Journal Homepage: -www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/17533
DOI URL: http://dx.doi.org/10.21474/IJAR01/17533

*RESEARCH ARTICLE*

# KNOWLEDGE AND ATTITUDE REGARDING EFFECTS OF COVID19 TO SMOKERS AMONG HEALTHCARE SEEKERS OF KING KHALID HOSPITAL: A CROSS-SECTIONAL STUDY

**W. Alsannaa, B. Alshakhs, T. Saleh, L. Ali and S. Awad Nathiya[1]**
[1]Nursing Student, College of Nursing, Riyadh Elm University, Riyadh, Kingdom of Saudi Arabia.

## *Manuscript Info*

***Manuscript History***
Received: 15 July 2023
Final Accepted: 19 August 2023
Published: September 2023

***Key words:-***
Attitude, Effects, Healthcare Seekers, Smokers,

## *Abstract*

**Background:** Cigarette smoking is a life threatening factor associated with COVID19 to individuals with respiratory infection. Public health has emphasized the treatment of tobacco use to prolonged life. Increasing awareness of smokers exposed to infection with COVID19 and tobacco products is important to encourage smoking cessation and prevents complication.
**Aim:** To assess the knowledge and attitude on the effects of COVID19 to smokers among healthcare seekers
**Methods:** A cross sectional design using convenience samples of 475 healthcare seekers were selected for the study. Validated self-contructed questionnaire was created to assess the knowledge and attitude among healthcare seekers. The data was collected using a link via email on each respondent. Confidentiality and anonymity was maintained during the conduct of the study. Analyses were carried out using SPSS version 23.0.
**Results:** The findings of the study have shown that majority of the healthcare seekers were moderately knowledgeable regarding the effects of COVID19 to smokers.
**Conclusion:** There is a significant association between knowledge and attitude towards the effects of COVID19 to smokers. Despite the moderate knowledge and attitude, health providers need to reiterate to their healthcare seekers the impact of smoking.



## Introduction:-

Smoking is the main cause of preventable death in the world. Today, the tobacco use resulted to more than 7 million deaths every year worldwide[1]. Continuing the current numbers of users increased the cases of serious smoking-related diseases. If the current number of patterns of smoking does not change around the world, it is estimated to reach more than 8 million people every year will die as to tobacco use by 2030 [2]. Similarly, the use of tobacco products is used in more than one billion smokers in the world [3]. Tobacco use kills an estimated 5.4 million people and the rate of 1 in every 10 adults in the world [4]. The World Health Organization predicted that smoking prevalence will reach 24% by 2025 which is common among male smokers [5]. In Saudi Arabia, smoking is not an exemption. In 2013, the Saudi National Survey showed 12.2% of Saudi adults were smokers [6]. In the 2021 research published revealed that 14.1 % of the respondents aged 15 years old smoke cigarettes. The latest survey done by the Saudi Food and Drug Authority in 2018 estimated the adult smoking prevalence at 21.4% [7].

**Corresponding Author:- Wejdan Alsannaa**
Address:- B.Nursing Science. College of Nursing.Riyadh Elm University.An-Namuthajiya Campus, Riyadh.

Consequently, if current trends continue, 650 million people alive at the moment will ultimately die from tobacco-related conditions [8]. Smoking stimulates cardiac contractility and condensation of the blood vessels, causing acute temporary rise of heart rate and arterial blood pressure [9]. In habitual smokers, the redundant sympathetic stimulation promote nonstop rises in heart rate and this cardiac effect can cause inflow turbulence which can get damage the filling of blood vessels. Stimulation of parasympathetic ganglia supplying the bronchi by nicotine can get condensation of the airways and present as shortness of breath and tachypnea [10].

Severe acute respiratory infection caused by coronavirus (SARS-CoV-2), is a global epidemic with severe morbidity and mortality and unknown profitable and social dislocation [11]. A striking point of COVID-19 is the wide friction in clinical inflexibility among infected people. Numerous factors relate with COVID-19 complaint inflexibility, including age, gender, body mass indicator, previous comorbidities, vulnerable responses, and genetics [12]. The respiratory tract is the target for the original SARS-CoV-2 infection and the most common point of serious clinical situations [13]. Infection of any mucosal surface occurs in the environment of its endogenous microbial, and bidirectional relations between host and microbes generally contribute to infection and pathogenesis [14].Research has shown that smokers have limited knowledge on certain risk associated with smoking such as lung cancer, impotence, accelerated aging, and stroke [15]. Since intention to stop and good knowledge has a strong correlation, this study focuses on the knowledge and attitude regarding the effects of COVID19 to smokers.

## Methods:-

A cross-sectional study was conducted in King Khalid Hospital, a specialty hospital in Riyadh City. Saudi Arabia. Convenience sampling technique was used to collect the data from the healthcare seekers via link. Those healthcare seekers were from the outpatient department of King Khalid Hospital in Riyadh. The questionnaire was a self constructed and validated questionnaire formulated by the researchers. After the approval of the REU research center and the Institutional Review Board (IRB), the researcher started the administraton of the questionnaire. A total of 475 healthcare seekers responded to the link sent and willing to participate in the study. Permission from the hospital department was also obtained before the conduct of this study. Confidentiality and anonymity was maintained throughout the conduct of the study.

### Statistical Analysis

The data gathered was analyzed using the SPSS version 23.0 using the descriptive statistics (frequency, percentage, mean, Pearson's chi-square test, and spearman correlation coefficient were used to find the association between different variables. Knowledge and attitude as the dependent variables and age, gender, educational level, occupation and smoking status as the independent variables were entered in multivariate regression.

## Results:-

**Table 1:-** Demographic characteristics of the respondents.

| Variables | Frequency | Percentage |
|---|---|---|
| **Gender** | | |
| Male | 93 | 19.58% |
| Female | 382 | 80.42% |
| **Age** | | |
| 18-25 | 242 | 50.95% |
| 26-30 | 75 | 15.79% |
| 31-35 | 58 | 12.21% |
| 40 and more | 100 | 21.05% |
| **Marital Status** | | |
| Not married | 213 | 44.84% |
| Married | 250 | 52.63% |
| Divorce | 12 | 2.53% |
| **Educational Level** | | |
| Elementary | 26 | 5.47% |
| High School | 82 | 17.26% |
| College | 367 | 77.26% |
| **Occupation** | | |
| Employed | 196 | 41.26% |

| | | |
|---|---|---|
| Unemployed | 279 | 58.74% |
| **Smoking status** | | |
| Non smoking | 383 | 80.63% |
| Currently smoking | 79 | 16.63% |
| Quit smoking | 13 | 2.74% |

Table 1 presents the demographic characteristics of the healthcare seekers. The total number of healthcare seekers participated in this study was 475. The study shows that majority of the respondents was female (382) with 80.4 percent whereas male (93) with 19.6 percent. Half of the respondents were at age ranged 18-25 years old 50.9 percent or 242 respondents. Three-fourth of the respondents was college graduate and more than half of them were unemployed. In terms of marital status, most of the respondents were married (52.6%) and for smoking status, the respondents were mostly non smokers (80.4%), quit smoking (2.7%) and Smokers (17.0%).

**Table 2:-** Knowledge regarding effects of COVID19 to smokers among healthcare seekers.

| Indicators | Weighted Mean | Qualitative Description |
|---|---|---|
| 1. Effects of COVID19 outcome for smokers | 3.809 | Moderately Knowledgeable |
| 2. Smokers risk of getting COVID19 infection | 3.800 | Moderately Knowledgeable |
| 3. Symptoms severity of COVID19 to smokers | 4.010 | Moderately Knowledgeable |
| 4. Smoker's paradox | 2.720 | Knowledgeable |
| 5. Alternative cigarette smoking risk of COVID19 | 3.830 | Moderately Knowledgeable |
| 6. Ways of chance on spreading and acquiring COVID19 by | 3.918 | Moderately Knowledgeable |
| 7. Willingness of quitting smoking as more affected by COVID19 | 4.037 | Moderately Knowledgeable |
| 8. Willingness to share smoking devices | 2.201 | Less Knowledgeable |
| 9. Prevalence of COVID19 with risk for passive smokers | 3.859 | Moderately Knolwedgeable |
| 10. Feeling as passive smokers | 2.621 | Knowledgeable |
| **Total Average Mean** | **3.481** | **Moderately Knowledgeable** |

The table above shows the knowledge regarding the effects of COVID19 to smokers among healthcare seekers. It can be seen on the table that majority of the respondents were moderately knowleageable with an average mean of 3.481. Based on the table, the healthcare seekers have moderate knowledge on the willingness of quitting smoking and the symptoms severity of COVID19 to smokers with mean of 4.037 and 4.010 respectively. However, the willingness to share smoking devices garnered the lowest mean of 2.201 which is less knowledgeable. Although the average mean is moderately knowledgeable, the result is nearly knowledgeable level.

**Table 3:-** Attitude toward effects of COVID19 to smokers among healthcare seekers.

| Indicators | Weighted Mean | Qualitative Description |
|---|---|---|
| 1. Effects of COVID19 outcome for smokers | 4.296 | Strongly Agree |
| 2. Smokers risk of getting COVID19 infection | 3.870 | Agree |
| 3. Symptoms severity of COVID19 to smokers | 4.072 | Agree |
| 4. Smoker's paradox | 2.750 | Neutral |
| 5. Alternative cigarette smoking risk of COVID19 | 3.823 | Agree |
| 6. Ways of chance on spreading and acquiring COVID19 by | 3.948 | Agree |
| 7. Willingness of quitting smoking as more affected by COVID19 | 4.017 | Agree |
| 8. Willingness to share smoking devices | 3.143 | Agree |
| 9. Prevalence of COVID19 with risk for passive smokers | 3.937 | Agree |
| 10. Feeling as passive smokers | 2.726 | Neutral |
| **Total Average Mean** | **3.658** | **Agree** |

The above table 3 represents the attitude toward effects of COVID to smokers among healthcare seekers. The data stated above that majority of the respondents were agreed on the effects of COVID19 to smokers. It can be seen on the results that majority of the respondents strongly agree on the effects of COVID19 outcome for smokers. It has a result of 4.296. Since COVID19 cause lung complication such as pneumonia and can lead to respiratory distress

syndrome on severe cases [16], it can be inferred that the respondents behaves on the way both can affect the respiratory system.

**Table 4:-** Significant difference on the level of knowledgeand attitude regarding the effects of COVID19 to smokers as to demographic characteristics.

| Variables | N | P value | Level of significance | Decision | Interpretation |
|---|---|---|---|---|---|
| **Age** | 475 | 0.462 | 0.05 | Reject the $H_o$ hypothesis | Significant |
| **Gender** | 475 | 0.229 | 0.05 | Reject the $H_o$ hypothesis | Significant |
| **Marital Status** | 475 | 0.004 | 0.05 | Accept the $H_o$ hypothesis | Not significant |
| **Educational level** | 475 | 0.495 | 0.05 | Reject the $H_o$ hypothesis | Significant |
| **Occupation** | 475 | 0.309 | 0.05 | Reject the $H_o$ hypothesis | Significant |
| **Smoking status** | 475 | 0.158 | 0.05 | Reject the $H_o$ hypothesis | Significant |

*Test of significance performed by $\chi 2$ test

The table 4 illustrates the significant differences on the level of knowledge and attitude regarding the effects of COVID19 to smokers as to demographic charateristics. Based on the results, there is a significant differences on the knowledge and attitude of the the healthcare seekers regarding the effect of COVID19 to smokers in various age range, in male and female, level of education, occupation and smoking status that lead to rejection of the null hypothesis. However, the marital status yielded to non differences on the knowledge and attitude regarding the effects of COVID19 to smokers resulting to accepting the null hypothesis. On the other hand,study concluded that the prevalence of smoking among male students and teachers was higher than general population and clergymen who equally smoked [17]. Also, level of knowledge and attitude of students were lower than teachers and clergymen. Thus, with the present study it can be argued that age, gender, educational level, occupation and smoking status are the predictors in the knowledge and attitude of the healthcare seekers.

**Table 5:-** Significant relationship between the knowledge and attituderegarding the effects of COVID19 to smokers.

| Variables | Pearson $r_s$ | P value | Sig. (2 tailed) | Interpretation |
|---|---|---|---|---|
| **Knowledge and Attitude** | **0.031** | **<0.001** | **0.05** | **Significant** |

*Significant relationship by Spearman correlation test

Table 5 shows the significant relationship between the knowledge and attitude regarding the effects of COVID19 to smokers. Using the Spearman correlation test, it can be seen that the computed value is higher that the p-value (CV > PV), resulting to a significant correlation. Since there is a significant association, it can be agreed that knowledge and attitude intertwined with each other. The correlation reaffirms that better knowledge can lead to positive attitude.

## Discussion:-

The level of knowledge and attitude regarding the effects of COVID19 to smokers was found to have moderately knowledgeable. Despite the moderate result, it can be seen that the result is nearly knowledgeable and that continuing education and promotion is recommended to achieve highly knowledgeable healthcare seekers. Studies have shown that smokers have low awareness level toward some specific health risks caused by smoking such as lung cancer to non-smokers from secondhand smoking. Other impact includes impotence in male as well as stroke [18]. The present study was aimed to determine the level of knowledge and attitude of the healthcare seekers regarding the effect of COVID19 to smokers. Findings have shown that female has significantly more knowledge about symptoms of COVID19 becoming more severe in smokers as male is more knowledgeable in not sharing the smoking devices with others. In terms of age, the respondents with age group 40 and above have a better knowledge on smoking devices as it increase the risk of COVID19 infection. However, study conducted about the knowledge,

attitude and behavior determinants of tobacco use among high school students revealed that they were highly aware on the harmful effects of smoking. They had a negative attitude towards smoking [19]. With the present study, the results provide useful insights for the healthcare provider to orient their patients on the effects of COVID19 to smokers. Anti smoking program in similar or other settings can increase awareness of the people to follow smoking cessation and smoking prevention. Developing smoking prevention programs may focus on modifying the attitudes toward smoking and providing a cigarette-free environment in and around any places.

**Limitation**

There were limitations of the present study. First, this cannot be generalized to the entire study population since it focused solely in the patient of the hospital. Second, this survey study does not observe nor reveal the real behavior of the respondents. It maybe seen that the respondents answer only on the social norms.

## Conclusion:-

The current study, majority of the healthcare seekers have moderate knowledge and attitude on the effects of COVID19 to smokers. The level of knowledge and attitude has significant differences on the respondents in terms of age, gender, educational level, occupation and smoking status. The significant correlation between knowledge and attitude reaffirmsthat healthcare seekers having better knowledge can lead to a positive attitude towards the effects of COVID19 to the smokers.

**Financial Support and sponsorship**

Nil.

**Conflicts of interest**

There is no conflict of interest.

## References:-

1-2 Center for Disease Control (2020). Diseases and Death.Retrieved from https://www.cdc.gov/tobacco/data _statistics/fact_sheets/fast_facts/diseases-and-death.html.

3 World Health Organization (2019). WHO global report on trends in prevalence of tobacco use 2000-2025.3rd Edn.Retrieved from https://www.who.int/publications/i/item/who-global-report-on-trends-in-prevalence-of-tobacco-use-2000-2025-third-edition.

4 Healthhub (2020). Smoking statistics in Singapore.Retrieved from https://www.healthhub.sg/live-healthy/597/questions_smoking#:~:text=Tobacco%20use%20kills%205.4%20million,after%20the%20onset%20of%20use.

5-6 Itumalla, R.,Aldhmadi, B.(2020). Combating tobacco use in Saudi Arabia: a review of recent initiatives. East *MediterrHealth J*. 26(7). pp.858–863. https://doi.org/10.26719/emhj.20.019

7 Healthdata.org (2015). Smoking in the Kingdom of Saudi Arabia: Findings from the Saudi Health Interview Survey. Retrieved from https://www.healthdata.org/sites/default/files/files/Projects/KSA/Smoking-KSA-Findings-from-the-Saudi-Health-Interview-Survey.pdf

8. Ministeriodesalud.org (n.d.). Retrieved from https://www.ministeriodesalud.go.cr/index.php/biblioteca-de-archivos-left/documentos-ministerio-de-salud/tecno-ciencia/expositores-expo-de-ciencia-y-tecnologia/1593-tabaco-un-problema-de-salud-publica-global-legal-aditivo-y-lucrativo-ingles-doctor-clyde-b-mc-coy/file.

9 Srakocic, S. (2022, June 27). Does Smoking Increase Your Risk of High Blood Pressure? Retrieved from https://www.healthline.com/health/high-blood-pressure-hypertension/smoking-and-hypertension.

10 Zhang, D.Y., Anderson, A.S. (2014).The sympathetic nervous system and heart failure.*CardiolClin*. 32(1).pp.33-45. doi: 10.1016/j.ccl.2013.09.010.

11 Kang, S.J., Jung, S.I. (2020).Age-Related Morbidity and Mortality among Patients with COVID-19.*Infect Chemother*. 52(2).pp.154-164. https://doi.org/10.3947/ic.2020.52.2.154.

12 Zheng, C., Hafezi-Bakhtiari, N., Cooper, V., Davidson, H., Habibi, M., Riley, P., Breathnach, A., (2020).Characteristics and transmission dynamics of COVID-19 in healthcare workers at a London teaching hospital.*J Hosp Infect.*106(2).pp.325-329. doi: 10.1016/j.jhin.2020.07.025.

13 Bourgonje, A.R., Abdulle, A.E., Timens, W., Hillebrands, J.L, Navis, G.J., Gordijn, S.J., Bolling, M.C., Dijkstra, G., Voors, A.A., Osterhaus, A.D. (2020).Angiotensin-converting enzyme 2 (ACE2), SARS-CoV-2 and the pathophysiology of coronavirus disease 2019 (COVID-19).*J Pathol*.251(3). pp. 228-248. doi: 10.1002/path.5471. Epub 2020 Jun 10. PMID: 32418199; PMCID: PMC7276767.

14 Chan, J. F. W., Yuan, S., Kok, K. H., To, K. K. W., Chu, H., Yang, J., Yuen, K. Y. (2020). A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. *The Lancet*, 395.pp. 514-523.

15 Dawood OT, Rashan MA, Hassali MA, Saleem F. Knowledge and perception about health risks of cigarette smoking among Iraqi smokers. J Pharm Bioallied Sci. 2016;8(2):146-51. doi:10.4103/0975- 7406.171738.

16Galiat Santos (2022, February 28). COVID19 lung damage.Retrieved from https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/what-coronavirus-does-to-the-lungs#:~:text=What%20does%20COVID%20do%20to,the%20lungs%20and%20other%20organs.

17 Heydari, G., Yousefifard, M., Hosseini, M., Ramezankhani, A., Masjedi, M.R. (2013).Cigarette smoking, knowledge, attitude and prediction of smoking between male students, teachers and clergymen in Tehran, Iran.*Int J Prev Med*. 4(5). pp. 557-64.

18 Dawood, O.T., Rashan, M.A., Hassali, M.A., Saleem, F. (2016). Knowledge and perception about health risks of cigarette smoking among Iraqi smokers.*J Pharm Bioallied Sci*. 8(2).pp.146-51. doi: 10.4103/0975-7406.

19 Raina, R., Krishna, M., Murali, R., Shamala, A., Yalamalli, M., Kumar, A.V. (2015). Knowledge, attitude and behavioral determinants of tobacco use among 13-15 year old school children. *J IntSocPrev Community Dent.*5(4).pp. 321-6.doi: 10.4103/2231-0762.161764.