Determining the coronavirus awareness of the Turkish society and the anxiety stress levels

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Abstract

The aim of the study is to determine the awareness of the Turkish society in COVID-19, and determine the anxiety stress levels. Research two months after the start of the outbreak in Turkey has reached 2163 individuals completed the online platform. The Integrated Anxiety Stress Scale significantly changed according to age, gender, marital status and working status after the pandemic. According to the results of multiple binary logistic regression analysis, individuals aged 50 and over, female gender, being single and not working after the pandemic for anxiety; female gender, being married, and post-pandemic study were found to be risk factors for Covid awareness. It is recommended that epidemic awareness studies and information sharing on controlled healing measures are planned considering the anxiety levels.

Keywords Anxiety · COVID-19 · Awareness · Stress

Significant Outcomes
The study is unique in that Covid-19 anxiety detection is performed nationwide.
The research is one of the limited number of studies linking both Covid-19 awareness level and anxiety.
It makes important contributions to the determination of the effective method to be made in the period when Covid-19 measures are not yet known all over the world.
It includes solutions for both society and anxiety management in a similar pandemic process.

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Introduction

Epidemics, one of the problems affecting the world, have affected people from the past to the present, leaving commercial and social effects (Yiğit & Gümüşçü, 2016; Yıldız, 2014). The epidemic (COVID-19 or 2019-nCOV) that emerged in Wuhan province of the People's Republic of China and affected the world in a short time (COVID-19 or 2019-nCOV) by the World Health Organization (WHO) "Serious Acute Respiratory Syndrome-Coronavirus-2" (SARS-CoV-2) and the disease it causes is named as Covid-19 (CoronaVirus Disease 2019). WHO reports that 15,785,641 cases of Covid-19 have been confirmed all over the world and 640,016 individuals have died (WHO

Coronavirus Disease (COVID-19) Dashboard, 2020). The virus first emerged in Turkey in March of the year 2020 226.100 people have seen in the case of Covidien-19 and 5613 people have lost their lives (*Türkiye'deki Güncel Durum*, 2020).

The most important strategy in preventing the disease is to stop the spread of the virus. Isolation of individuals, hand hygiene, use of protective equipment such as masks and compliance with social distance rules, and being careful not to be in crowded environments are important rules in preventing the spread of the virus to the society (Güner et al., 2020). Due to the limited social life, the most accessible way to convey information about the disease to individuals is online platforms (Hollander & Carr, 2020). While online platforms provide convenience in the access of information, they also cause the transfer of complex, incorrect and contradictory information (Zarocostas, 2020). In order to increase awareness of Covid-19 precautions during the pandemic process that requires taking individual precautions regarding hygiene and distance, it is necessary to provide correct information. Incorrect and incomplete information may cause individuals to experience negative feelings about the disease.

Both our observations and literature information have shown that the pandemic causes stress, anxiety and fear in individuals (Zhang et al., 2020). Studies show that the anxiety levels of individuals regarding the epidemic process vary between 4% and 41% (Ekiz et al.; Mowbray, 2020). It can be said that in countries where the epidemic is increasing, anxiety is high and this situation affects the spread. In a study conducted in our country on the subject, it was stated that individuals' anxiety levels were moderate (Ekiz et al.). In a study conducted with a healthy individual, it was found that individuals experienced fear and anxiety about coronavirus, had high levels of hopelessness, and adopted negative coping methods such as suicidal thoughts or alcohol / substance use (Lee, 2020). The way people perceive a disease is associated with their reactions to the disease and their adaptation to the disease (Hekler et al., 2008).

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Aims of the Study

The aim of this study is to determine the awareness of Turkish society regarding coronavirus measures and the effect of this situation on anxiety stress levels.

Method

The research was carried out descriptively to determine the awareness of individuals about Covid-19 measures and the effect of the pandemic on anxiety stress level. Have filled the universe of Turkey's seven geographical regions in the study were 18 years of age residing individuals who create internet access. The research was completed with 2163 individuals who were contacted via social networks such as whatsapp, facebook, twitter, and instagram and via e-mail between April 10 and June 10, 2020 without choosing a sample.

Data Collection Tools

The data were collected using questionnaires that determine the introductory characteristics of individuals, Covid-19 awareness and the Integrated Anxiety-Stress Scale developed by the researchers. These forms were transferred to the digital platform using the Google Form program and delivered to individuals through specified networks.

Questionnaire Form; includes 9 questions including age, gender, occupation, chronic illness, geography of residence, family type, marital, employment and educational status of individuals.

Covid-19 awareness form (Cov-A); Covid-19 covers 15 questions about the characteristics of individuals at risk, transmission, ways of protection and measures to be taken (Lee, 2020; *Türkiye'deki Güncel Durum*, 2020; WHO Coronavirus Disease (COVID-19) Dashboard, 2020). Each correct answer given to this form was scored as 1, and each incorrect answer was scored as 0, and the total score was evaluated.

Integrated Anxiety Stress Scale (IAS-S); This scale, validity of which was made by Ebadi in 2020, consists of 33 items with a Cronbach alpha value of 0.96. Higher scores on the scale indicate higher levels of anxiety and stress. Responses given to expressions that are marked never, rarely and sometimes are calculated as 0, and expressions that are marked usually and always are calculated as 1 point. The scores obtained from the scale are evaluated as very low between 0 and 7, low between 8 and 14, medium between 15 and 21, high between 22 and 28 and very high between 29 and 33.

Statistical Analysis

The study data were processed using the SPSS (Statistical Package for Social Sciences) 25.0. Data assessment was conducted using percentages, Pearson Chi-Square test, One-Way Analysis of Variance, and t test to determine whether or not

data followed a normal distribution. Results were considered significant at p < 0.05 and confidence interval was set at 95%. In addition, the comparison of the mean IAS-S scores before and after the training was analyzed by paired samples test. Statistical significance was accepted as p < 0.05.

Ethical Considerations

Before the implementation of the study, the ethics committee approval and written permission from the hospital were obtained from the ****** on 17.06.2020 (No. 95674917-108.99-E.14995). In collecting the data, the researcher informed the patients about the purpose, method and scope of the scientific research, and their consent was obtained.

Results

It was determined that 63.9% of the participants are women, 55.2% are married and 85.2% are university graduates. 71.2% of the individuals worked before the pandemic and that 92.1% of them increased their daily stay at home during the pandemic (Table 1). 52.5% of individuals would rate staying at home as moderately well. 2.26% of the individuals stated that they were worried about the health of their family elders and 5.04% of them were worried about the economic problems and work that might be experienced. It was determined that 40.7% of the participants heard the word coronavirus three months ago, and 47.1% of the epidemic news followed the internet. As the frequency of follow-up, 48.5% of the participants stated that they follow it several times a day, while 30.8%

Table 1 Sociodemographic and clinical features of the participants

Variables		
Age (years), $M \pm SD$		35.11 ± 11.69
Gender, n (%)	Female	1383 (63.9)
	Male	780 (36.1)
Marital status, n (%)	Single[a]	969 (44.8)
	Married	1195 (55.2)
Education level, n (%)	Primary school	15 (0.6)
	Secondary school	29 (1.3)
	High school	277 (13.8)
	Graduate	1843 (85.2)
Place of residence, n (%)	Black Sea Region	593 (27.4)
	Marmara Region	431 (19.9)
	Aegean Region	93 (4.3)
	The Mediterranean Region	242 (11.2)
	Central Anatolia Region	361 (16.7)
	Eastern Anatolia Region	307 (14.2)
	Southeastern Anatolia Region	110 (5.1)
	Turkish Republic of Northern Cyprus	27 (1.2)
Working before pandemic, n (%)	Yes	1540 (71.2)
	No	624 (28.8)
Accompanying chronic disease, n (%)	Yes	372 (17.2)
	No	1792 (82.8)
How does it feel to be at home?, n(%)	Good	415 (19.2)
	Mid	1135 (52.5)
	Bad	613 (28.3)
Following new stories about COVID-19, n (%)	Yes	2107 (97.3)
	No	57 (2.7)
Cov-A, $M \pm SD$	Total	43.4 ± 2.5
IAS-S, $M \pm SD$	Total	5.9 ± 7.9

[a]Divorced and widowed people are grouped together with singles because there are few

Table 2 Comparison of the participants divided into groups in terms of Cov-A and IAS-S

Variables		Cov-A $M \pm SD$	IAS-S $M \pm SD$
Age groups	18-49	43.57 ± 2.52	6.37 ± 0.18
	≥50	43.38 ± 2.36	6.24 ± 0.35
	p value	0.23	**<0.0001**
Gender	Female	43.84 ± 2.43	6.52 ± 8.26
	Male	43.02 ± 2.53	4.83 ± 7.31
	p value	**<0.0001**	**<0.0001**
Marital status	Single	43.32 ± 2.55	7.17 ± 8.64
	Married	43.73 ± 2.44	4.88 ± 7.23
	p value	0.06	**<0.0001**
Working after pandemic	Yes	43.75 ± 2.49	5.48 ± 7.79
	No	43.02 ± 2.45	6.96 ± 8.32
	p value	0.73	**<0.0001**
Accompanying chronic disease	Yes	43.59 ± 2.53	5.99 ± 8.11
	No	43.53 ± 2.49	5.89 ± 7.94
	p value	0.66	0.36

of the participants stated that they trust the information they have obtained.

It was found that the Integrated Anxiety Stress Scale significantly changed according to age, gender, marital status and working status after the pandemic. Young age, female, single, and post-pandemic nonwork were found to be factors that increase anxiety (p < 0.05). Covid awareness was found to vary only by gender (Table 2). It was observed that women were more aware of covid than men (p < 0.05).

According to the results of multiple binary logistic regression analysis, individuals aged 50 and over, female gender, being single and not working after the pandemic for anxiety; female gender, being married, and post-pandemic study were found to be risk factors for Covid awareness (Table 3).

Discussion

Covid-19 awareness of the Turkish society and anxiety-stress scale score were compared with the introductory features. The research group, which was mostly women, stated that the duration of stay at home was prolonged with the pandemic and they evaluated this situation as moderate. In similar population studies conducted in different countries, it was found that the prolonged quarantine and social isolation process caused individuals to feel bad and experience stress (Hawryluck et al., 2004; Marjanovic et al., 2007; Reynolds et al., 2008). In studies examining the effects of staying home during the pandemic, it was stated that the feelings of depression, anxiety and loneliness increased in individuals (Reger et al., 2020; Thunstrom et al., 2020).

Studies conducted with samples with different cultural characteristics present different results in the prolongation of individuals' stay at home after the pandemic (Reger et al., 2020; Thunstrom et al., 2020). It is seen that the parameters affecting being at home during the pandemic process cause economic problems and concerns about the health of the elderly. In a study, it was found that individuals were concerned about transmitting the disease to elderly people and family members (Nicomedes & Avila, 2020). Another study found that uncertainty regarding the process and social isolation cause stress and mental morbidit (Zandifar & Badrfam, 2020). In a review study; It has been emphasized that COVID-19 causes fear and panic in people and that consumers generally stack and store resources (Rajkumar, 2020). These data can be said that the causes of anxiety experienced by the society during the pandemic process are common and cultural characteristics do not affect the causes of anxiety.

In the study, it was seen that the news about the pandemic was mostly followed on the internet and individuals trusted less than two-fifths of the information they obtained. Failure to provide information from reliable sources can lead to negative behaviors in people due to information pollution. In a study conducted in different countries, they stated that

Table 3 Logistic regression analysis on factors significantly associated with awareness and anxiety

	According to Cov-A awareness vs non-awareness		According to IAS-S anxiety vs non-anxiety	
	OR (95% CI)	p value	OR (95% CI)	p value
Age	0.71(0.02,0.97)	0.40	40.18 (0.07,0.92)	**<0.0001**
Gender	51.31 (0.13-0.87)	**<0.0001**	20.37 (0.02,0.97)	**<0.0001**
Marital status	16.04 (0.07,0.93)	**<0.0001**	44.36 (0.03,1.03)	**<0.0001**
Accompanying chronic disease	0.14 (0.01,0.99)	0.70	0.04 (0.01,0.99)	0.83
Working after pandemic	39.17 (0.12,0.88)	**<0.0001**	16.74 (0.02,1.02)	**<0.0001**

OR: odds ratio; CI: confidence interval

misinformation was very common during the global crisis and this information caused panic and terror among people (Nicomedes & Avila, 2020). In the study of Bozkurt et al., It was reported that the frequency of information shared by the media about the coronavirus process negatively affected the process of staying at home (Bozkurt et al., n.d.). According to these results, it can be stated that the society is sensitive in sharing information regarding the pandemic process and this sensitivity should be paid attention to in information sharing in this process.

The data of our study revealed that the level of Covid awareness is high in Turkish society and the female gender affects this situation. In a study by Poissy et al., It was stated that the level of Covid awareness increased due to the increase in Covid prevalence (Poissy et al., 2020). In the study conducted by Wolf et al., pointed out that low socioeconomic level leads to health inequality and low health literacy rate, therefore, social health messages are an important parameter in raising awareness (Wolf et al., 2020). Despite the low rate of health literacy in our country, the high awareness of the epidemic shows that social messages are effective. As a matter of fact, we think that the detailed information given by the Ministry of Health every day since the beginning of the pandemic regarding the pandemic and the measures to be taken plays an important role in increasing the awareness of the society.

In our study, it was found that individuals had low anxiety-stress scale scores and were affected by young age, female, single and post-pandemic nonworking factors. Similarly, in a study conducted in China, the anxiety level of healthy individuals under quarantine was found to be 10.2% (Zhang et al., 2020). In another study conducted in Beijing, it was found that the post traumatic stress disorder of the pandemic ranged from 4% to 41%. It has been reported that variables such as female gender, low socioeconomic level, frequent social media use and low social support affect this situation (Mowbray, 2020). In Lee's study, it was stated that people could not cope with the mental crisis due to the fear and anxiety of coronavirus and they were hopeless and suicidal (Lee, 2020). These behaviors that people show in the face of the threat of the epidemic are important in terms of minimizing the geographical prevalence and spreading rate of the epidemic and reducing possible loss of life. Moreover, these behaviors are also important for health authorities to effectively respond and be prepared for outbreaks (Çırakoğlu, 2011). It can be said that female gender, being young and having elderly members in the family increase anxiety, and economic concerns vary according to countries with different socioeconomic levels.

In our study, it was determined that pandemic awareness was affected by female gender, being married, and continuing to work after the pandemic. This situation suggested that being married and working after a pandemic may be affected by individual responsibility. In addition, female gender, being single and not working after the pandemic were identified as factors that increase anxiety. In the study conducted by Wang et al., It was found that women were affected more psychologically during the pandemic period and their levels of stress, anxiety, and depression were significantly higher (Wang et al., 2020). In the study of Ekiz et al., It was stated that the level of anxiety felt by women was higher than that of men. When the stress levels of the participants are examined according to their marital status, no significant difference was found (Ekiz et al., 2020). In the study of Chen et al., It was revealed that divorced or widowed individuals during the coronavirus process showed more fear, anxiety and psychosomatic symptoms (Chen et al., 2020). Although there are differences in the level of anxiety towards events, it is observed that the parameters they are affected by are similar. Although the results of the study are not similar in terms of pandemic anxiety, it is seen that the risk factors affecting anxiety are common. In addition to the pandemic, individuals experience more anxiety in their social lives if they have a separate cause of stress or have more emotional structures. This shows that the degree of impact of the pandemic process in the world is not similar, but individuals with similar characteristics are equally affected by the pandemic.

Conclusion

It is seen that Covid awareness is effective in our country and informative messages are effective. It can be said that awareness studies have created similar effects to individuals at every educational level and socio-economic level. It is observed that individuals experience low anxiety during the pandemic process. This situation varies according to individuals' personal characteristics, family roles, economic and educational levels. Considering that the anxiety levels in individuals may be high depending on the course of the epidemic, studies should be planned to develop individual coping methods. As a result, the awareness of Turkish society on Covid-19 is high and anxiety levels are low, and it is seen that being a woman is a risk factor that affects both situations.

Limitations

Several limitations of this study must be acknowledged. In the first phase of high covid-19 awareness, study data were collected. Therefore, there may be differences in the level of anxiety and awareness in measurements made at different times.

Implications for Nursing Practice

- Pandemics cause high anxiety in societies. In this case, it is very important to provide online information correctly.
- It is vital that the information sources delivered to individuals are correct and conveyed in the right way while making this information.
- The society must be informed in advance in order to combat similar epidemic situations. It can be said that nurses have a great role in this regard.

Declarations

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