

## RESEARCH

# Psychological Distress and Finding Meaning in Relation to Personal Characteristics, Social Ties, and Media Use in the COVID-19 Pandemic

## COVID-19 Pandemisinde Kişisel Özellikler, Sosyal Bağlar ve Medya Kullanımıyla İlişkili Psikolojik Huzursuzluk ve Anlam Bulma

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### Abstract

The purpose of this study is to focus on people's psychological distress, the degree as to how meaningful they consider their lives during a period in which the COVID-19 pandemic has affected Turkey substantially, as well as to examine the relationship between these concepts and certain demographic variables, social ties with local or extended groups, and the use of social and traditional media. The study includes 1023 participants (828 of which are female and 195 are male) between the ages of 18-46. In parallel with the study hypotheses, women (compared to men) scored higher in the variables of finding meaning in life, local social ties, extended social ties and the use of traditional media. Those who have a perception of strong social ties with their local group (family members, friends, co-workers, and neighbors) and extended group (the city and the country they live in) during the pandemic consider life more meaningful. However, the psychological distress claimed by those who have a perception of stronger ties with their local group is stronger. While the perceived psychological distress of those who follow the developments regarding the pandemic on social and/or traditional media more closely are stronger, those who follow traditional media have a higher degree of considering their life more meaningful. Determining the level of psychological distress perceived by the people and how meaningful they consider life during the early stages of the pandemic, and to ascertain the related variables fills a major gap in the pandemic-based literature that is still growing and provides a source of information for the interventional studies to be conducted.

**Keywords:** COVID-19 pandemic, psychological distress, finding meaning, social ties, media use

### Öz

Çalışmanın amacı COVID-19 pandemisinin Türkiye'yi yoğun olarak etkilediği dönemde kişilerin psikolojik huzursuzluk ve hayatı anlamlı bulma düzeylerine odaklanmak ve bu kavramların belirli demografik değişkenler, yerel/geniş gruplara yönelik sosyal bağlar ve sosyal/klasik medya kullanımıyla olan ilişkilerini incelemektir. Çalışmaya 18-46 yaş aralığında bulunan 1023 kişi (828 kadın, 195 erkek) katılmıştır. Araştırma hipotezleriyle tutarlı olarak, erkeklere kıyasla kadınlar hayatı anlamlı bulma, yerel sosyal bağ, geniş sosyal bağ ve klasik medya kullanımı değişkenlerinde daha yüksek skorlara sahiptir. Pandemi sürecinde yerel gruba (aile bireyleri, arkadaşlar, işyerindeki/okuldaki kişiler ve komşular) ve geniş gruba (yaşanılan şehir ve ülke) yönelik kuvvetli sosyal bağlar algılayan kişiler hayatı daha anlamlı bulmaktadır. Fakat yerel gruba yönelik kuvvetli sosyal bağlar algılayan kişilerin belirttikleri psikolojik huzursuzluk daha kuvvetlidir. Pandemiye ilişkin gelişmeleri sosyal ve/veya klasik medya mecralarından daha fazla takip eden kişilerin algıladıkları psikolojik huzursuzluk daha kuvvetliken, klasik medya mecralarını takip eden kişilerin hayatı anlamlı bulma düzeyleri daha yüksektir. Pandeminin başladığı dönemde kişilerin ne ölçüde psikolojik huzursuzluk algıladığını ve hayatlarını anlamlı bulduğunu saptamak ve ilişkili değişkenleri belirlemek pandemi-temelli gelişmekte olan alanyazında önemli bir boşluğu doldurmakta ve uygulanacak müdahale çalışmaları için bilgi sağlamaktadır.

**Anahtar sözcükler:** COVID-19 pandemisi, psikolojik huzursuzluk, anlam bulma, sosyal bağlar, medya kullanımı

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**THE** new variant of coronavirus (COVID-19), which leads to acute respiratory tract illness as well as medical symptoms such as fever, coughing and shortness of breath, emerged in Wuhan, China in December 2019, and has spread worldwide. As of June 2021, the COVID-19 virus has been detected in almost 180 million people around the world, and it has been the cause of death of 4 million of them (Worldometer 2021). The first ever case in Turkey was reported on March 11, 2020, which was followed by the virus quickly spreading nationwide. However, the ongoing negative effects related to the COVID-19 pandemic is not just limited to deteriorating medical conditions. The government policies that are implemented to get the pandemic under control (e.g., lockdowns, quarantines, banning large gatherings such as weddings and funerals, closure of schools and workplaces, restriction of intercity or international travel), and the current state of uncertainty can also affect people's mental health negatively (Ahorsu et al. 2020, Qui et al. 2020, Tian et al. 2020). Currently, it is essential to make sense of the potential reasons behind the growing cases of psychological problems, and to study the psychological processes which may support individuals during this certain period of the pandemic. In this context, the purpose of this study is to examine the psychological distress people has perceived during a period of pandemic and heavy restrictions implemented to control the pandemic (April-June 2020), and their degree of finding meaning as a protective factor in the process by focusing on demographic variables (sex, age, perceived medical condition), social ties, and use of media.

Researchers have discovered that —similar to Ebola and SARS outbreaks— anxiety, depression and stress-related disorders have become more common during the COVID-19 pandemic, and that psychological distress has been growing which could be defined —without a clinical diagnosis— as overall uneasiness, unhappiness, bursts of anger and emotional exhaustion (Maunder et al. 2003, Hawryluck et al. 2004, Ji et al. 2017, Xiang et al. 2020). The state of psychological distress, which has grown during the pandemic, reveals itself as insomnia, restlessness, sadness, and anxiety throughout the day (Barkur et al. 2020, Gautam et al. 2020). When studying the effects of the pandemic on the aforementioned state of psychological distress, it is essential to focus on protective factors for the use of treatments and approaches of early intervention for individuals and masses during and after this global crisis (Coie et al. 1993).

The degree of how meaningful an individual considers their life during times of stress and hardship is one of the protective factors that determines mental wellbeing (Park 2013, Aiena et al. 2016). The state in which a person considers their life unmeaningful is associated with mental disorders and psychological distress (Maccallum and Bryant 2019). Similarly, those who find life meaningful during the COVID-19 pandemic have linked the pandemic to an existential basis rather than such notions as pain or loss, and they have defined the process as a valuable test. The people who had that approach showed fewer signs of the negative effects of pandemic-related stress factors on psychological distress, and behavioral indications that derive from anxiety (Schnell and Krampe 2020). The studies conducted in Turkey during the pandemic offer similar findings. While finding meaning in life is positively correlated with positive affectivity and satisfaction with life, it is negatively correlated with depression, somatization, and anxiety (Arslan et al. 2020). Despite the documented negative correlation between psychological distress and finding meaning during the pandemic, the process behind these variables have not been made clear. This study focuses on the perceived psychological distress by individuals living in Turkey during the COVID-19 pandemic,

and their degree of finding meaning in life, as well as examining the demographic variables, perceived social ties and use of media which have the potential to predict these concepts.

The ties formed with social groups meet basic psychological needs such as sense of belonging and safety, making sense of the social structure around oneself, having access to social support, and being in touch with other people. Since these needs are met, high quality social ties are positively correlated with positive affectivity and mental wellbeing (King et al. 2006, Hicks and King 2007, Krause 2007). Similarly, the studies that focus on the variable of finding meaning emphasize the importance of high-quality social ties and the social support that comes along with them (Baumeister and Leary 1995, Ryan and Deci 2001). Specifically, the people who have social ties, and can expect to have access to social support they would need during stressful and compelling times have a higher rate of finding meaning (Krause 2007). Long term quarantines, lockdowns, social distancing rules and changing methods of communication during the COVID-19 pandemic have reduced people's perception of social ties and social support, decreasing the level of meeting their basic psychological needs (Brooks et al. 2020). The decrease in the perceived social ties during the time spent at home due to quarantines and lockdowns have affected people's satisfaction with life, and their mental wellbeing in a negative manner (Calvo et al. 2020). For that reason, perceived social ties with local/small groups (e.g., family members, friends, coworkers or classmates, neighbors) and extended groups (e.g., the city or country in which a person lives) during the pandemic have become a significant variable which should be studied by researchers.

Making sense of present conditions, and the motivation to cope with the situation during traumatic events cause people to search for information, leading to an increase in the use of media. According to a 2020 media consumption report created by Nielsen Media Research, in the year 2020, in which the COVID-19 pandemic was of great significance, the use of media has increased (in comparison with 2019) by 215% in the US, 180% in Italy, 125% in Thailand, 78% in Japan and 52% in Australia (Oxford Business Group 2020). The increase in the use of media triggers perceived stress and mental disorders (Yeung et al. 2018, Holman et al. 2020). While the increase in the diversity, frequency and duration of media use amplifies the signs of depression and anxiety related to the COVID-19 pandemic, the increase in the use of social media, specifically, leads to psychological distress (Zhao and Zhou 2020, Neill et al. 2021). In another study, which examines the positive correlation of the depression and distress felt by people during the COVID-19 pandemic with stress and anxiety, the use of media was found to be a factor in this particular correlation (Chao et al. 2020). On the other hand, the number of studies which focus on the correlation between the use of media during traumatic events and the state of finding meaning in life is considerably few. Even though it was found out that the state of finding meaning in life during traumatic times is a protective factor, and that the use of media, depending on the content of the media being followed, determines the degree of finding meaning (Zhang et al. 2015), there is not enough information regarding the diversity and the duration of media usage. Therefore, the diversity of media usage during the pandemic (social and traditional media), as well as its duration are the main variables of this study.

In accordance with the results of the studies conducted during various outbreaks that focus on demographic variables, there is an increase in the number of prevention methods against the virus due to the decrease of impulsive behaviors as the age gets

older. However, age and prevention behaviors against the virus usually has a correlation of an inverted U curve (Leung et al. 2003, Vijaya et al. 2005, Spinella 2007). In another study conducted during the COVID-19 pandemic, it was revealed that middle-aged people displayed prevention behaviors against the virus more often than younger or older people because of their higher perception of risk (Pasion et al. 2020). An additional consideration is that during the COVID-19 pandemic, there has not been any studies examining the link between the age and finding meaning in life. However, studies conducted with various contexts signify a positive correlation between the variables of age and finding meaning in life (Reker 2005).

In addition, the studies which have examined the effect of the COVID-19 pandemic on the mental wellbeing detected differences between men and women, and these differences were often associated to social gender rather than biological gender. Apart from the quarantines and lockdowns implemented during the pandemic, the transition of jobs and education to online platforms which had been previously practiced face-to-face have made women's domestic responsibilities and workload heavier, which affected women's mental health more negatively than men (OECD 2020, Wenham et al. 2020). The research findings associate mental problems that are more common among women with the increase in the cases of domestic psychological violence related to government lockdowns in addition to the fear of contracting the COVID-19 virus and growing domestic workload (Özdin and Bayrak-Özdin 2020, Sediri et al. 2020, Wang et al. 2020). Although it is not from a pandemic related literature, another finding regarding the gender gap reveals that women internalize relationship values and social ties, and that this internalization strengthens their state of finding meaning in life compared to men (İmamoğlu and Karakitapoğlu-Aygün 2004, İmamoğlu et al. 2011, Özdemir et al. 2019). Finally, it would not be wrong to assume that women would be following media more closely than men because of the said relationality. However, it is necessary to mention the studies which found out that social media addiction, specifically, is quite common among both sexes (CBS 2018).

Another demographic variable that should be analyzed within the framework of the COVID-19 pandemic is perceived medical condition. Current studies usually focus on perceived wellbeing, and state that this variable has a negative correlation with psychological distress, and a positive one with finding meaning in life (Arslan et al. 2020, Yıldırım et al. 2021). This study, on the other hand, focuses on the levels of psychological distress and finding meaning in life, and tests their relationship with perceived social ties and media use after checking the variables of age, sex, and perceived medical condition.

This study, which examines the level of psychological distress perceived by people, and whether they find meaning in life between April-June 2020, in which the COVID-19 pandemic has spread in Turkey, focuses on (i) the demographic changes of sex, age and perceived medical condition, (ii) the power of the social ties felt for local and extended groups, and (iii) the frequency in the use of social and traditional media. While local social ties means the ties perceived for smaller groups (family members, friends, coworkers or classmates, neighbors), extended social ties means the ties with extended groups (for one's city or country). In addition, social media channels include online platforms such as Facebook, YouTube, Twitter, Instagram, and Reddit, while traditional media channels include government agencies, printed material and radio/television platforms.

Within the context of descriptive hypotheses, a significant difference between genders is expected on the (H1) research variables. Compared to men, women score higher in the variables of psychological distress, finding meaning, local social ties, extended social ties and the use of social media and traditional media. Moreover, while (H2) age and perceived medical condition have negative correlation to the psychological distress people felt during the pandemic, they have a positive correlation to their state of finding meaning during the pandemic. Within the context of the main hypotheses, the level of perceived social ties to (H3) local groups (family members, friends, coworkers or classmates and neighbors) and extended groups (the city and the country one lives in) has a negative correlation to the psychological distress they experienced during the pandemic, whereas it has a positive correlation to their finding meaning during the pandemic. Additionally, the duration in which people are exposed to the information that is related to the COVID-19 pandemic (H4) through social media (Facebook, YouTube, Twitter, Instagram, etc.) and traditional media (government resources, printed material and radio/television) is positively correlated to the psychological distress they have perceived during the pandemic, and negatively correlated to finding meaning during the pandemic.

## Method

### Sampling and Procedure

As part of an extensive research, the general protocol of which was approved by the University of Texas at Austin's Office of Research Support and Compliance on 4 November 2019 with the protocol number 2016-11-0136, this study was conducted online in Turkey between April and June 2020 by using QUALTRICS software. The announcements for the research were shared on social media channels; the participants were informed about the content of the research and researchers by being presented an online information sheet, and the notion of voluntary participation was emphasized.

After answering the demographic information sheet and questionnaire, the participants were presented with information regarding personal total scores based on their answers, and they were offered cognitive, emotional, and behavioral suggestions that could help them cope with the COVID-19 pandemic. Furthermore, the participants have received contact information of the organizations that provide guidance regarding the COVID-19 pandemic such as Turkish Ministry of Health and World Health Organization.

In estimating the sampling size of the collected data through random sampling method, the rule that "for each item in the questionnaire, there should be at least 10 participants (Tinsley and Tinsley 1987)" was taken into consideration. The study has 1023 participants with access to internet, who live in Turkey, and either graduated from or still study at a university. Of the participants, 195 (19.1%) of them are male, while 828 (80.9%) are female. The ages of the samples vary between 18 and 46, and the average age is 25.14 years ( $S = 6.60$ ). The perceived medical condition shows a heterogenous distribution, and the perceived medical condition in a 5-Point Likert Scale that ranges from '1: very bad' to '5: very good' has an average score of 3.58 ( $S = .77$ ).

## Measures

### Demographic Information Form

The form, which consists of five questions about one's country, educational level, sex, age and perceived medical condition, was used in order to assess the demographic information of the participants.

### Scale for measure of psychological distress

The two-item scale, which was developed within the context of the study, was used to determine how much people feel "desperate and depressed" and "afraid and worried" during the COVID-19 pandemic. The participants submitted their thoughts with a 5-Point Likert Scale that ranges from '1: very little or none' to '5: very much', and the internal consistency coefficient was detected as .80. These high measurement scores reflect the increased level of psychological distress during the COVID-19 pandemic.

### Scale for finding meaning in life

The single-item scale, which was developed within the context of the study, was used to determine how much people find their lives meaningful during the COVID-19 pandemic. The participants submitted their thoughts with a 5-Point Likert Scale that ranges from '1: very little or none' to '5: very much'. These high measurement scores indicate the high level of finding meaning in life during the COVID-19 pandemic.

### Scale for social ties

The two-dimensional scale, which was developed within the context of the study, was used to determine how much people feel social ties to local or extended groups during the COVID-19 pandemic. While local social ties include the ties perceived to one's family members, friends, coworkers/classmates, and neighbors; extended social ties include the perceived social ties to the city and country one lives in. The participants submitted their thoughts with a 5-Point Likert Scale that ranges from '1: very little or none' to '5: very much', and the internal consistency coefficient was detected as .72 for local social ties, and .75 for extended social ties. These high measurement scores indicate a high level of perceived social ties to local and/or extended groups during the COVID-19 pandemic.

### Scale for media use

The two-dimensional scale, which was developed within the context of the study, was used to determine how people follow the information that is related to the COVID-19 pandemic through social or traditional media channels. While use of social media includes Facebook, YouTube, Twitter and other social media platforms (Instagram, Reddit, etc.), the use traditional media includes government sources, printed material and radio/television channels. The participants submitted their thoughts with a 5-Point Likert Scale that ranges from '1: very little or none' to '5: very much', and the internal consistency coefficient was detected as .71 for social media use, and .66 for traditional media use. These high measurement scores indicate a high level of following the news related to the COVID-19 pandemic on social and/or traditional media.

## Statistical analysis

Mean and standard deviation statistics were calculated with IBM SPSS-22 software, and gender differences were tested with multivariate analysis of variance (MANOVA) within the context of the variables of psychological distress, finding meaning in life, local social ties, extended social ties, social media use, traditional media use, age, and perceived medical condition. The connections between variables were assessed with Pearson's correlation test. In order to determine the variables that predict the degrees of psychological distress and finding meaning in life, a three-stage regression analysis was conducted. Demographic variables (sex, age, perceived medical condition) in the first block, social ties variables (local social ties and extended social ties) in the second block, and media use variables (social media use and traditional media use) in the third block were included in the analysis as the potential predictive variables of the level of psychological distress and finding meaning in life. The Pearson's correlation test scores and the need to control the variables on different blocks were effective in determining the models of hierarchical regression analysis.

## Results

In order to test possible gender differences, the data was analyzed with bootstrap method (5000 resampling) using one-way MANOVA within the context of research variables, and it was detected that gender has a significant overall effect on variables ( $F(8, 1014) = 5.28, p < .001, \text{Wilks}' \lambda = .96$ ).

**Table 1. Descriptive statistics and correlation scores**

Variables	Male <i>n</i> =195	Female <i>n</i> =825	Total <i>n</i> =1023	Correlation Scores										
				1	2	3	4	5	6	7	8	9		
1. Psychological distress	1.79 (.97) <sub>a</sub>	1.86 (.96) <sub>a</sub>	1.85 (.96)	----										
2. Finding meaning in life	3.38 (1.29) <sub>a</sub>	3.72 (1.10) <sub>b</sub>	3.66 (1.15)	-.17 <sup>d</sup>	----									
3. Local social ties	3.15 (.72) <sub>a</sub>	3.32 (.78) <sub>b</sub>	3.29 (.78)	.09 <sup>d</sup>	.17 <sup>d</sup>	----								
4. Extended social ties	2.93 (1.02) <sub>a</sub>	3.32 (1.08) <sub>b</sub>	3.25 (1.08)	.06	.20 <sup>d</sup>	.57 <sup>d</sup>	----							
5. Social media use	2.46 (.86) <sub>a</sub>	2.44 (.77) <sub>a</sub>	2.44 (.79)	.19 <sup>d</sup>	-.01	.14 <sup>d</sup>	.12 <sup>d</sup>	----						
6. Traditional media use	3.15 (1.11) <sub>a</sub>	3.35 (1.04) <sub>b</sub>	3.31 (1.06)	.13 <sup>d</sup>	.13 <sup>d</sup>	.17 <sup>d</sup>	.22 <sup>d</sup>	.27 <sup>d</sup>	----					
7. Sex	----	----	1.81 (.39)	.03	.12 <sup>d</sup>	.09 <sup>d</sup>	.14 <sup>d</sup>	-.01	.08 <sup>c</sup>	----				
8. Age	26.07 (7.02) <sub>a</sub>	24.93 (6.48) <sub>b</sub>	25.14 (6.60)	-.00	-.02	.05	-.02	-.08 <sup>d</sup>	.02	-.07 <sup>c</sup>	----			
9. Perceived medical condition	3.63 (.77) <sub>a</sub>	3.57 (.77) <sub>a</sub>	3.58 (.77)	-.09 <sup>d</sup>	.12 <sup>d</sup>	.10 <sup>d</sup>	.08 <sup>c</sup>	.02	.09 <sup>d</sup>	-.03	-.06	----		

Sex: 1 = male. 2 = female. Sex-based comparisons were indicated by subscripts (a, b) across each row such that different subscripts indicated a significant ( $p < .05$ ) mean difference; c:  $p < .05$ ; d:  $p < .01$

According to univariate analysis, a significant gender difference was detected in the variables of finding meaning in life ( $F(1, 1021) = 14.17, p < .001, \eta^2 = .01$ ), local social ties ( $F(1, 1021) = 7.43, p < .01, \eta^2 = .01$ ), extended social ties ( $F(1, 1021) = 21.77, p < .001, \eta^2 = .02$ ), traditional media use ( $F(1, 1021) = 5.76, p < .05, \eta^2 = .01$ ) and age ( $F$

(1, 1021) = 4.73,  $p < .05$ ,  $\eta^2 = .01$ ). Compared to men, women scored higher in the variables of finding meaning in life, local social ties, extended social ties and traditional media use, while they scored lower in the variable of age (Table 1).

The correlation scores between the variables are presented in Table 1. There is a negative correlation between the variables of psychological distress and finding meaning in life. Moreover, the variable of psychological distress has a negative correlation with the variable of perceived medical condition whereas it has a positive correlation with the variables of local social ties, social media use and traditional media use. Finally, the variable of finding meaning in life has a positive correlation with the variables of local social ties, extended social ties, traditional media use, sex (1: male, 2: female) and perceived medical condition.

A three-step hierarchical regression analysis was used in order to determine the variables that predict the levels of psychological distress and finding meaning in life (Table 2). Sex, age, perceived medical condition in the first block, local social ties and extended social ties in the second block, and social media use and traditional media use in the third block were added to the analysis as predictive variables. To control the risk of multicollinearity between predictive variables, variance inflation factors were calculated. The factor scores are all lower than 1.53, and no issues of multicollinearity were detected since they did not exceed the upper limit of 5 (Alauddin and Son-Ngheim, 2010).

While the variable of psychological distress was predicted negatively by perceived medical condition ( $\beta = -.09$ ,  $p < .01$ ), it was predicted positively by local social ties ( $\beta = .09$ ,  $p < .05$ ), social media use ( $\beta = .16$ ,  $p < .01$ ) and traditional media use ( $\beta = .09$ ,  $p < .01$ ). Those who have a perception of poor medical condition, have strong social ties with their local groups (family members, friends, coworkers or classmates, neighbors) during the COVID-19 pandemic, and follow the information related to the COVID-19 pandemic closely on social media (Facebook, YouTube, Twitter, Instagram, Reddit, etc.) and traditional media (government sources, printed material, radio/television) suffer from high levels of psychological distress.

**Table 2. Psychological distress and finding meaning in life depending on hierarchical regression results**

Demographic Variables	Psychological Distress			Finding Meaning in Life		
	<i>B</i>	<i>SE</i>	$\beta$	<i>B</i>	<i>SE</i>	$\beta$
Sex	.06	.08	.03	.35	.09	.12**
Age	-.00	.01	-.01	-.00	.01	-.00
Perceived Medical Condition	-.11	.04	-.09**	.18	.05	.12**
	$R^2 = .01, F(3, 1019) = 3.02^*$			$R^2 = .03, F(3, 1019) = 9.70^{**}$		
Social Ties	<i>B</i>	<i>SE</i>	$\beta$	<i>B</i>	<i>SE</i>	$\beta$
Local Social Ties	.11	.05	.09*	.12	.06	.08*
Extended Social Ties	.02	.03	.02	.14	.04	.13**
	$\Delta R^2 = .01, F(5, 1017) = 3.79^{**}$			$\Delta R^2 = .03, F(5, 1017) = 13.47^{**}$		
Media Use	<i>B</i>	<i>SE</i>	$\beta$	<i>B</i>	<i>SE</i>	$\beta$
Social Media Use	.19	.04	.16**	-.08	.05	-.06
Traditional Media Use	.08	.03	.09**	.10	.04	.09**
	$\Delta R^2 = .04, F(7, 1015) = 8.43^{**}$			$\Delta R^2 = .01, F(7, 1015) = 11.06^{**}$		

\* $p < .05$ ; \*\* $p < .01$ ; Sex: 1 = male, 2 = female

The variable of finding meaning in life is positively predicted by sex ( $\beta = .12, p < .01$ ), perceived medical condition ( $\beta = .12, p < .01$ ), local social ties ( $\beta = .08, p < .05$ ), extended social ties ( $\beta = .13, p < .01$ ) and traditional media use ( $\beta = .09, p < .01$ ). The women with positive perception of medical condition, high levels of social ties with their local group (family members, friends, coworkers or classmates, neighbors) and extended group (the city and the country they live in) during the COVID-19 pandemic and follow the information related to the COVID-19 pandemic closely on traditional media channels (government sources, printed material, radio/television) have a high degree of finding meaning in life.

## Discussion

The COVID-19 pandemic has caused heavy losses globally and affected all segments of society differently. In addition to worries based on medical health, the psychological, social and economic hardships on individuals and masses caused by the measures taken by the government (or on a personal level) to get the pandemic under control and the restrictions that were implemented, opened up a new field of research based on the COVID-19 pandemic. Researchers are trying to make sense of the situation, which is not very common in the history of humanity in terms of prevalence and potential impacts, and to reduce its negative effects. This study focuses on the psychological distress of people, and the degree as to how meaningful they consider their lives during a period in which the COVID-19 pandemic has affected Turkey substantially and examines the possible relationship between these concepts with certain demographic variables (sex, age, perceived medical condition), perceived social ties with local or extended groups, and the use of social and traditional media.

In accordance with the descriptive results of the study and consistent with the first hypothesis, during the COVID-19 pandemic, women (compared to men) (i) has found their life more meaningful, perceived stronger social ties with their (ii) local groups (family members, friends, coworkers or classmates, neighbors) and (iii) extended groups (the city and the country they live in), and followed (iv) traditional media channels, which include government sources, printed material and radio/television platforms, more closely. These results are consistent with current literature (Hupkens et al. 2016, Yu et al. 2017). Additionally, it is a common finding that women internalize relational values more often when compared to men (İmamoğlu and Karakitapoğlu-Aygün 2004, İmamoğlu et al. 2011), and this finding can be interpreted with social gender roles. In this study, contrary to expectations, no gender differences were detected in the variables of (i) psychological distress and (ii) use of social media such as Facebook, YouTube, Twitter, Instagram and Reddit. In the early stages of the pandemic, women and men experienced similar levels of psychological distress. This finding supports that the environment of uncertainty and the perceived risks during the early stages of the pandemic disturbed people similarly, regardless of their gender. In addition, it is essential to mention the studies revealing that social media addiction is common among both sexes (CBS 2018).

In accordance with further descriptive results, and consistent with the second hypothesis, those who have a perception of better medical condition during the COVID-19 pandemic perceive lower levels of psychological distress in addition to having higher levels of finding meaning in life. However, contrary to expectations, there

has not been a significant relation between the variables of age and psychological distress or finding meaning in life. A reason for the unverifiable hypotheses regarding age could be that the age range of participants in the study were not wide enough. For instance, there are studies which confirmed that the correlation between age and pandemic-related behavior (e.g., taking precautions against the virus) is an inverted U curve (Leung et al. 2003, Vijaya et al. 2005, Spinella 2007; Pasion et al. 2020). In this context, future studies should pay attention to sampling characteristics, and demographic distribution.

In accordance with the main results of the study, and consistent with the third hypothesis, those who perceive stronger social ties with their family members, friends, coworkers/classmates and neighbors or with the city and the country they live in, find meaning in life during the pandemic. This finding is supported by other contemporary findings in the literature (Hicks and King 2007, Krause 2007, Hicks and King 2009). In the same hypothesis, however, and contrary to expectations, those who perceive stronger social ties with their family members, friends, coworkers/classmates and neighbors, have a stronger perception of psychological distress during the pandemic. This could be explained with the worry and stress felt by the people in local groups, which the participants perceive strong ties with, for their medical conditions. However, the validity of this explanation should be further tested in future studies.

Finally, consistent with the fourth hypothesis those who follow recent developments regarding the COVID-19 pandemic either from the social media channels such as Facebook, YouTube, Twitter, Instagram, and Reddit or from the traditional media channels, which include government sources, printed material and radio/television have a higher rate of perceived psychological distress. There are studies in the literature that support these findings (Asibong et al. 2020, Holman et al. 2020, Thorisdottir et al. 2020, Neill et al. 2021). However, contrary to the remark in the first hypotheses, those who follow recent developments regarding the COVID-19 pandemic from traditional media channels have a higher rate of finding meaning in life during the COVID-19 pandemic. The reason behind this finding could be explained with the content of the messages people receive from these traditional media channels they follow (Zhang et al. 2015). Even though the study asks the participants how much they follow the information related to the COVID-19 pandemic on social and traditional media channels, they have not been asked any questions that is related to the content of their messages. Future studies should focus on these contents that people have been exposed to during the pandemic and try to make sense of their effects on psychological processes.

The negative correlation between the psychological distress and finding meaning in life during the COVID-19 pandemic supports that the degree of finding meaning in life during the pandemic is a protective factor for people. Additionally, to emphasize the importance of this study, it is necessary to mention that it is one of the first studies in Turkey about the COVID-19 pandemic. Results of the analysis include a big number of participants' (n = 1023) first responses about the pandemic. In order to determine how much of a psychological distress people felt or how much they considered life meaningful during the early stages of the pandemic, and to identify the variables regarding these situations would fill a major gap in the developing literature about the pandemic which has dominated the world. The findings of the study also provide information for the measurement tools and intervention methods to be developed for the pandemic.

It is necessary to note the limitations of the study, in addition to the aforementioned contributions. The relational research pattern and the analysis method of the study

prevents making causal inferences regarding the findings. Readers should avoid interpreting the relationships between the variables with causal statements. It is necessary to have an experimental research pattern to make any causal inferences. In this respect, future studies regarding similar variables should be designed with an experimental research pattern, and the relationships determined in these studies should be tested in terms of their causality. Another limitation in this study could be specified as the potential criticism against validity and reliability of the data collecting tools used in the study. The measurement tool for finding meaning in life consists of a single item. The measurement tools for psychological distress, social ties and media use were all applied for the first time in this study. It is worth mentioning that the purpose of collecting the first ever responses about the pandemic made it necessary for the authors to develop the measurement tools in a short period of time. Moreover, various single-item measurement tools have been used in the literature quite often (Wanous et al. 1997, Elo et al. 2003). The findings detected in this study, which are also consistent with other works in the literature also support the validity and reliability of the measurement tools. Finally, specific demographic features of the participants may also create another limitation for the study. For example, the possibility of participants' being diagnosed for a current or past mental illness may affect how research findings are interpreted. However, there are no questions for it in the demographic information sheet. Future studies should ask participants whether they have been diagnosed with a mental illness. Additionally, since the study was conducted online, the participants were only those who had access to the internet. In order to minimize the complicated effect of the aforementioned limitations on findings, the study was conducted with a data set collected from extensive sampling.

## Conclusion

The findings of the study make notable contributions to the literature that developed as a result of the pandemic as well as the researchers/practitioners who work on the subject by making sense of people's level of psychological distress and how meaningful they consider life in the early stages of the pandemic with variables related to these concepts. The findings regarding the gender differences determined as part of research variables, and how demographic variables (sex, age, perceived medical condition), social ties perceived for local/ extended groups and the use of social/traditional media predict psychological distress and finding meaning in life would be beneficial for the development of post-pandemic intervention programs. However, it is essential to add that, due to its effects and prevalence, the COVID-19 pandemic is an unusual event in human history. Therefore, there is an ongoing need of studies that deal with the effects of the pandemic.

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