# Factors Affecting Social Stigma and Health-Seeking Behavior in COVID-19 Survivors: A Field Study in the West of Turkey[1, 2]

**Hülya ARSLANTAŞ[3], Hatice ÖNER[4], Nermin KORUKLU[5], Rahime ASLAN[6], Ezgi SARI[7]**

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**Abstract**

This study was conducted to determine factors affecting social stigma and Health-Seeking Behavior in individuals who had remain alive COVID-19. The sample of this cross-sectional study consisted of 257 individuals who had remain alive COVID-19 and were selected by using the snowball sampling method. Data were collected by using a "Personal Information Form," "The Social Stigma Questionnaire (SSQ)" and "The Health-Seeking Behavior Scale (HSBS)". The mean and standard deviation of the total scores of the participants obtained from the SSQ questionnaire were 49.23±31.36, and the mean and standard deviation of the total scores obtained from the HSBS scale were 41.84±7.78. There was a statistically important difference between the mean SSQ and HSBS points of participants who had remain alive COVID-19 and variables, such as being female, being single, having university-level education, having a family member with a chronic disease, witnessing someone exposed to social negativity due to their disease, displaying stigmatizing attitudes towards someone infected with COVID-19, ability to determine behaviors that are harmful to health, worrying about health, and having a high risk of contracting a serious illness ($p<.05$). A moderate, important positive correlation was found between mean points on the SSQ and

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[2] At the outset, the approval of the T.R. Ministry of Health (2021-01-14T20-13-28.xml) and the Non-Interventional Clinical Research Ethics Committee of a state university (date: February 26, 2021-9497; issue: E-50107718-050.99-9497; Protocol No: 2021/230) and the official permission of Aydın Governorship Provincial Health Directorate (date: April 14, 2021, Number: E-44021967-605.01) were obtained.

[3] Professor, Aydın Adnan Menderes University Faculty of Nursing, Department of Mental Health and Disease Nursing, Aydın, Turkey. hulyaars@yahoo.com https://orcid.org/0000-0002-3018-2314

[4] Associate Professor, Aydın Adnan Menderes University Faculty of Nursing, Department of Mental Health and Disease Nursing, Aydın, Turkey. honer@adu.edu.tr https://orcid.org/0000-0002-6556-5753

[5] Professor, Aydın Adnan Menderes University Faculty of Education, Department of Educational Sciences, Department of Guidance and Psychological Counseling, Aydın, Turkey. nonerkoruklu@gmail.com https://orcid.org/0000-0003-1577-8352

[6] Assistant Professor, Kütahya Health Sciences University, Faculty of Health Sciences, Department of Nursing, Division of Psychiatric Nursing, Kütahya, Turkey, aslanrahime@gmail.com https://orcid.org/0000-0002-8301-4656

[7] Phd, Research Assistant, Aydın Adnan Menderes University Faculty of Nursing, Department of Mental Health and Disease Nursing, Aydın, Turkey. ezgi.ozen@adu.edu.tr https://orcid.org/0000-0002-0776-1318

the HSBS (r=.504; p<.001). In line with these results, it is recommended that individuals be informed about viruses that cause pandemics such as COVID-19 and that measures be taken to prevent stigmatization.

**Keywords:** COVID-19, Social Stigma, Health, Behavior

## COVID-19 Geçiren Bireylerde Sosyal Damgalama ve Sağlık Arama Davranışını Etkileyen Faktörler: Türkiye'nin Batısından Kesitsel Bir Çalışma

**Özet**

Bu araştırma, COVID-19 geçiren bireylerde sosyal damgalanma ve sağlık arama davranışını etkileyen faktörleri belirlemek amacıyla yürütülmüştür. Bu kesitsel araştırmanın örneklemini, COVID-19 geçiren ve kartopu örnekleme yöntemi kullanılarak seçilen 257 birey oluşturmuştur. Veriler "Kişisel Bilgi Formu", "Sosyal Damgalama Anketi-SDA" ve "Sağlık Arama Davranışı Ölçeği-SADÖ" kullanılarak toplanmıştır. Araştırmaya katılanların SDA anketinden elde edilen toplam puanlarının ortalaması ve standart sapması 49.23±31.36 ve SADÖ ölçeğinden elde edilen toplam puanlarının ortalaması ve standart sapması 41.84±7.78'dir. COVID-19 geçiren katılımcıların sosyal damgalama ve sağlık arama davranışı puan ortalamaları ile kadın olmak, bekar olmak, üniversite düzeyinde eğitime sahip olmak, kronik hastalığı olan bir aile üyesine sahip olmak, hastalığı nedeniyle birinin sosyal damgalamaya maruz kalmasına tanık olmak, COVID-19'a yakalanmış birine karşı damgalayıcı tutumlar sergilemek, sağlığa zararlı davranışları belirleyebilmek, sağlık konusunda endişelenmek ve ciddi bir hastalığa yakalanma riskinin yüksek olması gibi değişkenler arasında istatistiksel olarak anlamlı bir fark vardı (p<.05). Sosyal Damgalama Ölçeği ve Sağlık Arama Davranışı Ölçeğindeki ortalama puanlar arasında orta düzeyde, anlamlı bir pozitif korelasyon bulunmuştur (r=.504; p<.001). Bu sonuçlar doğrultusunda bireylere COVID-19 gibi pandemiye neden olan virüsler konusunda bilgilendirme yapılması ve damgalamayı önlemeye yönelik önlemlerin alınması önerilir.

**Anahtar Kelimeler:** COVID-19, Sosyal Damgalama, Sağlık, Davranış

## 1. Introduction

The COVID-19 pandemic, which first spring up from a market in Wuhan in early December 2019, has affected the whole globe (Lu et al., 2020). COVID-19 can be fatal depending on the severity of the disease, which affects individuals at unlike levels (Huang et al., 2020; Wang et al., 2020). Deaths due to COVID-19 not only cause anxiety, depression, post-traumatic symptoms, and grief in families, but the rapidly spreading and unpredictable pandemic can also lead to discrimination and stigma against survivors (Sekowski et al., 2021). Pandemics, which are considered public health emergencies, are stressful times for people and communities. Fear and anxiety about a disease can cause social stigma, which involves negative attitudes and beliefs toward people. As a result of stigma, individuals may be exposed to labeling, stereotyping, discrimination, and negative attitudes of others. In particular, individuals who have experienced or been in contact with the disease may encounter hostile glances from their environment (Dar et al., 2020). Societies have tended to stigmatize more, especially in cases of infectious and mental diseases that have far-reaching effects (Oran et al., 2008; Arslantaş et al., 2010; Shigemura et al., 2020).

The stigmatized individual can hide the symptoms and diagnosis of the disease and delay seeking healthcare services by internalizing the feeling of worthlessness, which is characterized by being unwanted or discredited from a social point of view, and developing emotional and reactive responses such as avoiding social relations, embarrassment, and guilt (Arslantaş et al., 2010; Dhingra & Khan, 2010; Courtwright & Turner, 2010; Başterzi et al., 2020; Huda et al., 2020; Brooks et al., 2020). In addition, stigmatized individuals may experience isolation, depression, anxiety, or embarrassment in society (Oran et al., 2008; Arslantaş et al., 2010; Huda et al., 2020; Corrigan et al., 2014).

In a meta-analysis study conducted to investigate the prevalence of stigma in infectious disease pandemics, the overall combined prevalence of stigma was 34% and perceived stigma was 31% in all populations. In the same study, the prevalence of stigma was 38% in patients, 36% in the community population, and 30% in healthcare workers. Also, the prevalence of stigma was reported as 33% in individuals with a high level of education and 47% in those with a low level of education (Yuan et al., 2021a). Some studies in the literature have shown that factors affecting Social Stigma (SS) and Health-Seeking Behavior (HSB) in individuals with COVID-19 include age, education, having a chronic illness, financial insecurity, having family members infected with COVID-19, being married, occupation, experiencing economic loss and depressive symptoms during the COVID-19 pandemic (Başterzi et al., 2020; Nursalam et al., 2020; Dar et al., 2020; Yuan et al., 2021a; Yuan et al., 2021b; Envuladu et al., 2021; Brooks et al., 2020).

It is important to stop stigma to make society and its members safer and healthier because it can prevent individuals from seeking help (Başterzi et al., 2020). Help-seeking behavior occurs when people seek support by consulting professional or non-professional people who can help them in the face of problems that they experience and have difficulty coping with. In an effort to cope with the problems they encounter, individuals sometimes prefer carrying out this

process themselves and they sometimes prefer getting help from the source they find appropriate (Arslantaş et al., 2010).

The importance of early intervention will be better understood when the effects of stigma are considered. It is thought that revealing this problem together with its influencing factors will contribute to raising awareness in the context of stigma and its effects on individuals and facilitating getting professional help. When studies in the literature were examined, few studies investigating factors affecting SS and HSB due to COVID-19, which is an infectious disease, were found (Yuan et al., 2021a; Kumari, 2021; Planchuelo-Gómez et al., 2020). Studies on the subject will contribute to the development of anti-stigma programs, the determination of healthy help-seeking behaviors, and the creation of relevant intervention programs. Therefore, this study was conducted to investigate factors affecting SS and HSB in individuals who remain alive COVID-19.

Accordingly, the research question was determined as “What are the factors affecting SS and HSB in COVID-19 survivors?”

## 2. Materials and Methods

### a. Study Sample

The data of this cross-sectional study were collected between March 25, 2021 and August 08, 2021 to determine factors affecting SS and HSB in individuals who had remain alive COVID-19. The research was conducted with 257 volunteers who met the inclusion criteria and had remain alive COVID-19 in the central district of a province in the west of Turkey. The sample size of the study was calculated as 214 individuals on the G Power software, based on an effect size of 0.50, a Type 1 error margin of 0.05 and a power of 0.95. Taking into consideration the possible losses, a 20% reserve was added and the final sample size was calculated as 257. When calculating the sample size, the study conducted that individuals experiencing HIV-related stigma were 21% less likely to access or use health and social services was taken as a reference (Rueda et al., 2016). The snowball sampling method was employed to reach the research group. The inclusion criteria of the study were having had COVID-19 and volunteering to participate in the study, whereas the exclusion criteria were having an infectious disease other than COVID-19, such as HIV/AIDS, Hepatitis B/C, or Tuberculosis, having been diagnosed with a psychiatric disorder, being a healthcare worker, having a chronic and systemic disease, or having hearing or vision problems. The data were collected by using a "Personal Information Form," "SSQ" and "the HSBS".

#### i. The Personal Information Form

This form consists of 15 questions about issues that are thought to affect SS and health-seeking behavior, including sociodemographic characteristics of individuals, which were developed following a review of the literature (Oran & Şenuzun, 2008; Arslantaş et al., 2010; Başterzi et al., 2020; Brooks et al., 2020; Maunder et al., 2003; Verma et al., 2004; Arslantaş et al., 2011; Williams & Gonzalez-Medina, 2011).

**ii. The Social Stigma Questionnaire (SSQ)**

A form that was created by researchers in line with the literature was used since there was no scale whose validity and reliability studies had been conducted to evaluate the perception of the SS of individuals who had remain alive COVID-19 in our country at the time of the research (Dar et al., 2020; Bana, 2020). In this context, necessary permissions were obtained from Bana (2020) and Dar et al. (2020) for the use of the questions on their scale. The questionnaire is a five-point Likert-type measurement tool that has 25 items. High points on the questionnaire mean high levels of social stigma (Dar et al., 2020; Bana, 2020). In our study, Cronbach's alpha value of the SSQ was calculated as .98.

**iii. The Health-Seeking Behavior Scale (HSBS)**

This scale was developed by Kıraç and Öztürk (2021) to measure the HSB of individuals. The HSBS consists of 3 dimensions (Online, Professional, Traditional) and 12 items. The items on the scale has a five-point Likert-type evaluation structure with options. An increase in the total points obtained from the scale indicates an increase in health-seeking behavior. The scale has three sub-dimensions: Online, Professional, and Traditional. The points of the scale is obtained from the subscales of the scale and their sum. Cronbach's Alpha values of subscales and overall scale were reported as .72, .72, .73, and .75, respectively (Kıraç & Öztürk, 2021). In our study, Cronbach's alpha values for the Online, Professional, and Traditional subscales of the scale and the total scale were calculated as .87, .91, .68, and .79, respectively.

**b. Data analysis**

SPSS 21.0 (Statistical Package for the Social Sciences) software package was used for the analysis of study data. Descriptive statistics of the data were presented as arithmetic mean±standard deviation, numbers and percentages values. The normality of data was examined by using visual (histogram and probability graphs) and analytical methods (Kolmogorov-Smirnov test). Since the data did not show a normal distribution, the comparison of sociodemographic variables with the SSQ and the HSBS was conducted by using the Mann-Whitney U test and the Kruskal-Wallis Test. Tamhane's T2 test was performed as a post-hoc test after the one-way analysis of variance (ANOVA) to determine the subgroup causing a important difference among variables that were found to show an important difference according to the Kruskal-Wallis test result. The relation between SSQ and the HSBS was examined by using Spearman correlation analysis. Chi-square analysis was performed in categorical data comparisons. The results were accepted as important at $p<0.05$, with a confidence interval of 95%.

**c. Ethical Aspects of the Research**

At the outset, the approval of the T.R. Ministry of Health (2021-01-14T20-13-28.xml) and the Non-Interventional Clinical Research Ethics Committee of a state university (date: February 26, 2021-9497; issue: E-50107718-050.99-9497; Protocol No: 2021/230) and the official permission of Aydın Governorship Provincial Health Directorate (date: April 14, 2021, Number: E-44021967-605.01) were obtained. Participation in the study was voluntary, and participants could withdraw from the study at any time. In order to ensure the protection of

individual rights in the research, the principles of the Helsinki Declaration of Human Rights were adhered to throughout the research.

## 3. Results

The mean age of 257 individuals participating in the study was 38.22±8.47, 54.9% of them were male, 50.6% were single, 49.8% were university graduates, 26.5% were unemployed, the income of 70.4% was equal to their expenses, and 90.3% had a nuclear family. Of the participants, 60.3% had a family member with a chronic disease, 52.5% thought they were able to overcome the problems occurring in their lives, 66.1% witnessed individuals in their circles who experienced negativity due to their illness, 25.3% exhibited stigmatizing attitudes towards individuals with COVID-19, 53.7% were able to determine behaviors that were harmful to their health, and 52.5% reported that they considered the information they learned about harmful behaviors from sources as an opportunity to develop their health. Also, 19.8% of the participants reported that they were at risk of contracting a serious illness, and 37.7% were concerned about their health. The mean points of individuals in the study on the total SSQ was 49.23±31.36, and their mean points on the HSBS was 41.84±7.78.

There was a significant difference between participants' mean points on the total SSQ and variables, such as gender (MWU=3778.50; p<.001), being single (MWU =5466.50; p<.001), educational status (KW=17.47; p<.001) and occupation (KW=5.77; p<.001). There was a significant difference between participants' mean points on the total SSQ and variables, such as presence of a family member with a chronic disease (MWU =2487.00; p<.001), finding the ability to overcome problems in oneself (MWU =1665.00; p<.001) , the first person with whom health problems were shared (KW=64.18; p<.001) and witnessing someone who was exposed to social negativity due to their illness (KW=64.50; p<.001). There was a significant difference between participants' mean points on the total SSQ and variables, such as stigmatizing attitudes towards someone infected with COVID-19 (MWU=4337.00; p<.001), taking into consideration the information about harmful behaviors learned from sources as an opportunity to develop health (MWU=4832.00; p<.001), ability to determine unhealthy behaviors (MWU=3481.00; p<.001), feeling concerned about health (MWU=5503.50; p<.001), and risk of contracting a serious illness (MWU=4133.50; p<.05) (Table 1). In the study, it was found that especially participants who were female volunteers, were single, had undergraduate education, had a family member with a chronic disease, witnessed stigma against individuals with COVID-19, and had health risks exhibited more socially stigmatizing attitudes. Studies in the literature with findings that are similar to or unlike from our study findings have shown that especially the perception of SS is affected by unlike sociodemographic characteristics.

**Table 1**. Comparison of sociodemographic characteristics of individuals who survived COVID-19 and their mean scores on the SSQ

| **Sociodemographic Characteristics** | | **Mean scores on the SSQ** | | |
|---|---|---|---|---|
| | **n** | **Median** | **%** | **Test type and p value** |

| | | | | |
|---|---|---|---|---|
| **Gender** | | | | |
| Female | 116 | 166.93 | 45.1 | MWU=3778.50 |
| Male | 141 | 97.80 | 54.9 | **p<.001**** |
| **Marital status** | | | | |
| Single | 130 | 150.45 | 50.6 | MWU=5466.50 |
| Married | 127 | 107.04 | 49.4 | **p<.001**** |
| **Education** | | | | |
| Elementary and below | 83 | 106.64 | 32.3 | KW=17.47 |
| Secondary education | 46 | 120.89 | 17.9 | **p<.001**** |
| University | 128 | 146.41 | 49.8 | |
| **Occupation** | | | | |
| Non-working | 68 | 131.46 | 26.5 | KW=5.77 |
| Worker | 78 | 113.86 | 30.4 | **p<.001**** |
| Civil servant | 111 | 138.13 | 43.1 | |
| **Income** | | | | |
| Income<expenses | 66 | 77.06 | 25.7 | KW=64.60 |
| Income=expenses | 181 | 151.40 | 70.4 | p=.050 |
| Income>expenses | 10 | 66.45 | 3.9 | |
| **Family type** | | | | |
| Nuclear | 232 | 131.44 | 90.3 | KW=4.00 |
| Extended | 19 | 114.18 | 7.4 | p=.130 |
| Broken | 6 | 81.50 | 2.3 | |
| **Presence of chronic diseases in the family** | | | | |
| Yes | 155 | 163.95 | 60.3 | MWU=2487.00 |
| No | 102 | 75.88 | 39.7 | **p<.001**** |
| **Finding the ability to overcome problems in oneself** | | | | |
| Yes | 135 | 80.33 | 52.5 | MWU=1665.00 |
| No | 122 | 182.85 | 47.5 | **p<.001**** |
| **The first person with whom health problems are shared** | | | | |
| Friends | 78 | 180.83 | 30.4 | KW=64.18 |
| First-degree relatives | 55 | 114.46 | 21.4 | **p<.001**** |
| Spouse | 124 | 102.85 | 48.2 | |
| **Witnessing someone who is exposed to social negativity due to their illness** | | | | |
| Sometimes | 171 | 147.50 | 66.6 | KW=64.50 |
| Often | 26 | 151.87 | 10.1 | **p<.001**** |
| Never | 60 | 66.37 | 23.3 | |

| | | | | |
|---|---|---|---|---|
| **Exhibiting stigmatizing attitudes due to the presence of someone in the environment infected with COVID-19** | | | | |
| Yes | 68 | 159.72 | 26.5 | MWU=4337.00 |
| No | 189 | 117.95 | 73.5 | **p<.001**** |
| **Considering the information about unhealthy behaviors learned from sources as an opportunity to improve health** | | | | |
| Yes | 139 | 104.76 | 53.7 | MWU=4832.00 |
| No | 118 | 157.55 | 46.3 | **p<.001**** |
| **Ability to identify unhealthy behaviors** | | | | |
| Yes | 141 | 95.69 | 53.7 | MWU=3481.00 |
| No | 116 | 169.49 | 46.3 | **p<.001**** |
| **Feeling concerned about health** | | | | |
| Yes | 97 | 105.74 | 37.7 | MWU=5503.50 |
| No | 160 | 143.10 | 62.3 | **p<.001**** |
| **Risk of contracting a serious illness** | | | | |
| Yes | 51 | 150.95 | 19.8 | MWU=4133.50 |
| No | 206 | 123.57 | 80.2 | **p=.010*** |

*p<.05; **p<.001; NS: Not Significant; MWU: Mann-Whitney U Test, KW: Kruskal-Wallis Test

It was found that there was a significant difference between participants' mean points on the total HSBS and gender (MWU=5172.50; p<.001), marital status (MWU=5694.50; p<.001), educational status (KW=55.66; p<.001), occupation (KW=32.07; p<.001), family type (KW=10.80, p<.001), presence of a chronic disease in the family (MWU=6743.00; p<.001), finding the ability to overcome problems in oneself (MWU=5853.50; p<.001), the first person with whom health problems were shared (KW=10.69; p<.05), witnessing someone in the environment who was exposed to social negativity due to their illness (KW=11.49; p<.001), ability to determine unhealthy behaviors (MWU=6404.00; p<.001), and worrying about health (MWU=4790.00; p<.001)(Table 2).

**Table 2**. Comparison of sociodemographic characteristics of individuals and their mean scores on the Total HSBS Scale and its subscales

| Sociodemographic characteristics | Online | Professional | Traditional | Mean Score on the Total HSBS Scale |
|---|---|---|---|---|
| **Gender** | | | | |
| Female | 23.27±2.77 | 10.74±1.68 | 11.08±0.74 | 45.10±2.99 |
| Male | 17.62±7.63 | 10.97±7.77 | 10.56±2.71 | 39.16±9.35 |

| | | | | |
|---|---|---|---|---|
| **Test type and p value** | MWU=4614.50 | MWU=6575.00 | MWU=7683.50 | MWU=5172.50 |
| | **p<.001**** | **p<.001**** | p=.360 | **p<.001**** |
| **Marital status** | | | | |
| Single | 22.10±5.02 | 10.88±1.92 | 11.10±1.16 | 44.10±5.89 |
| Married | 18.19±7.37 | 10.85±2.71 | 10.48±2.69 | 39.53±8.77 |
| **Test type and p value** | MWU=5392.00 | MWU=7268.50 | MWU=8185.00 | MWU=5694.50 |
| | **p<.001**** | p=.070 | p=.890 | **p<.001**** |
| **Education** | | | | |
| Primary education and below | 16.51±7.80 | 10.09±2.59 | 10.31±2.69 | 36.92±9.18 |
| Secondary education | 19.52±7.51 | 10.84±2.25 | 10.36±2.57 | 40.73±7.47 |
| University | 22.78±3.49 | 11.38±2.07 | 11.26±1.13 | 45.42±4.33 |
| **Test type and p value** | KW=40.33 | KW =4.98 | KW =3.86 | KW =55.66 |
| | **p<.001**** | p=.080 | p=.145 | **p<.001**** |
| **Occupation** | | | | |
| Non-working | 20.25±6.02 | 10.57±2.12 | 10.70±1.82 | 41.52±7.01 |
| Worker | 17.12±8.14 | 10.43±2.59 | 10.58±2.71 | 38.15±9.44 |
| Civil servant | 22.27±4.60 | 11.36±2.21 | 11.00±1.69 | 44.63±5.58 |
| **Test type and p value** | KW=17.06 | KW=4.17 | KW=2.76 | KW=32.07 |
| | **p<.001**** | p=.120 | p=.250 | **p<.001**** |
| **Income** | | | | |
| Income<expenses | 14.56±7.39 | 10.87±2.73 | 11.07±2.34 | 36.51±8.43 |
| Income= expenses | 22.32±4.67 | 10.87±1.90 | 10.77±1.75 | 43.97±5.30 |
| Income>expenses | 18.40±8.56 | 10.80±5.51 | 9.30±4.34 | 38.50±18.35 |
| **Test type and p value** | KW=73.51 | KW=4.73 | KW=4.98 | KW=43.80 |
| | **p<.001**** | p=.090 | p=.080 | **p<.001**** |
| **Family type** | | | | |
| Nuclear | 20.45±6.51 | 10.92±2.17 | 10.95±1.76 | 42.33±7.16 |
| Extended | 18.47±7.10 | 9.42±3.51 | 8.52±3.82 | 36.42±7.16 |

| | | | | |
|---|---|---|---|---|
| Broken | 14.83±5.26 | 13.50±1.64 | 11.83±1.83 | 40.16±4.75 |
| **Test type and p value** | KW=9.73 | KW=10.61 | KW=12.60 | KW=10.80 |
| | **p<.001**** | **p<.001**** | **p<.001**** | **p<.001**** |
| **Chronic diseases in the family** | | | | |
| Yes | 22.20±4.32 | 10.25±1.63 | 10.53±1.74 | 42.99±5.67 |
| No | 17.09±8.08 | 11.80±2.90 | 11.19±2.46 | 40.09±9.96 |
| **Test type and p value** | MWU=5306.50 | MWU=4085.00 | MWU=4727.00 | MWU=6743.00 |
| | **p<.001**** | **p<.001**** | **p<.001**** | **p<.001**** |
| **Finding the ability to overcome problems in oneself** | | | | |
| Yes | 17.11±7.54 | 11.62±3.02 | 10.62±2.80 | 39.36±9.66 |
| No | 23.55±2.56 | 10.04±0.41 | 10.99±0.64 | 44.84±3.21 |
| **Test type and p value** | MWU=3873.50 | MWU=3775.50 | MWU=6163.50 | MWU=5853.50 |
| | **p<.001**** | **p<.001**** | **p<.001**** | **p<.001**** |
| **The first person with whom health problems are shared** | | | | |
| Friends | 23.70±2.10 | 10.11±0.55 | 11.00±1.15 | 44.82±2.42 |
| First-degree relatives | 19.38±6.75 | 11.34±2.10 | 11.09±1.63 | 41.81±7.75 |
| Spouse | 18.30±7.45 | 11.13±2.96 | 10.54±2.63 | 39.98±9.32 |
| **Test type and p value** | KW=39.72 | KW=31.38 | KW=9.77 | KW=10.69 |
| | **p<.001**** | **p<.001**** | p=.080 | **p=.030*** |
| **Witnessing someone who is exposed to social negativity due to their illness** | | | | |
| Sometimes | 22.34±4.12 | 10.92±2.25 | 10.86±1.63 | 44.14±5.35 |
| Often | 21.65±5.42 | 10.15±1.84 | 11.11±2.14 | 42.92±7.80 |
| Never | 13.35±8.01 | 11.01±2.75 | 10.46±3.01 | 34.83±9.42 |

| | | | | |
|---|---|---|---|---|
| **Test type and p value** | KW=34.29 | KW=25.53 | KW=5.00 | KW=11.49 |
| | **p<.001**** | **p<.001**** | p=.080 | **p<.001**** |
| **Exhibiting stigmatizing attitudes due to the presence of someone in the environment infected with COVID-19** | | | | |
| Yes | 21.94±5.39 | 9.61±2.31 | 10.16±2.39 | 41.72±8.12 |
| No | 19.53±6.85 | 11.32±2.19 | 11.02±1.91 | 41.88±7.67 |
| **Test type and p value** | MWU=5363.50 | MWU=3739.00 | MWU=4519.00 | MWU=6341.00 |
| | **p=.020*** | **p<.001**** | **p<.001**** | p=.860 |
| **Considering the information about unhealthy behaviors learned from sources as an opportunity to improve health** | | | | |
| Yes | 18.79±7.09 | 11.74±2.35 | 10.97±2.18 | 41.51±7.30 |
| No | 21.79±5.52 | 9.83±1.88 | 10.59±1.95 | 42.22±8.33 |
| **Test type and p value** | MWU=6097.00 | MWU=4291.00 | MWU=6346.50 | MWU=7380.00 |
| | **p<.001**** | **p<.001**** | **p<.001**** | p=.130 |
| **Ability to identify unhealthy behaviors** | | | | |
| Yes | 18.04±7.33 | 11.73±2.43 | 11.00±2.19 | 40.78±8.04 |
| No | 22.76±4.30 | 9.81±1.73 | 10.55±1.93 | 43.13±7.29 |
| **Test type and p value** | MWU=5288.00 | MWU=4143.00 | MWU=5950.00 | MWU=6404.00 |
| | **p<.001**** | **p<.001**** | **p<.001**** | **p<.001**** |
| **Feeling concerned about health** | | | | |
| Yes | 16.82±8.10 | 10.45±2.56 | 10.56±2.57 | 37.84±9.40 |
| No | 22.20±4.36 | 11.12±2.17 | 10.93±1.71 | 44.84±5.34 |
| **Test type and p value** | MWU=5083.00 | MWU=7541.00 | MWU=7258.00 | MWU=4790.00 |
| | **p<.001**** | p=.680 | p=.340 | **p<.001**** |

| | | | | |
|---|---|---|---|---|
| **Risk of contracting a serious illness** | | | | |
| No | 19.91±6.76 | 10.99±2.43 | 10.80±2.15 | 41.71±7.90 |
| Yes | 21.21±5.71 | 10.37±1.88 | 10.76±1.80 | 42.35±7.32 |
| **Test type and p value** | MWU=4750.50 | MWU=4473.00 | MWU=4761.00 | MWU=5094.50 |
| | p=.230 | p=.070 | p=.260 | p=.710 |

*p<.05; **p<.001; NS: Not Significant; MWU: Mann-Whitney U Test, KW: Kruskal-Wallis Test

The relation between the SSQ and the mean points on the total HSBS and its subscales was analyzed by using Spearman correlation analysis. Accordingly, the SSQ had a moderate, important positive relation with the mean HSBS total points (r=.504, p<.001), a high, important positive relation with the mean online HSBS points (r=.720, p<.001), a moderate, important negative relation with the mean professional HSBS subscale points (r=-.407, p<.001), and no relation with the mean traditional HSBS points (r=.064, p=.300) (Table 3).

**Table 3.** The relationship between the SSQ and the mean scores on the total HSBS Scale and its subscales

| **Scales** | **The SSQ** | |
|---|---|---|
| | **r** | **p** |
| **Mean scores on the total HSBS Scale** | .504 | **p<.001*** |
| **Online HSBS Subscale** | .720 | **p<.001*** |
| **Professional HSBS Subscale** | -.407 | **p<.001*** |
| **Traditional HSBS Subscale** | .064 | p=.300 |

*p<.001; NS: Not Significant; r:Spearman correlation.

## 4. Discussion

This study is the first study conducted in our country to determine the factors affecting SSQ and HSBS in COVID-19 survivors. The mean points of individuals in the study on the total SSQ was 49.23±31.36 and their mean points on the total HSBS was 41.84±7.78. Taking into consideration that a total of 100 points can be obtained from the SSQ and 60 points from the HSBS, it can be said that the SS perception of individuals who remain alive COVID-19 was at a moderate level and their HSBS was close to a high level. Of the participants, 66.1% stated that they had witnessed individuals who experienced negativity due to their illness, and 25.3% stated that they exhibited stigmatizing attitudes toward someone with COVID-19. Two out of every three participants witnessed people who had negative experiences due to their illness, and one out of every four people exhibited stigmatizing attitudes toward other individuals who

had COVID-19 despite having had COVID-19 themselves. It is an interesting finding that although individuals participating in the study had also experienced COVID-19, one out of every four people exhibited a stigmatizing attitude toward others who had COVID-19. This result may be related to fear and anxiety about the unknown, internalization of the value judgments of society, news in the media, existential crises, the effort to survive, and to feel close to death and question the meaning of life (Huda et al., 2020; Ain & Gilani, 2021; Mahmud & Islam, 2021). The existential crisis occurs upon the death of a loved one, loss of meaning, and loss of security (Yang et al., 2010). Because of anxiety and fear, people often use 'stigma' to maintain avoidance of an infected person (Kumari, 2021). In this context, the stigma of COVID-19 can be understood as a social process related to the exclusion of sick individuals who are perceived as a potential source of disease and a threat to social life (Bhanot et al., 2021). In a meta-analysis and systematic review study conducted by Yuan et al (2021a) to investigate the prevalence of stigma in infectious disease epidemics and pandemics including COVID-19, they found the prevalence of perceived stigma as 31% and the prevalence of stigma as 38% in patients, 36% in the community population, and 30% in health workers. The similarity of these rates shows that stigma is an important public health problem. It has been stated that multifaceted interventions are needed to decrease the problems caused by misinformation during infectious disease pandemics, including COVID-19 (Huda et al., 2020; Yuan et al., 2021a). Online mental health and counseling services, which will be provided by unlike institutions such as hospitals and community health centers, may be beneficial in reducing the devastating effects of diseases such as COVID-19 that impact societies on mental health and preventing stigma (Liu et al., 2020). This result may be related to fear and anxiety about the unknown, internalization of the value judgments of society, news in the media, existential crises, the effort to survive, and to feel close to death and question the meaning of life. In addition, since it is the first study conducted on the subject in our country, it is thought that it will contribute to the field, which constitutes the strength of the research.

In the study, it was found that especially participants who were female volunteers, were single, had undergraduate education, had a family member with a chronic disease, witnessed stigma against individuals with COVID-19, and had health risks exhibited more socially stigmatizing attitudes. Studies in the literature with findings that are similar to or unlike from our study findings have shown that especially the perception of SS is affected by unlike sociodemographic characteristics. This may be due to the scales used, the cultural characteristics of the communities, and the characteristics of the samples participating in these studies. Nursalam et al. (2020) described the risk factors for SS and psychological impact in individuals who had remain alive COVID-19 and the factors contributing to SS as environmental factors, the history of accompanying chronic diseases, discrimination, self-exclusion, and the perceptions of people in the region where the disease is common. In line with our research findings, Duan et al. (2020) investigated the stigma profiles and risk factors associated with COVID-19 among people at high risk of transmission. Accordingly, they indicated that individuals with a high level of education, perception of threat, and anxiety about COVID-19 were more likely to experience "perceived" stigma (Duan et al., 2020). In connection with this finding, some studies claim that high anxiety and fear of contracting the

disease may trigger stigma (Kumari, 2021). In a study, a high correlation was found between the cases of having had COVID-19, having family members infected with COVID-19, being married, and experiencing economic loss and depressive symptoms during the pandemic and the level of stigma points (Yuan et al., 2021b). Similar to our research finding, another study indicated that a important portion of women felt stigmatized and that they stigmatized people with COVID-19 themselves (Envuladu et al., 2021). Bu (2020) reported that some individuals and family members who had remain alive COVID-19 were also rejected by their neighbors and employers. It was determined that individuals who had low health literacy, were living in areas with a high number of COVID-19 cases, and were from ethnic minorities were more exposed to stigma (Jiang et al., 2021). Individuals suffering from SS may feel ashamed of themselves and experience constant fear of communicating with their family members and friends, or they may show self-blaming behavior (Duan et al., 2020; Bu, 2020). Adom et al. (2021) reported that since being highly stigmatized due to COVID-19 decreased the sufferers' chances to express their health status, this became a barrier to the control and prevention of COVID-19. Stigma can undermine social adjustment and accelerate the possible social isolation of groups. All of these can lead to more serious health problems and hinder the control of the pandemic by increasing the likelihood of the spread of the virus.

In our study, the mean HSBS total points of participants who were female, were single, had a university education, were civil servants, had an income equal to expenses, had a nuclear family, had a chronic disease in the family, did not think they could overcome problems, shared their health problems with friends first, were more likely to witness someone around them who experienced social negativity due to their illness and could not determine behaviors that are harmful to their health was higher. Unlike these findings, in a study conducted by Mojtabai et al. (2011), it was reported that approximately 45% of the participants who did not seek treatment and had a disease had a low perception of their needs. Intrinsic stigma and hopelessness may be effective in not turning to any help-seeking behavior when individuals have an illness (Mojtabai et al., 2011). It has been stated that especially experiences of anxiety and uncertainty may be effective in increasing the hopelessness of individuals about their future life in such periods (Saricali et al., 2020). However, Asril et al. (2021) found in their study that age, health motivation, and self-efficacy were importantly associated with help-seeking behavior. From this point of view, help-seeking behavior can be affected by many unlike factors (Koller et al., 2021). What needs to be emphasized here is that there is a need for a deeper understanding of the dynamics underlying these differences in individuals' help-seeking behavior. In particular, the effect of individual, environmental, and cultural characteristics in this process should be revealed.

In our study, it was found that as SS increased, general health-seeking and online HSBS increased, but that professional HSBS decreased and there was no change in traditional health-seeking behavior. Although recent studies have reported the use of informal health services among Ebola virus disease survivors (Bak-James et al., 2019), no research to date has studied the relation between the use of traditional and complementary medicine and the stigma associated with COVID-19 disease. Our study, which was carried out in the central county of

a province located in the west of Turkey, revealed that stigma among COVID-19 survivors did not cause a change in the use of informal healthcare services (traditional and complementary medicine), but that online HSB increased while Professional HSBS decreased. This result is consistent with our other research findings. Of the participants in the present study, 66.1% stated that they witnessed individuals who were exposed to negative attitudes due to their illness, and 25.3% stated that they showed stigmatizing attitudes towards individuals with COVID-19. This may be due to the fact that stigmatization is prevalent especially when people feel vulnerable to infection (Koller et al., 2021). Taking into consideration that the first person with whom participants shared their health problems included friends, first-degree relatives, or their spouses, it can be said that results support this finding. As a matter of fact, studies have shown that individuals primarily tend to seek unprofessional resources and social support in pandemics and that having good relations within the household is a protective factor in pandemic diseases (Bananno et al., 2008; Chew et al., 2020; Odriozola-González et al., 2022).

### a. Limitations of the study

Our study has some limitations. A cross-sectional design was used in our study, therefore no causality inferences could be made between the independent and outcome variables. Our findings apply only to COVID-19 survivors in the central county of Aydın province and cannot be generalized to the whole of Turkey. The majority of study participants were urban residents, so survivors living in remote rural areas may have unlike experiences. The period immediately after the declaration of COVID-19 was perhaps the time when stigma was highest and perhaps when stigma was overrepresented. As there was no approved COVID-19 stigma scale, questions of a social stigma-related questionnaire that was developed by other researchers were utilized. Since the research into the subject was limited, the findings were discussed over the results of research conducted on other chronic diseases.

## 5. Conclusion

It was found that the SS perception of individuals participating in the study was at a moderate level and that their HSBS were at a high level. A important difference was found between SS and health-seeking behaviors of individuals who remain alive COVID-19 and their gender, marital status, education level, occupation, family type, and income level. The results of the study also indicated that there was a important difference between individuals' mean SSQ and HSBS points and having a family member with a chronic disease, experiencing health problems, witnessing someone who experienced negativity in their social environment due to their illness, and having health concerns.

A moderate, important positive correlation was found between the mean SSQ and HSBS Scale points. The mean SSQ points had a high level and positive correlation with the mean points on the online HSBS and a moderate and important negative correlation with the mean points on the professional HSBS, which are two subscales of the HSBS. No important relation was

found between the mean SSQ points and the mean traditional HSBS, which is one of the subscales of the HSBS.

The COVID-19-associated stigma is common among COVID-19 survivors. It is recommended that the stigma experiences of COVID-19 victims should be assessed routinely and appropriate psychological assistance, public education, and anti-stigma campaigns and policies should be implemented to decrease stigma towards individuals in this vulnerable subpopulation. There is a need for survivor-centered and community-focused anti-stigma programs to promote the recovery and reintegration of COVID-19 survivors into society. Private interventions should be encouraged to develop health literacy and decrease the public stigma associated with COVID-19. The perception of low risk and the stigma associated with COVID-19 can create barriers to accessing testing and care and therefore adversely affect early control of the disease. Rigorous public health education programs about the disease and the negative consequences of the stigmatization of infected persons should be carried out. COVID-19 victims should be assessed routinely for their stigma experiences and appropriate psychological assistance, public education, and anti-stigma campaigns and policies should be implemented to decrease stigma in this vulnerable subpopulation. It may be useful to include interventions to increase conscious awareness in the content of psychological help.

**Conflict of Interest**

Authors declare they have no conflicts of interest.

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