



## Changes in the Lives of Middle-Aged Adults and Their Non-Formal Educational Needs During the COVID-19 Pandemic

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### ABSTRACT

Throughout history, various epidemics have affected societies socially, economically, and psychologically by causing problems for humanity. COVID-19 epidemic, which started in Wuhan, China late in December, 2019 and has caused and continues to cause, millions of people in the world to get infected and a significant number of people to lose their lives. Considering the pandemic process that we are experiencing, this study aims to identify changes in the lives of middle-aged adults and their educational needs during the COVID-19 pandemic. In this case, 19 individuals who live in different socio-economic regions of Turkey participated in the study, based on qualitative research design, voluntarily, were interviewed. The data collected through a demographic information form, a semi-structured interview form, and a story completion form developed by the researchers were analyzed through content analysis. As a result of the study, it was revealed that negative psychological and economic impacts emerged; observed differences in hygiene, diet, and social life behaviors; and participants wanted to receive education on public health, COVID-19 pandemic, and information technologies.

**Keywords:** COVID-19, pandemic, adult education

## Orta Yaş Üzeri Yetişkinlerin Covid-19 Pandemisi Sürecinde Yaşamlarındaki Değişiklikler ve Yaygın Eğitim İhtiyaçları

### Öz

Tarih boyunca ortaya çıkan çeşitli salgın hastalıklar insanlık için sorunlar oluşturarak toplumları sosyal, ekonomik ve psikolojik olarak etkilemiştir. Çin Halk Cumhuriyeti'nin Wuhan şehrinde, 2019 yılının aralık ayının sonlarına doğru ortaya çıkan ve halen devam etmekte olan COVID-19 salgını da tüm dünyada milyonlarca insanın enfekte olmasına ve çok sayıda kişinin yaşamını kaybetmesine neden oldu. İçinde bulunduğumuz salgın sürecinden hareketle; bu araştırmanın amacı, orta yaş üzeri yetişkinlerin COVID-19 pandemisi sürecinde yaşamlarındaki değişiklikleri ve eğitim ihtiyaçlarını belirleyebilmektir. Nitel araştırma desenine göre hazırlanan bu durum çalışmasında, Türkiye genelinde farklı sosyo-ekonomik bölgelerde yaşayan, çalışmaya katılmaya gönüllü 19 kişiyle görüşme yapılmıştır. Araştırmacılar tarafından geliştirilen demografik bilgi formu, yarı yapılandırılmış görüşme formu ve metin tamamlama formu ile toplanan veriler içerik analizi yöntemiyle çözümlenmiştir. Araştırma sonucunda; olumsuz psikolojik ve ekonomik etkilerin oluştuğu; hijyen, beslenme ve sosyal yaşam davranışlarında farklılıkların gözlemlendiği; katılımcıların genel sağlık, COVID-19 pandemisi ve bilişim teknolojileri hakkında eğitim almak istedikleri ortaya çıkmıştır.

**Anahtar kelimeler:** COVID-19, pandemi, yetişkin eğitimi

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## 1 | INTRODUCTION

Coronavirus is a type of virus that infects people and animals, and the recent coronavirus (COVID-19) is transmitted through inhalation and contact and has not been seen before. It is revealed that the elderly and people with chronic diseases are more likely to die of this virus (Gong, 2020).

COVID-19 (also known as Coronavirus) disease appeared in Wuhan, China late in December, 2019 (Xu, Shi, Wang, Zhang, Huang & Zhang, 2020). It spread over 136 countries according to the data obtained on April 4, 2020, and this disease spread over 136 countries around the world according to the data obtained on April 4, 2020 (World Health Organization [WHO], 2020). This epidemic, which spreads fast and results in death, has brought along many social changes as well as its impacts on human health.

The first case of COVID-19 was reported in The People's Republic of China in December, 2019 (WHO, 2020). The first cases out of China were recorded in Japan, South Korea, and Thailand (Taylor, 2020). Turkish Republic announced its first case of COVID-19 on March 11, 2020, when a citizen came back from Europe (TRT News, 2020). On December 19, 2020, when the study was conducted, total number of COVID-19 cases were stated to be 2,004,285 and the number of deaths as 17,851 in Turkey (Worldometers, 2020).

Due to COVID-19 pandemic, "social distancing" has become a significant concept. Regarding the conditions under which the disease is transmitted, keeping physical distance among people has appeared to be essential. Within this framework, various precautions in various fields have been taken throughout the world. World Health Organization has sent supplies to 172 countries during this process (WHO, 2020).

Struggle with new coronavirus continues all around the world, and each country has developed its own coping system. Considering the situation in October, 2020, countries generally aim protection from the pandemic through that everybody wears a mask, common use areas are disinfected, warnings are prepared for social distancing, and indoor activities are moved to outdoors (USA Today, 2020). With the circular issued by the Republic of Turkey on September 8, 2020, wearing a mask became compulsory everywhere except for residences. Other resolutions are as follows: Standing passengers will not be allowed in public transport vehicles; no music will be allowed in cafes, restaurants and other places of entertainment after midnight; and controls will be tightened in public places like marketplaces, beaches and restaurants. It was also stated that those who violate isolation rules will be sent to dormitories to stay during their quarantine days (BBC News Turkey, 2020).

In the 4-month process from the appearance of COVID-19 to May 12, Turkey is indicated to have struggled against the pandemic by managing the healthcare system effectively within the country and also aided 44 different countries with medical supplies to meet their needs; therefore, managed the pandemic process better than the countries that are more powerful socio-economically and in health services (Budak & Korkmaz, 2020).

Social isolation is described as total or partial lack of contact among individuals in the society (Gierueld, Tilburg & Dijkstra, 2006). According to the COVID-19 report of WHO (2020), in Turkey, as in many other countries, necessary steps have been taken for social isolation starting from the emergence of the epidemic, in accordance with the statements by Chinese Government and World Health Organization, even though the most vulnerable group include people aged 65 and over, call for social isolation has addressed all individuals as the young also get infected and become carriers. Upon negligence of people regarding their responsibilities for social isolation, countries like China, the USA, Italy, India, France and Spain declared curfews. As the number of cases increased, Turkey also started to impose curfews for the weekends.

The COVID-19 pandemic, along with the impact of social isolation, has drastically changed our way of entertainment, sports habits, work and study patterns, and it is unknown whether these changes will continue over time (Moya & Willis, 2020). According to Aragonés and Sevillano (2020), with the pandemic process, the consequences of lockdown, the restriction of our freedom within the framework of a positive goal, and the perception of social risk, especially psychological well-being will be among the topics discussed frequently in the future. Especially in the medical literature, many reports have been mentioned that there are symptoms of anxiety that may worsen the course of the disease and reduce the quality of life of recovered patients during COVID-19 disease and the recovery period (Kelly, 2020). Uzunova, Pallanti, and Hollander (2020), in their study in October

2020, stated that most of the published studies evaluating anxiety and other neuropsychiatric disorders in COVID-19 patients are cross-sectional and a few of the new studies are prospective. In addition, they emphasized the importance of conducting further prospective studies with follow-up of patients after the disappearance of COVID-19 symptoms.

It is concerned in the USA that, with the COVID-19 pandemic, adults as the vulnerable group are excluded more from the society, and their loneliness and other social diseases get worse. It is considered as a big problem that especially the elderly who live alone go into depression since they cannot go out and socialize; and social communication between parents and kids, family and elders become irregular in social isolation (Ustun & Ozciftci, 2020).

Altin (2020) identifies, in her study, that discriminant concepts such as being a refugee or an old lady, being disabled or poor, living alone, having a chronic disease, lacking digital devices and failing to use them has come into prominence as COVID-19 has deepened the inequalities in the society. The elderly, who were subject to exclusion and discrimination even before COVID-19, have been exposed to greater discriminatory attitudes and behaviors with the social and physical isolation during the pandemic (Varışlı & Gultekin, 2020). Yildirim (2020) states that, besides the elderly, individuals with low socio-economic status or chronic disease, working people, healthcare workers, and those who got infected and had the disease have fallen into the disadvantaged group and may be socio-psychologically at risk after the pandemic as society's attitudes and behaviors towards these people may change.

As COVID-19 pandemic sweeps, countries have taken various measures to protect the health of their citizens. Besides social impacts on the country and society, these precautions have also had economic impacts. Both the governments and citizens have had economic difficulties since the borders were sealed, businesses like restaurants or cafes where people came together were closed, and curfews were imposed. Moreover, economic circumstances such as decreases in the stock market, increase in exchange rates and oil prices have affected countries worldwide (Sit & Telek, 2020). With the borders sealed, decreases in foreign trade have occurred and supply chain has been disrupted, which has caused big firms to stop production due to lack of material (Cinel, 2020).

The sectors that coronavirus has adversely affected the most are tourism, air travel and stock market. Countries that provide economic development based on tourism sector have prohibited or limited entry and exits to the country to protect their citizens' health (Acar, 2020; Alpago & Alpago Oduncu, 2020). Since Turkey is also one of these tourism countries, it has also been affected considerably. According to the data by the Ministry of Culture and Tourism, the number of incoming visitors in January-March period has decreased by 20,52% compared to the 2019 data (Ministry of Culture and Tourism [MCT], 2020). As for the statistics of tourism income, the number for the third quarter of the year (July-September) has decreased by 71,2% compared to the last year's data for the same quarter (Turkish Statistical Institute [TurkStat], 2020).

As well as the measures taken with the pandemic, governments have made several arrangements with the decrease in production and consumption, and the economic distress that the citizens go through. These are financial adjustments such as tax discounts, decrease in interest rates, financial support and tax deferral. Countries like Germany, France, the USA and Italy have initially rescheduled or suspended payment for taxes, supported businesses and citizens financially, and legislated economic laws. Turkey has also made a regulation to postpone some tax collection and change tax rates with the General Communique no. 518 on Tax Procedure Law dated 24.03.2020 (Bilgic Ulun, 2020).

Due to the rapid development in science and technology, the knowledge that people have learned in their childhood is not sufficient and valid in their adulthood (Akbaş & Özdemir, 2002). In his research, which aims to reveal the use and skill levels of individuals aged 45 and over, and their views on these technologies, Sutluoglu (2020) stated that the tendency to prefer traditional media has increased in individuals aged 45 and over; the rate of using a smart phone, knowing how to use a computer and the internet has decreased; revealed that the most frequently used social media environments are WhatsApp and Facebook. The most important conclusion reached in the research is that the online practices of these individuals are mostly limited to the use of these two social media environments or to practices that require only basic skills.

Trainings in the field of lifelong learning should prepare people for new conditions (Knowles, 1996). Even though the concept of adult is interpreted in different ways in many cultures, it is generally defined as the period starting from puberty, in which individuals grow to social, emotional and biological maturity, take the responsibility of their own lives and behave properly (Koc et al., 2009). World Health Organization (WHO) defines the period between the ages of 45-59 as middle age, 60-74 as old age, 75-89 as elderly, and 90 and over as senility (Arpaci & Iletmis, 2017).

Lifelong Learning activities play an important role in protecting physical and mental health by increasing active participation in life, thus may contribute to quality and productive aging of old aged adults (Rowe & Kagn, 1998). According to the Monitoring and Evaluation Report of the Directorate General of Life Long Learning in Ministry of Education (DGLLL in MoNE), the number of adults aged 45 and over who attended the courses decreased from 1,310,848 in 2019 to 651,539 in 2020. In the same report, according to the number of trainees between the ages of 25-64, the courses opened in the fields of Handicraft Technology, Health and Personal Development and Education are in the first three places in 2019, while the courses opened in the fields of Health, Handicraft Technology and Personal Development and Education in 2020 are in the first three places. It is thought that the decrease in the number of adults aged 45 and over attending the courses between 2019 and 2020 and the fact that the courses in the field of Health are more preferred compared to the number of trainees between the ages of 25-64 has changed due to the COVID-19 pandemic. In this process, according to the news published by Directorate General of Life Long Learning in April 22, 2020, volunteer master trainers working in Maturation Institutes and Public Education Centers and trainees to cover the increasing demands due to the COVID-19 pandemic, started to produce disinfectant products, especially masks, and medical overalls in their own homes and educational buildings (Directorate General of Life Long Learning in Ministry of Education [DGLLL in MoNE], 2020). This situation shows that there are changes in the institutions working in the fields of public education and adult education in accordance with the process experienced with the epidemic. In the announcement made by Samsun Public Education Center in September 24, 2020, it was mentioned that 15 Motivation, Information and Training Courses are planned during the COVID-19 pandemic process of the Directorate General of Life Long Learning in Ministry of Education. Among the courses opened are hygiene rules, communication, healthy eating, time management courses during the pandemic period (Samsun Public Education Center, 2020). During the epidemic process, it is seen that course plans are made for the needs of individuals and related to the epidemic.

## RESEARCH QUESTIONS

In this study, the answer to the question of “What are the changes in the lives of over 45 years aged adults and their educational needs during the COVID-19 pandemic?” was sought. The fact that elderly people have a higher risk of death due to chronic diseases during the pandemic process and the introduction of protective practices such as lockdown played a role in the study of people in middle age. The fact that there was no research conducted within this context in Turkey was the starting point of this study whose subproblems are as follows:

1. What are adults’ opinions, behaviors and attitudes that have changed during the COVID-19 pandemic?
2. What are the changes in adults’ daily lives (in diet, hygiene, health, work, education, and social, economic, psychological etc.) during the COVID-19 pandemic?
3. What kind of non-formal education do adults want to receive against epidemics such as COVID-19?

This study’s limitations are:

1. The size and demographic of the sample are not enough to generalize to the entire adults and Turkish public.
2. The study is limited to participants’ views.
3. The data of the study was collected only via phone/video calls because of the pandemic.
4. The study was carried out when COVID-19 just popped out; hence, the literature review is limited because of the lack of previous studies.

## 2 | METHOD

This study which aims to identify changes in adults' lives and educational needs during the COVID-19 pandemic is a case study as one of qualitative research designs. In qualitative studies, data collection tools such as interview, observation, and document analysis are utilized, and cases are presented qualitatively in a realistic and holistic way (Yildirim & Simsek, 2018). Case studies are authentic studies in which individuals, events or institutions are investigated thoroughly and longitudinally (Turan, 2015).

In selection of the study sample, maximum variation was utilized as one of the purposive sampling methods (variation sources: gender, age, profession, education, living in rural or urban regions). Maximum variation sampling presents and defines themes including a great number of differences regarding the case investigated (Baltacı, 2018). Demographic information on the volunteers participating in the study is presented in Table 1.

**Table 1.** Information on Participants Aged 45 and Older in the Study Sample

Participant	Gender	Age	Education	Marital Status	Job	Employment Status	Chronic Disease	People They Live with during the Pandemic
F1	Female	62	Elementary School	Married	Housewife	Unemployed	Yes	Family
F2	Female	45	Elementary School	Married	Housewife	Unemployed	No	Family
F3	Female	48	Bachelor's Degree	Married	Officer	Employed	Yes	Family
F4	Female	49	Bachelor's Degree	Married	Officer	Employed	No	Family
F5	Female	45	Bachelor's Degree	Married	Officer	Employed	No	Family
F6	Female	46	Elementary School	Married	Worker	Employed	No	Family
F7	Female	48	Elementary School	Married	Housewife	Unemployed	No	Family
F8	Female	55	Elementary School	Single	Worker	Retired	No	Family
F9	Female	63	High School	Married	Housewife	Unemployed	Yes	Family
M1	Male	52	Bachelor's Degree	Married	Officer	Employed	Yes	Family
M2	Male	55	Associate Degree	Married	Officer	Retired	Yes	Family
M3	Male	55	High School	Married	Worker	Retired	Yes	Family
M4	Male	57	Associate Degree	Married	Officer	Retired	No	Family
M5	Male	66	Associate Degree	Married	Officer	Retired	No	Family
M6	Male	51	Associate Degree	Married	Officer	Employed	No	Family
M7	Male	49	Bachelor's Degree	Married	Officer	Employed	No	Family
M8	Male	51	Elementary School	Married	Farmer	Employed	No	Family
M9	Male	74	Bachelor's Degree	Married	Officer	Retired	Yes	Family
M10	Male	52	High School	Single	Farmer	Employed	No	Family

### DATA COLLECTION

The first stage of content analysis is the coding of data. At this stage, the information obtained is analyzed, it is tried to be divided into meaningful parts, and what each part means conceptually is explained (Yildirim & Simsek, 2018). The data were collected by the researchers through video calls on the phone and their recordings. In order to ensure validity and reliability, the researchers who would hold the interviews conducted a sample interview simulation beforehand.

All the data were obtained in the first two weeks of April 2020 when the peak of COVID-19 was seen in Turkey after the pandemic was officially announced for the first time. The data were collected from 19 voluntary participants (9 females and 10 males) who were informed about the purpose of the study and ensured that their personal data would be protected. The data obtained were analyzed through content analysis. In content analysis,

similar data are gathered together within the frameworks of certain concepts and themes, and interpreted by being organized in a way that readers can understand (Buyukozturk, Kilic, Akgun, Karadeniz & Demirel, 2008). The main purpose of using content analysis is to define the phenomenon conceptually (Elo & Kyngäs, 2008). The study is limited to adults over 45 year-old living in Turkey who have not had COVID-19.

In the study, a demographic information form, a semi-structured interview form and a story completion form were utilized as data collection tools. While developing the data collection tools, opinions of four experts, except for the researchers, were asked for, and items and stories on which agreement was achieved were included in the forms. These experts involved an adult's instructor, a psychologist, an assessment and evaluation expert, and a language expert. A pilot interview was held with two adults (a 62-year-old female and a 65-year-old male), who were not in the study sample, for the intelligibility of the questions, and some expressions were edited (e.g. "salgın" which is a word of Turkish origin for pandemic was used instead of "pandemi" as a word of foreign origin).

### RESEARCH ETHICS

In this study, verbal and written consent of the participants was obtained with a consent form. Before starting to study ethics committee approval was obtained from Bartın University Ethics Committee for the research procedures. Ethical principles and rules were followed during the planning, data collection, analysis, and reporting of the research.

### 3 | FINDINGS

In the research, participants were addressed the questions in the forms. Themes and categories along with frequencies considering participants' responses are presented in tables. Themes were created based on the codes (Creswell, 2017).

**Table 2.** Knowledge of Participants on COVID-19

Themes	Sub-Themes	Codes	Female	Male
Pandemic	Disease	Symptoms of the disease	F3, F5, F7, F9	M2, M3, M4, M5, M6, M7, M8, M10
		Epidemic		
	Protection	Social distancing	F1, F4	
	Consequences	A deadly disease	F2, F3, F5, F6, F8, F9	M9
Virus	Source	A contagious disease from China	F5	M1, M3, M6
		An unknown virus		
	Spread	Infecting a large number of people very quickly	F9	M1, M2, M4, M7
		Spread all around the world		

In Table 2, it is observed that all participants were aware of the fact that the virus caused a contagious disease. About the epidemic, male participants mostly emphasized the virus as a disease whereas females also expressed their opinions on protection from and consequences of the pandemic. A female participant responded as "(...) It is a disease that leads to death; the death rate is much higher especially at older ages." (F5). When the data obtained were examined, it was identified that mostly males presented their opinions on the origin and spread of the virus.



**Table 3.** Knowledge of Participants on How the Virus is Transmitted

Themes	Sub-Themes	Codes	Female	Male
Contact	Human	from person to person saliva handshake speaking (to each other) by breathing cough close contact	F1, F2, F3, F4, F5, F6, F7, F8, F9	M2, M4, M5, M6, M8, M10
		Matter		M1, M9
Through Inhalation		the necessity of keeping food hygienic money	F4, F5, F6, F7, F8	M1, M2, M3, M5, M6, M9, M10
Being Unhygienic		from other people who have the disease	F6	M8

When Table 3 is examined, the majority of the participants are observed to have stated that the virus was transmitted through contact; only two males indicated that the virus was also transmitted through contact with matter. As an example, a participant (M5) said; “It is a disease that spreads from person to person through cough, sneeze and close contact”. Another participant (M9) responded as; “(...) Let’s say he hits his hand to where he sits, even so it spreads”. Most of the participants indicated that the virus was transmitted through inhalation. As an example, a female participant (F8) stated; “It is transmitted mostly through inhalation and contact”, and a male (M3) said; “(...) People get infected through inhalation”. Only two participants expressed that the virus spread as a result of unhygienic conditions. For instance, an individual (F6) stated; “If we do not wear masks and gloves while going out, we get infected through inhalation, sneeze and contact”.

**Table 4.** Knowledge of Participants on Symptoms of COVID-19

Themes	Codes	Female	Male
Symptoms	Fever	F1, F2, F3, F4, F6, F8, F9	M1, M2, M3, M4, M5, M6, M7, M8, M9, M10
	Cough	F1, F2, F3, F4, F5, F6, F7, F8	M1, M2, M3, M4, M6, M7, M10
	Sore throat	F1, F2, F4, F7, F8	M1, M2, M7, M8
	Respiratory Distress	F5	M2, M5, M6, M9
	Weakness	F2, F5	M2, M3, M7
	Nausea and Sickness	F3, F5, F6	
	Diarrhea	F3	
	Loss of Appetite	F9	
	Pain	F4, F5, F6, F9	M5, M9, M10
	Nasal Discharge and Obstruction		
Symptom Number		F6	

According to Table 4, for the symptoms of COVID-19, almost all the participants responded as fever, cough and sore throat; about half of them stated respiratory distress, weakness and pain, and a small number of people indicated nausea and sickness, diarrhea, loss of appetite, nasal discharge and obstruction. Only one female participant emphasized that some people showed no symptoms at all.

**Table 5.** Expressions of Participants for What to Do If They Had the Symptoms

Themes	Sub-Themes	Codes	Female	Male
Consult to a Health Institution	In person	Going to hospital Go to the primary care physician Go to the ER Apply to the nearest health institution	F1, F2, F6, F8	M1, M2, M4, M5, M6, M7, M8, M9, M10
	By phone	Calling 112 Calling 182 Calling 184	F1, F3, F7, F9	M2, M4
Self-treatment		Taking antipyretic medicine	F1	M5
Talking to Familiar Healthcare Professionals		Calling a relative who is a doctor	F5	

Considering Table 5, almost all the participants specified that if they had the symptoms, they would consult to a health institution in person or by phone. As an example, a participant (M1) stated; “(...) I would go to the nearest health institution by wearing my mask”. Although some participants knew that they needed to consult to a health institution, they did not know what number to call by phone. For instance, one (F3) said; “I would call the Ministry. What was the number, 180 or 187?”. Two participants would prefer self-treatment at home before consulting to a health institution. As an example, one (M5) stated; “If there is something to do at home to reduce fever or ease respiration, I try them first. If they do not work, I will go to the hospital”. It was observed that one participant abstained from consulting directly to a health institution. She (F5) expressed as follows: “First, I call my brother; he and his wife are doctors. Now I do not trust much actually, I may not call somewhere I do not know. First, I call the doctors around me. Then, I would do something with their guidance”.

**Table 6.** Precautions that Participants Have Taken Against COVID-19

Themes	Codes	Female	Male
Hygiene	Washing Hands	F2, F5, F7, F8, F9	M1, M3, M6, M7, M9
	Cleaning House	F2, F4, F5,	M7, M8, M9
	Cleaning Food	F4, F5	M8
	Mask-gloves	F2, F4, F5, F6, F7, F8, F9	M1, M4, M6, M8, M9, M10
Isolation	Social distancing	F1, F4, F6, F8	M1, M3, M5, M7, M10
	Staying in	F2, F3, F4, F5, F6, F7, F8	M2, M3, M4, M5, M6, M10
Regular Life	Being or having a guest	F1, F6	F6



In Table 6, it is observed that participants took precautions such as hygiene and isolation. The majority mentioned hand cleaning, house cleaning and use of masks and gloves whereas only three people stated food cleaning. As an example; one (M3) said; “Washing our hands and face often, using disposable napkins or closing our mouth and nose with our elbows while coughing or sneezing (...)”. The participant who mentioned food cleaning (F5) stated; “Everything that comes from outside stay in the balcony for four hours. Sometimes we leave them from night to morning”.

In addition, it is observed that participants isolated themselves by paying attention to social distancing, staying in and not being or having a guest. The majority of the participants strived for staying in, half of them for social distancing and only two females for being or having a guest. As an example, one (M10) stated; “I do not have many precautions because of where I live (village). Only social distancing. Apart from that, nothing. Yeah, when I go out, into the crowd, first I watch out for social distancing, and I wear a mask. Except for these, I do not use that disinfectant stuff and so on. Indeed, I do not go out much so I do not use”. Considering that this participant lived in the village, he did not adopt isolation methods much since his interaction with others was less compared to a person living in the city. Another participant (F2) said; “We do not go out unless it is necessary. When we do, we wear masks and gloves to protect ourselves, and we get cleaned when we return home. We pay attention mostly to hygiene”.

**Table 7.** Sufficiency of Precautions that Participants Have Taken

Themes	Female	Male
Sufficient	F1, F4, F5, F7,	M2, M8, M9
Insufficient	F3	M6, M10
Indecisive	F6, F8, F9	M7

Regarding Table 7, it is observed that 7 participants considered the precautions they had taken as sufficient and 3 as insufficient, 4 participants were indecisive, and 5 expressed no opinion on this matter. As an example, one of the participants (M2) stated that the measures were sufficient; "It is not an unbeatable disease if we follow the precautions," One participant (F3) specified; “I act paranoid as if it will spread from air” while another one (F6) said; “I do not know”.

**Table 8.** Opinions of Participants on Their Responsibilities towards the People They Live with during the Pandemic

Themes	Codes	Female	Male
Not spreading the disease	Being hygienic	F2, F4, F5, F8, F9	M2, M5, M7, M10
	Avoiding contact	F1, F3, F7, F8, F9	M3, M4, M5, M6, M10
Psychological support	Self-protection	F9	M1, M6, M9
	Psychological support		M2
Creating awareness	Warning family members when necessary		
	Warning family members about nutrition and sleep patterns	F2, F6	M8

According to Table 8, only one participant mentioned the importance of psychological support, and three of creating awareness. As an example, one male (M3) said; “Not to hug, kiss, shake hands, eat from the same plate, drink from the same glass, use the same towel, and if necessary, not to sleep in the same bed”. Moreover, another male (M2) stated; “I live with my wife, and we have mutual responsibilities. Physically, we pay attention to hygienic measures. Psychologically, we support each other, and try to keep our spirit high”.

**Table 9.** Opinions of Participants on Their Responsibilities towards the Society during the Pandemic

Themes	Codes	Female	Male
Isolation	Not transmitting the disease		M1, M4, M6, M7, M10
	Staying in	F1, F2, F4, F5, F8	M2, M3, M4, M5, M7,
	Social distancing	F3, F8	M2, M9
Hygiene rules	Wearing mask-gloves	F9	M2
	Washing hands		
Creating awareness	Informing our relatives about the epidemic	F6, F7	

Considering Table 9, it is observed that all the participants who thought they were responsible towards the society not to spread the disease were males; half of the males in the sample mentioned the subject. A large part of the participants addressed the importance of staying in, and very few participants mentioned social distancing, use of mask and gloves, and awareness-creating. Some responses are as follows: “As if I had the disease, I do not go into crowds” (M7), “It is necessary not to accept guests, and we need to talk on the phone with the people in the distance” (F1), “Our responsibility towards the society is not to go out and transmit the virus if we had it. You need to protect others and contact no one if you go out” (F8), and “Wearing a mask and gloves while going out, and after we are done, throwing them in the trash not on the streets” (M2).

**Table 10.** Reasons for Participants to Find COVID-19 Dangerous

Theme	Codes	Female	Male
Consequences	Contagious	F1	M2, M3, M5, M7, M8, M10
	Fatal		
	Causing too many deaths	F2, F4, F5, F6, F7, F8, F9	M1, M3, M4, M8, M9
Concern for the future	No cure	F3, F8	M2, M4, M9, M10
	Uncertainty		M1, M9, M10
	Distrust in healthcare system	F5	

In Table 10, it is observed that the majority of the participants found COVID-19 dangerous as they defined it as fatal. Almost all the males mentioned its contagiousness. In addition, males, more than females, expressed that there was no cure for the disease. Only three males stated to find COVID-19 dangerous due to uncertainties. Some responses are as follows: “Of course, I find it dangerous, quite dangerous indeed. It is a mysterious enemy. Once there were diseases like plague and others, it is similar” (M8), and “I do not trust in the healthcare system. I do not

think I would survive if I got infected” (F5). In F5’s statements, it is observed that there is a relationship between trust in healthcare system and surviving the disease. One participant said; “Sure, it is dangerous; there is neither a cure nor a vaccine, and most of the infected people are dying” (M4) while another stated; “(...) As I cannot imagine to what extent the consequences of COVID-19 will go, I find it very dangerous” (M1).

**Table 11.** Danger Scores that Participants Indicated for COVID-19 “from 1 (the Lowest) to 10 (the Highest)”

Themes	Codes	Female	Male
Low risk	1		
	2		
	3		
	4		
Average risk	5		M5
	6		M5
	7	F4	M7
High risk	8	F1	M3, M7
	9	F2, F3	M3
	10	F1, F5, F6, F7, F8, F9	M1, M2, M3, M6, M8,
			M9, M10

When Table 11 is examined, it is observed that none of the participants gave a score below 5, and almost all of them selected 9 and 10 as the highest danger score, which indicates that they considered COVID-19 as very dangerous.

**Table 12.** Concerns of Participants Regarding COVID-19

Themes	Codes	Female	Male
Concern for the future	Losing beloved ones	F3, F4, F9	M4
	Uncertainty	F2, F5, F8,	M3, M4, F2, M7, M9
	No treatment	F5	M1, M2
	Fatality		M1, M3, M8
	Infectiousness	F2, F5, F6, F8	M1, M5, M6, M7, M9, M10
	Social awareness	F5	M9
No concerns	Inadequate healthcare service	F5	
	No fear or worry (linked to religious belief)	F1	

It is observed, in Table 12, that most of the participants expressed their concerns for the virus as contagiousness and the uncertainty. For instance, some of their statements are as follows; “I see it as a worldwide disease that can spread more” (M5), “Well, every time I go out, I concern about whether the person near me is infected and spreads the virus” (F8). Few participants mentioned losing their beloved ones (mostly females), absence of a cure, fatality of the disease (all males), lack of social awareness and inadequate healthcare system. A participant said; “I have many concerns. For example, we have become distant. Even we cannot hug our kids. We stay away from everyone” (F9). Only one participant claimed to have no concerns stating; “I have no fears or concerns, I have faith. If it is our destiny to die of this disease, there is nothing to do” (F1).

**Table 13.** Changes in Opinions and Behaviors of Participants during the COVID-19 Pandemic

Themes	Sub-Themes	Codes	Female	Male
Individual effects	Being more hygienic	Cleaning the house often Disinfecting grocery store food Washing hands frequently	F4, F5, F7	M1, M2, M6, M10
	Estranging oneself from social life	Not to receive guests Not going to the bank and the post office Prohibition on people over 65 years of age Not being able to meet friends	F3, F5, F6, F7, F8	M1, M3, M4, M7, M8, M9, M10
	Adverse effects on the economy	Increasing in market prices Economic developments in the world	F3, F4, F6, F8, F9	
Social effects	Adverse effects on psychology	Having constant anxiety The fear of death Mistaking any disease for covid	F1, F3, F5, F6, F8, F9	M3, M6
	Distrust in government	Inadequacy of government policies Regional economic impact	F3, F4, F5	M10
	Realizing values	To appreciate what we have That restrictions may occur against our will	F4	M2, M5

As seen in Table 13, the majority of the participants expressed to have estranged themselves from social life. Five females cited the economic effects of the pandemic. For instance, one participant stated; “Physically, we have already locked ourselves in the house. I feel like I am in prison. Psychologically, I am always concerned about what will happen tomorrow. I feel depressed, extremely. Unwillingness to do housework, constantly thinking that I have the symptoms, paranoia... Economically, we have not felt any impact yet but probably we will in a month, because of my husband’s work. I do not think that measures taken in Turkey are enough” (F3). Another participant responded; “(...) Economically, there is no change” (F4). Nearly half of the participants mentioned the adverse effects they have experienced psychologically. For example, one male described the negative situation he had stating; “When I touch somewhere, I want to wash my hands and clean somewhere immediately. When I go out and get in the car, I cannot feel comfortable; I believe I will get infected at once” (M3).

**Table 14.** Subjects on which Participants Want to Receive An Education against pandemics like COVID-19

Theme	Sub-Themes	Codes	Female	Male
		Mobile		
	Internet use	banking		M1
		Smart phone		
Digital competence	Health	Health class in schools	F3, F6	M3, M5, M7, M8, M9
		First aid training		
	Hygiene		F5	M8
		Symptoms of COVID-19		
COVID-19	Effects of COVID-19	Treatment of COVID-19	F2, F5, F7, F9	M1, M4, M7, M10
		Protection from COVID-19		
Health literacy				
	Not considering education	Praying Having enough knowledge	F1, F4	M2, M6
	Modes of transmission	Getting information from an expert	F8	M1, M10

According to Table 14, almost half of the participants would like to receive education on health, six people on COVID-19 treatment, and only one person on symptoms of the disease. Some statements are as follows; “I would like to take first aid training. If we had known first aid, we would be able to respond to an emergency on our own. I feel incomplete” (M5), and “I would like to have training on what needs to be done primarily and what may be done at home” (F5). Four participants, as two females and two males, indicated that they did not think of receiving any kind of education. One of these females (F1) was a primary school graduate, and the other (F4) was a university graduate. The former stated; “There is no subject that I would like to be trained for, we only pray to Allah to be healthy” (F1) whereas the latter cited; “I think what I have already known is enough, I am not thinking of taking any training” (F4).

In the study, opinions of participants on certain subjects during the COVID-19 pandemic were taken through story completion method. Relevant themes and frequencies are presented in the tables.

**Table 15.** Opinions of Participants on Holding a Wedding during the Pandemic

Themes	Female	Male
Postponement	F5, F7, F8	M1, M2, M4, M6, M8,
Cancellation	F1, F2, F3, F4, F6, F9	M3, M5, M7, M9, M10

As it is seen in Table 15, during the COVID-19 pandemic, participants prefer not to hold a wedding on the day planned beforehand considering the benefit of the society.

**Table 16.** Opinions of Participants on Whether They Would Get Back on Task If They Were Retired Healthcare Workers and Needed during the Pandemic

Themes	Sub-Themes	Codes	Female	Male
Affirmative	Conditioned	Risk of transmitting COVID-19	F1, F4, F8	M7
		Postpone the wedding	F2, F3, F6, F7, F9	M1, M2, M3, M4, M5, M8, M9, M10
Negative	Unconditioned	Probability of worse	F5	
Indecisive				M6

It is observed in Table 16 that almost all the participants expressed that they would go back to work if they were retired healthcare workers when necessary in the COVID-19 process.

**Table 17.** Sources that Participants Find Reliable during the COVID-19 Pandemic

Themes	Codes	Female	Male
Ministry of Health and Science Committee	News channels	F1, F3, F6, F9	M1, M6
	Healthcare professionals	F8	M2, M5, M6, M7, M9
Specialist doctors		F2, F4, F5, F6, F7, F8, F9	M3, M4, M10
	President	F1	
	Academic resources and the internet	F5	

Considering Table 17, nearly all the participants relied on the Ministry of Health, the Science Committee and healthcare professionals like specialist doctors. One participant stated; “Actually, there are different statements on every channel. As we have no other chance, I want to believe what the members of the Science Committee declare. We want to trust them, their statements, the information they give. I think no one other than healthcare professionals should give information. Each person speaks differently. They confuse people. When healthcare professionals talk, you can at least implement what you hear from them. Also, you do not get panicked because when everyone speaks differently, people get panicked. Fear, alarm... I think it is healthier when doctors give information” (F8). A female participant expressed to rely on information given by the president, and another



female on academic resources and information on the internet. The former stated; “I pay attention to the words of our president who is honest and trustworthy” (F1).

**Table 18.** Opinions of Participants on Helping Old and Helpless Neighbors for Shopping and Pharmaceutical Errands during the Pandemic

Themes	Codes	Female	Male
Those who help	In person	F2, F4, F5, F7, F8, F9	M1, M2, M4, M6, M8, M9
	Through someone	F1, F3, F6	M5, M7, M10
Those who do not help		F3	M3

When Table 18 is examined, it is observed that almost all the participants claimed to help in person or through someone. Only two participants as one male and one female indicated that they would not help. Some responses are as follows; “I would go and help without any hesitations. I do not know what the future holds for me; I could be in the same situation so I would help as far as I could (M1), “As I am a carrier, I would absolutely decline. I would stay away and refer to someone else, someone healthier” (F3), and “If I had the risk of dying, I would not put myself on the line” (M3).

#### 4 | DISCUSSION & CONCLUSION

This study investigating the effect of COVID-19 pandemic on adults and their needs was conducted with 19 participants as 10 females and 9 males from different cities of Turkey, and it was intended to identify changes in adults' lives, their reactions to the pandemic and their educational needs. In the study, demographic features such as gender, age, profession, and level of education were taken into consideration. Due to the pandemic, the research data were obtained from interviews held via communication tools.

According to the study by Atalan (2020), the lockdown as one of the precautions taken against the COVID-19 pandemic have had adverse impacts on human psychology as regards to stress level and depression. It was observed that the majority of the participants in this study also referred to negative effects or it was inferred from their statements. Possible psychological conditions that COVID-19 caused in the society are panic, fear, rage, excessive optimism and sorrow, and especially those with weakened immunity or chronic disease fall into anxiety, depression and fear more easily since they are more prone to get infected (Liu, Zhao, Ji, Liu, Zhang, Mou & Shi, 2020). Recently, COVID-19 has become grounds for the fear of dying in panic attack patients. When anxiety cannot be brought under control, high level of stress is observed in individuals (Aslan, 2020). In this study, as well, participants with weakened immunity and chronic disease had such statements as “(...) I have the paranoia that the disease will spread from the air”, “(...) you feel uneasy; get scared” and “Even if I do not go out, I wash my hands, just in case”. During the COVID-19 pandemic, controlled anxiety has become a condition.

Tarhan (2020) highlights that social distancing, which has become a necessity with the COVID-19 pandemic, may cause alienation, isolation, increasing fear, anxiety and weakening trust bonds in time. It is essential to maintain social bonds while keeping social distance during this process. Positive thoughts, behaviors and statements strengthen the immune system while fighting against viruses. Therefore, it is important to replace habits and behaviors with the right ones (Aslan, 2020). In the relevant evaluation report, Police Academy (2020) notes that, as a result of physical isolation, people share confined spaces with monotonous activities, have to communicate only through the internet and phones, and spend long hours on the internet and social media aimlessly, which may affect social relationships adversely in the long run. Goka (2020) indicates that behavioral and mental changes occurring as the features of “anxiety age” and “fear culture”, which already exist before the pandemic, strengthen and spread, will be involved in social psychology and threaten mental health with psychopathologies such as “trauma”, “sorrow”, “feeling of isolation”, “negativities in socioeconomic field”, and “compliance problems”, which affect large masses throughout the pandemic. It is observed that our ability to get

together with our loved ones under limited conditions, our ability to share the feelings of those who experience painful situations from a distance, and the uncertainties in our expectations about our jobs and the future of our relationships negatively affect our psychological health. Education enables individuals to look at the life from different perspectives. Education is expected to develop awareness and understanding in individuals. In this case, it can be said that individuals' skills such as self-efficacy and self-esteem will develop through their developing new interests and emerging potentials (Hammond, 2004). In terms of providing continuity in learning, lifelong learning and adult education can be expected to positively affect mental health.

In the study, it was identified that females, compared to males, mentioned negative psychological impacts of the pandemic more while responding to the question “What are the changes in your opinions (on health, economy, society, government etc.) and behaviors (in diet, hygiene, visits and travels etc.) during the COVID-19 pandemic?”. Malesza and Kaczmarek (2020), in their study, present that epidemic-related anxiety levels are higher in females compared to males. A significant relationship could not be found between anxiety level and genders as in this study.

Regarding the responses obtained, the individuals participating in the study during the COVID-19 pandemic did not experience economic distress in general. It was considered to be because most of them were officials and had no salary deduction. On the other hand, some participants (F3, F5) indicated that they anticipated economic problems due to the jobs of their husbands or the economy of the country.

Some participants in the study indicated that news sources could lead to confusion and accordingly to anxiety. They stated; “Each person speaks differently. They confuse people. (...) when everyone speaks differently, people get panicked. Fear, alarm...”. This finding is supported by a study revealing that the most frequently encountered item in both females and males for COVID-19-related fears was specified to be the anxiety while watching relevant news and social media posts (Hizli Sayar, Unubol, Tarhan, 2020).

Healthcare professionals actively working in the pandemic are at higher risk of getting infected compared to other citizens. Consequently, they experience several psychological impacts such as fear, anxiety and depression besides physical ones like fatigue, dizziness and shortness of breath. Some other studies also reveal that psychology of those who work in healthcare during the pandemic is adversely affected (Liu et al., 2020). Da Silva and Neto (2020) state that, during the pandemic, healthcare professionals have mental disorders at higher rates, their scores for anxiety and depression are considerably high, and mental disorders are more common in those who work more closely to infected patients. It can be inferred that psychological situations like anxiety and depression have been on the increase since the outbreak of COVID-19 epidemic. It is acknowledged that some relevant associations and companies related to mental health in Turkey conduct studies in order to provide mental health services online. This kind of support studies and services offered during the COVID-19 pandemic have been discovered to be effective in Turkey and throughout the world (Mehra, Sahoo, Suri, Malhotra, Yaddanapudi, Puri & Grover, 2020).

The study revealed that some participants tended to cope with problems by depending on religion, associating COVID-19 pandemic and problems they faced with God, interpreting them favorably and expecting the remedy from God again. It is observed that individuals depend on religion more in their problems as they get older. In addition, educational background and where they live affect their dependence on religion (Batan, 2016). Participants who thought that the pandemic started by Allah and would be ended by Him were primary school graduates and inhabitants of small towns, which coincides with the research findings of Batan (2016). Individuals adopt positive religious coping methods such as praying, praising and thanking Allah, and thinking that “every cloud has a silver lining”. Positive religious coping method is described as the method that individuals employ in order to solve a problem by getting strength from spirituality and conceding (Pargament, Smith, Koenig & Perez, 1998).

One sub-purpose of the study is to discover the subjects about which individuals feel inadequate and would like to receive education in case of COVID-19 or another pandemic. The results of the analyses conducted within this context have revealed that participants mostly have worried about the cure of the disease and want to obtain information or take training on symptoms and treatment of the disease, and prevention. Moreover, it can be inferred

from that participants also think of taking training on general health issues and first aid, they want to protect themselves and their beloved ones from any kind of trouble to be faced. There are also some participants who do not consider taking any training or education due to several reasons like faith in God and finding themselves and precautions adequate. Furthermore, because of the problems that they have experienced in daily life during the pandemic, some participants desire to receive education on subjects such as use of internet, hygiene and transmission ways of the disease.

In traditional families, responsibilities are shared based on gender. Men mostly handle stuff like gardening and repairing whereas women are responsible for housework like cooking, dishwashing and cleaning (Gunay & Bener, 2011). Imamoglu (1993) notes that, in terms of social gender roles, the situation is not different for women who work, and distributions of tasks in families are not equal. In the study, only female participants, whose employment statuses vary as employed or unemployed, are observed to have expressed their opinions on protection from the disease in lockdown throughout the COVID-19 pandemic. In addition, educational backgrounds of these participants are different from one another, which shows that social gender roles have an impact on every level of education.

According to the study, even though some participants know that they can reach health institutions by phone, they do not know the number to call. That individuals do not use media organs effectively or follow them sufficiently and carefully can be considered as a reason for this situation, and they do not have a simple level of knowledge about accessing health services. In this direction, it can be concluded that individuals' media literacy, digital competencies and health literacy are not sufficient. When non-formal education programs are examined, it is seen that adults are trained with course programs in these fields (HBÖGM, 2022). It is anticipated that directing adults to these course programs will have a positive effect. Most of the participants are observed to have taken basic precautions such as staying in and wearing mask and gloves. With respect to this, both positive and negative situations have been encountered in Turkey. Besides those who respect the ban and pay attention to wearing masks in public transport (Haberler, 2020), there are also people who ignore the rules, do not use masks properly as it is required (mask below nose or on the chin, carried on the arm etc.) (Sozcu, 2020). In addition to this when it comes to opinions on holding wedding ceremonies during the COVID-19 pandemic, all of the participants expressed that they would cancel or postpone the wedding. When the situation in Turkey is examined, it is observed that wedding ceremonies were held outdoors although it was banned (Sozcu, 2020), some businesses continued to run their wedding venues during the lockdown, (BirGun, 2020), and rules for weddings issued in the circular were sometimes violated (Sputniknews, 2020). The reason for this can be explained by the following: COVID-19 is not taken seriously enough, and information literacy and media literacy skills are not sufficiently embedded in individuals. It is thought that the fact that covid is not taken seriously enough is closely related to the mentioned literacy. When the findings of this study are examined, it is seen that some individuals do not have enough access to information about COVID-19, and they do not know what the right resources are to reach. Unlike negative cases, it was identified that the majority of the participants in this study knew how to protect themselves from the epidemic so they would help a helpless individual in person or through someone else. Considering that participants accepted to help a sick person through someone, it was understood that they had knowledge of the potential to be a carrier. It can be inferred that the participants making this statement follow media organs actively.

The majority of the participants are observed to be conscious about not spreading the disease. In Turkey during the time period when the study was conducted (March-April 2020), “Life Fits in Home” and “Stay Home” slogans were actively used on media organs and social media. The subject was pointed out on social and mass media via hashtags (#). Based on this, it can be stated that participants considered staying home as a responsibility towards the society. This is a good example of the importance of having digital competence and using media literacy skills in effectively using the right information in life. When the findings of this study were examined, it was seen that adults wanted to learn to use technological tools such as mobile banking and smartphones, and the internet in general. This shows that the digital competence of middle-aged adults is not sufficient. Individuals in this age group should be directed to courses created to improve their digital skills. Also, courses in this field should be more accessible.

When the participants in this study were asked about the resources that they found reliable, some responded as “the president”. Some gave other country leaders as examples for informing the public as they saw in the news and specified that they expected the government to give exact information and lead the public properly in Turkey,

as well. As a matter of fact, during the COVID-19 crisis, a process of obedience to the state authority has been experienced with transformations in social behaviors as the struggle for survival is imposed through compulsory volunteering along with partial or controlled sanctions by the government (Cingoz, 2020). The most important reason for that an authoritarian orientation is being discussed in this process may be the fear caused by the COVID-19 pandemic. As the threshold of fear increases in a society, areas of rights and freedoms easily narrow, and the person drawn into fear assents to every proposal offered in order to get rid of the fear (Karakas, 2020). Therefore, even though the fear of death caused by COVID-19 has forced them to stay away from certain habits, it makes it easier for governments to ensure that the public conform to implications and restrictions put into practice to prevent the epidemic. Dependence and reliance on the government and political power representing the state authority can be associated to the prevention/struggle for survival together with fear and despair in a sense. Even though some participants in the study expressed their loyalty to and trust in the president as a representative of the state authority during the pandemic, a study presents that coronavirus struggle of some democratic countries including Turkey, South Korea, Germany etc. eliminate the myth that only authoritarian regimes can fight against the pandemic effectively (Ulutas, 2020, 12).

Based on the results obtained in the study, suggestions for prospective research and implications are presented below.

- Since the study was conducted with middle aged adults, it can also be conducted with participants from different age groups.

- As a result of this study, it was determined that middle aged adults were not aware of their educational needs enough. For this reason, awareness seminars for common fields can be given. Public Education Centers or institutions like universities can organize these seminars.

- Considering the literature review, it is observed that there is limited research on psychological effects of COVID-19 in our country and in the world. Relevant studies are required.

#### STATEMENTS OF PUBLICATION ETHICS

We declare that the study has no unethical problems and ethics committee approval was obtained from Bartın University Ethics Committee.

#### RESEARCHERS' CONTRIBUTION RATE

The authors involved in the research contributed equally.

#### CONFLICT OF INTEREST

This study does not have any conflict of interest.

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