



## Anxiety and spiritual well-being in adolescents and young adults during the COVID-19 pandemic in Turkey

### Türkiye’de COVID-19 pandemisi sürecinde adölesanlarda ve genç yetişkinlerde anksiyete ve spiritüel iyi oluşluk

Çiğdem Ceylan<sup>1</sup>, Çiğdem Sarı Öztürk<sup>2</sup>

<sup>1</sup>Asst. Prof., Bolu Abant İzzet Baysal University Health Sciences Faculty, Department of Child Health and Disease Nursing, Bolu, Turkey. cigdemceylan@gmail.com, 0000-0002-9015-5684  
<sup>2</sup>Asst. Prof., Gazi University Nursing Faculty, Department of Child Health and Disease Nursing, Ankara, Turkey. cigdemsari@hotmail.com, 0000-0001-8203-5925

#### ABSTRACT

**Aim:** This study aimed to determine the effect of spiritual well-being in reducing anxiety levels during the COVID-19 pandemic in adolescents and young adults. **Materials and Methods:** 806 participants (aged 16–24) took part in this cross-sectional study in Turkey. The data was collected by online demographics form, anxiety levels before and during the pandemic, the reasons of the anxiety, coping strategies before and during the pandemic and Spiritual Well-Being Scale (SWBS). **Results:** The means of anxiety levels were higher during the pandemic than before the pandemic. Being anxious and coping with anxiety were increased and keeping calm when worried, feeling safe, and feeling peaceful were decreased according to before the pandemic. No correlation was found between anxiety level before the pandemic and SWBS ( $p > 0.05$ ). A low negative correlation was found between anxiety level during the pandemic and SWBS ( $p < 0.05$ ). Anxiety levels before and during the pandemic were found to be a statistically significant association ( $p < 0.05$ ). **Conclusions:** COVID-19 can affect individuals’ mental health and cause anxiety in individuals. Spiritual well-being is one of the important components for coping with anxiety during the COVID-19 pandemic.

#### ÖZ

**Amaç:** Bu çalışma, adölesanlarda ve genç yetişkinlerde COVID-19 pandemisi sürecindeki spiritüel iyi oluşluğun anksiyete düzeylerini azaltmadaki etkisini belirlemeyi amaçlamıştır. **Gereç-Yöntem:** Türkiye’deki bu kesitsel çalışmaya 806 katılımcı (16-24 yaş arası) katılmıştır. Veriler, çevrimiçi tanıtıcı özellikler formu, pandemi öncesi ve sürecindeki kaygı düzeyleri, kaygının nedenleri, pandemi öncesi ve sürecindeki başa çıkma stratejileri ve Spiritüel İyi Oluş Ölçeği (SWBS) ile toplanmıştır. **Bulgular:** Pandemi sürecinde kaygı düzeyleri pandemi öncesine göre daha yüksek olarak belirlenmiştir. Pandemi öncesine göre kaygılı olma ve kaygıyla baş etme artmış, kaygılıken sakin olma, kendini güvende hissetme ve huzurlu hissetme azalmıştır. Pandemi öncesi kaygı düzeyi ile SWBS arasında ilişki bulunmamıştır ( $p > 0,05$ ). Pandemi sürecindeki kaygı düzeyi ile SWBS arasında düşük bir negatif ilişki bulunmuştur ( $p < 0.05$ ). Pandemi öncesi ve sürecindeki kaygı düzeylerinde istatistiksel olarak anlamlı bir ilişki olduğu saptanmıştır ( $p < 0.05$ ). **Sonuç:** COVID-19, bireylerin ruh sağlığını etkileyebilir ve bireylerde kaygıya neden olabilir. Spiritüel iyi oluşluk, COVID-19 pandemisi sürecinde kaygıyla baş etmenin önemli bileşenlerinden biridir.

#### ARTICLE INFO/MAKALE BİLGİSİ

**Key Words:** COVID-19, Spiritual Well-Being, Anxiety, Adolescent, Young Adult

**Anahtar Kelimeler:** COVID-19, Spiritüel İyi Oluşluk, Anksiyete, Adölesan, Genç Yetişkin

**DOI:** 10.5281/zenodo.8434535

**Corresponding Author/Sorumlu Yazar:** Asst. Prof., Bolu Abant İzzet Baysal University Health Sciences Faculty, Department of Child Health and Disease Nursing, Bolu, Turkey. cigdemceylan@gmail.com, 0000-0002-9015-5684

**Received Date/Gönderme Tarihi:** 21.07.2023

**Accepted Date/Kabul Tarihi:** 12.10.2023

**Published Online/Yayımlanma Tarihi:** 31.12.2023

#### INTRODUCTION

The first case of Coronavirus Disease 2019 (COVID-19) was reported to the World Health Organization (WHO) by the Chinese authorities on December 31, 2019, as a result of a patient who was affected by pneumonia in Wuhan City, Hubei Province, China. WHO declared COVID-19 an international public health emergency on January 30, 2020. COVID-19 has also been declared a pandemic by the WHO. The pandemic has affected

many countries and on April 06, 2023, 762,201,169 COVID-19 confirmed cases were reported worldwide (1,2,3). On November 14-27, 2022, Turkey’s Ministry of Health reported 17,042,722 confirmed cases of COVID-19 (4). Countries around the world have taken preventions such as quarantine, online education, and social restrictions due to the pandemic situation. Various preventions have also been quickly adopted in Turkey because of the pandemic. The importance of masks, social distancing, and hand hygiene are emphasized,



and people are reminded of these every day through various media. Preventions such as quarantine and social restrictions have been adopted, and education has moved from face-to-face to online. These preventions were undertaken quickly and one of the groups most affected by this process are adolescents and young adults.

In addition to medical risk, the pandemic has psychological and social impacts on individuals. It is difficult to predict the psychological and emotional effects of COVID-19, as it is a new pandemic. Exposure to pandemic stress and social isolation may increase the incidence of mental health problems. Studies conducted in China have shown that mental problems such as stress, anxiety, and depression may develop as a result of fear of the unknown and uncertainty (5,6,7). Although COVID-19 is not as severe and deadly in children as it is in adults, its impact on the quality of life and mental health is not yet well understood. Children and adolescents are living with major changes in their daily lives, such as school closures, staying home and social distancing rules, which can strain them significantly (8).

Mental health is an essential condition for a good quality of life (9). One of the closely related components of mental health is spiritual well-being. Spirituality has been defined as the meaning of an individual's life, guiding the individual's existence and experiences, beliefs or thoughts (10,11,12,13). Additionally, spirituality has been defined as the thing that gives meaning, motivation, energy, and direction to an individual's behavior (12). Spirituality has also been reported to have a positive effect on mental health. For these reasons, one type of interventions that can reduce anxiety are those based on spirituality (10,14).

We have not encountered such a study investigating the effect of spirituality and spiritual well-being in reducing anxiety levels among adolescents and young adults due to the COVID-19 pandemic. Therefore, this study's aim was to determine the effect of spiritual well-being in reducing anxiety levels in adolescents and young adults during the COVID-19 pandemic.

## MATERIAL AND METHODS

### Study Design and Population

This was a cross-sectional study carried out between December 30, 2020 and January 30, 2021, while the schools, cafes, and most entertainment centers were closed and with social distancing in the country. Primary data were collected from seven regions in Turkey. The survey was created using Google Forms. The researchers sent the survey web-link to participants via social media tools (Twitter®, Instagram®, Facebook®, WhatsApp®). It took approximately 5 minutes to complete the survey.

The inclusion criteria of this study were the following: adolescents and young adults aged 16–24 years, being a student in high school or university, living in Turkey and volunteering to participate. Participation in the survey was entirely voluntary, and the data included questions about demographics (age, gender, educational status, presence of chronic disease, diagnosis of COVID-19, and socio-demographic characteristics of the family) and questions about anxiety levels before and during the pandemic, the reasons for the anxiety, coping strategies to address the anxiety, and about the Spiritual Well-Being Scale (SWBS). We reached 816 participants through Google Forms. We excluded 10 participants because seven participants did not meet the inclusion criteria and three participants had duplicate responses. Accordingly, the sample size of this study was 806 participants.

### Measurements

In the collection of the data, the online demographics form created by the researchers, the anxiety levels and coping strategies before and during the pandemic, the online questionnaire, and the Spiritual Well-Being Scale were used.

### Online Demographics Form

An online demographics form was prepared by the researchers in line with the literature information. It consists of 10 questions regarding age, gender, educational status, presence of chronic disease, previous diagnosis of COVID-19, and socio-demographic characteristics of the families of the adolescents and young adults (3,5,6,14,15,16,17).

### Anxiety Levels and Coping Strategies Before and During Pandemic Online Questionnaire

An online questionnaire about anxiety and coping methods before and during the pandemic was prepared by the researchers in line with the literature information. It consists of 10 questions about the anxiety levels of adolescents and young adults before and during the pandemic and their coping strategies when they are anxious as well as the situations that cause them to be anxious (3,5,6,14,16).

### Spiritual Well-Being Scale (SWBS)

This scale was developed by Ekşi and Kardaş (2017) and was applied to individuals whose ages ranged from 16 to 54. The items on the scale were determined by scanning the relevant literature, using other scales, and obtaining material from the compositions on the subject, which were written by the individuals. The scale consists of 29 items and 3 subscales: transcendence, harmony with nature, and anomie. The scale is a 5-point Likert-type scale. The Cronbach's alpha coefficient was 0.886 in the Turkish validity and reliability study of the scale. The

lowest score from the scale is 29, the highest score is 145, and higher scores indicate higher levels of spiritual well-being in individuals (18).

### Data Analysis

The data were analyzed using the SPSS for Windows version 22.0 (Statistical Package for Social Sciences, version 22.0, for Windows) package data program. The compliance of the data to the normal distribution was evaluated with the Kolmogorov-Smirnov test. The comparison of the variables that were not normally distributed was performed using the Mann-Whitney U Test and the Kruskal-Wallis Test. Spearman’s correlation analysis was used to investigate the relationship between Table 1. Characteristics of adolescents and young adults and spiritual well-being scale scores (n = 806)

the adolescents and young adults’ anxiety levels and spiritual well-being. Multiple linear regression analysis was used for the variables predicting the adolescents and young adults’ SWBS. The significance level was  $p < 0.05$ . Statistical analyses were used in this study.

## RESULTS

### Participants’ Characteristics

Table 1 shows the characteristics of adolescents and young adults and their SWBS scores. Among the participants, 48.0% were adolescent, and 52.0% were young adults. The mean age of the participants was  $19.52 \pm 2.58$ ; 70.5% were female and 29.5 were male.

Variables	M±SD	Min-Max		
Age	19.52±2.58	16-24		
Transcendence subscale	58.39±12.56	15-75		
Harmony with nature subscale	29.83±4.63	7-35		
Anomie subscale	20.98±6.22	7-35		
Spiritual Well-Being Scale (SWBS)	109.21±18.17	48-145		
<b>Characteristics</b>	<b>n</b>	<b>%</b>	<b>SBWS</b>	<b>p</b>
<b>Age</b>				
16–19	387	48.0	76985.000 <sup>a</sup>	0.215
20–24	429	52.0		
<b>Gender</b>				
Female	568	70.5	49980.000 <sup>a</sup>	0.000
Male	238	29.5		
<b>Education status</b>				
High school	327	40.6	72380.500 <sup>a</sup>	0.067
University	479	59.4		
<b>Mother’s education status</b>				
Primary	480	59.6	37.151 <sup>b</sup>	0.000
High school	248	30.8		
University	78	9.7		
<b>Father’s education status</b>				
Primary	325	40.3	17.713 <sup>b</sup>	0.000
High school	282	35.0		
University	199	24.7		
<b>Chronic illness</b>				
Yes	34	4.2	10286.500 <sup>a</sup>	0.033
No	772	95.8		
<b>Region of living</b>				
Southeastern Anatolia	15	1.9		
Aegean	48	6.0		
Eastern Anatolia	57	7.1	27.323 <sup>b</sup>	0.000
Marmara	83	10.3		
Mediterranean	127	15.8		
Central Anatolia	232	28.8		
Black Sea	244	30.3		
<b>Place of living</b>				
Village	84	10.4	22.738 <sup>b</sup>	0.000
District	315	39.1		
Town center	407	50.5		
<b>Individuals living together</b>				
Grandparents	4	0.5		
Friend/friends	15	1.9	12.696 <sup>b</sup>	0.005
Alone	23	2.9		
Parents	764	94.8		
<b>COVID-19 diagnosis before</b>				
Yes	109	13,5	36532.000 <sup>a</sup>	0.520
No	697	86,5		

aMann-Whitney U test, bKruskall-Wallis test

Most of the participants (94.8%) lived with their parents, 13.5% had COVID-19 diagnosis, and 86.5% had not had a COVID-19 diagnosis.

The scores for SWBS ranged from 48–145, with a mean score of 109.21±18.17. The mean scores of the transcendence, harmony with nature and anomie subscales were 58.39±12.56, 29.83±4.63, and 20.98±6.22, respectively.

**Anxiety States of Participants Before and During the Pandemic**

The means of anxiety levels before and during the pandemic were 4.36±2.46 and 7.60±0.09, respectively. Sports/sporting activities (such as playing basketball, football, swimming etc.) were the most common (26.6%)

coping strategies before the pandemic. Spending time in front of the screen (such as watching film, playing with computer etc.) was the most (30.3%) coping strategy during the pandemic. Additionally, staying at home, wearing a mask, paying attention to hygiene and social distancing (12.2%), physical activity/exercise at home (4.1%), unable to cope with anxiety (3.2%) and eating food (1.1%) were additional coping strategies during the pandemic. School closure, online education (40.9%) and restrictions in social life (39.8%) were the most common causes of anxiety during the pandemic (Table 2).

Being anxious (83.4%) and coping with anxiety (47.3%) increased compared to before the pandemic. Keeping calm when worried (48.3%), feeling safe (58.6%) and feeling peaceful (71.0%) decreased compared to before pandemic (Table 3).

**Table 2.** Anxiety levels and coping strategies before and during the COVID-19 pandemic (n = 806)

Anxiety level	M±SD	Min-Max
Anxiety level before the pandemic	4.36±2.46	0-10
Anxiety level during the pandemic	7.60±0.09	0-10
Variables	Category	n (%)
Coping strategies before the pandemic	Tobacco	2 (0.2)
	Religious practices/praying	16 (2.0)
	New hobbies	26 (3.2)
	Reading book/studying for lessons	62 (7.7)
	Meditation/yoga	90 (11.2)
	Social activities	103 (12.8)
	Do nothing, sleeping/being alone	146 (18.1)
	Spending time in front of the screen	147 (18.2)
	Sports/sporting activities	214 (26.6)
Coping strategies during the pandemic	Tobacco	4 (0.5)
	Walking outside	5 (0.6)
	Eating food	9 (1.1)
	Religious practices/praying	18 (2.2)
	Unable coping with anxiety	26 (3.2)
	New hobbies	27 (3.3)
	Physical activity/exercise at home	33 (4.1)
	Talking to family/friends	35 (4.3)
	Reading book/studying for lessons	68 (8.4)
	Meditation/yoga	95 (11.8)
	Staying at home, masking, practicing good hygiene, social distancing	98 (12.2)
	Do nothing, sleeping/being alone	144 (17.9)
	Spending time in front of a screen	244 (30.3)
Cause of anxiety during the pandemic	Economic problems	13 (1.6)
	Fear of oneself/family being COVID-19	20 (2.5)
	Family/relative diagnosed with COVID-19	122 (15.1)
	Restrictions in social life	321 (39.8)
	School closure, online education	330 (40.9)

**Table 3.** Changes in anxiety and spiritual well-being parameters during the COVID-19 pandemic

Variables	Category	n (%)
Being anxious compared to before the pandemic	Decreased	34 (4.2)
	Same as before	100 (12.4)
	Increased	672 (83.4)
Coping with anxiety compared to before the pandemic	Decreased	92 (11.4)
	Same as before	333 (41.3)
	Increased	381 (47.3)
Keeping calm when worried compared to before the pandemic	Increased	109 (13.5)
	Same as before	308 (38.2)
	Decreased	389 (48.3)
Feeling safe compared to before the pandemic	Increased	64 (7.9)
	Same as before	270 (33.5)
	Decreased	472 (58.6)
Feeling peaceful compared to before the pandemic	Increased	62 (7.7)
	Same as before	172 (21.3)
	Decreased	572 (71.0)

### Correlation Between Participants’ Spiritual Well-Being and Anxiety Levels Before and During Pandemic

Table 4 shows the correlations between the SWBS, its subscale scores and anxiety levels before and during the pandemic. Spearman’s correlation analysis revealed no correlation between anxiety level before the pandemic and SWBS ( $r = 0.055$ ;  $p > 0.05$ ). Spearman’s correlation analysis revealed a low negative correlation between anxiety level during the pandemic and SWBS ( $r = -0.162$ ;  $p < 0.05$ ). There was a low positive correlation between anxiety level before the pandemic, the SWBS transcendence, and harmony with nature subscale scores ( $p < 0.05$ ), and a low negative correlation between anxiety level before pandemic the SWBS anomie subscale score ( $p < 0.05$ ). There was a low negative correlation between anxiety level during the pandemic, the SWBS transcendence and anomie subscale scores ( $p < 0.05$ ), and no correlation between the SWBS harmony with nature subscale score ( $p > 0.05$ ).

### Factors Predicting Participants’ SWBS Scores

The results of the multiple linear regression analysis explaining the factors affecting the adolescents’ and young adults’ SWBS scores are given in Table 4. Anxiety level before and during the pandemic showed a statistically significant association with the multiple linear regression analysis ( $p < 0.05$ ). While the total scores for SWBS were positively correlated with variables such as age, chronic illness, and anxiety level before the pandemic, they were negatively correlated with a previous COVID-19 diagnosis and anxiety level during the pandemic. In our study, the Cronbach alpha coefficient of the scale was found to be 0.93.

### DISCUSSION

COVID-19 is a global health problem. Government restrictions to slow the spread of the virus have led to widespread social isolation. This can have deep consequences for mental health and may cause negative emotions (e.g. anxiety and fear) in individuals (5,19,20). Since spirituality is related to individuals’ physical and mental health, it is generally beneficial in dealing with stress factors in life. Spirituality is also a key factor in reducing psychological outcomes, particularly anxiety (21).

In this study, it was determined that anxiety levels were higher in adolescents and young adults during the pandemic than before the pandemic. Similarly, Husky et al. (2020) found that university students indicated that their level of anxiety had increased since the beginning of the COVID-19 confinement period (22). Wang et al. (2020) conducted with university students, most of the participants stated that their stress/anxiety levels increased during the COVID-19 pandemic (23). In other current studies with university students, it was also found that students had high levels of anxiety during the COVID-19 pandemic (24,25). Some studies have found that young adults had higher anxiety levels than older adults during the COVID-19 pandemic (26,27). Anxiety is among the most common mental health disorders and can be defined as a constant feeling of worry, fear, or irritability. The pandemic caused common anxiety in the general population (28,29).

It was also found that the participants used a range of strategies to cope with anxiety. Among the most common coping strategies to address anxiety during the COVID-19 pandemic were the following: spending

Table 4. Correlation between spiritual well-being and anxiety levels before and during the pandemic

	Transcendence subscale	Harmony with nature subscale	Anomie subscale	SWBS
Anxiety level before the pandemic	0.114 $p < 0.05$ - 0.099	0.120 $p < 0.05$ - 0.038	- 0.103 $p < 0.05$ - 0.232	0.055 $p > 0.05$ - 0.162
Anxiety level during the pandemic	$p < 0.05$	$p > 0.05$	$p < 0.05$	$p < 0.05$

Spearman test

Table 5. Multiple linear regression analyses of SWBS

	B	SE	$\beta$	t	p	95% CI
Age <sup>a</sup>	1.376	1.265	0.038	1.089	0.277	- 1.106, 3.859
Chronic illness <sup>b</sup>	5.243	3.153	0.058	1.663	0.097	- 0.947, 11.432
COVID-19 diagnosis before <sup>c</sup>	- 0.580	1.845	- 0.011	- 0.314	0.753	- 4.201, 3.042
Anxiety level before the pandemic	0.692	0.272	0.094	2.545	0.011	0.158, 1.226
Anxiety level during the pandemic	- 1.585	0.318	- 0.182	- 4.977	0.000	- 2.210, -0.960

B: Beta coefficient; SE: Standard error;  $\beta$ : Standardized beta coefficient; 95% CI: 95% confidence interval

a: 1 = 16–19, 2 = 20–24

b: 1 = No, 2 = Yes

c: 1 = No, 2 = Yes

time in front of the screen (watching a film, playing on the computer etc.), doing nothing, sleeping/being alone, staying at home, masking, practicing good hygiene, social distancing, meditation/yoga, reading book/studying for lessons, talking to family/friends, physical activity/exercise at home, and new hobbies. Similarly, Sameer et al. (2020) examined various coping strategies under the COVID-19 pandemic enforced lockdown. They found that among the top coping strategies for spending time and coping with the stress during the lockdown were watching television for fun, Facebook, Instagram, Twitter, listening to music, sleeping, house cleaning, washing, eating, and finishing piled-up work. Among the coping strategies were also sleeping and watching television for films (30). Similar to our study results, another current study with medical students found that among activities and strategies used to help with mental well-being were taking up new hobbies, indoor exercising, taking up new hobbies and meditation (31). COVID-19 can cause anxiety and coping with anxiety is so important because of its influence on health. Two general coping strategies have been identified. These are problem-focused coping, the purpose of which is to solve the problem, and emotion-focused coping, the purpose of which is to reduce the emotional distress associated with stressful situations (25,32).

In this study, it was determined that causes of anxiety during the pandemic were school closure, online education, restrictions in social life, a family member/relative diagnosed with COVID-19, fear of oneself/family getting COVID-19, and economic problems. A recent study investigated the impact of COVID-19 on medical students' mental well-being. Similar to our study results, they found that among concerns about COVID-19 were family members testing positive and themselves testing positive (31). The uncertainty about this pandemic, self-isolation measures and quarantine can cause mental health problems such as anxiety in individuals (33,34).

A negative and significant correlation between anxiety level during the pandemic and SBWS was found in this study. This means that adolescents and young adults with low SBWS scores had high anxiety scores, and vice versa. Similarly, Rias et al. (2020) found that individuals who had low levels of spirituality had higher anxiety according to individuals who had higher levels of spirituality (21). González-Sanguino et al. (2020) found that participants with a high score for spirituality had lower levels of anxiety (35). Recent studies with university students and healthcare workers also found that spirituality was correlated with anxiety during the COVID-19 pandemic (36,37). Fabbris et al. (2017) investigated the relationship between anxiety and spiritual well-being in nursing students. It was

determined that spiritual well-being was related to anxiety, which means that higher scores for spiritual well-being were related to lower scores for anxiety level (38). Spiritual well-being has been defined as meaning, purpose and satisfaction in life. Spiritual well-being has a positive effect on mental health and plays a crucial role in reducing anxiety (39).

### Study Limitations

This study was conducted in Central Anatolia, where the effect of spiritual well-being in reducing anxiety levels during the COVID-19 pandemic in adolescents and young adults who are Muslim. Therefore, cannot be generalized. This study was conducted during the COVID-19 pandemic, and we used an online survey method with voluntary participation. The anxiety levels, the causes of anxiety and coping strategies before and during the pandemic were measured with self-report. Data and analyses were made from a cross-sectional study design. Therefore, it can be difficult to make temporal and causal relationships between variables.

### CONCLUSION

Countries around the world have implemented preventions such as social restriction, hand hygiene, social distancing, wearing masks, quarantine and online education during the COVID-19 pandemic. These preventions can have psychological impacts on individuals and increase the incidence of mental health problems such as stress and anxiety. One of the groups most affected by this pandemic process are adolescents and young adults. Adolescents and young adults are affected by the major changes such as online education, social restriction, and quarantine.

Mental health can affect individuals' quality of life, so it has an important role in life. Spiritual well-being is a component of mental health. Spirituality has been defined as the meaning of life, the motivation, beliefs/thoughts and guiding an individual's existence. Spirituality has a positive effect on mental health and can reduce anxiety. Spirituality and spiritual well-being are important to reduce anxiety in adolescents and young adults during the COVID-19 pandemic.

## REFERENCES

- Weston S, Frieman MB. COVID-19: Knowns, unknowns, and questions. *mSphere*. 2020;5(2):e00203-20. doi: 10.1128/mSphere.00203-20.
- who.int [homepage on the Internet]. Coronavirus disease (COVID-19) pandemic. [updated 6 April 2023; cited 9 April 2023]. Available form: [https://www.who.int/emergencies/diseases/novel-coronavirus-2019?gclid=EAlaIqobChMik6-w8s-E7QIVfAwGAB1AzQnLEAAYASAAEgI4w\\_D\\_BwE](https://www.who.int/emergencies/diseases/novel-coronavirus-2019?gclid=EAlaIqobChMik6-w8s-E7QIVfAwGAB1AzQnLEAAYASAAEgI4w_D_BwE)
- Zhang Y, Zhang H, Ma X, Di Q. Mental health problems during the COVID-19 pandemics and the mitigation effects of exercise: a longitudinal study of college students in China. *Int J Environ Res Public Health*. 2020;17(10):3722. doi: 10.3390/ijerph17103722.
- covid19.saglik.gov.tr [homepage on the Internet]. COVID-19 Information Page. [updated 14-27 November 2022; cited 9 April 2023]. Available form: <https://covid19.saglik.gov.tr/TR-66935/genel-koronavirus-tablosu.html>
- Lucchetti G, Góes LG, Amaral SG, Ganadjian GT, Andrade I, Almeida POA, et al. Spirituality, religiosity and the mental health consequences of social isolation during Covid-19 pandemic. *Int J Soc Psychiatry*. 2021;67(6):672-679. doi: 10.1177/0020764020970996.
- Ozamid-Etxebarria N, Dosil-Santamaria M, Picaza-Gorrochategui M, Idoiaga-Mondragon N. Stress, anxiety, and depression levels in the initial stage of the COVID-19 outbreak in a population sample in the northern Spain. *Cad Saude Publica*. 2020;36(4):e00054020. doi: 10.1590/0102-311X00054020.
- Shigemura J, Ursano RJ, Morganstein JC, Kurosawa M, Benedek DM. Public responses to the novel 2019 coronavirus (2019-nCoV) in Japan: Mental health consequences and target populations. *Psychiatry Clin Neurosci*. 2020;74(4):281-282. doi: 10.1111/pcn.12988.
- Ravens-Sieberer U, Kaman A, Erhart M, Devine J, Schlack R, Otto C. Impact of the COVID-19 pandemic on quality of life and mental health in children and adolescents in Germany. *Eur Child Adolesc Psychiatry*. 2022;31(6):879-889. doi: 10.1007/s00787-021-01726-5.
- Zhou SJ, Zhang LG, Wang LL, Guo ZC, Wang JQ, Chen JC, et al. Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. *Eur Child Adolesc Psychiatry*. 2020;29(6):749-758. doi: 10.1007/s00787-020-01541-4.
- Doust MV, Hojjati H, Farhangi H. Effect of Spiritual Care Based on Ghalbe Salim on Anxiety in Adolescent with Cancer. *J Relig Health*. 2020;59(6):2857-2865. doi: 10.1007/s10943-019-00869-9.
- Gaskin-Wasson AL, Walker KL, Shin LJ, Kaslow NJ. Spiritual well-being and psychological adjustment: mediated by interpersonal needs? *J Relig Health*. 2018;57(4):1376-1391. doi: 10.1007/s10943-016-0275-y.
- Giovagnoli AR, Paterlini C, Meneses RF, Silva AM. Spirituality and quality of life in epilepsy and other chronic neurological disorders. *Epilepsy Behav*. 2019;93:94-101. doi: 10.1016/j.yebeh.2019.01.035.
- Shek DTL. Spirituality as a positive youth development construct: a conceptual review. *Scientific World Journal*. 2012;2012:458953. doi: 10.1100/2012/458953.
- Amjad F, Bokharey IZ. Comparison of spiritual well-being and coping strategies of patients with generalized anxiety disorder and with minor general medical conditions. *J Relig Health*. 2015;54(2):524-39. doi: 10.1007/s10943-014-9834-2.
- Elbay RY, Kurtuluş A, Arpacioğlu S, Karadere E. Depression, anxiety, stress levels of physicians and associated factors in Covid-19 pandemics. *Psychiatry Res*. 2020;290:113130. doi: 10.1016/j.psychres.2020.113130.
- Huang Y, Zhao N. Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. *Psychiatry Res*. 2020;288:112954. doi: 10.1016/j.psychres.2020.112954.
- Verma S, Mishra A. Depression, anxiety, and stress and socio-demographic correlates among general Indian public during COVID-19. *Int J Soc Psychiatry*. 2020;66(8):756-762. doi: 10.1177/0020764020934508.
- Ekşi H, Kardeş S. Spiritual well-being: scale development and validation. *Spiritual Psychology and Counseling*. 2017;2(1):73-88. doi: 10.12738/spc.2017.1.0022.
- Balasubramanian S, Rao NM, Goenka A, Roderick M, Ramanan AV. Coronavirus disease 2019 (COVID-19) in children - what we know so far and what we do not. *Indian Pediatr*. 2020;57(5):435-442. doi: 10.1007/s13312-020-1819-5.
- Magson NR, Freeman JYA, Rapee RM, Richardson CE, Oar EL, Fardouly J. Risk and protective factors for prospective changes in adolescent mental health during the COVID-19 pandemic. *J Youth Adolesc*. 2021;50(1):44-57. doi: 10.1007/s10964-020-01332-9.
- Rias YA, Rosyad YS, Chipojola R, Wiratama BS, Safitri CI, Weng SF, et al. Effects of spirituality, knowledge, attitudes, and practices toward anxiety regarding COVID-19 among the general population in Indonesia: A cross-sectional study. *J Clin Med*. 2020;9(12):3798. doi: 10.3390/jcm9123798.
- Husky MM, Kovess-Masfety V, Swendsen JD. Stress and anxiety among university students in France during Covid-19 mandatory confinement. *Compr Psychiatry*. 2020;102:152191. doi: 10.1016/j.comppsy.2020.152191.
- Wang X, Hegde S, Son C, Keller B, Smith A, Sasangohar F. Investigating mental health of us college students during the COVID-19 pandemic: cross-sectional survey study. *J Med Internet Res*. 2020;22(9):e22817. doi: 10.2196/22817.
- Essadek A, Rabeyron T. Mental health of French students during the COVID-19 pandemic. *J Affect Disord*. 2020;277:392-393. doi: 10.1016/j.jad.2020.08.042.
- Savitsky B, Findling Y, Erel A, Hendel T. Anxiety and coping strategies among nursing students during the covid-19 pandemic. *Nurse Educ Prac*. 2020;46:102809. doi: 10.1016/j.nepr.2020.102809.
- Gambin M, Sękowski M, Woźniak-Prus M, Wnuk A, Oleksy T, Cudo A, et al. Generalized anxiety and depressive symptoms in various age groups during the COVID-19 lockdown in Poland. Specific predictors and differences in symptoms severity. *Compr Psychiatry*. 2021;105:152222. doi: 10.1016/j.comppsy.2020.152222.
- Głowacz F, Schmits E. Psychological distress during the COVID-19 lockdown: The young adults most at risk. *Psychiatry Res*. 2020;293:113486. doi: 10.1016/j.psychres.2020.113486.
- Mosheva M, Hertz-Palmor N, Ilan SD, Matalon N, Pessach IM, Afek A, et al. Anxiety, pandemic-related stress and resilience among physicians during the COVID-19 pandemic. *Depress Anxiety*. 2020;37(10):965-971. doi: 10.1002/da.23085.
- Smith L, Jacob L, Yakkundi A, McDermott D, Armstrong NC, Barnett Y, et al. Correlates of symptoms of anxiety and depression and mental wellbeing associated with COVID-19: a cross-sectional study of UK-based respondents. *Psychiatry Res*. 2020;291:113138. doi: 10.1016/j.psychres.2020.113138.
- Sameer AS, Khan MA, Nissar S, Banday MZ. Assessment of mental health and various coping strategies among general population living under imposed COVID-lockdown across world: a cross-sectional study. *Ethics, Medicine and Public Health*. 2020;15:100571. doi: 10.1016/j.jemep.2020.100571.
- Lyons Z, Wilcox H, Leung L, Dearsley O. COVID-19 and the mental well-being of Australian medical students: impact, concerns and coping strategies used. *Australas Psychiatry*. 2020;28(6):649-652. doi: 10.1177/1039856220947945.
- Huang L, Lei W, Xu F, Liu H, Yu L. Emotional responses and coping strategies in nurses and nursing students during COVID-19 outbreak: A comparative study. *PLoS One*. 2020;15(8):e0237303. doi: 10.1371/journal.pone.0237303.
- Nwachukwu I, Nkire N, Shalaby R, Hrabok M, Vuong W, Gusnowski A, et al. COVID-19 pandemic: age-related differences in measures of stress, anxiety and depression in Canada. *Int J Environ Res Public Health*. 2020;17(17):6366. doi: 10.3390/ijerph17176366.
- Shah SMA, Mohammad D, Qureshi MFH, Abbas MZ, Aleem S. Prevalence, psychological responses and associated correlates of depression, anxiety and stress in a global population, during the coronavirus disease (COVID-19) pandemic. *Community Mental Health J*. 2020;57(1):101-110. doi: 10.1007/s10597-020-00728-y.
- González-Sanguino C, Ausín B, Castellanos MA, Saiz J, López-Gómez A, Ugidos C, et al. Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain. *Brain Behav Immun*. 2020;87:172-176. doi: 10.1016/j.bbi.2020.05.040.

36. Prazeres F, Passos L, Simões JA, Simões P, Martins C, Teixeira A. COVID-19-related fear and anxiety: spiritual-religious coping in healthcare workers in Portugal. *Int J Environ Res Public Health*. 2020;18(1):220. doi: 10.3390/ijerph18010220.
37. Salman M, Asif N, Mustafa ZU, Khan TM, Shehzadi N, Tahir H, et al. Psychological impairment and coping strategies during the COVID-19 pandemic among students in Pakistan: a cross-sectional analysis. *Disaster Med Public Health Prep*. 2022;16(3):920-926. doi: 10.1017/dmp.2020.397.
38. Fabbris JL, Mesquita AC, Caldeira S, Carvalho AMP, Carvalho EC. Anxiety and spiritual well-being in nursing students: a cross-sectional study. *J Holist Nurs*. 2017;35(3):261-270. doi: 10.1177/0898010116655004.
39. Musa AS, Pevalin DJ, Al Khalailah MAA. Spiritual well-being, depression, and stress among hemodialysis patients in Jordan. *J Holis Nurs*. 2018;36(4):354-365. doi: 10.1177/0898010117736686.