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ORIGINAL ARTICLE

The Relationship between Alcohol Use – Smoking and Psychological Resilience in the COVID-19 Pandemic

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Main Points

- When the findings of smoking after coronavirus disease 2019 (COVID-19) were examined, it was seen that 50.9% of the sample did not undergo a change in their smoking, 40.2% had an increase in smoking, and 8% had a decrease in smoking. After COVID-19, alcohol use of 49.2% remained unchanged, increased in 34.2%, and decreased in 17.6%.
- When the nicotine dependence scores of the participants are examined according to the effect of smoking during the pandemic period, it is seen that the nicotine dependence scores of those who stated that their smoking increased were higher.
- In the study, there does not appear to be a difference in the use of nicotine and alcohol according to having COVID-19 status of the participants.
- While there was no significant difference in the sub-dimensions of structural style and family harmony in the psychological resilience scale, there was a significant difference in self-perception, perception of the future, social competence, social resources, and total psychological resilience score of the participants according to the effect of smoking during the pandemic period.
- In the social resources sub-dimension, it was determined that those whose smoking did not change during the pandemic period had a higher perception of social resources compared to those whose smoking decreased.

Abstract

The aim of this study is to examine the relationship between alcohol use and smoking and psychological resilience in the coronavirus disease 2019 pandemic. The sample of this study, in which the relational survey model, one of the quantitative methods, was used, consisted of 398 randomly selected people who participated voluntarily. Personal Information Form, Nicotine Dependence Test, Michigan Alcoholism Screening Test, and Psychological Resilience Scale were used in the research. The findings of the study showed that after the coronavirus disease 2019 pandemic, smoking increased in 40.2% of the participants and alcohol use increased in 34.2%. It is seen that those who stated that smoking increased during the pandemic period had higher nicotine dependence scores ($F = 7.758$; $p < .05$). The findings of the study indicate that smoking of alcohol addicts increased significantly during the pandemic period, and alcohol use of those who were smoking addicts increased significantly in the same way. When the total psychological resilience scores were examined, it was determined that those whose smoking did not change and increased during the pandemic period had higher psychological resilience compared to those whose smoking decreased. There was no significant difference in the total psychological resilience scale of the participants according to the effect of alcohol use during the pandemic period. According to the results of the regression analysis, it was seen that psychological resilience predicted nicotine dependence at a rate of 4% and alcohol addiction at a rate of 9%. As a result of the research, it was determined that both the addiction and the psychological resilience of individuals whose nicotine and alcohol use increased during coronavirus disease 2019 period were affected by this.

Keywords: Alcohol use, COVID-19, pandemic, psychological resilience, smoking

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Introduction

The coronavirus disease 2019 (COVID-19), which emerged in Wuhan, China, at the end of 2019, spread rapidly and caused a pandemic that affected the world (WHO, 2020). The virus brought serious consequences leading to death by causing problems such as severe respiratory tract disease and organ failure, especially in individuals with chronic diseases and the elderly (Ministry of Health, 2020). The high number of cases and death rates around the world, with the closure of schools and businesses, travel restrictions, curfews, and restrictions including quarantine, have caused great changes in social life (McKee & Stuckler, 2020). Social isolation makes people lonely (Killgore et al., 2020); however, many factors such as economic effects and the obligation to stay at home affect people's mental health, resulting in psychological problems such as anxiety, depression, acute stress disorder, insomnia, post-traumatic stress disorder, and substance use (Bansal et al., 2020; Kim et al., 2020). It has been observed that the uncertainty of the course of the epidemic increases the feelings of anxiety and fear in society (Rajkumar, 2020) and increases the stress levels of individuals (Salari et al., 2020).

People turn to many unhealthy behaviors and coping methods such as alcohol use and smoking due to stress, loneliness, and anxiety about setbacks in daily life (Debell et al., 2014; Rokach, 2002). In such cases, individuals consume alcohol with the thought that it will regulate their mood and bring pleasure and relaxation (Corbin et al., 2013; Ng & Jeffery, 2003). It has been observed that smokers similarly define smoking as a relaxing, pleasing, and satisfying habit (Işıktaş et al., 2019). In addition, it has been observed that the inability to use free time efficiently and effectively leads the person to substance use (Liebregts et al., 2015; Trivedi et al., 2011). Stressful life affects addictions; it is emphasized that people with alcohol and substance use disorders are considered more vulnerable to stress and crisis and are at risk for relapse (Koob, 2013; Milivojevic & Sinha, 2018). Stressful life events and disasters are also indicated as dangerous periods in the development of alcohol, substance, and behavioral addictions for people without a history of addiction (Somaini et al., 2012).

In the light of this information, it is thought that the COVID-19 pandemic will be a risky period in terms of smoking and alcohol use. Studies in the literature stated that alcohol intake increased during the COVID-19 pandemic process (Clay & Parker, 2020; French et al., 2022; Schmits & Glowacz, 2021). In a study conducted in China, alcohol consumption in the COVID-19 pandemic was examined with Alcohol Use Disorders Identification Test (AUDIT) and the results showed that risky consumption increased by 29.1%, harmful use by 9.5%, and alcohol dependence by 1.6% (Ahmed et al., 2020). In a study conducted by Bommelé et al. (2020), 18.9% of smokers due to COVID-19 stated that they smoked more, while 14.1% stated that they smoked less. The reasons for the group who smoked more are boredom (48.6%), feeling stressed (43.2%), loneliness (36.6%), and decrease in being in places where smoking is prohibited (23.5%). Moreover, 24.7% of smokers believe that it is more difficult to quit smoking since COVID-19. In general, the main reasons for the use of substances such as alcohol and cigarettes during the pandemic period have been identified as less social interaction, loss of daily routine, boredom, loneliness, desire to enjoy, and entertainment (Vanderbruggen et al., 2020). In a study examining the changes in alcohol use – smoking during the coronavirus pandemic in Turkey, 844 of the alcohol users stated that there was no change in their alcohol use, 204 of them increased their alcohol use, and 465 of them reduced or quit alcohol, while 191 of the smokers stated that their smoking increased, and 472 of them stated that they reduced or quit smoking (Arpacıoğlu & Ünübol, 2020). This difference seen in studies emphasizes that people's reactions to events are different and that they develop different methods of struggle. It seems that some people approach these changes in a positive way and stay away from bad habits by fighting against difficulties. These people can be considered to be more psychologically resilient than others.

Psychological resilience can be defined as a self characteristic that reduces the effectiveness of stress and illness when faced with a stressful situation or traumatic event, facilitates the individual's attachment to life, their work, and family, makes them believe that they have a say in their life, and facilitates adaptation to the environment and living conditions (Aydoğdu, 2013). When the studies examining the relationship between alcohol use and resilience are examined, a negative relationship is observed (Green et al., 2014; Johnson, 2011). In a study conducted by Acar et al. (2019) with people who do not smoke, who receive smoking cessation treatment, and who smoke, it was found that the psychological resilience levels of smokers are lower.

In the literature, it has been seen that different results have been reached in studies examining the relationship between alcohol and cigarette use and psychological resilience in the COVID-19 pandemic. In a study by Tudehope et al. (2021), examining the effect of resilience on the relationship between alcohol use and perceived stress in Australian individuals during the COVID-19 pandemic, they stated that resilience is a moderate factor, and that high-level resilience creates a buffering effect on stress-related alcohol consumption in the COVID-19 pandemic. Another study by Tam et al. (2021) in Chinese university students found that students with higher levels of resilience in the face of COVID-19 were more likely to evaluate stressors positively, develop a better emotional tolerance, and reduce the risk of psychological distress. However, no significant relationship was found between smoking and psychological resilience during COVID-19. Similarly, in another study by Du et al. (2021), it was found that psychological resilience had no effect on harmful use of alcohol in the COVID-19 pandemic. Therefore, further studies are needed to understand the nature of the relationship between resilience, stress, and alcohol consumption in more diverse contexts and populations, due to the scarcity of information available from previous research. In line with this direction, the aim of this study is to examine the relationship between alcohol use and smoking and psychological resilience in lifestyle change during the pandemic process.

Methods

Participants and Procedure

Relational screening model, one of the quantitative methods, was used in the research. The population of this research is adult individuals over the age of 18 who smoke and/or use alcohol.

The unknown universe sampling method was used and a sample was formed from 398 people who participated voluntarily. Personal Information Form, Nicotine Dependence Test, Michigan Alcoholism Screening Test, and Psychological Resilience Scale were used as data collection tools in the study. Individuals or groups were given a single session. Ethical approval was obtained from the Near East University Scientific Research Ethics Committee for the study (dated October 7, 2021, with YDÜ/SB/2021/1097 project number). Participants who agreed to participate in the study were informed by reading the Participant Information Form and Informed Consent Form, and their consent was obtained.

Personal Information Form

It is a form created by the researcher and includes questions about the demographic characteristics of the people. Through this form, participants were asked to answer questions such as gender, age, marital status, and educational status.

Nicotine Dependence Test

The scale was developed by Fagerstrom and Schneider (1989) to determine the degree of physical dependence on smoking. The Turkish validity and reliability study of the six-item scale was conducted by Uysal et al. (2004) in 2004 and it was reported that the Cronbach's alpha coefficient was calculated as .56. Each item of the scale is scored as 0, 1, 2, and 3, and the range of scores that can be gotten from the scale ranges from 0 to 1. The increase in the score obtained from the scale indicates that the smoking addiction is high. According to the total score obtained from the scale, smoking addiction is graded in five groups as very mild (0 – 2 points), mild (3 – 4 points), moderate (5 points), high (6 – 7 points), and very high (8 – 10 points). In this study, the degree of smoking addiction was graded in three categories as mild, moderate, and high, and the Cronbach's alpha coefficient of the scale was calculated as .78 (Uysal et al., 2004).

Michigan Alcoholism Screening Test

The scale was developed by Gibbs (1983) to measure whether a person faces alcohol use problems and, if any, its level. In the test containing 25 questions, each question has different score values. It was adapted to Turkish by Coşkunol et al. (1995). In terms of procedural validity, it was determined that the best discrimination was when the cut-off point was taken between 5 and 9. Cronbach's alpha value was .74. The cut-off point was .99 at 5, .95 when the cut-off point was 9, and the sensitivity was .79 at 5 cut-off points and .91 at 9 cut-off points.

Psychological Resilience Scale

The Psychological Resilience Scale for Adults was developed by Friborg et al. (2005). The reliability (Cronbach's Alpha) coefficient of the scale was found to be .89. It was adapted into Turkish by Basım and Çetin (2011). As a result of the factor analysis, a six-factor structure, which overlaps with the original scale and includes the dimensions of "Self-perception," "Perception of the future," "Structural style," "Social competence," "Family harmony," and "Social resources," was confirmed (χ^2 = 1104, df = 480, χ^2/df = 2.3; Root Mean Square Error of Approximation (RMSEA) = .055; Tucker-Lewis Index (TLI) = .90; Comparative Fit Index (CFI) = .91). Social Comparison Scale and Locus of Control Scale were used for criterion-dependent validity. It was found that the internal consistency coefficients of the sub-dimensions of the scale ranged between .66 and .81, and the test – retest reliability ranged between .68 and .81 (Basım & Çetin, 2011).

Statistical Analysis

The data obtained in the research were analyzed using the Statistical Package for Social Sciences for Windows 22.0 program. In the evaluation of the data, numbers and percentages were used as descriptive statistical methods. The *t*-test was used to compare quantitative continuous data between two independent groups, and the one-way analysis of variance test was used to compare quantitative continuous data between more than two independent groups. The findings were evaluated at the 95% CI and at the 5% significance level.

Results

One hundred thirty-one (32.9%) women and 267 (67.1%) men participated in the study. Of the participants, 31 (7.8%) were primary school graduates, 34 (8.5%) were secondary school graduates, 135 (33.9%) were high school graduates, and 198 (49.7%) were university graduates. Post-COVID smoking decreased in 32 of them (8.0%), remained unchanged in 206 (50.9%), and increased in 160 (40.2%). Alcohol use decreased in 70 (17.6%) participants after COVID, remained unchanged in 192 (49.2%), and increased in 136 (34.2%). One hundred two (25.6%) of the participants had COVID, and 296 people (74.4%) did not have COVID.

When Table 1 is examined, it has been determined that there is a significant difference between the age group of 26 – 35 years old (M = 3.52) and the group aged 46 and over (M = 4.80) in the nicotine dependence scale according to the age of the participants. According to these results, it is seen that the group aged 46 and over consumes more nicotine (F = 3.608; $p < .05$).

As seen in Table 2, it was determined that there was a significant difference between the increasing (M = 4.68) and decreasing (M = 2.81) nicotine dependence scales of the participants

Table 1.
Results of the Nicotine Dependence Scale by Age of the Participants

Score	Groups	*N*	$\bar{x}$	*SD*	Var.C.	*ST*	*Dof*	*MS*	F	*p*
	Age 18 – 25	91	4.56	2.109	Between groups	68.197	3	22.732	3.608	.014
Nicotine dependence scale	Age 26 – 35	52	3.57	1.983	In-group	2482.660	394	6.301		
	Age 36 – 45	80	4.17	2.651	Total	2550.857	397			
	Age 46 and over	175	4.80	2.760						
	Total	398	4.45	2.534						

SD = standard deviation; SM = Sample Mean; ST = Mean Square.

Table 2.
Nicotine Dependence Scale and Alcoholism Screening Test Results According to the Effects of Participants' Smoking During the Pandemic Period

Score	Groups	*N*	$\bar{x}$	*SD*	Var.C.	*ST*	*Dof*	*SM*	F	*p*
Nicotine Dependence Scale	Decreased	32	2.81	2.705	Between group	96.417	2	48.209	7.758	.000
	Did not change	206	4.53	2.582	In-group	2454.439	395	6.214		
	Increased	160	4.68	2.326	Total	2550.857	397			
	Total	398	4.45	2.534						
Alcoholism	Decreased	32	13.69	3.771	Between group	160.975	2	80.488	3.582	.029
	Did not change	206	15.59	4.336	In-group	8876.866	395	22.473		
	Increased	160	16.13	5.368	Total	9037.842	397			
	Total	398	15.66	4.771						

SD = standard deviation.

Table 3.
Participants' Alcoholism Screening Test and Nicotine Dependence Scale Results According to the Affected Status of Alcohol Use During the Pandemic Period

Score	Groups	*N*	$\bar{x}$	*SD*	Var.C.	*ST*	*Dof*	*SM*	F	*p*
Alcoholism	Decreased	70	15.17	4.508	Between group	67.833	2	33.916	1.494	.226
	Did not change	192	15.44	4.696	In-group	8970.009	395	22.709		
	Increased	136	16.21	4.987	Total	9037.842	397			
	Total	398	15.66	4.771						
Nicotine dependence scale	Decreased	70	3.71	2.207	Between group	51.201	2	25.601	4.045	.018
	Did not change	192	4.52	2.539	In-group	2499.656	395	6.328		
	Increased	136	4.75	2.626	Total	2550.857	397			
	Total	398	4.45	2.534						

SD = standard deviation.

according to the effect of smoking during the pandemic period. According to these results, it is seen that those who stated that smoking increased during the pandemic period had higher nicotine dependence scores (F = 7.758; $p < .05$). It was determined that there was a significant difference between those who increased their smoking (M = 16.13) and those whose smoking decreased (M = 13.69) in the alcoholism screening test according to the effect of smoking on the participants during the pandemic period. According to these results, it is seen that those who smoked more are more addicted to alcohol (F = 3.582; $p < .05$).

When Table 3 was examined, no significant difference was observed in the alcoholism screening test according to the effect of alcohol use during the pandemic period. Alcohol use does not differ according to the effect of alcohol use during the pandemic period (F = 1.494, $p > .05$). It was determined that there was a significant difference between the participants whose alcohol use increased during the pandemic period (M = 4.75) and those whose alcohol use decreased (M = 3.71) in the nicotine dependence scale. According to these results, those with increased alcohol use are more addicted to nicotine (F = 4.045; $p < .05$).

There was no significant difference in the alcoholism screening test according to having COVID-19 status of the participants. Alcohol use does not differ according to the status of having COVID-19 (t = 1.521, $p > .05$). There was no significant

Table 4.
Participants' Alcoholism Screening Test and Nicotine Dependence Scale Results According to Having COVİD-19 Status

Score	Groups	*n*	$\bar{x}$	SD	SE	*t*	Dof	*p*
Alcoholism	Yes	102	16.27	5.035	.499	1.521	396	.129
	No	296	15.44	4.667	.271			
Nicotine dependence scale	Yes	102	4.4118	2.65641	.26302	.222	396	.825
	No	296	4.4674	2.49599	.14508			

SD = standard deviation; SE = standard error.

Table 5.
Participants' Psychological Resilience Scale Results According to the Affected Status of Smoking During the Pandemic Period

Score	Groups	*N*	$\bar{x}$	*SD*	Var.C.	*ST*	*Dof*	*SM*	F	*p*
	Decreased	32	13.59	4.805	**Between group.**	450.013	2	225.007	7.497	.001
Self-perception	Did not change	206	16.75	5.447	**In-group**	11855.193	395	30.013		
	Increased	160	17.68	5.640	**Total**	12305.206	397			
	Total	398	16.87	5.567						
	Decreased	32	9.38	3.875	**Between group**	185.898	2	92.949	6.029	.003
Perception of Future	Did not change	206	10.96	4.017	**In-group**	6089.589	395	15.417		
	Increased	160	11.85	3.817	**Total**	6275.487	397			
	Total	398	11.19	3.976						
	Decreased	32	10.81	4.802	**Between group**	50.588	2	25.294	1.680	.188
Structural Style	Did not change	206	11.39	3.636	**In-group**	5948.651	395	15.060		
	Increased	160	11.97	3.983	**Total**	5999.239	397			
	Total	398	11.58	3.887						
	Decreased	32	14.97	4.261	**Between group**	387.176	2	193.588	9.028	.000
Social competence	Did not change	206	18.31	4.580	**In-group**	8470.302	395	21.444		
	Increased	160	16.95	4.763	**Total**	8857.477	397			
	Total	398	17.49	4.723						
	Decreased	32	17.44	3.999	**Between group**	28.243	2	14.122	.684	.505
Family harmony	Did not change	206	17.14	4.668	**In-group**	8156.392	395	20.649		
	Increased	160	17.70	4.482	**Total**	8184.636	397			
	Total	398	17.39	4.541						
	Decreased	31	17.39	4.814	**Between group**	235.439	2	117.720	3.450	.033
Social resources	Did not change	204	19.99	6.192	**In-group**	13375.735	392	34.122		
	Increased	160	18.90	5.549	**Total**	13611.175	394			
	Total	395	19.34	5.878						
Total psychological resilience	Decreased	31	83.45	16.203	**Between group**	3720.171	2	1860.085	4.399	.013
	Did not change	204	94.69	20.139	**In-group**	165765.915	392	422.872		
	Increased	160	95.04	21.799	**Total**	169486.086	394			
	Total	395	93.95	20.740						

SD = standard deviation.

difference in the nicotine dependence scale according to having COVID-19 status of the participants. The use of nicotine does not differ according to the status of having COVID-19 ($t = -.222$; $p > .05$) (Table 4).

When Table 5 is examined, there is no significant difference in the sub-dimensions of structural style and family harmony in the psychological resilience scale according to the effect of smoking during the pandemic period, while a significant difference was observed in self-perception (F = 7.497; $p < .05$), perception of the future (F = 6.029; $p < .05$), social competence (F = 9.028; $p < .05$), social resources (F = 3.450; $p < .05$), and total resilience scale (F = 4.399; $p < .05$). In the sub-dimension of self-perception, it was determined that those who smoked more during the pandemic period (M = 17.68) had higher self-perception compared to those who smoked less (M = 13.59). In the perception of the future sub-dimension, it was determined that those who smoked more during the pandemic period (M = 11.85) had a higher perception of the future compared to those who smoked less (M = 9.28). In the social competence sub-dimension, it was determined that those whose smoking did not change during the pandemic period (M = 18.31) had a higher perception of social competence compared to those whose smoking did not decrease (M = 14.97). In the social resources sub-dimension, it was determined that those whose smoking did not change during the pandemic period (M = 19.99) had a higher perception of social resources compared to those whose smoking did not decrease (M = 17.39). In the total psychological resilience scale, it was determined that those whose smoking did not change during the pandemic period (M = 94.69) and those whose smoking increased (M = 95.04) had

Table 6.
Participants' Psychological Resilience Scale Results According to the Affected Status of Alcohol Use During the Pandemic Period

	Groups	*N*	$\bar{x}$	*SD*	Var.C.	*ST*	*Dof*	*SM*	F	*p*
Score	Decreased	70	14.97	5.093	Between group	400.343	2	200.171	6.642	.001
Self-perception	Did not change	192	16.82	5.339	In-group	11904.863	395	30.139		
	Increased	136	17.91	5.882	Total	12305.206	397			
	Total	398	16.87	5.567						
	Decreased	70	10.36	4.025	Between group	68.782	2	34.391	2.189	.113
Perception of future	Did not change	192	11.22	4.090	In-group	6206.706	395	15.713		
	Increased	136	11.57	3.745	Total	6275.487	397			
	Total	398	11.19	3.976						
	Decreased	70	11.63	3.857	Between group	57.122	2	28.561	1.899	.151
Structural style	Did not change	192	11.21	3.818	In-group	5942.117	395	15.043		
	Increased	136	12.06	3.974	Total	5999.239	397			
	Total	398	11.58	3.887						
	Decreased	70	17.49	4.526	Between group	52.797	2	26.398	1.184	.307
Social competence	Did not change	192	17.16	4.221	In-group	8804.681	395	22.290		
	Increased	136	17.97	5.435	Total	8857.477	397			
	Total	398	17.49	4.723						
	Decreased	70	17.17	4.641	Between group	4.044	2	2.022	.098	.907
Family harmony	Did not change	192	17.43	4.423	In-group	8180.592	395	20.710		
	Increased	136	17.44	4.681	Total	8184.636	397			
	Total	398	17.39	4.541						
	Decreased	69	18.09	5.332	Between group	158.846	2	79.423	2.314	.100
Social resources	Did not change	190	19.37	5.980	In-group	13452.328	392	34.317		
	Increased	136	19.95	5.938	Total	13611.175	394			
	Total	395	19.34	5.878						
Total psychological resilience	Decreased	69	89.72	18.540	Between group	2482.092	2	1241.046	2.913	.055
	Did not change	190	93.37	20.295	In-group	167003.994	392	426.031		
	Increased	136	96.90	22.074	Total	169486.086	394			
	Total	395	93.95	20.740						

SD = standard deviation.

higher resilience compared to those whose smoking decreased (M = 83.45).

While there was no significant difference in the perception of the future, structural style, social competence, family harmony, and social resources sub-dimensions in the psychological resilience scale and total psychological resilience scale, according to the effect of alcohol use during the pandemic period of the participants, a significant difference was observed in the sub-dimension of self-perception (F = 6.642; $p < .05$). In the sub-dimension of self-perception, it was determined that those whose alcohol use decreased (M = 14.97) during the pandemic period had lower self-perception compared to those whose alcohol use increased (M = 17.91) (Table 6).

As can be seen in Table 7, when the results of multiple regression analysis regarding the sub-dimensions of the resilience scale predict the nicotine addiction scale, the result turned out to be significant (R = .188, $R^2 = .035$, $p < .01$). This shows that the model is significant. Accordingly, the resilience of the participants explains 4% of the total variance ($R^2 = .035$). Self-perception regression load was determined to be −.038, future perception regression load to be .080, structural style regression load to be −.005, social competence regression load to be −.004, family harmony regression load to be −.078, and social resources regression load to be −.073.

When Table 8 is examined, it has been revealed that the results of multiple regression analysis regarding the prediction of the sub-dimensions of the psychological resilience scale on the alcoholism screening test are significant (R = .298, $R^2 = .089$, $p < .01$). This shows that the model is significant. Accordingly, the psychological resilience of the participants explains 9% of the total variance ($R^2 = .089$). Self-perception regression load was determined to be .222, future perception of future regression load to be −.143), structural style regression load to be .005), social competence regression load to be .058, family harmony regression load to be −.010), and social resources regression load to be .076.

Table 7.
Regression Analysis Results for Nicotine Dependence Scale

Variables	B	Standard Error	B	T	*p*
(Fixed)	4.290	.628		6.827	.000
Self-perception	−.038	.034	−.084	−1.127	.261
Perception of future	.080	.043	.126	1.875	.062
Structural style	−.005	.037	−.008	−.136	.892
Social competence	−.004	.034	−.007	−.110	.913
Family harmony	−.078	.032	−.141	−2.444	.015
Social resources	.073	.030	.170	2.414	.016
		R =. 188	$R^2 = .035$	F = 2.376	$p = .029$

Table 8.
Regression Analysis Results for Alcoholism Screening Test

Variables	B	Standard Error	B	T	*p*
(Fixed)	11.159	1.149		9.713	.000
Self-perception	.223	.062	.260	3.594	.000
Perception of future	−.143	.078	−.119	−1.823	.069
Structural style	.005	.068	.004	.074	.941
Social competence	.058	.062	.058	.948	.344
Family harmony	−.010	.059	−.010	−.178	.859
Social resources	.076	.055	.093	1.362	.174
		R = .298	$R^2 = .089$	F = 6.311	$p = .000$

Discussion

In this study, along with the change in alcohol use and smoking during the pandemic process, the results of the addiction scale were examined according to the effect of alcohol use and smoking. It was aimed to examine the relationship between the psychological resilience level and its sub-dimensions in individuals whose smoking and alcohol use increased, decreased, and remained unchanged during the pandemic period.

When the findings of smoking after COVID-19 were examined, it was seen that 50.9% of the sample did not undergo a change in their smoking, 40.2% had an increase in smoking, and 8% had a decrease in smoking. After COVID-19, alcohol use of 49.2% remained unchanged, increased in 34.2%, 17.6% decreased in 17.6%. Although it has been observed that the majority of the participants did not change their alcohol use and smoking in the study, the finding that the alcohol use and smoking also considerably increased shows parallelism with other studies in the literature (Arpacıoğlu & Ünübol, 2020; DiClemente et al., 2021). In the study conducted in France by Guignard et al. (2021), similar results were obtained with this study; after the quarantine, 54.7% of smokers reported that their use did not change, 26.7% reported an increase, and 18.6% reported a decrease, while 64.8% of alcohol users reported that their use did not change, 10.7% reported an increase, and 24.4% a decrease. The reasons for increased alcohol use and smoking can be predicted as uncertain stress caused by the pandemic (Rodriguez et al., 2020), increased anxiety and depression levels of people (Guignard et al., 2021), boredom caused by leisure time at home during social isolation, and quarantine (Reddy, 2020). It can be thought that the low rate of decrease in alcohol use and smoking during the pandemic period may be due to the fact that people do not make efforts to quit due to pandemic conditions. Previous studies have shown that smokers believe it is more difficult to quit after COVID-19 (Bommelé et al., 2020). The reasons why the decrease in alcohol consumption is relatively higher than the decrease in smoking can be explained as the closure of businesses such as bars and nightclubs, financial

problems, and the difficulty in accessing alcohol due to the prohibition of alcohol sales within the scope of some measures, especially during the quarantine period in Turkey.

When the nicotine dependence scores of the participants are examined according to the effect of smoking during the pandemic period, it is seen that the nicotine dependence scores of those who stated that their smoking increased were higher. It can be thought that users with a higher level of nicotine dependence have difficulty tolerating stress and increase their smoking. From this, it can be deduced that the pandemic period results in increased smoking and creates a risk against smoking addiction. When we review the literature, there are studies showing that the increased smoking and other substances increases with the pandemic and poses a risk (Satre et al., 2020). In a study by Rolland et al. (2020), in which behaviors such as high calorie/salt intake, screen use, and substance use among addiction-related habits in COVID-19 restrictions in France were examined, it was observed that there was an increase in tobacco use in 35.6% of the participants, in alcohol use of 28.8%, and in cannabis use of 31.3% and an increase rather than a decrease in addictive behaviors overall. Decreased well-being and increased stress factors were associated with an increase in addictive behaviors.

It was found that the alcoholism screening scores of the participants did not differ according to the effect of alcohol use during the pandemic period. This finding differs from studies stating that risky alcohol consumption and possible alcohol dependence increased during the pandemic period (Kosendiak et al., 2021). The reason for this is that the majority of the participants who use alcohol were social drinkers, and this result was obtained since it was studied with a sample where the use was not at a risky level.

The findings of the study indicate that cigarette use of alcohol addicts increased significantly during the pandemic period, and alcohol use of smoking addicts increased significantly in the same way. This result is in parallel with the literature showing that alcohol and nicotine dependence are related to each other in general (Batel et al., 1995). It has been found that people addicted to alcohol are three times more likely to be smokers than the general population, while nicotine addicts are four times more likely to be addicted to alcohol than the general population (Grant et al., 2004). In the study by Arpacıoğlu and Ünübol (2020), which examined the changes in alcohol use – smoking during the COVID-19 pandemic, it was found that there was a significant relationship between alcohol use and smoking, and that there was an increase in smoking in people with an increase in alcohol use.

In the study, there does not appear to be a difference in the use of nicotine and alcohol according to having COVID-19 status of the participants. This finding could mean that confronting the anxiety-provoking situation in people with COVID-19 causes a decrease in stress levels. For those who survived fighting a deadly virus, the virus is no longer as much of a concern as it used to be. In this direction, having COVID-19 may not have caused a difference in smoking and alcohol consumption. In a study by Wu et al. (2008), it was found that harmful use of alcohol and dependence in the future were not associated with each other in people who had a family member infected with severe acute respiratory syndrome (SARS) virus or died from the SARS virus.

While there was no significant difference in the sub-dimensions of structural style and family harmony in the psychological resilience scale, there was a significant difference in self-perception, perception of the future, social competence, social resources, and total psychological resilience score of the participants according to the effect of smoking during the pandemic period.

In the social competence sub-dimension, it was determined that those whose smoking did not change during the pandemic period had a higher perception of social competence compared to those whose smoking did not change. This finding shows that individuals whose smoking did not change during the pandemic period perceive themselves as more socially compatible and extroverted and that they are more willing to engage in social activities. It can be thought that young individuals who act with the desire for social desirability in social environments think that smoking contributes to their ideal self-image and that they smoke to reduce the feeling of disharmony created by being in social environments where smoking is common. It has been seen in previous studies that especially high social competence perception is a risk factor for smoking in young individuals (Veselska et al., 2009). In this study, it can be thought that the high results of the nicotine addiction scale of the 18 – 25 age group may cause high perceived social competence.

In the social resources sub-dimension, it was determined that those whose smoking did not change during the pandemic period had a higher perception of social resources compared to those whose smoking decreased. The fact that the social relations and support that the person has remained the same in the participants whose smoking did not change during the pandemic period may mean that these individuals are more active in their social relations. The amount of consumption of the participants whose smoking decreased may be because of the weakening of their social relations due to the social isolation brought by the pandemic and the decrease in the number of environments where they were exposed to smoking. In this context, smoking may cause the perceived social resources of the reduced group to be lower.

In the sub-dimensions of self-perception and future perception, it was determined that those who smoked during the pandemic period had a higher sense of self and future compared to those whose smoking decreased. This finding appears to be inconsistent with previous studies (Acar et al., 2019). It can be thought that the higher scores obtained in the sub-dimensions of self-perception expressing self-awareness and one's thoughts about himself/herself and the perception of the future, which explains one's point of view toward the future, were higher in smokers because the group with the highest nicotine dependence in the study sample was 46 years of age or older. It can be deduced that as age increases, people's thoughts about themselves become more positive and their worries about the future decrease.

When the total psychological resilience scores were examined, it was determined that those whose smoking did not change during the pandemic period and those whose smoking increased had higher psychological resilience compared to those whose smoking decreased. It is inconsistent with the previous literature

that the psychological resilience of individuals whose smoking has increased and has not changed is higher than those whose smoking has decreased (Acar et al., 2019; Goldstein et al., 2013). The reason for this may be the fact that the participants in the 18 – 25 age range with high nicotine dependence rates generally want to portray themselves as more resilient than they are in perceived psychological resilience, and the younger age of the group whose smoking rate increased during the pandemic process seen in previous studies (Vanderbruggen et al., 2020). In previous studies, it has been observed that psychological resilience is higher in young people who smoke and use alcohol (Altay et al., 2014). At the same time, the high level of education of the sample may have caused the psychological resilience of the individuals to be high.

There was no significant difference in the total psychological resilience scale and its sub-dimensions of the participants according to the effect of alcohol use during the pandemic period. In a recent study by Du et al. (2021), in which the effects of sleep quality and resilience on perceived stress, dietary behaviors, and alcohol abuse during the COVID-19 pandemic were examined, similar results were obtained, and it was found that psychological resilience did not affect alcohol abuse.

When the results of multiple regression analysis regarding the psychological resilience scale sub-dimensions predicting the nicotine dependence were examined, the result was found to be significant. Accordingly, it is seen that psychological resilience is effective on nicotine dependence and predicts nicotine addiction at a rate of 4%. Karimi and Naziry (2016) showed that daily smoking rate can be predicted by stamina, cognitive-emotional regulation scale, age, and education level. It is seen that psychological resilience during the pandemic process has a predictive power, albeit low, on nicotine addiction.

When the results of multiple regression analysis regarding the prediction of the sub-dimensions of the resilience scale on the alcoholism screening test were examined, the result was found to be significant. Accordingly, the psychological resilience of the participants is effective on alcohol dependence. Psychological resilience predicts alcohol dependence by 9%. Psychological resilience during the pandemic process is effective on alcohol dependence. Aldemir et al. (2018) found in their research that when psychological resilience increases by 1 unit, there is a .18 unit decrease in the severity of alcohol use disorder. Morgan et al. (2018) revealed that resilience significantly modulates the relationship between stress and alcohol-related outcomes.

Limitations and Suggestions for Future Research

The scarcity of studies in the literature examining the relationship between alcohol use and smoking during the pandemic and psychological resilience has limited the discussion of the findings. In this context, further studies with a larger and perhaps dependent sample are needed. The result of this study is that psychological resilience alone does not have an effect on smoking and alcohol use, and further studies should be conducted considering the effects of variables such as age, education level, social environment, and motivation of the person on the use of these substances. However, the finding that psychological resilience has a predictive power on alcohol and smoking addiction means that the effect of resilience on addiction cannot be denied.

Ethics Committee Approval: Ethical committee approval was received from the Scientific Research Ethics Committee of Near East University, (dated October 7, 2021, with YDÜ/SB/2021/1097 project number).

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