with previous findings in the literature (9-12). Relapse to smoking behavior after a period following the occurrence of a disease is also reported previously (10,13). Ten percent of the study population was at the action stage of the TTM for behavior change where actual smoking cessation is questionable in terms of progressing to the maintenance phase of behavior. Therefore, follow-up with the smokers is of crucial importance to assess their long-term behavior change. Significantly, 40% of the participants were assessed as being in the pre-contemplation and contemplation stage as described through the TTM. Although the educational status of most of the total participants of this study was above intermediate level and the participants confirmed that they understood the risks associated with smoking, they demonstrated limited understanding as to what extent and how cigarette smoking could worsen an existing health condition, such as a positive COVID-19 diagnosis. Therefore, health literacy emerged as a significant finding of this study. Findings from a correlational descriptive study conducted in Iran showed a positive relationship between health literacy and the stages of behavior change in smoking (14).

Another important factor identified in support of quitting smoking was an informal/formal smoking bans at home, in workplace, and in public areas. This finding was further enhanced due to confined physical mobility and enforced isolation during the COVID-19 outbreak. These findings are similar to those previously described in the literature (15-16). This finding emphasizes the importance of implementation of broad anti-smoking policies and guidelines. Adherence to religious practices, such as fasting, were found to be supportive for smoking cessation (17); however, the role of religious teachings and beliefs regarding cigarette smoking needs further exploration.

Peer pressure is a known factor that influences people to indulge in risky behaviors especially smoking (18-21). Furthermore, most of the smokers attributed continued smoking to addiction, habit, and stress. Participants in the study appeared to use the terms habit and addiction interchangeably, suggesting that these behaviors are perceived to be the same, despite the fact that habits are generally psychological and can be modified, whereas addiction is both a physical and psychological dependency

that cannot be modified easily. Misunderstandings at this level can be addressed with appropriate health education interventions. The findings of this study are consistent with a similar study in Scotland, which reported that smoking habits and nicotine dependency served as barriers for smoking cessation (22).

The analysis revealed that, in some instances, smoking is believed to be protective factor against COVID-19 infections. Most studies that reported similar findings have provided inconsistent results due to sample bias, poor analytic technique, and conclusions drawn with insignificant association between smoking and COVID-19 (23-25). To the contrary, recent scientific evidence negates any findings that smoking is protective against COVID-19 (26). Health policies of countries advocating against smoking during the pandemic and lock-downs, if studied statistically, have led to groundbreaking evidence about COVID-19 and other similar pandemics as augmenting the global battle concerning ongoing public health issues such as smoking.

Conclusion

The current study has provided information about culturally relevant factors that promote or hamper smoking cessation during the current COVID-19 pandemic. Health literacy and socio-cultural norms, including religious attitudes and social expectations, have the strongest influence on smoking behaviors among cardiac and respiratory patients in Pakistan and on the smokers' intentions and capacities to quit smoking. Moreover, the fear associated with cardiac or respiratory diseases and COVID-19 can provide an ideal catalyst to address negative behaviors like cigarette smoking.

Limitations of the Study

The researcher interviewed only one female; hence, a limited perspective was obtained from the fe-male group. The study setting was limited to one urban tertiary care hospital site only, although a comprehensive and active acute care setting, this mono-site study may limit transferability of findings to any other hospital or health care settings. Also, patients suffering from illnesses other than cardiac or respiratory disease were not included in the study; therefore, perceptions of potentially relevant factors influencing smoking behaviors were limited.

Recommendations

The current study demonstrates the need for increased awareness in public regarding the hazards of smoking. This is doable through mass media and inclusion of anti-smoking strategies in curriculum of all health care training. Moreover, there is a need of trained healthcare professionals to correctly identify the 'teachable moment': the time when a patient is diagnosed with a smoking related health risk such as respiratory or cardiovascular problem. Our findings also indicate the need for efforts by religious leaders to highlight the prohibition of cigarette smoking from religious

perspectives. There is an intense need of strict implementation of anti-smoking laws especially ban on smoking in public spaces as smoking in public spaces motivates others for smoking. Based on contextual findings of the current study in a limited number of participants, further development and testing of smoking cessation interventions are recommended through large scale longitudinal studies.

Disclaimer

A part of this data was presented as a masters' thesis at Aga Khan University School of Nursing and Mid-wifery. However, the whole set of the presented data is part of PhD thesis of a student at Aga Khan University Faculty of Health Sciences (FHS)

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