Repercussions of Perceptions and Attitudes Related the COVID-19 on Healthy Lifestyle Behaviors in Young Adults

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Abstract

Objective: This study was conducted to determine the effects of young adult individuals' perception of disease (PD), perception of causes (PC), perception of control (PCL), and avoidance behaviors (AB) related to the COVID-19 pandemic on their healthy lifestyle behaviors.

Methods: The study was carried out with a cross-sectional, correlational design at a university in the south of Turkey. The research was conducted online and completed with 786 young adults aged 18-24. The study data were collected using a socio-demographic form, the Scale for Evaluating Perceptions and Attitudes towards the COVID-19 Pandemic, and the Health Promoting Lifestyle Profile (HPLP).

Results: A moderate positive correlation was found between the mean HPLP total scores of the young adults and their mean scores for PC-Environmental, PCL, and PCL-Individual (p<.05). The perception of disease in young adults had a positive effect on their healthy lifestyle behaviors (ß=0.179), avoidance behavior positively affected their healthy lifestyle behaviors (ß=0.279) and perception of control had a positive effect on their healthy lifestyle behaviors (ß=0.424) (p<.05).

Conclusion: Young adults with a high perception of disease, perception of causes, perception of control, and belief in avoidance behaviors related to the COVID-19 pandemic exhibited positive healthy lifestyle behaviors during the pandemic process. For the creation of a healthy society following pandemics or other public health events, young adults' healthy lifestyle behaviors need to become a way of life and be sustained. Healthcare professionals have a very important place in supporting increasing healthy lifestyle behaviors and encouraging/regaining decreasing behaviors.

Keywords: Attitude, COVID-19, Healthy Lifestyle Behaviors, Perception, Young Adult

Öz

Genç Erişkinlerde COVID-19 ile İlgili Algı ve Tutumların Sağlıklı Yaşam Biçimi Davranışlarına Yansımaları

Amaç: Bu çalışma, genç yetişkin bireylerin COVID-19 pandemisiyle ilgili hastalık algısı (HA), nedenler algısı (NA), kontrol algısı (KA) ve kaçınma davranışlarının (KD), sağlıklı yaşam tarzları üzerindeki yansımalarını belirlemek amacıyla yürütülmüştür.

Yöntem: Bu çalışma, Türkiye'nin güneyinde bir üniversitede kesitsel, ilişkisel bir tasarım ile gerçekleştirildi. Araştırma çevrimiçi olarak yürütüldü ve 18-24 yaş arasındaki 786 genç yetişkin ile tamamlandı. Çalışma verileri, bir sosyo-demografik form, COVID-19 Pandemisi'ne Yönelik Algı ve Tutumları Değerlendirme Ölçeği ve Sağlıklı Yaşam Biçimi Davranışları Ölçeği (SYBDÖ) kullanılarak toplandı.

Bulgular: Genç erişkinlerin SYBDÖ toplam puan ortalamaları ile NA-Çevre, KA ve KA-Kişisel puan ortalamaları arasında orta düzeyde pozitif korelasyon bulundu (p<.05). Genç erişkinlerde hastalık algısı sağlıklı yaşam biçimi davranışları üzerinde olumlu bir etkiye (ß=0.179), kaçınma davranışı sağlıklı yaşam biçimi davranışları üzerinde olumlu bir etkiye (ß=0.279) ve kontrol algısı sağlıklı yaşam biçimi davranışları üzerinde olumlu etkiye (ß =0,424) sahiptir (p<0,05).

Sonuç: COVID-19 pandemisi ile ilgili hastalık algısı, nedenler algısı, kontrol algısı ve kaçınma davranışlarına inancı yüksek olan genç yetişkinler, pandemi sürecinde olumlu sağlıklı yaşam biçimi davranışları sergilediler. Pandemi ya da diğer halk sağlığı olaylarının ardından sağlıklı bir toplum oluşabilmesi için genç yetişkinlerin sağlıklı yaşam biçimi davranışlarının bir yaşam biçimi haline gelmesi ve sürdürülmesi gerekmektedir. Sağlıklı yaşam biçimi davranışlarının artırılmasında ve azalan davranışların teşvik edilmesinde/yeniden kazandırılmasında sağlık bakım profesyonelleri çok önemli bir konuma sahiptir.

Anahtar Kelimeler: Algı, COVID-19, Genç Yetişkin, Sağlıklı Yaşam Biçimi Davranışları, Tutum

INTRODUCTION

In many countries, various preventive measures, such as travel and trade restrictions, the closure of schools and shopping centres, and even lockdowns have been implemented to control the spread of COVID-19 infection (Zhang et al., 2021). As well as complying with these control measures, it is critically important for individuals to comply with practices such as personal hygiene, vaccination, avoidance of crowds, and mask wearing. The implementation of individual measures against COVID-19 is determined by individuals' levels of knowledge, attitude, perception, and practice related to the disease (Bates et al., 2020; Lawal et al., 2022). In a systematic review and meta-analysis study, it was found that individuals had positive perceptions and attitudes towards COVID-19, and kept away from crowded places to avoid contracting COVID-19 (Bhagavathula et al., 2020). In another study, it was found that individuals with a high level of knowledge and positive attitudes towards COVID-19 tended to display better preventive behaviours and behavioural adaptation (Zhong et al., 2020). Since young adults are more likely to engage in risky behaviours, it is extremely important to determine perceptions and attitudes towards COVID-19 in this group in particular (Gill, 2021). Revealing the perceptions and attitudes of young adults towards COVID-19 will help to change misunderstandings about COVID-19, and thereby, to control the disease, as well as to develop programmes and strategies to prevent COVID-19 (Artan et al., 2020; Šljivo et al., 2021).

Although the restrictions applied during the COVID-19 pandemic have been effective in controlling the spread of infection, they can have a negative effect on individuals' mental health (Radwan et al., 2021) and reduce their quality of life (Diedhiou et al., 2021) by causing negative effects on their lifestyle behaviours in the short and long term (Abouzid et al., 2021; Alah et al., 2021). Since the restrictions and quarantine measures during the pandemic process cause a decrease in individuals' physical activity (Diedhiou et al., 2021), they can reduce individuals' ability to resist viral infection and increase the risk of damage to their immune, respiratory, cardiovascular and musculoskeletal systems (Woods et al., 2020). Studies have also shown that in this process, there are changes in individuals' health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations and stress management habits, and that individuals cannot maintain healthy lifestyle behaviours (Öğe et al., 2021; Uysal & Argın, 2021). Individuals reported that during the COVID-19 pandemic, they gained weight, the time they spent sitting/lying down increased (Alah et al., 2021), the frequency and duration of their physical activity decreased, their sleeping time increased, and the time they spent watching TV and on social media increased (Abouzid et al., 2021), and that there was an increase in addictive habits such as smoking and alcohol consumption

(Zhang et al., 2021). It is vital to evaluate the impact of the pandemic process on individuals' lifestyle behaviours and to encourage individuals to use health promotion strategies aimed at adopting and maintaining positive health-related behaviours (Diedhiou et al., 2021). The World Health Organisation (WHO) emphasises the importance of initiatives for preventing the spread of COVID-19 and of maintaining healthy lifestyle behaviours in breaking the chain of infection during the pandemic process (Kaya & Kaplan, 2020; Sliwa, et al., 2021), and recommends that during quarantine, individuals do home exercises, eat healthily, avoid smoking and get enough sleep (WHO, 2020).

Nurses have played a key role in implementing frontline preventive measures and caring for affected individuals during the COVID-19 pandemic. Nurses have taken the lead in conducting awareness-raising campaigns in the community, adopting the right preventive measures and disseminating accurate information about the pandemic. They have made significant contributions to the health systems to cope with the pandemic by performing critical tasks such as managing isolation and quarantine processes, caring for patients, and providing respiratory support. In this process, nurses have been effective not only in physical health, but also in supporting the mental health of patients and other healthcare professionals. Nurses have played an important role in the management of COVID-19 by sharing their knowledge and experience during the pandemic, participating in research and taking part in the formulation of health policies (Kako & Kajiwara, 2020; Sharma et al., 2020). Principal among the risk groups in which healthy lifestyle behaviours have been negatively affected during the COVID-19 pandemic process is the young age group. Indeed, in the study by Öğe et al. (2021), it was determined that the healthy lifestyle behaviours of individuals in the young age group were lower than those of individuals of middle age and above during the pandemic process. Therefore, it is thought that determining the perceptions and attitudes of young adults, who constitute the risk group, towards COVID-19 and revealing the profile of their lifestyle behaviours will assist health care providers in designing effective interventions. The aim of this study is to examine the repercussions of young adults' perceptions and attitudes towards the COVID-19 pandemic on their healthy lifestyle behaviours.

METHODS

Study Design: This research was conducted with a cross-sectional, correlational type of design.

Research Question: In order to determine the effect of young adults' perceptions and attitudes towards the COVID-19 pandemic on their healthy lifestyle behaviours, the theoretical model in Figure 1 was created in accordance with the examined literature and research

aim. In accordance with the model, the following research questions have been formulated:

- Does young adults' perception of the nature of COVID-19 disease affect their healthy lifestyle behaviors?
- Does young adults' perception of the causes of COVID-19 disease affect their healthy lifestyle behaviors?
- Does young adults' perception of ways to control the COVID-19 pandemic affect their healthy lifestyle behaviors?
- • Do young adults' avoidance behaviors towards COVID-19 affect their healthy lifestyle behaviors?
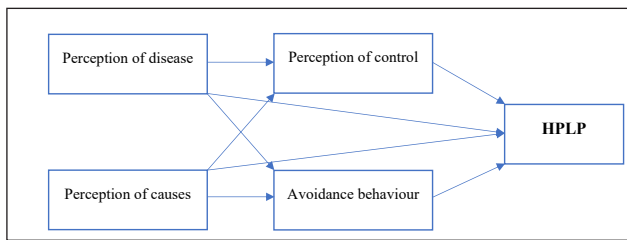
HPLP: Health Promoting Lifestyle Profile

Figure 1. Path diagram of research model

Variables of the Study: The independent variables were the gender, age, education level, place of residence, income level, COVID test performed, COVID-positive case(s) in family. The dependent variables were the Health Promoting Lifestyle Profile and Evaluating Perceptions and Attitudes towards the COVID-19 Pandemic Scale score.

Settings of the Study: The study was carried out at a town located in the south of Turkey by using standardized tools through a web-based platform. The research was carried out online via within the scope of social isolation measures taken due to the COVID-19 pandemic.

Population of the Study: The study was targeted at all young adults between 1st November-31st December 2021 and was completed with a total of 786 young adults. Young adults were reached through various groups in the town. Working and non-working young people with different educational levels in the region are members of these groups. Young adults' who were aged between 19-25, male or female, access to the internet to fill questionnaires, and willing to participate in the research were included in the study.

Data Collection: The data were collected using an online web-based questionnaire via Google Forms. The questionnaire was delivered to young adults via social media networks (Facebook, Instagram, WhatsApp) through various groups in the town. Before beginning the study, the aim and method of the study were explained to the young adults, and it was stated that the research would only be used for scientific purposes, that the confidentiality

of the obtained data would be protected, that the study was conducted on a voluntary basis and that the young adults were free to participate or not to participate in the research. The young adults who agreed to take part in the study began to answer the questions after they had confirmed their willingness in an electronic environment. It took an average of 20-25 minutes to respond to the questionnaires. A total of 892 young adults completed the questionnaire. When the forms were examined after the study, a total of 106 forms filled in by persons aged 18 and under or aged over 25 were not taken into consideration. Therefore, data collection was completed with 786 young adults aged 18-24.

Data Collection Tools: A socio-demographic form prepared by the researchers by examining the literature, the Scale for Evaluating Perceptions and Attitudes towards the COVID-19 Pandemic, and the Health Promoting Lifestyle Profile were used to collect the data.

Socio-demographic Form: This was prepared in line with the literature, and there are seven questions in total: five questions including the demographic information of the participants and two questions asking about the situation of having COVID-19 (Baloran, 2020; Fashafsheh et al., 2021; Gamaleldin et al., 2021; Hatabu et al., 2020; Salameh et al., 2021).

Scale for Evaluating Perceptions and Attitudes towards the COVID-19 Pandemic: The original scale was evaluated perceptions and attitudes towards the H1N1 epidemic, on the other hand, Artan et al. (2020) made an scale adaptation by removing only the expressions related to H1N1. This scale consists of four different subscales which include 8 items related to the nature of the disease, 18 items for causes of the disease, 13 items regarding methods of controlling the pandemic, and 14 items related to avoidance behaviours. Each of the subscales is evaluated independently, and separate scores are obtained. The scale total or subdimension score is calculated by dividing by the number of items in that dimension, and a value between 1-5 is obtained. High scores obtained for all scales indicate a high degree of belief in that area. The Perception of Disease (PD), Perception of Causes (PC) and Perception of Control (PCL) subscales are 5-point Likert-type scales, where marking can be made between 1= "strongly disagree" and 5= "strongly agree". The Avoidance Behaviours (AB) subscale, on the other hand, consists of a 5-point Likert-type scale with options between 1= "I have never performed this behaviour" and 5= "I have performed this behaviour very often". The dangerousness subdimension of PD consists of perceptions and beliefs about the danger posed by the coronavirus, while the contagiousness subdimension consists of perceptions about the infectiousness of the disease. The conspiracy subdimension of PC measures the belief that the coronavirus was created by some kind of conspiracy

motivation, while the environmental subdimension measures the perception that the disease occurs due to environmental causes, and the belief subdimension measures the degree to which the disease is attributed to religious reasons. The macro control subdimension of PCL reflects the belief that the measures taken are adequate, while the individual control subdimension reflects the belief that the disease can be controlled well with individual measures, and the inevitability subdimension reflects the belief that the disease cannot be controlled. The cognitive avoidance subdimension of AB includes behaviours such as not thinking or speaking about the pandemic and diverting attention away from it, while the subdimension of avoiding common areas concerns behaviours towards staying away from public areas, and the subdimension of avoiding personal contact involves not making contact with other people in situations that necessitate being in the same environment. Artan et al. (2020) calculated Cronbach alpha values of the scale ranging between 0.595 and 0.849. In this study, the Cronbach alpha values were found to be 0.722 for PD, 0.893 for PC, 0.765 for PCL, and 0.932 for AB. The Cronbach alpha values for the subdimensions of the scales were determined to range between 0.672 and 0.948.

Health Promoting Lifestyle Profile (HPLP): Developed by Walker (1996), this scale consists of 52 items and six factors. The subdimensions are health responsibility (9 items), physical activity (8 items), nutrition (9 items), spiritual growth (9 items), interpersonal relations (9 items) and stress management (8 items). The validity and reliability study of the HPLP was conducted by Bahar et al. (2008). The overall score of the scale gives the healthy lifestyle behaviours score. All items of the scale are positive, 4-point Likert-type scales (1= never, 2= sometimes, 3= often, and 4= regularly). The lowest score obtainable for the whole scale is 52, while the highest score is 208. The questions in the scale measure behaviours that improve the health of the individual with regard to a healthy lifestyle. An increase in scores obtained from the scale indicates that the individual performs the specified health behaviours at a higher level. The Cronbach alpha reliability coefficients were calculated as 0.92 for the overall scale and between 0.64 and 0.80 for the subdimensions (Bahar et al., 2008). In this study, the Cronbach alpha values were found to be 0.892 for the total scale and between 0.781 and 0.902 for the subdimensions.

Ethics Considerations: Permission to conduct the study was obtained from the Ministry of Health (2021-10-12T21_53_11), and ethical approval was obtained from the Akdeniz University Clinical Research Ethics Committee (Date: 27/10/2021, No: KAEK-760). Information about the study was given on the first page of the online link of the data collection tools, and the participants' consent was obtained. If persons wished to take part in the study, they were asked to mark the statement "I consent to participate in the study", and those who completed the form were deemed to have agreed to participate in the study.

Data Analysis: Statistical analyses of the data were performed using SPSS Statistics Base version 23 and Amos 21.0 software of the Statistical Package for the Social Sciences software licensed by Akdeniz University. Descriptive statistical methods (frequency, percentage, mean and standard deviation) were used to evaluate the data of the study and Pearson correlation analysis was used to determine the relationship between the scales. In the study, the path analysis method was applied to test the hypotheses of the model created to determine the relationship between perceptions/attitudes towards the COVID-19 pandemic and healthy lifestyle behaviours, and the fit index values were examined. The results were evaluated at the 95% confidence interval and p<.05 significance level.

RESULTS

Among the young adults participating in the study, 64.0% were women, their mean age was 21.45±1.15 years, and 33.6% were high school graduate. About half of the participants (50.2%) stated that they had lived in the city for the longest period, and more than half (56.5%) stated that their income was equal to their expenditure. Thirty-two participants (4.1%) stated that they had been diagnosed with COVID-19, 17.6% stated that there was a COVID-positive case in their family but that they did not live with them, while 16% stated that they lived with them (Table 1).

It was determined that the mean PD score of the young adults was 2.94±0.64, their mean PC score was 2.42±0.88, and their mean PCL score was 2.46±0.53. The highest mean score in the perception subdimensions was found to be 3.78±1.09 for PD-Contagiousness, while the lowest was found to be 1.97±0.80 for PCL-Macro. It was determined that the mean AB score was 2.57±0.99 and that the highest score in the subdimensions was for AB-Avoiding personal contact, with a mean score of 3.35±1.31. The total HPLP mean score was 111.83±21.05, while in the subdimensions, the highest score was 23.32±4.59 for HPLP-Spiritual growth, and the lowest was 16.21±3.76 for HPLP-Physical activity (Table 2).

In the study, moderate, positive correlations were found between the young adults' mean PD scores and the mean interpersonal relations scores of the HPLP in a negative; for mean PD-Contagiousness scores with mean health responsibility and spiritual growth scores in a positive, and with mean interpersonal relations scores in a negative; between PC-Conspiracy and stress management mean scores in a positive; for mean PC-Environment scores with mean health responsibility and spiritual growth scores in a positive; for mean PCL scores with mean health

responsibility, physical activity, and interpersonal relations scores in a positive; and for mean PCL-Individual scores with mean health responsibility and interpersonal relations scores in a positive (p<.05). Moderate, positive correlations were found between HPLP total mean scores and mean scores for PC-Environment, PCL, and PCL-Individual; weak, positive correlations were found between HPLP total mean scores and mean scores for PD, PD-Contagiousness, PC-Conspiracy, PC-Belief, PCL-Inevitability, and AB-Avoiding personal contact (p<.05) (Table 3).

Standardised estimation values for the model drawn in Figure 1 within the scope of the research are given in Table 4. According to the research model, in young adults, perception of disease positively affected perception of control (β=0.269); perception of causes positively affected perception of control (β=0.227) and negatively affected avoidance behaviour (β=-0.093); perception of disease positively affected healthy lifestyle behaviours (β=0.179); avoidance behaviour positively affected healthy lifestyle behaviours (β=0.279), and perception of control positively affected healthy lifestyle behaviours (β=0.424) (p<.05). As a result of the path analysis, it was determined that the values obtained by the goodness-of-fit indices of the research model were good (Barrett, 2007; Perry et al., 2015). It was observed that in the research model, whose goodness-of-fit indices were examined, model-data fit was achieved. Accordingly, the H_1, H_3 and H_4 hypotheses related to the model were accepted, while the H_2 hypothesis was rejected (Table 4).

Table 1. Some demographic characteristics of the participants

	n (%)
Gender	
Female	503 (64.0)
Male	283 (36.0)
Age	
21 and under	382 (48.6)
22 and over	404 (51.4)
Education level	
Primary school	163 (20.8)
Secondary school	189 (24.0)
High school	264 (33.6)
Bachelor degree	170 (21.6)
Place of residence	
City	395 (50.2)
Town	286 (36.4)
Village	105 (13.4)
Income level	
Income lower than expenditure	236 (30.0)
Income equal to expenditure	444 (56.5)
Income higher than expenditure	106 (13.5)
COVID test performed	
No	654 (83.2)
Yes, negative	100 (12.7)
Yes, positive	32 (4.1)
COVID-positive case(s) in family	
No	521 (66.2)
Yes, not living together	138 (17.6)
Yes, living together	127 (16.2)

Table 2. Scale total and subdimension mean scores of the participants

	Min.	Max.	M (SD)	Skewness	Kurtosis
Perception of Disease	1	5	2.94 (0.64)	-1.064	1.231
PD – Dangerousness	1	5	2.43 (0.52)	-0.311	0.049
PD – Contagiousness	1	5	3.78 (1.09)	-1.103	1.305
Perception of Causes	1	5	2.42 (0.88)	0.034	-0.631
PC – Conspiracy	1	5	2.89 (0.94)	-0.226	-0.129
PC – Environmental	1	5	2.78 (0.75)	-0.446	-0.055
PC – Belief	1	5	2.66 (0.68)	-0.623	0.221
Perception of Control	1	5	2.46 (0.53)	-0.519	0.484
PCL – Macro	1	5	1.97 (0.80)	0.494	-0.481
PCL – Individual	1	5	2.65 (0.84)	0.046	0.048
PCL – Inevitability	1	5	2.71 (0.86)	0.063	-0.345
Avoidance Behaviours	1	5	2.57 (0.99)	0.148	-0.727
AB – Cognitive avoidance	1	5	2.13 (1.00)	0.735	-0.184
AB – Avoiding common areas	1	5	2.76 (1.32)	0.228	-1.126
AB – Avoiding personal contact	1	5	3.35 (1.31)	-0.516	-0.987
Health Promoting Lifestyle Profile	52	208	111.83 (21.05)	-0.796	0.476
HPLP – Health responsibility	9	36	19.47 (3.96)	0.355	1.197
HPLP – Physical activity	8	32	16.21 (3.76)	0.167	0.275
HPLP – Nutrition	9	36	18.86 (3.44)	-0.195	0.525
HPLP – Spiritual growth	9	36	23.32 (4.59)	0.005	0.935
HPLP – Interpersonal relations	9	36	23.28 (4.20)	-0.423	1.034
HPLP – Stress management	8	32	17.38 (3.37)	-0.116	0.011

Table 3. Relationship between the Scale for Evaluating Perceptions and Attitudes towards the COVID-19 Pandemic and the Health Promoting Lifestyle Profile

		Health responsibility	Physical activity	Nutrition	Spiritual growth	Interpersonal relations	Stress management	HPLP
Perception of Disease	r	0.374	-0.003	-0.112	0.314	-0.499	0.086	0.316
	p	**<.001*****	.923	**.002****	**<.001*****	**<.001*****	**.016***	**<.001*****
PD – Dangerousness	r	0.027	0.250	-0.071	0.007	-0.027	0.083	0.166
	p	.447	**<.001*****	**.048***	.837	.443	**.019***	**<.001*****
PD – Contagiousness	r	0.450	-0.225	-0.119	0.429	-0.433	0.068	0.362
	p	**<.001*****	**<.001*****	**.001****	**<.001*****	**<.001*****	.056	**<.001*****
Perception of Causes	r	0.116	0.230	0.245	0.112	0.016	0.201	0.146
	p	**.001****	**<.001*****	**<.001*****	**.002****	.657	**<.001*****	**<.001*****
PC – Conspiracy	r	0.047	0.323	0.317	0.105	0.329	0.452	0.379
	p	.189	**<.001*****	**<.001*****	**.003****	**<.001*****	**<.001*****	**<.001*****
PC – Environmental	r	0.430	0.324	0.088	0.428	0.351	0.261	0.466
	p	**<.001*****	**<.001*****	**.014***	**<.001*****	**<.001*****	**<.001*****	**<.001*****
PC – Belief	r	0.294	0.263	0.391	0.266	0.192	0.210	0.350
	p	**<.001*****	**<.001*****	**<.001*****	**<.001*****	**<.001*****	**<.001*****	**<.001*****
Perception of Control	r	0.489	0.448	0.252	0.232	0.440	0.326	0.461
	p	**<.001*****	**<.001*****	**<.001*****	**<.001*****	**<.001*****	**<.001*****	**<.001*****
PCL – Macro	r	0.260	0.303	0.276	-0.055	-0.080	0.396	0.083
	p	**<.001*****	**<.001*****	**<.001*****	.123	**.024***	**<.001*****	**.019***
PCL – Individual	r	0.447	0.237	0.115	0.356	0.470	0.114	0.433
	p	**<.001*****	**<.001*****	**.001****	**<.001*****	**<.001*****	**.001****	**<.001*****
PCL – Inevitability	r	0.332	0.244	-0.090	0.228	0.328	0.042	0.324
	p	**<.001*****	**<.001*****	**.012***	**<.001*****	**<.001*****	.240	**<.001*****
Avoidance Behaviours	r	0.004	-0.012	0.230	0.264	0.170	0.038	0.250
	p	.910	.745	**<.001*****	**<.001*****	**<.001*****	.285	**<.001*****
AB – Cognitive Avoidance	r	-0.067	0.059	0.230	0.090	-0.007	0.051	0.098
	p	.060	.100	**<.001*****	.011	.840	.152	**.006****
AB – Avoiding common areas	r	0.063	-0.100	0.104	0.125	-0.441	-0.039	0.242
	p	.077	**.005****	**.003****	**<.001*****	**<.001*****	.275	**<.001*****
AB – Avoiding personal contact	r	0.049	-0.012	0.087	0.351	-0.391	0.096	0.385
	p	.168	.744	**.014***	**<.001*****	**<.001*****	**.007****	**<.001*****

*p<.05, **p<.01, ***p<.001

Table 4. Results Related to Research Model

Effect	Estimate (β)	Standard Error	t	p
Perception of Disease à Perception of Control	0.269	0.042	7.779	<.001**
Perception of Disease à Avoidance Behaviours	0.020	0.042	0.532	.594
Perception of Causes à Perception of Control	0.227	0.042	6.572	<.001**
Perception of Causes à Avoidance Behaviours	-0.093	0.042	-2.476	.013*
Perception of Disease à HPLP	0.179	0.042	5.578	<.001**
Perception of Causes à HPLP	-0.023	0.095	-0.731	.465
Avoidance Behaviours à HPLP	0.279	0.006	9.501	<.001**
Perception of Control à HPLP	0.424	0.029	13.264	<.001**
Fit Indices				
χ2/df: 2.253, RMSEA: 0.040, GFI: 0.999, AGFI: 0.983, CFI: 0.998, SRMR: 0.002				

*HPLP: Health Promoting Lifestyle Profile, *p<.01, **p<.001*

DISCUSSION

The world is struggling with a global pandemic and difficulties related to this pandemic continue to be experienced. Countries have implemented public health protocols such as social distancing, hand washing, quarantine, etc., to control the spread of the virus. This critical situation has led to various reactions among the public, causing many anxieties and great fear. Furthermore, the COVID-19 pandemic has also had negative effects on the mental health, quality of life and lifestyle behaviours of society (Roy et al., 2020). In this study, the repercussions of young adult individuals' perception of disease, perception of causes, perception of control and avoidance behaviours related to the coronavirus pandemic on their healthy lifestyle behaviours were examined.

A healthy lifestyle is the ability of the individual to control all the habits that threaten his/her mental and physical health, and to take responsibility for being healthy (Fleming & Godwin, 2008). According to the results of this study, it was determined that young adults displayed moderate healthy lifestyle behaviours. Similar results have been reported in studies in the literature (Fashafsheh et al., 2021; Shaheen et al., 2015). When the subdimensions of the HPLP were examined, it was found that similar to the results of studies conducted with university students, the highest scores were in the spiritual growth subdimension, while the lowest scores were in the physical activity subdimension (Gamaleldin et al., 2021; Fashafsheh et al., 2021). This situation can be explained by the fact that young adults do not see physical activity as a part of their course intensity and daily life activities in the social context, and by the lack of complete awareness of physical activity in the cultural context.

The COVID-19 pandemic has had a significant impact on the health, wellbeing and behaviours of young adults and the general population globally (Van de Velde et al., 2021). Studies carried out with young populations globally since the beginning of the pandemic reveal that young adults have positive knowledge, attitudes and practices regarding infection prevention and control behaviours (Puspitasari et al., 2020; Van de Velde et al., 2021). Young adults' perceptions of disease, perceptions of causes and perceptions of control, and avoidance behaviours related to the COVID-19 pandemic were found to be moderate. In this case, it can be predicted that the young adults' risk of being infected by and transmitting the virus during the course of the pandemic was moderate. In the subdimensions of these perceptions, the highest mean scores were found to be for PD-Contagiousness and AB-Avoiding personal contact, while the lowest mean score was for PCL-Macro. The macro subdimension covers the fight against the pandemic at the universal and national level and the efforts of health institutions. The fact that the score in this dimension was low indicates that the young adults were not satisfied with the efforts of the government and institutions. On the other hand, in two studies, it was found that young peoples were satisfied with the actions of governments to reduce the risks related to COVID-19 (Baloran, 2020; Salameh et al., 2021).

In the study, it was observed that there was a weak relationship between the young adults' healthy lifestyle behaviours and their perceptions of environmental causes of the coronavirus pandemic, disease control, and the contagiousness of the disease, their belief that the disease was created by a kind of conspiracy motivation, their belief that the disease could be controlled, and their attitudes towards avoiding personal contact. These results show that the young adults were aware of the necessary measures to prevent the disease, but that their attitudes such as avoiding contact to ward off the disease were inadequate. A negative correlation was found between the young adults' interpersonal relations scores of the HPLP, and their perception of disease (PD) and PD-contagiousness scores. Due to the transmission routes of COVID-19, this is a plausible outcome. The positive relationship between the young adults' stress management scores and their belief that the coronavirus was created by a kind of conspiracy motivation (PC-Conspiracy) can be interpreted as the fact that this was an inference they used to cope with the disease (Marchlewska et al., 2022; Pfeffer et al., 2022).

It is important in terms of disease prevention that there is a positive relationship between young adults' lifestyle attitudes towards health responsibilities, spiritual growth, physical activity and interpersonal relations and their perceptions of the contagiousness, causes, and control of the disease.

According to our research findings, young adults' healthy lifestyle behaviours generally had a positive effect on their attitudes towards COVID-19. In a study evaluating the attitudes and risk perceptions of society towards COVID-19, it was found that participation in health protection behaviours among the 18-29 age group was low (Faasse & Newby, 2020). Although young adults have less financial independence compared to other adult populations, they have more free time and a wider range of activities. In addition, youth years are the most important period for one to form one's own free will, and young adults are much more likely than other individuals to act according to their own decisions (Hatabu et al., 2020). For this reason, it is important for young adults to frame their lifestyles in a healthy way and to develop effective coping strategies for situations such as COVID-19.

Regarding the results of the direct and indirect effects of perceptions and attitudes towards the COVID-19 pandemic on healthy lifestyle behaviours, is can be seen that perception of disease and avoidance behaviours are a remarkable factor at the level of healthy lifestyle behaviours. However, it was determined that the perceived causes of disease did not have an effect on disease avoidance and therefore on healthy lifestyle behaviours. As a subset of the public that has fewer comorbidities and fewer general concerns about their health, it is important to understand young adults' perceptions about communicable diseases, because they may understand disease risks in a fundamentally different way to adults (Wickman et al., 2008). For this reason, it is considered that there is a need for interventional studies on the reasons for young adults' perceptions and attitudes towards the factors that cause disease, and on improving these perceptions.

Limitations of the Study

This research has some limitations. Firstly, the study was conducted online and only young adults with internet access were included in the sample. A second limitation is that since the data were obtained based on the participants' self-reports, no observations could be made, and this may have caused bias. Although the study found that the coronavirus pandemic had a significant impact on healthy lifestyle behaviours, the results cannot be generalised to the entire young adult population. The effects of cultural characteristics, socio-demographic factors, etc., on perceptions, attitudes and behaviours should also be considered.

CONCLUSION

Healthy lifestyle behaviours are important for everyone, everywhere, in every profession, at any age, and in any situation. A positive healthy lifestyle is essential, not only for the COVID-19 pandemic, but also for possible future pandemics and for all possible public health problems to be managed by societies. It was determined that young adults' perception of disease, perception of causes, perception of control and avoidance behaviours related to the coronavirus pandemic positively affected their adoption of a healthy lifestyle. For the creation of a healthy society during/following pandemics or other public health events, it is important for young adults' healthy lifestyle behaviours to become a lifestyle and for them to be maintained. Public health nurses hold a crucial position in preserving and enhancing community health and fostering positive behaviors. Before, during and after pandemics, they should inform society, raise awareness, take initiatives to provide the necessary conditions, and emphasise the importance of the issue. Nurses can play a key role in improving public health by guiding young adults to adopt healthy lifestyle habits.

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