



Perceived stress and death anxiety in university students during the Corona Virus pandemic process

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Abstract

Purpose of this study was to investigate the perceived stress and death anxiety in university students during the Corona virus pandemic process. The sample of the study consisted of a total of 649 university students, 331 of which were females and 318 of which were males, with an average age of 22. The study was assessed using the Perceived Stress and Death Anxiety Scales. The data were found to be in accordance with the normal distribution with the “Kolmogorov Smirnov Test”. Independent t-test, one-way analysis of variance and LSD tests were used for statistical analysis. The data were evaluated with the SPSS 25.0 package program. In the study, significant difference according to gender was found in perceived stress scores which were higher in women than in men ($p < 0.05$). On the other hand, no significant difference was found between death anxiety scores according to gender ($p > 0.05$). It was determined that there was a statistically significant difference in perceived stress and death anxiety scores according to the sleep patterns stated by the students and their belief in their immunity ($p < 0.001$). The difference in perceived stress and death anxiety scores according to watching television and following the coronavirus news on the internet and exposure to virus news on social media was found to be statistically significant ($p > 0.001$). As a result of the data and analyzes acquired in the study, it was determined that while the perceived stress status of university students differed according to gender, their feeling of death anxiety was similar. It was considered that those who sleep regularly and rely on their immunity were less likely to feel the coronavirus epidemic in terms of perceived stress and death anxiety. It was determined that as students had a higher awareness of the Corona virus on the social media, they felt death anxiety less. It could be suggested that students sleep regularly, increase their immunity or believe that their immunity is strong, and increase their knowledge about the effect of the corona virus on social media.

Keywords: Perceived stress, death anxiety, university students, social media, sleep, immunity

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1. Introduction

Stress negatively affects the normal functions of people, while being exposed to stress for a long time also leads to the emergence of various health problems and even negatively affects functioning of people and their quality of life (Schneiderman et al., 2005). Stress is the entirety of situations that originate from individuals or their environment, cause mental or physical tensions, pressure, anxiety or other forms of anxiety and it is efforts by individuals to maintain internal balance (Tutkun and İmamoğlu, 2017). Stress is a physiological state and not anxiety, worry, depression or inhibition. Stress can be defined as a situation that emerges when physical and mental integrity is strained, or as factors that force and disrupt personal integrity (Tekin et al., 2019). A relationship was found between perceived stress level and shorter sleep periods, frequent breakfast consumption, increased alcohol consumption, increased use of legal drugs, and lack of physical exercise. Cohen et al. (1983) mentioned that a scale that assesses global stress perceptions could serve various valuable functions. Perceived stress could be accepted as an outcome variable that measures the level of stress experienced as a function of objective stressful events, coping processes, and personality factors (Cohen and Williamson, 1988). According to a study conducted during the corona virus pandemic, it was determined that 7% of individuals had symptoms of stress (Liu et al., 2020). Psychological Stress is considered a significant factor in the onset, course and exacerbation of various illnesses. For instance, depression was associated with cardiovascular diseases, immune-related disorders, and higher overall mortality (Bachen et al., 2007; Nielsen et al., 2008; Wiegner et al., 2015). The fact that people experience positive stress contributes to reduction of their anxiety levels and increase of their life satisfaction. On the other hand, negative stress paves the way for a decrease in people's self-confidence, an increase in their sense of hopelessness, and the development of a helpless personality. When it is considered from an athletic point of view, the ability of athletes to cope with the stress they perceive is considered to be a very important element of sportive performance (Holt and Hogg, 2002). According to a study conducted during the corona virus epidemic, it was determined that 7% of individuals had symptoms of stress (Liu et al., 2020).

Fear is defined as an unpleasant emotional state triggered with the perception of threatening stimuli (De Hoog et al., 2008). There is no universally accepted definition of death anxiety (Lehto and Stein, 2009). The fact that the concepts of anxiety and fear are used interchangeably and seem to give rise to the same experience makes it even more difficult to define death anxiety (Nyatanga and Vocht, 2006). Staying at home and the decrease in social relations in order to seek protection against the pandemic may lead to psychological problems such as depression, fear (especially fear of death), anxiety about not getting adequate and efficient health care, sleep problems, and anxiety (Torales et al., 2020).

Death anxiety has a negative effect on not only the people who suffer from this condition, but also circles of those who experience it (Halıcı-Kurtalan and Karairmak, 2016). Death anxiety is considered to be the basis of all the fears experienced, which results in every person feeling its presence deeply. People become aware that they will no longer exist, that they can lose the world and themselves and become ‘nothing’. Death anxiety is a phenomenon that emerges after all these processes. It could be argued that fear or anxiety of death stems from uncertainty, loss of body, suffering, loneliness, loss of relatives, loss of control, loss of sense of identity and regression. The fear of death is defined as: the fearful state of the thought of “death” before achieving all the goals aimed in life, completing the planned work, attaining dreams and reaching the targeted level (Solomon, 2000). During a pandemic, individuals experience adverse effects (MacIntyre, 2020; Shigemura et al., 2020). The unavoidable increases in the number of positive cases and loss of life lead to fear, which is a psychological aspect of the corona virus pandemic. During the corona virus pandemic, issues such as social distance, isolation and quarantine, together with their social and economic reflections, perception of security, risk of contamination, quarantine and imprisonment, stigmatization, sadness, anxiety, fear, anger, anger, frustration, guilt, helplessness, loneliness and tension in individuals can trigger psychological mediators. These are common features of the typical mental health problems most people would experience during and after the crisis (Ahorsu et al., 2020; Banerjee, 2020; Hamouche, 2020; Mamun and Griffiths, 2020; Pakpour and Griffiths, 2020; Xiang et al., 2020). It was reported that the coronavirus pandemic was positively associated with anxiety (Roy et al., 2020). In addition, in a study, it was reported that the prevalence of anxiety disorder was quite high (35.1%) during the corona virus pandemic (Huang and Zhao, 2020). In addition to increasing anxiety in general, the coronavirus outbreak can particularly increase death anxiety in individuals and even trigger it in people who are unaware of it. Previous studies suggested that illnesses with high mortality rates may increase death anxiety. Since the corona virus pandemic is a very contagious virus and killed many people all over the world, it is quite possible that it will trigger death anxiety (Kavaklı et al., 2020).

It is very important to recognize the problems experienced by university students who approach life with joy and dynamism and have a lot of plans for the future and to take relevant measures. In this context, purpose of the study is to reveal both stress levels and death anxiety of university students during the corona virus pandemic process.

2. Methods

This study, which examines the stress and death anxiety of university students during the corona virus pandemic process, was a quantitative study and its design was descriptive general survey model. Survey models try to describe situations that existed in the past or that still exist. General survey models, on the other hand, are survey studies

conducted on a sample achieved from the entire population or on the entire population in order to arrive at a general judgment about the population that consists of many elements (Karasar, 2014). The sample of the study consisted of 649 university students who were reached using simple random and convenience sampling methods. Research data were collected between March-April and May 2020, when the corona virus pandemic started. Curfews or some other restrictions were applied between these dates. Students started to attend classes in the form of remote learning. To that aim, study data were collected online using Google docs form infrastructure. Place of residence of student and the restrictions they were exposed to could not be controlled. Students who were infected with the corona virus were excluded from the study.

2.1. Participants

A total of 649 university students, 331 of which were women and 318 of which were men voluntarily participated in this study. All stages of the study were carried out in accordance with the Principles of the Declaration of Helsinki.

2.2. Data collection tools

2.2.1. Perceived stress scale (PSS)

The scale is a measurement tool developed by Cohen et al. (1983) to measure the frequency of stress symptoms. Consisting of 14 items in total, PSS is designed to measure how stressful persons perceive their lives. Participants assess each item on a 5-point Likert-type scale ranging from “Never (0)” to “Very often (4)”. One of the items is required to be scored based on the last 1 month period. There is no time limit for answering the scale. While 7 items in the scale are scored normally, 7 items are scored in reverse order. The minimum score that can be achieved from the scale is 0 while the maximum score is 56. High total scores indicate higher stress is perceived by individuals while low total scores indicate low stress is perceived. The Turkish adaptation study of the scale was conducted by Eskin et al. (2013).

2.2.2. Death anxiety scale

In this study, the death anxiety scale developed by Sarıkaya (2013) was used to determine death anxiety. The scale consists of 20 items prepared using a 5-point rating. Responses to the scale are scored as 0 points for the “Never” option, 1 point for the “Rarely” option, 2 points for the “Sometimes” option, 3 points for the “Often” option, and 4 points for the “Always” option. Items 1, 2, 5, 6, 7, 9, 10, 11, 17 and 20 in the scale are under ‘uncertainty of death’ factor, items 4, 8, 12, 13, 14, 16 and 19 are under ‘contemplating and witnessing death’ factor while items 3, 15 and 18 are under ‘suffering’ factor. Receiving a low score on the scale is considered good, and receiving a high score is considered bad.

2.3. Statistical analysis

Kolmogorov-Smirnov test was performed to test whether the data were normally distributed, and it was determined that the data showed normal distribution. Independent t-test, one-way analysis of variance and LSD tests were used for statistical operations. SPSS 25.0 package program was used for statistical operations.

3. Results

The data obtained for the purpose of the study and the findings of the statistical analyzes are presented below.

Table 1. Comparison of stress and death anxiety perceived according to gender

	Gender	N	Mean	Standard Deviation	t-Test Score
Perceived stress	Female	331	28.97	8.68	-2.87*
	Male	318	27.10	7.89	
Death anxiety	Female	331	33.68	16.21	0.10
	Male	318	33.54	17.06	

*p<0.05

According to Table 1, a significant difference was found between women and men in perceived stress scores according to gender where the scores were higher in women (p<0.05). There was no significant difference between death anxiety scores according to gender (p>0.05).

Table 2. Comparison of perceived stress and death anxiety according to sleep pattern in the pandemic period.

		N	Mean	Standard Deviation	F/LSD
Perceived stress	No change in sleep pattern (1)	202	25.55	7.46	
	I sleep more (2)	237	28.88	9.00	14.05**
	I sleep less (3)	210	29.52	7.87	1<2.3
	Total	649	28.05	8.35	
Death anxiety	No change in sleep pattern (1)	202	30.56	14.70	
	I sleep more (2)	237	28.85	10.22	44.51**
	I sleep less (3)	210	41.92	20.66	3>1.2
	Total	649	33.61	16.62	

**p<0.001

According to Table 2, the perceived stress and death anxiety scores according to sleep patterns during the pandemic showed statistically significant differences (p<0.001).

Table 3. Comparison of perceived stress and death anxiety according to state of immunity in the pandemic period.

		N	Mean	Standard Deviation	F/LSD
Perceived stress	Strong immunity (1)	239	27.24	8.69	
	Partially strong immunity (2)	248	27.88	8.11	3.66*
	Weak immunity (3)	162	29.51	8.05	1<3
	Total	649	28.05	8.35	
Death anxiety	Strong immunity (1)	239	28.47	11.80	
	Partially strong immunity (2)	248	31.37	13.02	57.86**
	Weak immunity (3)	162	44.62	21.84	1<2.3
	Total	649	33.61	16.62	2<3

*p<0.05 and **p<0.001

According to Table 3, it was determined that the perceived stress and death anxiety scores according to the immunization status during the pandemic showed a statistically significant difference ($p<0.001$).

Table 4. Comparison of stress and death anxiety according to watching television and following the corona virus news on the internet during the pandemic.

		N	Mean	Standard Deviation	F/LSD
Perceived stress	0-2 hours (1)	347	27.06	7.37	
	3-4 hours (2)	113	28.81	9.79	5.53*
	5 hours and above (3)	189	29.42	8.90	1<3
	Total	649	28.05	8.35	
Death anxiety	0-2 hours (1)	347	39.68	16.75	
	3-4 hours (2)	113	33.27	13.76	79.67**
	5 hours and above (3)	189	22.67	11.61	1>2.3
	Total	649	33.61	16.62	2>3

*p<0.05 and **p<0.001

According to Table 4, there was a statistically significant relationship between the perceived stress and death anxiety scores according to watching television and following the coronavirus news on the internet during the pandemic ($p>0.001$).

Table 5. Comparison of stress and death anxiety according to exposure to corona virus on social media during the pandemic.

		N	Mean	Standard Deviation	F/LSD
Perceived stress	Never + Rarely (1)	228	25.69	6.48	
	Sometimes (2)	183	29.80	9.74	11.42**
	Often (3)	144	28.15	7.34	1<2,3,4
	Very often (4)	94	30.22	9.49	
	Total	649	28.05	8.35	
Death anxiety	Never + Rarely (1)	228	37.52	17.38	
	Sometimes (2)	183	30.73	14.78	6.91**
	Often (3)	144	31.67	12.59	1>2,3,4
	Very often (4)	94	32.72	21.35	
	Total	649	33.61	16.62	

**p<0.001

According to Table 5, a statistically significant relationship was found between perceived stress and death anxiety scores according to exposure to virus news on social media during the pandemic ($p>0.001$).

4. Discussion

In this study, that aims to reveal both the stress levels and death anxiety of university students during the corona virus pandemic process, it was determined that while the perceived stress levels differ according to gender, their feelings of death anxiety were similar. There are studies conducted in Turkey reporting that stress differs in terms of gender (Özgan et al., 2018; Savcı and Aysan, 2014; Eraslan, 2016; Demir, 2019). On the other hand, there are studies stating that the stress level does not differ according to gender (Hevedanlı and Çakmak, 2005; Şanlı, 2017). Demir (2019) stated in his study that the number of studies showing that stress differs according to gender was higher and that anxiety and stress levels of male students were lower than that of females. Ozgan et al. (2018) stated in their study that girls are more stressed than boys. Tutkun and İmamoğlu (2017) found in a study with male and female students that the perceived stress score is higher in favor of males. In this study, it was found that the perceived stress scores according to gender were higher in women than in men ($p<0.05$). In their study Cao et al. (2020) stated that the psychological effect of the corona virus pandemic did not differ according to gender.

In their study Erdoğan and Özkan (2007) determined that there was no difference in death anxiety between men and women. Gencer (2020) stated in his study that during the corona virus pandemic, the participants experienced a close to moderate fear of corona virus, while there was a significant difference according to gender, and the corona

virus fear level of women was higher than that of men. In their study Kavaklı et al. (2020) found that women had higher levels of both perceived corona virus threat and death anxiety than men. Again, Bakioglu et al. (2020) found in their study that women have higher levels of corona virus fear. Death anxiety is higher in women (Morris, 2002; Depaola et al., 2003; Abdel-Khalek, 2005; Madnawat and Kachhawa, 2007). Aslan and İmamoğlu (2020) found a significant difference in death anxiety scores between men and women in their study. In this study, no significant difference was found between death anxiety scores according to gender ($p>0.05$). It could be argued that results of different studies vary depending on the differences of study groups such as occupation, age, place of residence, education, and the time of the research.

In this study, a statistically significant difference was found between perception of stress/discomfort and perceived stress scores of persons who said that there was no change in their sleep patterns during the pandemic, but that they slept more or less ($p<0.001$). Those who stated that there was no change in their sleep patterns had a higher perceived stress score than those who stated that they slept less. Poor sleep quality negatively affects people's physical state, work performance, quality of life and mental state (Örsal et al., 2019). Prolonged sleep deprivation can lead to severe thought retardation, memory loss, slow response, fatigue, irritability, and even potential depression, and suicidal ideation (Mieda and Sakurai, 2013; Rosado et al., 2015). Problems such as insomnia or constant desire to sleep, loss of appetite or excessive eating, and harmful substance use are frequently seen in individuals with high stress levels. It may be recommended to take the necessary measures in order not to disturb the sleep patterns or return sleep patterns of those with disturbed patterns to a normal state. In their study Aslan and İmamoğlu (2020) stated that during the pandemic, sleep patterns of students and their levels of perception of immunity were not effective on death anxiety. In this study, the difference in death anxiety scores according to sleep patterns was found to be statistically significant ($p<0.001$). Those who did not change their sleep state and those who slept more had a significantly lower death anxiety score than those who slept less. It could be argued that those who had death anxiety during the corona virus epidemic slept less than normal or those who slept less experienced higher death anxiety due to the corona virus. In order to reduce death anxiety, students should pay attention to increase their sleep time. They may be advised to avoid drinks and activities that keep them up.

In a study by Gencer (2020), no significant difference was found in the corona virus fear scores of the chronic disease group and the chronic disease group. On the other hand, in the study by Bakioglu et al. (2020), it was found that individuals with chronic diseases had higher corona virus fear levels. Again, in a study on the Corona virus pandemic, health anxiety levels of individuals were determined as moderate (Ekiz et al., 2020). Özdin and Özdin (2020) found that chronic disease is a risk factor for health anxiety during the Corona virus pandemic process. In this study, the perceived stress scores of

those that indicate they had strong immunity were significantly lower than those that indicate they had weak immunity ($p < 0.05$). It could be argued that students who believed that their immunity was weak were more affected in terms of perceived stress from the corona virus process. Again, in this study, death anxiety scores in the corona virus process changed significantly according to the state of perception of immunity. Those with strong immunity experienced less death anxiety. Those who stated that their immunity level was weak experienced higher death anxiety. It could be recommended that students strengthen their immunity and increase their belief in their immunity in order to be relieved from feeling death anxiety.

Huckins et al. (2020) found that students had higher rates of anxiety and depression during the Corona virus-19 process, and these rates were positively related to the amount of time spent watching the news. In their study, Aslan and İmamoğlu (2020) stated that watching television, using the internet to follow corona virus news and being exposed to virus news on social media had no effect on death anxiety scores. In this study, the difference in perceived stress and death anxiety scores according to the state of being exposed to virus news in social media and watching television and following the coronavirus news on the internet was found to be statistically significant ($p > 0.001$). According to the status of watching television and following the coronavirus news on the internet, the perceived stress scores of those who watch fewer hours were found to be significantly lower than those who watch for 5 hours or more. On the other hand, death anxiety decreases as the time spent watching TV and following the coronavirus news on the internet increases during the pandemic. In this study, a statistically significant difference was found between perceived stress and death anxiety scores according to exposure to the Corona virus on social media during the pandemic ($p < 0.001$). The perceived stress scores of those who were not exposed to coronavirus news on social media and who had little exposure to it were sometimes, generally and significantly lower than those who were exposed very often. Death anxiety scores of those who have no or little exposure to the corona virus on social media were higher. Although the perceived stress increases as the time spent watching the news and the exposure to coronavirus news on social media increases, considering the decrease in death anxiety, it could be argued that it was more important to follow coronavirus news. It was mentioned that providing accurate health information to reduce the impact of the pandemic was required and it was suggested that when satisfaction with health information was higher, the psychological impact of the pandemic and stress, anxiety and depression levels in humans were lower (Wang et al., 2020).

5. Conclusions

It was determined that while the perceived stress levels of university students vary according to gender, their feelings of death anxiety were similar. It was considered that those that sleep regularly and those who rely on their immunity were less likely to feel

the coronavirus pandemic in terms of perceived stress and death anxiety. It was determined that as the students had a higher awareness of the coronavirus on social media, they felt less death anxiety. It could be recommended that students sleep regularly, reinforce their immunity or believe that their immunity is strong, and increase their knowledge from the social media about the effect of the corona virus.

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