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COVID-19 pandemic and motivation to smoking cessation

COVID-19 salgını ve sigarayı bırakma motivasyonu

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ABSTRACT

Background: The aim of this study is to determine how being infected with COVID-19 affects the success of smoking cessation.
Materials and Methods: This is a descriptive study. The population of the study consisted of 2002 COVID-19 patients followed in Adıyaman city center. Two hundred sixty-one people were selected from patients who diagnosed with COVID-19 (PCR positivity). Two hundred sixty-one people who were COVID-19 PCR negative. The questionnaire applied included socio-demographic data and "Smoking Cessation Success Prediction Scale" and the Fagerström cigarette addiction scale.
Results: The mean age of the participants in the study was 39.95±12.05. 43.1% of the participants were civil servants, 84.5% had been smoking for seven years or more. The mean Fagerström scores of the COVID-19 PCR positive group and the COVID-19 PCR negative group were 4.88±1.88 and 4.49±1.74, respectively. The mean SCSPS score of the COVID-19 PCR positive group (41.90±8.28) was higher than the mean SCSPS score of the COVID-19 PCR negative group (40.21±10.25) ($p<0.05$). The mean SCSPS score was higher in those who had COVID-19 disease, in the group under 50 years of age, and in those who had smoking cessation experience. There is a positive correlation between having a COVID-19 infection and the mean of SCSPS.
Conclusions: Even if unsuccessful, attempts to quit smoking positively affect smoking cessation success. In cases of epidemics, people's desire to quit smoking increases therefore, it may be beneficial to provide support for smoking cessation those who are being treated for any disease at the same time.
Keywords: Covid-19, Tobacco, Smoking, Smoking cessation

ÖZET

Amaç: Bu çalışmanın amacı COVID-19 enfeksiyonuna yakalanmanın sigara bırakma başarısını nasıl etkilediğinin belirlenmesidir.
Materyal ve Metot: Bu çalışma bir tanımlayıcı araştırmadır. Çalışmanın evrenini Adıyaman il merkezinde takip edilen 2002 COVID-19 (PCR pozitif) tanılı hasta oluşturmuştur. COVID-19 PCR pozitif hastalar içinden 261 kişi seçilmiştir. COVID-19 PCR negatif 261 kişi COVID-19 PCR negatif grup olarak seçilmiştir. Uygulanan anket sosyo-demografik verileri ve "Sigara Bırakma Başarısı Öngörü Ölçeği (SBBÖÖ)" ve Fagerström sigara bağımlılığı ölçeğini içermektedir.
Bulgular: Çalışmaya katılanların yaş ortalaması 39,95±12,05'tir. Katılımcıların %43,1'i memur, %84,5'i yedi yıl ve üzeri süredir sigara kullanmaktaydı. COVID-19 PCR pozitif ve negatif grupların Fagerström puan ortalaması sırası ile 4,88±1,88 ve 4,49±1,74'tü. COVID-19 PCR pozitif grubun SBBÖÖ puan ortalaması (41,90±8,28), COVID-19 PCR negatif grubun SBBÖÖ puan ortalamasından (40,21±10,25) yüksekti ($p<0.05$). COVID-19 hastalığı geçirenlerde, 50 yaş altı olan grupta ve sigara bırakma deneyimi olanlarda SBBÖÖ puan ortalaması daha yüksekti. COVID-19 enfeksiyonu geçirme ile SBBÖÖ ortalaması arasında olumlu yönde ilişki bulunmaktadır.
Sonuç: Başarısız dahi olunsa sigara bırakma denemeleri sigara bırakma başarısını olumlu yönde etkilemektedir. Salgın durumlarında insanların sigara bırakma istekleri artığı için herhangi bir hastalık sebebiyle tedavi olan kişilere aynı anda sigara bırakma açısından destek sağlanması faydalı olabilir.
Anahtar Kelimeler: Covid-19, Tütün, Sigara, Sigara bırakma

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INTRODUCTION

COVID-19 infection emerged at the end of 2019 and quickly became a pandemic that spread all over the world. Although it is considered that outbreaks in affluent countries have disappeared since the 1960s, outbreaks with widespread diseases have emerged in the last 20 years (Kocabaş, 2020). When evaluated in terms of clinical progression, the symptoms of COVID-19 range from asymptomatic to multi-organ failure (Şeker et al., 2020).

Diabetes, hypertension, immunodeficiency diseases and smoking are some of the risk factors for COVID-19 infection and the severe diseases it may cause (Rashedi et al., 2020; Rod et al., 2020). In a study conducted among patients with COVID-19, smoking was found to be statistically significant in patients hospitalized in the intensive care unit (Salman et al., 2022).

Several variables influence the decision to stop smoking. While the doctor's counsel is the most critical component in promoting smoking cessation, other factors that influence this issue include fear of catching the disease, environmental impact, and additional diseases (Yaşar, Kar Kurt, & Talay, 2014).

Cigarettes and tobacco products are one of the most important causes of preventable deaths (Kanık & Tözün, 2020). In order to achieve success in the fight against tobacco, it will be guided to recognize the behaviors of starting and quitting smoking, identifying the reasons that make it easier to start and the obstacles in front of attempts to quit (Aydemir et al., 2019).

The aim of this study is to determine the effect of the COVID-19 pandemic on smoking cessation behavior.

MATERIALS AND METHODS

This is a descriptive study. The study's population included 2002 patients who were followed up on by the Central Community Health Center of Adıyaman province on 01.12.2022 owing to COVID-19 infection as part of filiation investigations. The formula n= Nt2pq/ d2 (N-1) + t2pq was used to determine sample selection, and the number of people to be sampled was determined as 261 with a 95% confidence interval, a prevalence of 26.5%, and a variation of 5%. Necessary permissions for the study were taken from the Adıyaman Provincial Health Directorate (Decision dated 22.12.2020 and numbered 2020/11-14), the Republic of Turkey Ministry of Health Scientific Research Platform (form name: F.K.-2020-12-07T19_50_25), and the Adıyaman University Non-Interventional Research Ethics Committee. The research was conducted in accordance with the principles of the Helsinki Declaration. Informed consent was obtained from the patients. Starting on the first working day after the permission was granted, 261 COVID-19 PCR(polymerase chain reaction test) positive patients were chosen at random using a random number table, and a telephone questionnaire was administered on a voluntary basis. Numbering is made according to the date of being PCR positive. A random numbers table was used to determine 261 COVID-19 PCR negative participants as the COVID-19 PCR-negative group. People of the same age and gender were included in the study on the day of the selection for those who did not consent to participate in the COVID-19 PCR positive group and the COVID-19 PCR negative group. The questionnaire contains two sections. The first section contains sociodemographic data, while the second section contains items from the "Smoking Cessation Success Prediction Scale (SCSPS)" and the Fagerström test for nicotine dependence. Aydemir et al., conducted a validity and reliability study on the related scale, The Cronbach's Alpha coefficient of SCSPS was measured as 0.782 (Aydemir et al., 2019). SCSPS is a self-report scale with 10 items in two dimensions in five-point Likert-type (1=very low, 2=few, 3=average, 4=many, 5=too many). The maximum score that can be obtained from the scale is 50 while the minimum score is 10. Higher scores on the scale indicates higher level of smoking cessation success.

Statistical Analysis

Statistical package (SPSS 22.00) program was used in the evaluation of the data. Descriptive variables were provided as numbers and percentages. Chi-Square and Fischer's exact Chi-Square tests were used to explore the correlations between the variables in the categorical structure. The means were compared using one-way ANOVA and the t-test. Means were provided with standard deviation. The Skewness-Kurtosis test was applied as a homogeneity test. For normally distributed data, parametric tests ANOVA and t-test were applied. For non-normally distributed data, non-parametric tests such as chi-square and Kruskal Wallis test were applied. Z-score and Tukey test were used to detect differences between groups. The results were evaluated at 95% confidence interval and $p<0.05$ was accepted as significant.

RESULTS

Mean age of the participants in the study was 39.95±12.05. Of the participants, 79.3% were married, 61.9% had a high school or higher education level, and 43.1% were white collar workers (Table 1).

Table 1. Certain sociodemographic characteristics.

	COVID-19 PCR positive group (n,%)	COVID-19 PCR negative group (n,%)	Statistics
Sex			
Male	200 (48.4)	213 (51.6)	x^2=1.960, p=0.162
Female	61 (56.0)	48 (44.0)	
Marital status			
Married	198 (47.8)	216 (52.2)	x^2=4.089, p=0.129
Single	58 (59.2)	40 (40.8)	
Divorced	5 (50.0)	5 (50.0)	
Educational background			
Illiterate	11 (68.8)	5 (31.2)	x^2=7.254, p=0.123
Primary School Graduate	43 (44.3)	54 (45.7)	
Secondary School Graduate	37 (43.5)	48 (46.5)	
Highschool Graduate	100 (55.6)	80 (44.4)	
University Graduate	70 (48.6)	74 (51.4)	
Occupation			
Unemployed	37 (71.2)	15 (28.8)	x^2=20.902, p=0.001
Retired	11 (47.8)	12 (52.2)	
White collar worker/Teacher*	93 (41.3)	132 (58.7)	
Storekeeper/Farmer	51 (52.6)	46 (47.4)	
Health care worker	19 (44.2)	24 (55.8)	
Other	50 (61.0)	32 (39.0)	

*The group from which the difference emerges according to the Z-score.

84.5% of the participants had been smoking for seven years or more. Of the participants, 84.5% had been smoking for at least seven years. The percentage of individuals who tried to quit smoking at least once was 67.4, and the percentage of those with a high level of tobacco addiction was 33.9. The mean Fagerström score of the participants was 4.68±1.82, while the mean SCSPS score was 41.06±9.35. The mean Fagerström scores of the COVID-19 PCR positive group and the COVID-19 PCR negative group were 4.88±1.88 and 4.49±1.74, respectively. The mean SCSPS score of the COVID-19 PCR positive group (41.90±8.28) was found to be higher than the mean SCSPS score of the COVID-19 PCR negative group (40.21±10.25) (t=2.075, p=0.038), (p<0.05). The percentage of people who sought support to quit smoking was 96.7 (Table 2).

Table 2. Some characteristics related to smoking.

		COVID-19 PCR positive group (n,%)	COVID-19 PCR negative group (n,%)	Total (n,%)	Statistics
Time spent smoking tobacco products	1 year or less	5 (83.3)	1 (16.7)	6 (100)	x^2=25.591 p=0.001
	1 to 3 years	19 (67.9)	9 (32.1)	28 (100)	
	3 to 7 years*	37 (78.7)	10 (21.3)	47 (100)	
	7 years and more*	200 (45.4)	241 (46.6)	441 (100)	
Attempt times to quit smoking	Not attempted	84 (49.4)	86 (50.6)	170 (100)	x^2=0.037 p=0.982
	1 to 4 times	155 (50.3)	153 (49.7)	308 (100)	
	5 times and over	22 (50.0)	22 (50.0)	44 ((100)	
Addiction level	Extremely low	35 (44.3)	44 (55.7)	79 (100)	x^2=0.680 p=0.013
	Low	63 (46.3)	73 (53.7)	136 (100)	
	Moderate	55 (49.1)	57 (50.9)	112 (100)	
	High	93 (52.5)	84 (47.5)	177 (100)	
	Severe	15 (83.3)	3 (16.7)	18 (100)	
		COVID-19 PCR positive group (mean±SD)**	**COVID-19 PCR negative group (mean±SD)**	**Total (mean±SD)**	**Statistics**
Fagerström Mean Score		4.88±1.88	4.49±1.74	4.68±1.82	t=2.482 p=0.013
SCSPS Mean Score		41.90±8.28	40.21±10.25	41.06±9.35	t=14.608, p=0.038
Seeking previous assistance for smoking cessation	Yes	16 (94.1)	1 (5.9)	17(100)	x^2=13.681 p<0.001
	No	245 (48.5)	3 (51.5)	505 (100)	

* The groups from which the difference emerges according to the Z-score.
** Standart Deviation

The mean SCSPS score was greater among individuals with COVID-19 disease, those under 50 years old, and those who attempted to quit smoking ($p<0.05$). There was no difference in the duration of using tobacco products in the COVID-19 PCR positive group and the COVID-19 PCR negative group ($p>0.05$). The number of smoking cessation attempts in the COVID-19 PCR positive group was higher than in COVID-19 PCR negative group ($p<0.05$) (Table 3). It predicts a positive correlation between having a COVID-19 infection and the mean SCSPS ($R2=0.08$, $B=1.693$, $p=0.038$).

Table 3. Smoking Cessation Success Prediction Scale (SCSPS) and Fagerström mean scores based on some characteristics of the participants.

		COVID-19 PCR positive group		COVID-19 PCR negative group	
		SCSPS* Mean Score	**Statistics**	**SCSPS* Mean Score**	**Statistics**
Age	Between 18-34	41.70±8.19	f=1.843, p=0.160	41.47±8.55**	F=3.542, p=0.030
	Between 35-49	43.09±7.22		40.75±9.90	
	50 ve over	40.35±9.92		37.07±12.74**	
Sex	Male	41.60±8.60	t=3.069, p=0.278	40.35±10.35	t=0.056, p=0.537
	Female	42.91±7.13		39.10±9.49	
Educational background	Illiterate	39.45±11.06	f=0.750, P=0.559	39.60±14.31	F=2.005, p=0.094
	Primary School Graduate	41.95±8.40		37.37±12.46	
	Secondary School Graduate	43.67±7.23		39.12±11.92	
	Highschool Graduate	41.42±8.30		42.12±8.21	
	University Graduate	42.02±8.29		40.97±8.62	
Marital status	Married	41.67±8.52	**x^2=0.867 p=0.648	40.25±10.41	**x^2= 0.594 p=0.743
	Single	42.62±7.56		39.55±9.90	
	Divorced	42.80±7.69		43.60±5.36	
Time spent smoking tobacco products	1 year or less	37.20±9.12	f=0.755, p=0.520	46.00±0.00	F=1.202, p=0.310
	1 to 3 years	40.94±8.72		37.77±7.64	
	3 to 7 years	41.40±8,47		35.00±10.46	
	7 years and over	42.21±8.20		40.49±10.30	
Attempt times to quit smoking	Never attempted	**38.21±10.61	f=13.698, p=0.001	**35.76±12.02	F=13.220, p=0.001
	1 to 4 times	43.52±7.78		42.45±8.58	
	5 times and over	43.31±8.28		42.00±7.90	
Having complaints (Cough, phlegm)	Yes	42.65±7.71	t=2.649, p=0.162	41.16±9.44	t=8.541 p=0.027
	No	41.21±8.71		38.16±11.60	

* Smoking Cessation Success Prediction Scale

** Kruskal-Wallis test was used.

*** The group from which the difference emerges according to the Tukey test.

DISCUSSION

The mean SCSPS score of the COVID-19 PCR positive group was found to be higher than the mean SCSPS score of the COVID-19 PCR negative group ($p<0.05$). According to WHO, COVID-19 infection is more severe among smokers (WHO, 2022). According to a study, nearly one-fourth of people who participated in the study during the pandemic attempted to quit smoking. In the same study, it was discovered that 26.2 percent of participants believed the risk of developing COVID-19 infection was higher. The rate of smoking decreased significantly before and during the COVID-19 pandemic (Yingst et al., 2021). In a study of those with COVID-19 infection, it was discovered that more than half of those who continue to smoke have reduced their smoking, 76.9 percent of them wanted to quit smoking, 48.4 percent needed professional help to quit smoking, and 38.5 percent of those who did not

quit smoking during the pandemic believed they caught COVID-19 from smoking (Kayhan Tetik et al., 2021).

Although it was not significant in the COVID-19 PCR positive group the mean SCSPS score was significantly lower in the 50 and over age group in the COVID-19 PCR negative group. A study revealed no correlation between smoking cessation success and age (Kayhan Tetik et al., 2021). There has been research published in the literature that there is a relationship between age and smoking cessation success, and the success rate of smoking cessation improves with age (Raherison et al., 2005; Tillgren et al., 1996; Yeom et al., 2018).

No significant difference was found between the mean SCSPS scores between male and female genders in the COVID-19 PCR positive group and the COVID-19 PCR negative group. There was no significant difference in mean SCSPS scores between male and female genders in our study. Several studies have found no correlation between smoking cessation success and gender (Argüder et al., 2013; Kayhan Tetik et al., 2021). In one study, women were more likely than males to quit smoking in only two of the studies, while men were more likely in 59 studies and there was no difference between men and women in 44 studies (Smith et al., 2016). Furthermore, research shows that women are more successful at quitting than men (Esen et al., 2020). Because the investigations were performed with various sample groups, different results may have been achieved.

Although there was no significant difference between the COVID-19 PCR positive group and the COVID-19 PCR negative group in those with higher education levels, the mean SCSPS score was higher. The effect of education level on smoking cessation varies in the literature. In the study of

Yasar et al., it was shown that education level has no effect on smoking cessation (Yaşar, Kar Kurt, Talay, et al., 2014). In the study of Jeong et al., it was shown that the success of smoking cessation increases with the increase in education level (Jeong Yang et al., 2015). These differences may be due to the different sample groups.

There was no difference between the mean scores of SCSPS according to marital status in the COVID-19 PCR positive group and the COVID-19 PCR negative group. When the studies were analyzed, some studies indicated no association between smoking cessation success and marital status, while others found that smoking cessation success was higher among married adults (Argüder et al., 2013; Kayhan Tetik et al., 2021; Yeom et al., 2018).

In our study, we discovered that there was no difference between the duration of smoking and SCSPS scores in the COVID-19 PCR-positive group and the COVID-19 PCR-negative group. In the study conducted by Selçuk et al., no statistically significant difference was found between the duration of smoking and smoking cessation behavior (Raherison et al., 2005; Selçuk et al., 2018). Furthermore, research demonstrates that an increase in smoking exposure is inversely associated with the success of cigarette cessation (Jeong Yang et al., 2015).

In the COVID-19 PCR-positive group and the COVID-19 PCR-negative group, the mean SCSPS score was found to be lower in those who had no smoking cessation experience ($p<0.001$). According to one study, previous unsuccessful attempts to quit smoking were not effective in quitting smoking (Argüder et al., 2013; Yeom et al., 2018).

CONCLUSION

The mean SCSPS score of those who had COVID-19 infection was higher than those who did not have COVID-19 infection. It affects the mean of COVID-19 infection and SCSPS scores. In the COVID-19 PCR positive group, heavily tobacco addicts were high. In the COVID-19 PCR negative group, the mean SCSPS score was lower in older patients. Age, gender, marital status, duration of use of tobacco products were found to have no effect on smoking cessation success. Those who had not tried to quit smoking had a lower mean SCSPS score.

Symptoms such as cough affect smoking cessation success. In cases of epidemics, people's desire to quit smoking increases and it may be beneficial to provide support to those who have had the disease in these periods in terms of quitting smoking at the same time.

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Ethics Committee Approval: This research complies with all the relevant national regulations, institutional policies and is in accordance the tenets of the Helsinki Declaration and has been approved.

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Conflict of Interest: The authors have no conflict of interest to declare.

Author Contributions:

Idea/Concept: Engin Burak SELÇUK; **Design:** Ferit KAYA; **Supervision/Consulting:** Ferit KAYA, Engin Burak SELÇUK; **Data Collection and/or Processing:** Hülya DOĞAN TİRYAKİ; **Analysis and/or Interpretation:** Ferit KAYA, Eda Fulden TUTAR ÇÖLGEÇEN; **Literature Review:** Eda Fulden TUTAR ÇÖLGEÇEN; **Writing of the Article:** Ferit KAYA, Eda Fulden TUTAR ÇÖLGEÇEN; **Critical Review:** Engin Burak SELÇUK, Hülya DOĞAN TİRYAKİ; **Resources and Funding:** Hülya DOĞAN TİRYAKİ

Limitations:

Since the data was collected during the COVID-19 pandemic period, there were differences between the groups in terms of sociodemographic data such as age and gender. The fact that this study was conducted in a single center limited its generalizability to the community. The subject studied needs further research.

REFERENCES

Argüder, E., Karalezli, A., Hezer, H., Kılıç, H., Er, M., Hasanoğlu, H. C., & Demir, P. (2013). Sigara bırakma başarısını etkileyen faktörler. Turk Toraks Dergisi, 14, 81–87.

Aydemir, Y., Doğu, Ö., Dede, C., & Çınar, N. (2019). Smoking-Cessation Success Prediction Scale: Development, validity, and reliability study. Addicta: The Turkish Journal on Addictions, 6(2), 387–402.

Esen, A. D., Soylem, Y., Arica, S., Belgin, G., & Gonultas, N. (2020). Factors affecting success and abstinence within a smoking cessation clinic: A one-year follow-up study in Turkey. Tobacco Prevention & Cessation, 6(December), 1–8.

Jeong Yang, J., Song, M., Yoon, H. S., Lee, H. W., Lee, Y., Lee, S. A., Choi, J. Y., Lee, J. K., & Kang, D. (2015). What Are the Major Determinants in the Success of Smoking Cessation: Results from the Health Examinees Study. PloS One, 10(12).

Kanık, M.K., & Tözün, M. (2020). İzmir'de Sigarayı Bırakma Polikliniklerine Başvuranların Sigara ve Diğer Tütün Ürünleri Kullanım Özellikleri Ve Nikotin Bağımlılık Durumları. Eskişehir Türk Dünyası Uygulama ve Araştırma Merkezi Halk Sağlığı Dergisi, 5(1), 84–95.

Kayhan Tetik, B., Gedik Tekinemre, I., & Taş, S. (2021). The Effect of the COVID-19 Pandemic on Smoking Cessation Success. Journal of Community Health, 46(3), 1.

Kocabaş, A. (2020). COVID-19 pandemisi ve sağlığın sosyal bileşenleri. In O. İtil, G. Altınışık Ergur, N. Köktürk, Y. Havlucu, M. Akgün, & N. Aytaç (Eds.), COVID-19 pandemisi ve sağlığın sosyal bileşenleri (1st ed., pp. 5–7). Türk Toraks Derneği COVID-19 E-Kitapları Serisi.

Raherison, C., Marjary, A., Valpromy, B., Prevot, S., Fossoux, H., & Taytard, A. (2005). Evaluation of smoking cessation success in adults ARTICLE IN PRESS. Respiratory Medicine, 99, 1303–1310.

Rashedi, J., Mahdavi Poor, B., Asgharzadeh, V., Pourostadi, M., Samadi Kafil, H., Vegari, A., Tayebi-khosroshahi, H., & Asgharzadeh, M. (2020). Risk Factors for COVID-19. Le Infezioni in Medicina, 4(Risk Factors for COVID-19), 469–474.

Rod, J. E., Oviedo-Trespalacios, O., & Cortes-Ramirez, J. (2020). A brief-review of the risk factors for covid-19 severity. Rev Saude Publica., 54–60.

Salman, E., Çelikbilek, N., Özdem, B., Gökay, S., Aydoğan, S., Kırca, F., Toyran, A., Bilici Salman, R., & Dinç, B. (2022). Evaluation of Prognostic Factors in Patients with COVID-19: Ankara City Hospital Experience as a Pandemic Center. Akdeniz Medical Journal, 8(1), 9–15.

Selçuk, T. T., Avcı, K., & Mercan, D. (2018). Smoking Addiction among University Students and the Willingness and Self-Efficacy to Quit Smoking. Clin Exp Health Sci, 8, 36–43.

Smith, P. H., Bessette, A. J., Weinberger, A. H., Sheffer, C. E., & McKee, S. A. (2016). Sex/gender differences in smoking cessation: A review. Preventive Medicine, 92, 140.

Şeker, M., Özer, A., Tosun, Z., Korkut, C., & Doğrul, M. (2020). Covid-19 Pandemi Değerlendirme Raporu.

Tillgren, P., Haglund, B. J., Lundberg, M., Romelsjo, A., Institutet, K., Tillgren BJA Haglund M Lundberg A Romelsjo, S. P., & Tillgren, P. (1996). The sociodemographic pattern of tobacco cessation in the 1980s: results from a panel study of living condition surveys in Sweden. Journal of Epidemiology and Community Health, 50, 625–630.

WHO. (2022, February 4). Resources for tobacco use control as part of COVID-19 response. World Health Organization.

Yaşar, Z., Kar Kurt, Z., Talay, F., & Kargı, A. (2014). One-Year Follow-up Results of Smoking Cessation Outpatient Clinic: Factors Affecting the Cessation of Smoking. Eurasian J Pulmonal, 16, 99–104.

Yeom, H., Lim, H. S., Min, J., Lee, S., & Park, Y. H. (2018). Factors Affecting Smoking Cessation Success of Heavy Smokers Registered in the Intensive Care Smoking Cessation Camp (Data from the National Tobacco Control Center). Osong Public Health and Research Perspectives, 9(5), 240–247.

Yingst, J. M., Krebs, N. M., Bordner, C. R., Hobkirk, A. L., Allen, S. I., & Foulds, J. (2021). Tobacco Use Changes and Perceived Health Risks among Current Tobacco Users during the COVID-19 Pandemic. Int. J. Environ. Res. Public Health, 18.