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Individuals' perceptions of their lifestyles, personal hygiene and anxiety after the COVID-19 pandemic

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Abstract

Aim: COVID is a life-threatening pandemic disease that can lead to panic-attack disorder, anxiety, mourning, loss and depression. However, it is thought that it may negatively affect their lifestyle, personal hygiene and perception of anxiety. In this direction, the aim of the study is to examine the lifestyle, personal hygiene and anxiety perceptions of individuals after the COVID-19 pandemic.

Materials and Methods: In the study, a 12-item questionnaire was applied to determine the perceptions of individuals about their lifestyle, personal hygiene and concerns after the epidemic. The questionnaire was applied via the internet and the data collected is limited to the responses of participants. Data was collected from a total of 2003 social media users from different provinces using convenience sampling.

Results: In the study, it was thought that the participants would significantly change their lifestyles after COVID-19. Accordingly, while online shopping has increased relatively, behavioral changes regarding active living spaces have also developed.

Conclusion: According to the data in the study, significant changes are expected in the lifestyles of societies after the COVID-19 pandemic. New lifestyles, marked by moving away from crowds, will transform consumer styles. In this direction, it seems inevitable to create new policies for various social areas such as entertainment world, tourism, food and beverage sector, transportation, architecture and shopping.

Introduction

Social changes and individual changes occur with world wars, great natural disasters and pandemics. Because life-threatening factors cause a wide variety of problems such as panic-attack disorder, anxiety, mourning, loss and depression, as well as physical health [1]. In this direction, it is clear that the COVID-19 pandemic will trigger many changes individually. During the COVID-19 pandemic, individuals' fear of coming into contact, fear of being stigmatized [2] and concerns about transmitting the disease to their relatives [3] have been observed. Thus, it has led to hopelessness and social isolation in people [4]. Differently, there are positive aspects such as post-traumatic growth, personal development opportunities and psychological resilience. In fact, the positive and negative consequences caused by the pandemic have changed life routines and life has begun to be radically reshaped [5]. The study investigated how individuals' perceptions of their lifestyles, personal hygiene and anxiety affected after the COVID-19 pandemic.

Lifestyle is the measure and example of life formed by an individual's social activities, interests and ideas [6]. Carman [7] added consumption behaviors to the individual's activities, interests and ideas in his definition of lifestyle. There is a direct relationship between lifestyle and consumption style, and similar values and tastes create similar consumption patterns [8]. From another perspective, lifestyle affects consumer purchasing and consumption [9]. With the COVID-19 pandemic, social isolation and life changes may have changed the lifestyle and, in parallel, the individual perception of consumption style. Because the deep economic, social, political and cultural effects will continue for a long time after the pandemic [10].

Personal hygiene includes all practices and cleaning measures to protect against harmful factors [11]. With the COVID-19 pandemic, isolation and hygiene efforts have begun, as in every epidemic disease [5]. After a while during the pandemic, the increase in deaths and vital concerns increased the sales of hygiene products [12]. In this period,

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the demand for medical supplies such as hand soap, hand disinfectant and surgical masks for personal hygiene and products such as toilet paper increased [13] and even behavioral changes to give more importance to hand hygiene and sanitation were observed [14]. On the other hand, studies have found a significant relationship between hygiene and anxiety [15]. It has been stated that this situation may affect habits related to hygiene and cleaning [16-18].

Under the heading of anxiety, situational and generalized anxieties, which include future plans, permanent life changes and perceptions of the world after COVID-19, were examined. Anxiety is an internal and chronic process of permanent stress and psychological and physiological symptoms that the individual has difficulty in controlling [19] and is accompanied by fear and uneasiness [20]. Thus, it causes a decrease in work efficiency [21] and economic losses [22]. Epidemic diseases have a feature that triggers anxiety levels [23]. In this regard, the rates of anxiety have increased with the COVID-19 pandemic and, in parallel, the use of preventive medications has increased [22]. Similarly, an increase was determined in studies on situational and generalized anxieties [24-27]. Studies have shown that situational and generalized anxiety scores increase together [28-30] In the COVID-19 pandemic, situational and generalized anxiety levels increased together [31]. This situation has revealed the assumption that the anxiety process can also affect the post-COVID-19 pandemic.

In the study, it was aimed to examine the lifestyle, personal hygiene and anxiety perceptions of individuals after the COVID-19 pandemic. It is thought that the research results will contribute to preventive mental health studies, sociology studies in terms of social structure changes, and economic aspects such as advertising and consumer supply.

Materials and Methods

Study design and data collection tools

The study is a descriptive research based on the general screening model from quantitative approaches and ethical approval was received (ODU, 30/04/2020-85). The research was structured over the internet and was planned to be open to adults of all age groups in all provinces of Turkiye. The population of the research is limited to the social influence of the researchers and the sample consists of 2003 participants who were reached on social media with a convenience sampling and voluntarily participated in the research online.

The research was conducted during the periods when the impact of the COVID-19 pandemic decreased globally and during the transition period to the new normal. An online cross-sectional survey was conducted in May-October 2020 by filling out the online questionnaire prepared via Google Forms. A questionnaire was shared on social media networks after uploading it to Google forms. The study utilized a survey as a data collection tool that contains the demographic variables and research questions. Accordingly, a 12-item questionnaire, four items each, was applied to determine individuals' perceptions of their lifestyle, personal hygiene and concerns after the COVID-19 pandemic [5, 11-13,15]. After the questionnaire questions were created within the literature, opinions were received from 6 academicians who Expert opinions were received from 6 faculty members in the field of guidance and psychological counseling.

Statistical analysis

Differences between the responses to items of the questionnaire were evaluated using frequency distribution and one-sample chi-square analysis. In calculations and interpretations, the statistical significance level (α) was taken into account as 0.05. SPSS v26.0 (IBM, Armonk, NY, USA) was used for all statistical calculations.

Results

The research was structured over the internet, open to all provinces of Turkey within all age groups of adults. However, the population of the research is limited to the social influence of the researchers and the sample consists of 2003 participants who were reached on social media with a simple random method and voluntarily participated in the research online. Information about the participants is presented in Table 1. Accordingly, 34.6% of the participants are men and 65.4% are women, and the majority (80.8%) live in metropolitan cities. Additionally, 30.1% are between the ages of 18-30, 29.9% are between the ages of 31-40, 25.7% are between the ages of 41-50, 13.8% are between the ages of 51-64, and the remaining 0.7% are aged 65 and over. On the other hand, the education level of the majority of the participants was determined to be bachelor or postgraduate degree (65.6% and 20.7%, respectively).

In the study, data obtained from participants regarding lifestyle, personal hygiene and anxiety after COVID-19 were evaluated. In this direction, the findings obtained in terms of lifestyle are shown in Table 2.

When Table 2 is evaluated, the rate of participants (64.4%) who stated that they will go to restaurants, patisseries and cafe-style places much less after COVID-19 than before COVID-19 is quite high. When the rate of those who say they will never go (23.6%) is added to this, the rate is approximately 88%. Similarly, participants stated regarding ordering from restaurants, patisseries and cafe-style places after COVID-19 that they would order less (59.9%) or even not order at all (20.2%). Again, the participants thought about going to crowded areas such as markets, shopping malls, parks, bazaars and market places that they would go less (80.1%) and some even stated that they would never go (8.2%). On the other hand, participants stated in terms of online shopping options that they would shop as before (45.5%) and shop more (24.4%). This all difference between the participants' preferences was also statistically significant ($p<0.001$).

According to the findings, personal hygiene data are shown in Table 3.

According to Table 3, the number of participants who stated that they would wash their hands more in terms of personal hygiene after COVID-19 was significantly higher (76.3%) ($p<0.001$). Similarly, it has been observed that the rule of maintaining a distance of at least 1.5 meters

Table 1. Demographic characteristics of the study participants.

		n	%
Is the city you live in a metropolitan city?	Yes	1618	80.8
	No	385	19.2
Age	18-30	602	30.1
	31-40	596	29.8
	41-50	515	25.7
	51-64	276	13.8
	65 and over	14	0.7
Gender	Male	694	34.6
	Female	1309	65.4
Level of education	Literate	4	0.2
	Primary school	40	2.0
	Middle school	25	1.2
	High school	205	10.2
	Bachelor degree	1314	65.6
	Postgraduate degree	415	20.7
What is your employment status?	Academical personal	187	9.3
	Not working	76	3.8
	Other	75	3.7
	Retired	93	4.6
	Tradesman	27	1.3
	Housewife	142	7.1
	Employee	78	3.9
	Officer	131	6.5
	Engineer	36	1.8
	Student	335	16.7
	Teacher	564	28.2
	Helatcare worker	259	12.9

Table 2. Data of participants regarding lifestyle after COVID-19.

		n	%	p*
Regarding going to restaurants, patisseries and cafe-style places to eat and drink,	I will go less.	1289	64.4	**<0.001**
	I will go further.	16	0.8	
	I will go like before.	226	11.3	
	I will never go.	472	23.6	
Regarding ordering from restaurants, patisseries and cafe-style places,	I will go less.	1200	59.9	**<0.001**
	I will go further.	33	1.6	
	I will go like before.	365	18.2	
	I will never go.	405	20.2	
Regarding online shopping;	I will go less.	467	23.3	**<0.001**
	I will go further.	488	24.4	
	I will go like before.	911	45.5	
	I will never go.	137	6.8	
Regarding going to crowded places such as markets, shopping malls, parks, bazaars and market places,	I will go less.	1605	80.1	**<0.001**
	I will go further.	9	0.4	
	I will go like before.	225	11.2	
	I will never go.	164	8.2	

*: One-sample chi-square test.

in communication during the pandemic will continue effectively after COVID-19. Because the rate of the option to act as before in complying with physical distance in communication remained very low (6.6%) ($p<0.001$). On the other hand, it has been observed that there will be a change of approximately half in cleaning the house and taking a bath ($p=0.592$ and $p=0.592$, respectively). The data obtained in the research regarding both situational

Table 3. Data of participants regarding personal hygiene after COVID-19.

		n	%	p*
Regarding washing hands,	I will wash more.	1528	76.3	**<0.001**
	I will wash as before.	475	23.7	
Regarding taking bath,	I will take a bath more.	989	49.4	0.592
	I will take a bath as before.	1014	50.6	
Regarding the cleaning of your home,	It will be cleaned more.	971	48.5	0.180
	It will be cleaned like before.	1032	51.5	
Regarding complying with physical distance in communication,	I will comply with 1.5 meter rule, at least a little.	246	12.3	**<0.001**
	I will mostly comply with 1.5 meter rule.	1055	52.6	
	I will comply with 1.5 meter rule under all circumstances.	570	28.5	
	I will behave as before.	132	6.6	

*: One-sample chi-square test.

Table 4. Participants' perceptions of anxiety after COVID-19.

		n	%	p*
Regarding planning my future life,	I will make some changes.	1151	57.5	**<0.001**
	I will make many changes.	370	18.5	
	I won't make changes.	404	20.2	
	I will make fundamental changes.	78	3.8	
My life concerns,	It has increased slightly.	1010	50.4	**<0.001**
	Similar to before.	492	24.6	
	I have anxieties that I cannot overcome and will continue to increase.	52	2.6	
	I have high levels of anxiety.	449	22.4	
To the thought about "Nothing will be the same after COVD-19 pandemic",	I agree.	875	43.7	**<0.001**
	I don't agree.	171	8.5	
	I partially agree.	957	47.8	
My thoughts on the world (politics, balance of power, wealth-poverty, etc.),	It has changed slightly.	744	37.1	**<0.001**
	It has changed so much.	621	31.0	
	It hasn't changed.	470	23.5	
	It has changed completely.	168	8.4	

*: One-sample chi-square test.

and general concerns of the participants are in Table 4.

When Table 4 is evaluated, only 20.2% of the participants stated that they would not make any changes regarding their future life plans after COVID-19 ($p<0.001$). Similarly, the participants expressed that their life concerns were similar to the previous ones (24.6%) at a very low rate, and even a high level of anxiety was detected (22.4%) ($p<0.001$). Again, the rate of those who disagreed with the view that nothing will remain the same after COVID-19 was found to be quite low (23.5%) ($p<0.001$).

Discussion

According to the findings of the research, the participants stated that they will go to restaurants, patisseries and cafe-style places less (64.49%) or not at all (23%), and will not order (20.2%) or order less often (59.9%) after COVID-19 compared to before COVID-19. Moreover, the rate of those who emphasized that they will go less (80%) or not at all (8.2%) to crowded areas such as markets, shopping malls, parks, bazaars and market places was found to be high. On the other hand, more people stated that they will do their online shopping as before (45.5%) or will shop more (24.4%). This can be evaluated as participants will significantly change their lifestyles after COVID-19. Accordingly, while online shopping increases relatively, behavioral changes regarding active living spaces can be expected. Similarly, it was stated that before and after the pandemic will be different [32]. Supporting this, it was determined that online sales increased rapidly (64%) during the pandemic [32]. It is clear that changing lifestyles will also change habits after a while [33], and as a result, permanent behavioral changes will occur [34]. In a study conducted on this subject, concerns about health were shown as the reason for changing lifestyles. In fact, pandemics throughout history have caused serious social changes in the long term [35]. It is inevitable that ideas, beliefs, values, habits and behaviours will change with good and bad experiences during the COVID-19 pandemic [10].

Another finding obtained in the study is related to personal hygiene behaviours. Accordingly, participants stated that they will wash their hands more after the pandemic (76.3%) and will continue to keep a distance of 1.5 m effec-

tively (93.4% in total). Furthermore, it was found that the frequency of taking a bath and cleaning the house will vary by nearly half. This shows that there will be significant changes in personal hygiene behaviors after the COVID-19 pandemic. Throughout the pandemic, personal hygiene products (hand sanitizer, cologne, mask, etc.) have been stocked by consumers and their use has increased [13]. Researchers used an online survey similar to the presented study and reported that 74.7% of the participants increased their monthly budgets for personal and general cleaning due to the epidemic [13]. In particular, warnings about the need to wash hands frequently for at least 20 seconds and news of soap, disinfectant and cologne increased sales [35]. It is estimated that some changes in living habits during the pandemic process will be permanent. In a study conducted in America on this subject, it was observed that the effects of behavior will be permanent [36]. Duygun [38] applied the 8 lifestyles revealed by the VALS 2 scale (innovators, thinkers, achievers, experiencers, believers, strivers, makers and survivors) during the COVID-19 pandemic. Researcher: In an environment where people stay at home more and try to be "self-sufficient" during COVID-19, consumption habits and, accordingly, consumer behavior are changing. They reported that they generally focused on basic needs and shopped accordingly, and that they started to do their shopping online without leaving home. Accordingly, VALS 2 found that consumers behave close to the "doers" lifestyle in terms of lifestyle. As a result, similar to the research findings, it was stated that COVID-19 will completely affect hygiene behaviors [16-18].

The participants' perceptions of anxiety regarding COVID-19 were also evaluated in the study. Accordingly, participants largely reported that they had to make changes in their life plans after COVID-19. In this regard, only 22.2% stated that they would not make any life changes for the future. Moreover, the rate of participants expressing that their vital concerns have not changed after COVID-19 is very low (24.6%). Again, the rate regarding "Nothing will be the same as before", which is also one of the clichéd views of the COVID-19 process, was determined as 23.5%. In this context, it can be evaluated that situational anxiety, which is high during the pandemic period, will turn into generalized anxiety. Supporting this situation, a positive relationship was found between situational and generalized anxiety averages. In other words, as situational anxiety increases, generalized anxiety also increases [38]. Similarly, in a study conducted in Spain, depression (18.7%), anxiety (21.6%) and post-traumatic stress disorder (15.8%) were detected in participants after the COVID-19 pandemic. Again, in the study conducted by Wang [39] and his colleagues, it was found that depression and anxiety levels increased after the pandemic. Doğan and Düzel [40] also reported in their research that following the first week of the epidemic in Turkey, the participants were most likely to fear that their families/acquaintances would catch the virus. They stated that the second highest source of fear of the participants was being exposed to the virus in crowded places. Researchers have determined that the participants' expression of increased anxiety levels regarding the virus when they see someone coughing/sneezing at a high rate and when they are close to people increases the feeling of uncertainty and increases fear/anxiety in individuals due to the risk of transmitting the virus at any time in social environments. They also stated that fear and anxiety were observed in all individuals during the epidemic and that these may vary depending on age, gender, education, income level, working conditions and living environment. Additionally, the study found that men were more worried about the epidemic than women, and secondary school graduates were more worried than undergraduate graduates.

Conclusion

According to the data obtained in the research, there will be significant changes in the lifestyles of societies after the COVID-19 pandemic. New lifestyles, marked by moving away from crowds, will transform consumer styles. In this regard, it is inevitable to create new policies for various social areas such as the entertainment world, tourism, food and beverage industry, transportation, architecture and shopping. Accordingly, it would be beneficial for both relevant official institutions and the private sector to work together. On the other hand, behavioral changes regarding personal hygiene are expected. In addition to the increased use of hygiene products, individual hygiene expectations and wishes in social areas will bring about many changes. Therefore, manufacturers and sellers of hygiene products must take the necessary measures for supply. Moreover, it would be appropriate for businesses such as restaurants, patisseries, hospitals and cafes to implement practices that will meet hygiene expectations. Furthermore, the participants' perceptions of anxiety after COVID-19 were also evaluated. Accordingly, it has been observed that generalized anxiety increases along with situational anxiety and future concerns intensify. It has been determined that uncertainties about the future trigger anxiety. It is crucial for mental health professionals and policy makers to carry out joint projects regarding this situation. In addition, fundamental changes in marketing and advertising are necessary. Correspondingly, new structures will turn possible commercial problems into positive ones.

Ethical approval

Approval was received for this study from Ordu University Clinical Research Ethics Committee (Decision no: 2020/85).

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