

Original Research

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The Effect of Health-Related Media Messages on Fear and Uncertainty about the COVID-19 Pandemic

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Abstract

Objective: This study was conducted to investigate individuals' perceptions of media messages about the COVID-19 pandemic and the effect of these messages on their fear and uncertainty.

Methods: Data for this descriptive correlational study were collected between October and November 2020. A total of 653 individuals living in Turkey provided online survey data by completing a Personal Information Form, the Pandemic Uncertainty Scale, and the COVID-19 Pandemic Fear Scale.

Results: The mean age of the participants was 52.1 ± 12.6 , and 79.9% were female. It was found that 27.9% of participants "always" followed COVID-19 news in the media, and 41.3% "often" followed COVID-19-related news. Participants' COVID-19 fear (24.46 ± 8.07) and uncertainty (55.35 ± 8.63) scores were moderate and correlated.

Conclusions: Level of trust in mass media was found to affect uncertainty about the pandemic. As level of trust in mass media increased, uncertainty about the pandemic decreased. Appropriate measures must be identified and adopted for effective and safe media use in situations posing massive and significant health threats such as COVID-19.

The coronavirus disease 2019 (COVID-19) is an infectious disease that has spread all over the world in a short time. The first case of COVID-19 in Turkey was reported on March 11, 2020, and the number of cases peaked on April 11, 2020. To limit the spread of COVID-19, school closures, curfew for individuals over the age of 65, flexible working hours in business life, entry and exit bans in cities where cases were common, curfew on weekends, mandatory mask-wearing in public areas, etc., were implemented. Depending on the number of deaths observed after the measures were taken, Turkey started to take steps to transition to the "new normal" period as of May 11, 2020. During this period, physical distance, hand hygiene, and mask-wearing continued. With the declaration as a pandemic by the World Health Organization (WHO), COVID-19 has become a most important agenda of governments, health professionals, and individuals worldwide. While important measures have been taken to prevent infection, mass media and social media platforms have been critical in informing people about the disease.¹

In times such as natural disasters and pandemics, when chaos, fear, and uncertainty are rampant, raising anxiety and fear, the emotionality and sometimes social polarization make communication and dissemination of correct information difficult.² Different theories have been developed on how to best manage communication in times of crisis. Among these crisis communication theories, the most important is the Situational Crisis Communication Theory,³ which provides a comprehensive framework for effective crisis response. Although institutions and organizations create responses to the crisis situation in this theory, first designing and organizing information and then providing information are the basic responses necessary for all crises in order to protect the public and stakeholders from harm. This designed information not only helps the public cope with the crisis but also helps them fight the psychological threats produced by the crisis. For this reason, designing and organizing up-to-date information about the pandemic and then providing clear information about it are the basic responses that should be made during the pandemic as well as in all crises.^{4,5}

During the COVID-19 pandemic, people sought help for fear of contracting the disease and to fight the disease. In this period, when social isolation was recommended, individuals who spent most of their time at home sought help through the mass media. Therefore, the use of media increased during the pandemic. In crises, including the pandemic, communication is an effective force in determining the cognitive and behavioral reactions of individuals and society, given its functions of influencing, informing, directing, and when necessary, manipulating stakeholders.⁶ The literature underscores the importance of anticipating potential issues that may arise from the lack of memorability and comprehensibility in health-related communication messages. It is also emphasized that messages should be carefully crafted within the framework of Permanent Message

Theory.⁷ In an environment of fear and uncertainty, media messages can be perceived differently by members of society. In the case of COVID-19, individuals repeatedly watched the news about the virus, which led to an increase in their anxiety, uncertainty, and fear. In addition, contradictory statements in the media caused more uncertainty and fear.^{8,9} Studies indicate that individuals' use of social media during the COVID-19 pandemic affected their mental health. The dissemination of accurate information through social media platforms has been associated with increased adherence to preventive measures, emphasizing the importance of reliable sources and health literacy in promoting positive health.^{10–12} Understanding the impact of social media use on individuals' well-being is crucial for developing effective interventions and support systems to address the escalating mental health issues during a pandemic.

During the pandemic, governments called for social isolation, hygiene, and protection from the disease through the media.¹ It was crucial to prevent the emergence of false information and fake news during the COVID-19 pandemic. From time to time, "fake news", false information, and rumors about the disease were published on social media, leading to panic. False information and news create panic, fear, and anxiety in individuals, negatively affecting the mental health of the community.^{1,13} On the other hand, the accurate information spread by the media during the pandemic played a very important role in helping the public cope with the uncertainty and fear experienced due to COVID-19.¹⁴

Although many health communication theories tend to focus on expressing the role of cognitive mechanisms, they also recognize the importance of the social context in which people are placed.¹⁵ The Extended Parallel Process Model¹⁶ and the Risk Perception Attitude Framework¹⁷ describe how threat and activity perceptions affect people's responses to fear calls and health risks. Although not explicitly discussed in either theory, the internal mechanisms involved in responses to fear¹⁶ and risk¹⁷ are likely to be systematically shaped by the broader social environment in which people live. At the most basic level, the way individuals respond to a particular threat is likely to be influenced by the reactions of other people. That is, responses to threats and perceptions of effectiveness can be contagious.

The uncertainty created by the pandemic and the uncontrolled developments in the process caused individuals to experience fear.¹⁹ Fear is an adaptive emotion that activates an individual to deal with potential threat. When fear is too extreme, it can have negative effects at the individual level, such as phobia and social anxiety, and at the social level, such as panic shopping and xenophobia. On the other hand, insufficient fear has negative effects on individuals and society. People may ignore government measures to slow the spread of the pandemic. In addition, fear triggers safety behaviors (such as hand washing) that can reduce certain threats (such as contamination), but paradoxically, it can also increase fear (such as contamination concerns and health anxiety).^{9,19,20} This crisis period is also accompanied by feelings such as contamination, catching the disease, losing jobs due to the worsening economy, xenophobia, losing or not seeing loved ones for a while, and fear of uncertainty.⁹ The uncertainty experienced during the COVID-19 pandemic was perceived as a threat and posed challenges, such as individuals' not being able to predict the future or make future plans. The more uncertainty individuals experienced in this process, the more unhappy, uncomfortable, and restless they felt.²¹ Whatever the reason, uncertainty should be considered as an important public health problem because it has the potential to adversely affect the mental health of the individual, family, and society.^{14,19}

During the pandemic, the use of mass media increased, and it has become even more important to investigate the effect of messages presented in the media on fear and uncertainty in society. Governments and health professionals should use the media to raise awareness about COVID-19 and reduce panic. In this way, the power of the media can be used in the most adaptive manner.^{1,13} In the literature, the effects of health-related messages on human behavior are discussed, and it is emphasized that attention should be paid within the framework of memorable message theorizing especially in the preparation of these messages.⁷ The present study was conducted to investigate the perceptions that media messages about the pandemic created among individuals and the effect of those messages on society's fear and uncertainty about the pandemic.

Research Questions

- What perceptions were created by media messages regarding the COVID-19 pandemic?
- What levels of fear and uncertainty were experienced regarding the COVID-19 pandemic?
- What was the effect of media messages regarding the COVID-19 pandemic on the fear and uncertainty experienced in society?

Materials and Methods

Research Type

Data for this descriptive and correlational study were collected between October and November 2020.

Research Population and Sample

The target population of the study consisted of individuals over the age of 18 living in Turkey during the COVID-19 pandemic. In order to determine the sample size of the study, the sample size of the universe is unknown. As a result of the power analysis using $n = \frac{t^2 pq}{d^2}$. This approach estimated a sample size of at least 379 volunteers, with a 95% confidence interval and 5% error margin, based on the 44.7% prevalence of anxiety due to COVID-19 reported in the study of Li and Wang.¹⁸ In addition, the minimum sample size was calculated to be 380 in the OpenEpi sample calculation program, again based on a prevalence rate of 44.7%, a standard error of 5%, and a confidence interval of 95%. Our sample consisted of 653 individuals who were aged 18 and over, living in Turkey during the COVID-19 pandemic, and literate in Turkey. They all had the technological equipment to access the online research link and voluntarily participated in the study.

Data Collection Tools

Data were collected using the Personal Information Form, the Pandemic Uncertainty Scale, and the Pandemic Fear Scale.

Personal information form

This form consisted of 23 questions on sociodemographic characteristics, experiences related to the COVID-19 pandemic, and opinions of media messages about the pandemic. In addition, participants' level of trust in the mass media was evaluated on a visual scale between 0 (very bad) and 10 (very good). The form was developed in line with the literature^{9,22} and based on the opinions of 3 experts in the fields of public health, psychology, and nursing.

Pandemic Uncertainty Scale

The scale assessed the uncertainty experienced by individuals regarding the pandemic. It was developed by Çal and Avci²³ and includes 18 items under 3 factors: self-efficacy and awareness of the pandemic (Items 6, 8, 15, 16, 17, 18), uncertainty about the current situation (Items 1, 2, 3, 4, 5), and uncertainty about coping with the pandemic (Items 7, 9, 10, 11, 12, 13, 14). The total scale score and factor scores are calculated separately. The items are rated on a 5-point Likert-type scale from strongly disagree to strongly agree. Items 6, 8, 15, 16, 17, and 18 are reverse-coded. The minimum and maximum scale values are 6-30 for the factor of self-efficacy and awareness of the pandemic, 5-25 for the factor of uncertainty about the current situation, 7-35 for the factor of uncertainty about coping with the pandemic, and 18-90 for the total score. Higher scores on the factor of self-efficacy and awareness of the pandemic reflect decreased uncertainty. Higher scores on factor of uncertainty about the current situation, the factor of uncertainty about coping with the pandemic, and the total score indicate greater uncertainty.²³

COVID-19 Pandemic Fear Scale

This scale was developed by our research team²³ to determine individuals' levels of fear of the COVID-19 pandemic. The scale includes eight items, and interpretations are made based on the total score. Each item in the scale is rated on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Higher scores reflect that fear of the pandemic is high.²³

Data Collection Process

Data were collected via social media platforms using a survey created via Google forms. Participants using social media accounts across Turkey were invited to participate. Participants' informed consent was obtained by adding a preliminary explanation to the data collection form regarding the research team and the purpose of the study. Participants were also informed that participation was voluntary, they could withdraw from the study at any time, their information would be kept confidential, and the data would be used only for scientific purposes. Before starting the study, a pilot study was conducted by administering the data collection tools to a group of 15 people. Based on the pilot study's results, the tools were revised and finalized. It took about 15 minutes for the participants to fill out the forms.

Data Analysis

The data were analyzed using the SPSS for Windows Version 22.0 (IBM Corporation, Armonk, NY, USA) program. Descriptive data are presented as number, percentage, mean, standard deviation, and minimum and maximum values. Reliability data are presented with Cronbach's alpha coefficient, and the level of statistical significance was set at 0.05. Normality was assessed with the Kolmogorov-Smirnov test, and Pearson correlation analysis and standard multiple regression were performed.

Ethical Considerations

Approval was obtained from Ankara Medipol University, Health Sciences Non-Interventional Research Ethics Committee (no: 74791132-109/321; April 29, 2020). Permission was obtained for use of the study's measurement tools. An explanation about the research was added to the online data collection form, and it was considered that the participants who ticked the statement "I have

read the above information and voluntarily participate in this study" gave written consent. All stages of the study were based on the ethical principles of the Declaration of Helsinki.

Results

The ages of the participants varied between 18 and 55 (mean age: 52.1 ± 12.6). Regarding other demographics, 79.9% of the participants were female, and 87.1% were married. The majority of participants (85.6%) were university graduates, 55.4% did not work, 67.3% reported that their income was equal to their expenses, and 58.8% lived in the city center (Table 1).

Table 1. Descriptive characteristics of participants and regarding the use of media during the COVID-19 pandemic

Characteristics	Mean \pm SD	Min-max
Age	52.1 \pm 12.6	18–55
The state of trusting the messages on mass media during the pandemic		
Radio	4.62 \pm 3.44	0–10
Internet sites	3.48 \pm 3.15	0–10
Newspaper/magazine	3.95 \pm 3.14	0–10
Social media	4.11 \pm 3.20	0–10
	3.70 \pm 3.12	0–10
	n	%
Gender		
Male	131	20.1
Female	522	79.9
Marital status		
Single	84	12.9
Married	569	87.1
Level of education		
Primary school	11	1.8
High school	44	6.7
University	559	85.6
Postgraduate	39	6.0
Working status		
Working	131	20.1
Unemployed	362	55.4
Student	160	24.5
Level of income		
Income less than expenses	211	32.3
Income equal to expenses	374	67.3
Income more than expenses	68	10.4
Place of residence		
City	384	58.8
Town	204	31.2
Village	65	10.0

(Continued)

Table 1. (Continued)

Characteristics	Mean ± SD	Min-max
Frequency of following the pandemic in the media		
Always	182	27.9
Often	270	41.3
Occasionally	171	26.2
Rarely	25	4.6
Sources to follow the developments related to the pandemic*		
Television	517	25.9
Social media	486	24.3
Internet sites	470	23.5
Family/relatives/friends	214	10.7
WhatsApp groups	127	6.4
Academic publications	90	4.5
Newspapers/magazines	50	2.5
Radio	30	1.5
Announcements/brochures	12	0.6

*Participants could choose more than one option.

Participants were asked to rate (between 0 and 10) their level of trust in mass media during the pandemic. It was found that participants trusted television most (4.62 ± 3.44) and radio the least (3.48 ± 3.15). Level of trust in social media was found to be 3.70 ± 3.12 . It was revealed that 41.3% of the participants “often” followed the news regarding the pandemic, and 27.9% “always” followed the COVID-19 news. The most frequently used sources of COVID-19-related news were television (25.9%), social media (24.3%), and Internet sites (23.5%), respectively (Table 1).

Table 3 presents participants’ views regarding media messages during the pandemic; 38.0% of the participants reported that informational media messages during the pandemic were not sufficient, whereas 36.6% reported that the frequency of the messages was high. The majority of participants were undecided about the accuracy and reliability of the messages and the objectivity of the message contents (39.4% and 37.4%, respectively). The majority of

participants did not agree that the messages were fictional and did not reflect the truth (53.6%); there was exaggeration of the facts (51.3%), and the contents of the messages were not clear (42.9%). In addition, whereas 66.9% of participants reported that media messages were not too complex to be understood, 43.0% thought that the information provided by the experts was contradictory (Table 2).

Participants’ mean score on the COVID-19 Pandemic Fear Scale was 24.46 ± 8.07 (min: 8, max: 40). The Pandemic Uncertainty Scale total mean score was 55.35 ± 8.63 (min: 26, max: 83). Mean scores on the scale factors were 14.06 ± 4.90 (min: 6, max: 30) for self-efficacy and awareness of the pandemic, 17.57 ± 4.63 (min: 5, max: 25) for uncertainty about the current situation, and 23.71 ± 5.76 (min: 7, max: 35) for uncertainty about coping with the pandemic. In general, level of fear of the pandemic and uncertainty about the pandemic were moderate.

The Pandemic Uncertainty Scale was correlated with the COVID-19 Pandemic Fear Scale. Positive and moderate relationships were found between the Pandemic Uncertainty Scale, the factor of uncertainty about the current situation, the factor of uncertainty about coping with the pandemic, and the COVID-19 Pandemic Fear Scale. However, a negative and weak relationship was found between COVID-19 fear levels and the Pandemic Uncertainty Scale’s factor of self-efficacy and awareness of the pandemic (Table 3).

A weak negative relationship was found between participants’ level of trust in all mass media, except the Internet, and the total Pandemic Uncertainty Scale score ($P < 0.05$). In addition, a weak positive relationship was found between the factor of self-efficacy and awareness of the pandemic and level of trust in all communication tools ($P < 0.001$). No statistically significant relationships were found between level of trust in mass media, COVID-19 fear, and the Pandemic Uncertainty Scale factors of uncertainty about the current situation and uncertainty about coping with the pandemic (Table 3).

A standard multiple regression analysis was conducted to investigate whether fear of COVID-19 pandemic and level of trust in mass media could predict pandemic uncertainty. Fear of pandemic and trust in mass media explained 25.2% of the variance in pandemic uncertainty ($R^2 = 0.252$). A significant positive relationship was found between fear of pandemic and uncertainty ($\beta = 0.458$, $P < 0.05$). A 1-unit increase in fear of pandemic yielded a 0.490 increase in uncertainty ($\beta = 0.490$). A significant negative relationship was observed between trust in TV and pandemic uncertainty

Table 2. Distribution of participants’ views on messages presented in the media during the COVID-19 pandemic

Perceptions of media messages about the pandemic	Disagree		Undecided		Agree		Not applicable	
	n	%	n	%	n	%	n	%
Public information messages are sufficient.	248	38.0	178	27.3	215	32.9	12	1.8
Messages are too frequent.	234	35.8	170	26.0	239	36.6	10	1.5
Messages are accurate and reliable.	192	29.4	257	39.4	190	29.1	14	2.1
Message contents are objective.	205	31.4	244	37.4	165	25.3	39	6.0
Messages are fictional and do not reflect reality.	350	53.6	180	27.6	95	14.5	28	4.3
There is exaggeration in messages.	335	51.3	172	26.3	124	19.0	22	3.4
The content of the messages is not clear.	280	42.9	190	29.1	156	23.9	27	4.1
The messages are too complex to be understood.	437	66.9	122	18.9	81	12.4	13	2.0
Information given by experts is contradictory.	155	23.7	177	27.1	281	43.0	40	6.1

Table 3. The relationship between participants' mean scores on the COVID-19 Pandemic Fear Scale, level of trust in mass media tools, and mean scores on the COVID-19 Pandemic Fear Scale and the Pandemic Uncertainty Scale

Level of trust in mass media tools	COVID-19 Pandemic Fear Scale		Pandemic Uncertainty Scale							
			Self-efficacy and awareness of the pandemic		Uncertainty about the current situation		Uncertainty about coping with the pandemic		Total	
	r	P	r	P	r	P	r	P	r	P
COVID-19 Pandemic Fear Scale	–	–	–0.214	<0.001	0.456	<0.001	0.521	<0.001	0.446	<0.001
TV	–0.001	0.981	0.251	<0.001	0.013	0.749	–0.039	0.323	–0.161	<0.001
Radio	0.037	0.347	0.194	<0.001	0.001	0.977	–0.030	0.441	–0.130	0.001
Internet sites	–0.006	0.888	0.167	<0.001	0.015	0.697	0.068	0.081	–0.041	0.295
Newspaper/magazine	0.012	0.767	0.204	<0.001	–0.021	0.593	–0.006	0.884	–0.131	0.001
Social media	–0.022	0.581	0.145	<0.001	–0.023	0.554	–0.001	0.981	–0.096	0.015

r: Pearson correlation coefficient

Table 4. Results of multiple regression analysis examining the effect of fear of COVID-19 pandemic and level of trust in mass media on pandemic uncertainty perception

Independent variable	Dependent variable	β	t	p	Beta	F	R ²
	Constant	45.044	43.685	<0.001		36.322	0.252
COVID-19 Pandemic Fear	Pandemic uncertainty	0.490	13.428	<0.001	0.458		
TV		–0.407	–2.642	0.008	–0.162		
Radio		–1.136	–0.835	0.404	–0.050		
Internet sites		0.687	3.709	<0.001	0.250		
Newspaper/magazine		–0.215	–1.048	0.295	–0.080		
Social media		–0.309	–1.905	0.057	–0.112		

($\beta = -0.162$, $P < 0.05$). A 1-unit increase in trust in TV resulted in a -0.407 decrease in uncertainty ($\beta = -0.407$, $P < 0.05$). There was a significant positive relationship between trust in the Internet and pandemic uncertainty ($\beta = 0.250$, $P < 0.05$). A 1-unit increase in trust in the Internet yielded a 0.687 increase in uncertainty ($\beta = -0.407$, $P < 0.05$) (Table 4).

Discussion

Results revealed that 27.9% of the participants “always” followed the pandemic in the media, and 41.3% “frequently” followed the news about the pandemic. The media sources followed were television (25.9%), social media (24.3%), and websites (23.5%), respectively. Çerçi *et al.* (2020) reported that information about COVID-19 was obtained mostly through television (32.5%); 28.0% used social media and 13.0% followed some websites. The same study revealed that 75.8% of participants perceived social media as a need.²² One study investigated the change in individuals due to the COVID-19 pandemic and found that 75.9% of participants wanted to follow the news, and the frequency of following social media increased by 59.1%.²⁴ In parallel with the literature, this study revealed that our Turkish individuals used all mass media, including social media and Internet sites, to be aware of developments related to this important health threat.

When participants were asked to rate their level of trust in mass media during the pandemic between 0 and 10, the highest level of trust was in television (4.62 ± 3.44), whereas the lowest was in radio

(3.48 ± 3.15) and social media (3.70 ± 3.12), 39.4% were undecided whether the messages presented in the media were accurate and reliable, and 37.3% were doubtful of messages' content. On the other hand, 53.6% did not agree that the messages were fictional and did not reflect reality, and 51.3% did not believe that there was exaggeration in the messages.

One of the most important components of crisis communication is being perceived as reliable by the public. In crisis communication, community insights are supported in many aspects such as transparency and empathy as well as the right to access information with the messages given to the community.² Many national and international studies have reported on the COVID-19 infodemic and its effects during the pandemic.^{3,25–28} Çerçi *et al.* (2020) revealed that 18.5% of their participants found television reliable and 15.4% found social media reliable.²² One study on COVID-19 vaccines carried out on Ekşi Sözlük, which is a widely used media tool in Turkey, found that 58.2% of shared messages consisted of speculation and subjective content.²⁹ According to statistics about TikTok, whose largest user groups are between the ages of 18 and 24 (42%) and 13 and 17 (27%), consumer videos provided more worrying and less factual and useful information than WHO videos. Among the TikTok videos, very few (4.3%) videos were found to publish misinformation about Covid-19. These are all videos posted by consumers.³⁰ One study comparing the official social media posts of the Ministries of Health of the United States and Turkey showed that only 19.4% of Turkish posts were on non-COVID-19 topics, whereas this rate was 36.5% for the US Ministry of Health.³¹

It has been reported that the aims of the posts on the official Twitter account of the Ministry of Health, which is among the main social media resources in Turkey, were to inform and warn (74%); provide surveillance, monitoring, and awareness (63%); and raise public awareness of risks and crises (53%).³¹ The heterogeneous structure of social media and nonexpert people adding their own comments to posts yield problems of confidentiality and reliability.^{32,33} Trust and belief are significant factors that influenced individuals' responses to information during the COVID-19 pandemic, particularly in the realm of social media. Studies underscore the crucial role of trust and belief in shaping individuals' responses to COVID-19 information, influencing their behaviors, attitudes, and decision-making processes during the pandemic.^{34–36} Trust in institutions, health-care workers, and reliable sources of information were highly valuable in increasing confidence, reducing fear, and promoting adherence to preventive measures in the face of the COVID-19 crisis. Videos and posts related to COVID-19, which were presented through unofficial channels especially on social media, contained very little useful information, which is seen as a lost opportunity to a large extent. The relatively low level of public confidence in the messages presented on social media may be related to this fact.

Participants' level of COVID-19 fear and pandemic uncertainty was found to be moderate. A weak negative relationship was found between COVID-19 fear levels and the Pandemic Uncertainty Scale's factor of self-efficacy and awareness of the pandemic. On the other hand, a moderate positive relationship was found between COVID-19 fear levels and the Pandemic Uncertainty Scale's factors of uncertainty about the current situation and uncertainty about coping with the pandemic. In line with these data, perceptions of uncertainty experienced during the pandemic affected the individuals' levels of fear. Along with the physical and biological effects of the pandemic, there were important psychological effects such as depression, stress, and anxiety.³⁷ Increasing individuals' uncertainty is a situation that needs to be managed; otherwise, it may negatively affect psychological health and coping.^{9,22} One study conducted during the pandemic revealed that the existence of job anxiety, alienation, not being able to see loved ones, and the fear of losing them were pointed out within the context of fear and uncertainty.⁹ It is seen that important crisis periods not only affect the psychological health of individuals, but this influence also directs individual awareness, self-efficacy, and coping.

A weak negative relationship was observed between participants' level of trust in mass media and the Pandemic Uncertainty Scale total score and the factor of self-efficacy and awareness of the pandemic. These data indicate that as the level of trust in the mass media increased, uncertainty regarding the pandemic decreased, and self-efficacy and awareness of the pandemic increased. It has been reported in the literature that crisis communication is much easier when a relationship of trust is established.² One qualitative study revealed that traditional media is less effective on negative mood than social media platforms and that social media triggers depression, anxiety, and stress more.³⁸ Çelik and Diker argue that the perception of risk and uncertainty brought about by the pandemic has affected the depression and stress experienced by individuals and increased the use of social media.³⁷ Due to its ease of use, people seek health-related information on the Internet and social networks. As a result of the anxiety caused by the information they have acquired in this way, individuals try to obtain new information, which continues frequently and repetitively for a while, eventually turning into a fear paradox.³⁹ Frequent use of the Internet to gain health-related information and in decision-

making is defined as cyberchondria (i.e., the illness of searching for illness on the Internet), which is commonly comorbid with mental problems.^{9,40,41} One quasi-experimental study that compared people's during-pandemic social media posts with their pre-pandemic posts reported that the pandemic increased psychological changes by 14%. It is thought that this psychological influence decreased over time as a result of people's adaptation to conditions and the "new normal."⁴² One study conducted in Turkey revealed a positive and direct relationship between depression and social media use, between depression and stress and fear of missing out, and between fear of missing out and social media use. In addition, it was found that the fear of missing out had a mediating role in the relationship between depression and stress and social media use.³⁷ Effective and safe media content supports the ability to cope with negative conditions, whereas uncontrolled and unsafe content brings with it negative emotions and experiences such as uncertainty and anxiety. Our multiple regression analysis revealed that as fear of COVID-19 pandemic and trust in TV increase, pandemic uncertainty decreases, while an increase in trust in the Internet leads to an increase in uncertainty. The rising rates of Internet usage in society are likely to exacerbate uncertainty during a potential pandemic.

Limitations

Due to the pandemic process, collecting data online instead of using the probability sampling method is an important limitation. For this reason, the sample's power to represent Turkey is low. Despite this, the results are valuable because they examine the impact of the media on fear and uncertainty during the critical period of the COVID-19 pandemic.

Conclusion and Recommendations

The study revealed that the majority of participants followed the news regarding COVID-19 in the media, and they trusted television more than social media and radio among the mass media; however, even this trust was below a moderate level. Participants were found to have moderate levels of COVID-19 fear and pandemic uncertainty, and these two constructs were found to be interrelated. As the level of trust in mass media increased, uncertainty about the pandemic decreased. Mass events and phenomena such as COVID-19 set the agenda of the whole world by increasing the use of media tools to obtain information. In order not to experience negative emotions such as uncertainty and anxiety, coping difficulties, and fear in important societal situations that may affect human health, the first thing to do is for official institutions, rather than individuals, to constantly provide reliable information. To present information and messages to society in a reliable manner, common information and communication platforms should be established among the mass media, health institutions, community-based organizations, and all relevant stakeholders. Media literacy training should be provided to the public so that they can recognize inaccurate, incomplete, and misleading content. It is thought that media literacy and health literacy are prerequisites for society to distinguish between correct and incorrect information in the media, to analyze message contents correctly, and to produce their own messages in situations that pose a global health threat such as COVID-19. Our results support the presentation of secure media messages through TV as a means to reduce uncertainty during a pandemic. In addition to the basic competencies and technical skills

necessary to combat the pandemic, it is recommended that crisis communication skills be developed at the same level within the framework of relevant communication theories. In addition, technological applications should be developed for the control, detection, and removal of nonscientific online posts, and they should be controlled within the framework of relevant laws. The effect of the media on coping with negative conditions in society should regularly be evaluated.

Data availability statement. The datasets generated during the current study are available from the corresponding author.

Author contribution. AC, MK and IAA were responsible for this study's design. The participants were obtained by AC, MK. IAA supervised the study. AC, MK was responsible for the drafting and revising of the manuscript. IAA approved the final manuscript.

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Ethical standard. Approval was obtained from Ankara Medipol University, Health Sciences Non-Interventional Research Ethics Committee (no: 74791132-109/321, date: 29.04.2020). Permission was obtained for the measurement tools used in the study. An explanation about the research was added to the online data collection form, and participants who ticked the statement "I have read the above information and voluntarily participate in this study" were considered to have provided written consent. All stages of the study were based on the ethical principles of the Declaration of Helsinki.

Declaration. The data sets generated during the current study are available from the corresponding author.

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