İSTANBUL UNIVERSITY PRESS

Journal of Advanced Research in Health Sciences
Sağlık Bilimlerinde İleri Araştırmalar Dergisi,
JARHS 2025

https://doi.org/10.26650/JARHS2025-1626739

Submitted: 25.01.2025
Revision Requested: 30.04.2025
Last Revision Received: 30.05.2025
Accepted: 30.05.2025
Published Online 16.06.2025

Journal of Advanced Research in Health Sciences
Sağlık Bilimlerinde İleri Araştırmalar Dergisi

Research Article

Open Access

After Covid-19 and the February 6 Earthquakes: The Impact of Global Health Crises on Adolescent Mental Health and Social Relationships

Covid-19 ve 6 Şubat Depremleri Sonrası: Küresel Sağlık Krizlerinin Adölesan Ruh Sağlığı ve Sosyal İlişkiler Üzerindeki Etkileri

Hakan Avan [1]

[1] Kahramanmaraş Sütçü İmam University, Afşin School of Health, Department of Nursing, Kahramanmaraş, Türkiye

Abstract

Objective: The aim of this study was to determine the relationship between global health crises and adolescent mental health and to examine changes in their social relationships.

Methods: This cross-sectional study was conducted with late adolescents between November 1 and December 15, 2024, in an online environment. Data were collected in 10-15 minutes using a Demographic Information Form, Social Relationships Scale (SRS), and Positive Mental Health Scale (PMHS), and were distributed to social media groups based on voluntary participation. Descriptive statistics, Pearson correlation analysis, independent t-tests, and ANOVA tests were used for data analysis.

Results: Global health crises, particularly the COVID-19 pandemic and the February 6 earthquakes, were associated with changes in adolescents' mental health and social relationships ($p<0.05$). These crises have been found to be associated with increased levels of anxiety, fear, and other mental health issues ($p<0.05$). Additionally, demographic factors (such as gender, family structure, family communication, and family income) have been associated with more pronounced changes in adolescents' psychological and social development over the long term ($p<0.05$).

Conclusion: Nurses should monitor adolescents' mental health and provide early support, educate families to strengthen stress management and parenting skills, establish connections with social support networks, and raise public awareness about the long-term impacts of crises.

Keywords Adolescence · Mental Health · Global Health · Adolescent Psychology · Earthquakes · COVID-19

Öz

Amaç: Küresel sağlık krizlerinin adölesanların ruh sağlığı ile olan ilişkilerini belirlemek ve sosyal ilişkilerindeki değişimlerini incelemeyi amaçlamaktayız.

Gereç ve Yöntemler: Kesitsel türde yürütülen bu araştırma, geç dönem adölesanlarla 01 Kasım-15 Aralık 2024 tarihleri arasında elektronik ortamda gerçekleştirilmiştir. Veriler, Tanıtıcı Bilgi Formu, Sosyal İlişkiler Ölçeği (SİÖ) ve Pozitif Mental Sağlığı Ölçeği (PMSÖ) kullanılarak 10-15 dakikada toplanmış ve gönüllülük esasına dayanarak sosyal medya gruplarına gönderilen anketlerle toplanmıştır. Veri analizinde tanımlayıcı istatistikler, Pearson korelasyon analizi, bağımsız t-testi ve ANOVA testi kullanılmıştır.

Bulgular: Küresel sağlık krizleri, özellikle COVID-19 pandemisi ve 6 Şubat depremleri, ergenlerin ruh sağlığı ve sosyal ilişkilerinde değişimlerle ilişkilendirilmiştir ($p<0.05$). Bu krizler, kaygı, korku ve diğer ruh sağlığı sorunlarıyla ilişkili bulunmuştur ($p<0.05$). Ayrıca, demografik faktörler (cinsiyet, aile yapısı, aile içi iletişim ve aile geliri gibi) ergenlerin psikolojik ve sosyal gelişiminde uzun vadede daha belirgin değişimlerle ilişkilendirilmiştir ($p<0.05$).

Sonuç: Hemşireler, ergenlerin ruhsal sağlıklarını izleyip erken destek sunmalı, ailelere eğitim vererek stres yönetimi ve ebeveynlik becerilerini güçlendirmeli, sosyal destek ağlarıyla bağlantı kurarak destek sağlamalı ve kriz sonrası toplumsal farkındalık oluşturmalıdır.

Anahtar Kelimeler Adölesan · Ruh Sağlığı · Küresel Sağlık · Ergen Psikolojisi · Depremler · COVID-19

Citation: Avan H. After Covid-19 and the February 6 earthquakes: The impact of global health crises on adolescent mental health and social relationships . Journal of Advanced Research in Health Sciences 2025; Advance Online Publication. DOI: 10.26650/JARHS2025-1626739

This work is licensed under Creative Commons Attribution-NonCommercial 4.0 International License.

© 2025. Avan H.

Corresponding author: Hakan Avan hakanavan@gmail.com

INTRODUCTION

Global health crises are events that deeply affect the social structure of societies, individuals' psychological states, and overall healthcare services (1). The COVID-19 pandemic and the earthquakes in February 6, 2023, in particular, are large-scale health crises that have had significant impacts not only on physical health but also on mental health and social relationships (2-4). The late adolescence period (ages 18-21) is a critical process during which individuals develop their identities, form social relationships, and mature emotionally (5-7). Stress and uncertainty experienced during this period can negatively affect adolescents' mental health and limit their social interactions.

During global health crises, adolescents have faced emotional challenges such as social isolation, uncertainty, and anxiety (1, 4). School closures, social distancing rules, and changes in family dynamics have had a determining impact on the social relationships and mental well-being of young people during this period (1, 2). In this context, there is a need for applicable and scalable mental health interventions for individuals affected by numerous adversities (8). Adolescents' mental health and social relationships can be influenced not only by large external factors such as health crises but also by individual characteristics and environmental factors. In this regard, demographic factors (such as age, gender, and socioeconomic status) can lead to significant differences in adolescents' psychological well-being and social interactions. For example, individuals from lower socioeconomic backgrounds may experience more stress and trauma during health crises, while gender differences may also play a decisive role in access to social support systems or coping mechanisms (9, 10).

The mental health of children and adolescents, as well as changes in anxiety and depression symptoms, can vary over time and by region (11). However, the earthquake that occurred on February 6th has caused trauma for many adolescents, and stress factors related to this event have been reported to lead to the development of acute stress disorder (ASD) or other psychiatric disorders (9, 12). This study aims to understand how adolescents' mental health and social relationships were affected in the long term after global health crises such as the COVID-19 pandemic and the February 6th earthquakes in Turkey. In this context, the study aims to analyse the effects of health crises on adolescents' psychological and social development using current data, thereby filling gaps in the existing literature and contributing to a deeper understanding of the issue.

The main objective of the study was to identify the relationship between such global health crises and adolescents' mental health, understand the changes in their social relationships, and examine the relationship between demographic factors and these changes. The findings will guide healthcare professionals and policymakers in better understanding the needs of adolescents and providing them with appropriate support. In addition, this research aims to contribute to the development of intervention strategies for adolescents' mental health.

In conclusion, global health crises such as the COVID-19 pandemic and the February 6th earthquakes have led to significant changes in adolescents' mental health and social relationships. However, the nature and extent of these changes have not been adequately studied, and there is a significant gap in the existing literature. This study aims to highlight the mental well-being of young people and contribute to improving support programs, designing school- and community-based support, and developing effective intervention strategies.

Within this context, the present study seeks to address several key questions: What changes have been observed in adolescents' mental health following major global crises such as the COVID-19 pandemic and the February 6 earthquakes? How have adolescents' social relationships been influenced during these periods? What is the relationship between demographic factors and adolescents' mental health and social relationships? Finally, what changes have occurred in adolescents' mental health and social relationships over the long term as a result of these crises?

MATERIAL AND METHODS

Research purpose and design

This study, conducted with a cross-sectional design, aims to understand the relationship between global health crises and adolescents' psychosocial health, as well as to examine the relationship between demographic factors and these changes. Specifically, it investigates how adolescents' mental well-being and social interactions changed during and after health crises. The research was conducted with late adolescents between November 1st and December 15th, 2024, in an electronic environment. The questionnaire forms were presented to the participants electronically and took approximately 10-15 minutes to complete.

The criteria for participant selection were as follows: Adolescents who can speak and understand Turkish, do

not have communication problems, have no psychiatric diagnoses, are not using medications, are willing to participate in the study, have experienced the February 6th earthquake in Kahramanmaraş, and are active members of a social media group. Participants were limited to adolescents aged 21 and under.

Data collection tools

Data in this study were collected using three different tools: the Demographic Information Form, the Social Relationships Scale (SRS), and the Positive Mental Health Scale (PMHS). These tools were designed to assess the participants' sociodemographic characteristics, social relationships, and mental health.

Demographic Information Form: The researcher prepared this form based on the relevant literature (5, 10, 13-15). The form includes questions about adolescents' sociodemographic characteristics and their emotional responses to the COVID-19 pandemic and the February 6th earthquakes — such as loss of a loved one, mood changes, whether the impact of the crises persists, and the effects of these events on mental health and social communication.

Social Relationships Scale (SRS): Developed by Köse and colleagues in 2022, the SRS is a 5-point Likert-type scale ranging from "Very Distant (1)" to "Very Close (5)". The scale consists of three subdimensions and 10 items, with no items requiring reverse scoring. The subdimensions are as follows: Family Relationships (Items 1-3), Relational/Neighbour Relationships (Items 4-6), and Friendship Relationships (Items 7-10). Since the number of items is not equal across the subdimensions, scoring can be done by dividing the sum of the items by the number of items in the subdimension or the total scale. Higher scores on the scale indicate closer social relationships. The total scale scores range from 10 to 50. The internal consistency coefficients for the scale are .79 for the total scale and .73, .74, and .67 for the subdimensions (16). In this study, the internal consistency coefficients were found to be .83 for the total scale and .83, .81, and .67 for the subdimensions.

Positive Mental Health Scale (PMHS): Developed by Lukat et al. (2016), the PMHS consists of 9 items. This scale primarily assesses emotional well-being, without correlating with theories related to overall well-being in mental health. It was designed to evaluate a single holistic positive emotional concept related to mental health. Yılmaz Akbaba and Eldeleklioğlu adapted the scale into Turkish (14). The items are measured using a 4-point Likert scale, where (1) is "not true" and (4) is "true". All items are positively worded. A higher score on the scale indicates better positive mental health. The internal consistency reliability coefficient was found to be between .84 and .93 (14). In this study, the internal consistency coefficient for the total scale was determined to be .91.

Data collection

Before the main data collection, a pilot test was conducted with 10 students who were excluded from the final sample to assess the clarity of the questionnaire forms. Following the pilot test, it was determined that there were no unclear questions. The researchers conducted the research through electronic means by sending a consent form, survey questions, and scales to adolescent social media groups. Participants were asked to complete the survey forms on a voluntary basis. To prevent potential biases, the participants' information was kept completely confidential, which eliminated social pressure. Standardised scales were used to ensure that the results were unbiased, and the validity and reliability of the tools were tested.

Sample size

In this study, a snowball sampling method was used, and sample size calculations were not made in advance. Data saturation was determined on the basis of post hoc power analysis. The analysis revealed that with a sample size of 522, a 5% margin of error, and a small effect size (0.2), the power was found to be 99.8%. This indicates that the study has high reliability and validity.

Ethical considerations

Before starting the research, necessary permissions were obtained for the scales used, and ethical approval was granted by the Kahramanmaraş Sütçü İmam University Social and Humanities Ethics Committee (Date: 18.10.2024, No. 2024-21). Additionally, written consent was obtained from both the adolescents' parents and the adolescents themselves.

Statistical methods

Descriptive statistics such as frequency, percentage, mean, and standard deviation were used in the data evaluation. Before analysing the data, normality checks were performed. As the skewness and kurtosis statistics of the scale averages were within acceptable limits (±1.5), the data were considered to follow a normal distribution. Therefore, the parametric methods were preferred for the analysis. The internal consistency coefficient was calculated using the Cronbach's alpha test. For data analysis, Pearson correlation analysis was used, and independent t-tests and ANOVA were applied for comparing scale scores across groups. Statistical significance was set at $p \leq 0.05$.

RESULTS

In this section, the changes in the mental health and social relationships of the adolescents participating in the study in relation to global health crises are examined. Additionally, it analyzes how adolescents' mental well-being and social interactions have changed during and after the crises, as well as the underlying reasons for these changes. The findings from the data provide a clearer understanding of these effects.

The average age of the adolescents who participated in the study was 18.78±1.00, with 74.6% being female, 87.3% having a nuclear family, and 60.5% reporting that their income was equal to their expenditures. It was found that 13.0% of the adolescents had lost a close one during the pandemic, and 33.7% had lost a close one during the February 6th earthquakes. Furthermore, 72.5% stated that they still felt the effects of these two crises. Regarding mental health and social communication, 75.7% of adolescents reported experiencing negative changes in their mental health during the pandemic, while 55.8% noted negative changes in their social communication. In the context of the earthquake, 52.5% of adolescents reported experiencing negative changes in their mental health, and 62.3% noted negative changes in their social communication. Adolescents reported experiencing intense feelings of stress (46.0%), anxiety (41.5%), and uncertainty (27.0%) during the pandemic, while the earthquake led to intense feelings of fear (56.0%), anxiety (30.3%), and stress (27.7%) (Table 1).

Table 1. Descriptive Statistics for Participants (n=552).

Descriptive Characteristics	Mean±SD	
Age	**18.78±1.00**	
	n	**%**
Age		
17 years old	71	12.9
18 years old	139	25.2
19 years old	179	32.4
20 years old	163	29.5
Gender		
Female	412	74.6
Male	140	25.4
Family type		
Nuclear family	482	87.3
Extended family	42	7.6
Broken family	28	5.1
Family Income Status		
Our income is less than our expenses	170	30.8
Our income is equal to our expenses	334	60.5
Our income is more than our expenses	48	8.7
Loss of a Loved One During the Pandemic		
Yes	72	13.0
No	480	87.0
Loss of a Loved One During the Earthquake		
Yes	186	33.7
No	366	66.3
Perceived Impact of Crises (COVID-19 and Earthquake)		
Yes	400	72.5
No	152	27.5
Did the Pandemic Negatively Affect Mental Health?		
Yes	418	75.7
No	134	24.3
Did the Pandemic Negatively Affect Social Communication?		
Yes	308	55.8
No	244	44.2
Did the Earthquake Negatively Affect Mental Health?		
Yes	290	52.5
No	262	47.5
Did the Earthquake Negatively Affect Social Communication?		
Yes	344	62.3
No	208	37.7
Feelings Experienced During the Pandemic *		
Stress	254	46.0
Anxietyı	229	41.5
Fear	64	11.6
Uncertainty	149	27.0
Other (Panic, Depression, Worry, Unhappiness, Sadness, etc.)	132	23.9
Feelings Experienced During the Earthquake *		
Stres	153	27.7
Anxiety	167	30.3
Fear	309	56.0
Uncertainty	60	10.9
Other (Insomnia, Restlessness, Panic, Hopelessness, Worry, etc.)	224	40.6

*: Percentages have been calculated within each variable. Mean (M): Average, sd: Standard deviation, %: Percentage within the total,

In Table 2, the correlation analysis conducted to determine the strength and direction of the relationship between the research variables shows a strong positive relationship between them ($p<0.01$). These findings indicate that increases in social relationships and their dimensions are positively

related to improvements in adolescents' positive mental health (Table 2).

Table 2. Results of Correlation Analysis for the Variables of the Study (n=552)

Variables	1	2	3	4	5
Family Relationships (1)	1				
Relatives/Neighbour Relations (2)	0.401**	1			
Friendship Relations (3)	0.443**	0.566**	1		
SR (4)	0.743**	0.808**	0.824**	1	
PMHS (5)	0.310**	0.210**	0.224**	0.311**	1

**p<0.01

When the adolescents' mean scores for Family Relationships (FR), Relatives/Neighbour Relationships (RNR), Friendship Relationships (FRR), Social Relationships (SR), and Positive Mental Health Scale (PMHS) were analysed based on gender, it was found that male adolescents had significantly higher levels of social communication and positive mental health ($p<0.05$). However, no significant difference was found in the Family Relationships (FR) dimension ($p>0.05$).

When the adolescents' FR, RNR, FRR, SR, and PMHS scores were examined based on whether they experienced family conflict, it was found that adolescents without family problems had significantly better levels of social communication and positive mental health ($p<0.001$).

When the adolescents' FR, RNR, FRR, SR, and PMHS scores were analysed based on whether they had lost a close one during the earthquake, it was found that those who had lost a close one had significantly weaker social communication and positive mental health levels ($p<0.05$).

When the adolescents' FR, RNR, FRR, SR, and PMHS scores were examined based on whether they felt the effects of the crises, it was found that those who felt the effects of the crises had significantly weaker social communication and positive mental health levels ($p<0.05$). However, no significant difference was observed in the Family Relationships (FR) dimension ($p>0.05$).

An analysis of adolescents' FR, RNR, FRR, SR, and PMHS scores based on self-reported changes in social communication during the pandemic showed that those who reported changes tended to have lower levels of social communication and positive mental health ($p<0.05$). However, no significant difference was observed in the Family Relationships (FR) dimension ($p>0.05$).

An analysis of adolescents' FR, RNR, FRR, SR, and PMHS scores based on self-reported changes in social communication following the earthquake indicated that those who reported such changes tended to have lower levels of social communication and positive mental health ($p<0.05$).

When the adolescents' FR, RNR, FRR, SR, and PMHS scores were analysed based on whether they experienced anxiety after the pandemic, it was found that those who experienced anxiety had significantly weaker social communication and positive mental health levels ($p<0.05$). However, no significant difference was observed in the FRR and PMHS mean scores ($p>0.05$).

When the adolescents' FR, RNR, FRR, SR, and PMHS scores were analysed based on whether they experienced fear after the earthquake, it was found that those who experienced fear had significantly weaker social communication and positive mental health levels ($p<0.05$). However, no significant difference was found in the FRR mean scores ($p>0.05$).

There was a significant difference in the FR, RNR, and SR mean scores based on family structure ($p<0.05$), but no significant difference was observed in the RNR and PMHS scores ($p>0.05$). Further analysis revealed that the significant difference was primarily due to individuals from broken families.

It was found that there was a significant difference in the FR, RNR, FRR, and SR mean scores based on family income level ($p<0.05$), but no significant difference was observed in the PMHS mean scores ($p>0.05$). Further analysis revealed that the significant difference was primarily due to individuals from families whose income was lower than their expenditures (Table 3).

DISCUSSION

In this section, the findings of this research examining the relationship between global health crises and the psychosocial health of adolescents will be discussed comprehensively. The analysis will focus on how the mental well-being and social interactions of adolescents have changed during and after health crises, addressing the underlying reasons for these changes. The alignment or divergence of these findings with previous literature will also be evaluated, and the contributions of this study to both the literature and practical applications will be discussed. Additionally, the potential impacts of these findings on adolescents and the guidance they offer for future research will be explored.

The results of the study indicate that the gender variable is significantly related to social communication and positive mental health levels, with this relationship being more pronounced among males.

Table 3. Examination of Adolescents' Family Relationships (FR), Relatives/Neighbour Relations (RNR), Friendship Relations (FRR), Social Interaction (SR), and Positive Mental Health Scale (PMHS) Averages According to Socio-Demographic Variables (n=552)

Variables	**FR**	**RNR**	**FRR**	**SR**	**PMHS**
	Mean±SD	**Mean±SD**	**Mean±SD**	**Mean±SD**	**Mean±SD**
Gender					
Female	3.79±0.87	2.71±0.85	2.89±0.77	3.09±0.64	23.09±6.56
Male	3.85±0.89	3.01±0.72	3.05±0.78	3.25±0.62	26.10±6.22
Test	t=-0.675 p=0.500	**t=-4.154 p<0.001**	**t=-2.127 p=0.034**	**t=-2.636 p=0.009**	**t=-4.738 p<0.001**
Having Issues with Family					
Yes	3.25±0.86	2.46±0.81	2.71±0.89	2.79±0.68	21.06±5.92
No	3.91±0.83	2.85±0.82	2.97±0.75	3.19±0.61	24.40±6.59
Test	**t=-6.764 p<0.001**	**t=-4.075 p<0.001**	**t=-2.662 p=0.003**	**t=-5.521 p<0.001**	**t=-4.459 p<0.001**
Losing a Loved One in an Earthquake					
Yes	3.68±0.84	2.60±0.76	2.75±0.73	2.98±0.56	22.37±6.01
No	3.87±0.88	2.87±0.85	3.02±0.79	3.20±0.66	24.61±6.76
Test	**t=-2.391 p=0.017**	**t=-3.655 p<0.001**	**t=-3.815 p<0.001**	**t=-4.172 p<0.001**	**t=-3.805 p<0.001**
Feeling the Impact of Crises					
Yes	3.81±0.88	2.70±0.80	2.86±0.75	3.08±0.61	23.11±6.30
No	3.80±0.85	3.00±0.86	3.11±0.82	3.26±0.69	25.81±6.98
Test	t=0.036 p=0.972	**t=-3.885 p<0.001**	**t=-3.408 p<0.001**	**t=-3.082 p=0.002**	**t=-4.362 p<0.001**
Did the Pandemic Affect My Social Communication?					
Yes	3.77±0.93	2.67±0.83	2.81±0.80	3.05±0.64	23.01±6.33
No	3.85±0.80	2.92±0.80	3.09±0.72	3.22±0.62	24.92±6.79
Test	t=-1.051 p=0.294	**t=-3.569 p<0.001**	**t=-4.237 p<0.001**	**t=-3.098 p=0.002**	**t=-3.413 p<0.001**
Did the Earthquake Affect My Social Communication?					
Yes	3.70±0.93	2.72±0.83	2.82±0.80	3.04±0.66	22.88±6.48
No	3.98±0.75	2.90±0.82	3.11±0.70	3.27±0.57	25.47±6.49
Test	**t=-3.808 p<0.001**	**t=-2.474 p=0.014**	**t=-4.174 p<0.001**	**t=-4.045 p<0.001**	**t=-4.539 p<0.001**
Anxiety Experienced After the Pandemic					
Yes	3.88±0.81	2.88±0.81	2.98±0.79	3.20±0.60	23.78±6.74
No	3.70±0.94	2.65±0.83	2.87±0.76	3.03±0.68	23.95±6.41
Test	**t=2.218 p=0.027**	**t=3.172 p=0.002**	t=1.622 p=0.105	**t=3.076 p=0.002**	t=-0.292 p=0.770
Fear Experienced After the Earthquake					
Yes	3.66±0.87	2.70±0.78	2.89±0.73	3.05±0.60	23.11±6.73
No	3.92±0.86	2.85±0.86	2.96±0.81	3.19±0.66	24.44±6.44
Test	**t=-3.521 p<0.001**	**t=-2.137 p=0.033**	t=-1.145 p=0.253	**t=-2.611 p=0.009**	**t=-2.342 p=0.020**
Family Structure					
Nuclear family	3.85±0.85	2.78±0.81	2.93±0.77	3.14±0.62	23.72±6.60
Extended family	3.90±0.79	2.92±0.89	3.11±0.71	3.24±0.62	24.71±6.80
Broken family	2.92±0.89[a]	2.71±0.95	2.61±1.00[a]	2.74±0.84[a]	24.92±6.25
Test	**f=15.752 p<0.001**	f=0.659 p=0.518	**f=3.380 p=0.035**	**f=5.974 p=0.003**	f=0.823 p=0.440
Famiyl Income Status					
Our income is less than our expenses	3.58±0.96[a]	2.65±0.97[a]	2.76±0.96[a]	2.97±0.76[a]	22.92±6.72
Our income is equal to our expenses	3.91±0.80	2.86±0.74	3.00±0.69	3.19±0.57	24.28±6.64
Our income is more than our expenses	3.88±0.86	2.76±0.76	3.11±0.56	3.22±0.52	24.16±5.63

Variables	FR	RNR	FRR	SR	PMHS
	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Test	f=8.615 p<0.001	f=3.701 p=0.025	f=6.715 p<0.001	f=7.596 p<0.001	f=2.452 p=0.087

Mean (M): Average, sd: Standard deviation, %: Percentage within the total, f: One-Way ANOVA, t: Independent Samples t-test. Within each group, comparisons were made using the group-specific statistical tests, and the superscripts a, b, and c indicate differences within the groups. Values with the same superscript are statistically similar.

Previous studies conducted during the COVID-19 pandemic and the February 6th earthquakes have identified gender as a risk factor for the development of mental health issues (3, 4, 10, 17-20). Globally, children and adolescents have experienced more mental health problems due to the pandemic, with gender being one of the most influential factors in this context (21, 22). This research, based on self-reporting and data collection from a specific region, highlights that the female gender is a strong predictor of psychosocial distress after major crises. The relationship between gender and social communication as well as positive mental health is crucial for paediatric nursing practices. This highlights the need for nurses to consider gender differences when assessing the mental health needs of adolescents. In particular, the more pronounced relationship among males (4, 10, 18, 19), calls for a gender-sensitive approach in care. Nurses should provide appropriate, effective, and individualised support by considering gender-based differences alongside the trauma adolescents have experienced. By analysing the gender factor, nurses can make targeted interventions to address the psychosocial needs of their patients, contributing to the healthy development of individuals.

The study also revealed that adolescents experiencing social communication problems with their families and the environment during the crises (pandemic and earthquake) had significantly lower levels of social communication and positive mental health (23, 24). Both the pandemic and the earthquake have caused considerable mental health stress for over 14 million individuals and families worldwide (9, 17, 18, 25, 26). Low-quality family relationships, exposure to pandemic-related discrimination, and other psychosocial factors reported by both parents and adolescents have exacerbated mental distress in youth. However, social and family support, in conjunction with positive coping strategies, has been associated with better outcomes (3, 18, 21, 25). During crises such as the pandemic and earthquakes, difficulties in family relationships have been associated with changes in children's psychological health. Paediatric nurses should observe family dynamics in such situations and provide guidance and support to the family. Offering family-oriented education and support programs to address communication issues within the family could be a critical approach. By fostering social and family support, nurses can help children develop better coping skills, which may contribute to healthier psychosocial development.

Crises like the COVID-19 pandemic have significantly impacted adolescent mental health, leading to increased levels of fear, anxiety, and other negative emotions, which have weakened their social communication and positive mental health. These crises have created an atmosphere of fear, anxiety, loneliness, depression, stress, and burnout (1-4, 8, 10, 12). Studies conducted among children and adolescents have shown that during these periods, symptoms such as anxiety, depression, loneliness, and stress are among the most prevalent mental health problems (3, 12). In particular, anxiety has been found to have a significant negative relationship with health needs during the crisis, with these needs increasing substantially (10, 27, 28). Crises have increased anxiety and stress among students, adversely affecting adolescents' self-efficacy (29). National paediatric data show a slight increase in anxiety levels compared to the period before the pandemic (19) and before the earthquake (4). Anxiety weakens adolescents' functionality, leading to negative approaches to their health. Therefore, it is crucial to develop effective strategies and policies to alleviate the fear and anxiety adolescents experience and to meet their health needs appropriately. Nurses should consider not only the physical health of adolescents but also their mental health, providing support to help them cope with emotional challenges.

To alleviate adolescents' anxiety levels, it is important for nurses to collaborate with families to strengthen strategies implemented at home and assist adolescents in developing their social skills in social environments such as school. Furthermore, providing psychological support to adolescents, offering coping skills training, and monitoring anxiety levels for intervention are necessary.

Crises such as the pandemic can lead to an increase in anxiety levels, weakening adolescents' functionality and leading to negative health outcomes. Nurses should develop effective strategies to help adolescents manage their anxiety and provide interventions to improve both their mental and physical health.

Family structure and socioeconomic status been significantly related to social communication and positive mental health levels. After major crises such as the pandemic and the

earthquake, disruptions in daily routines and financial losses in families have increased feelings of anxiety, stress, and uncertainty in children and adolescents (3, 4, 26). It has been observed that the behaviours of elementary school-aged children were significantly affected by the COVID-19 pandemic, with the negative outcomes varying according to family circumstances (22). Crises such as the COVID-19 pandemic and the earthquake have led to more mental health problems among children and adolescents, with socioeconomic status, parenting quality, family functioning, and social support being some of the most influential factors (21, 26). Family structure, socioeconomic status, parenting quality, family functioning, and social support directly impact adolescents' mental health. During crises, financial losses and disruptions in daily routines in families increase feelings of anxiety, stress, and uncertainty, leading to mental health problems in children and adolescents. Nurses should collaborate with families during this process to understand the family dynamics and provide guidance. Strengthening social support systems for families facing socioeconomic difficulties is a key role for nurses. Additionally, providing training and support for parents can strengthen healthy parenting skills, improve family functioning, and reduce the negative impact on children's mental health. In conclusion, paediatric nurses should develop various interventions to protect and improve the mental health of children and adolescents by considering family factors during crises. Strengthening social support and family functioning is an effective way to support the mental health of children and adolescents.

CONCLUSION

After global health crises, such as the COVID-19 pandemic and the February 6th earthquakes, both crises have negatively impacted adolescents' mental health, leading to an increase in anxiety, depression, stress, and other mental health problems.

The COVID-19 pandemic and the February 6th earthquakes have been associated with changes in adolescents' social relationships.

During these crises, adolescents' social relationships weakened due to losses and environmental factors, which, in turn, negatively impacted their mental health.

Demographic factors such as gender, family structure, family communication, and family income status have been shown to have a negative relationship with adolescents' mental health and social relationships.

The long-term effects of these crises, particularly the COVID-19 pandemic and the February 6th earthquakes, have resulted in significant changes in adolescents' mental health and social relationships. These crises have worsened adolescents' mental health, increasing anxiety, fear, stress, and uncertainty.

Nurses should monitor adolescents' mental health and provide psychological support by detecting symptoms of anxiety and depression early.

Nurses can offer educational and guidance services to families. Stress management, healthy communication, and parenting skills within the family should be strengthened. Nurses should support families in developing positive attitudes towards their adolescents.

Nurses should assess adolescents' social support resources and, when necessary, connect them with networks such as schools, community centres, and social services for additional support.

Nurses can provide training on stress management, emotion regulation, and problem-solving skills to adolescents.

Nurses should monitor adolescents' mental health in the post-crisis period and intervene early if symptoms of anxiety or depression are observed. Early diagnosis and treatment can prevent long-term mental health problems.

Nurses should raise awareness in the community about the long-term effects of crises and increase social sensitivity to mitigate the negative effects on adolescents' mental health.

Ethics Committee Approval: This study was approved by Kahramanmaraş Sütçü İmam University Social and Humanities Ethics Committee (Date: 18.10.2024, No. 2024-21)

Informed Consent: Written consent was obtained from both the adolescents' parents and the adolescents themselves.

Peer Review: Externally peer-reviewed.

Acknowledgements: We would like to thank those who helped in distributing the data collection forms to the adolescents and parents. We also extend our gratitude to the adolescents and parents who voluntarily participated in the study.

Conflict of Interest: The author declare that there is no conflict of interest.

Financial Disclosure: The author declared that this study has received no financial support.

Author Details

Hakan Avan
[1] Kahramanmaraş Sütçü İmam University, Afşin School of Health, Department of Nursing, Kahramanmaraş, Türkiye
0000-0003-2494-3671 hakanavan@gmail.com

REFERENCES

1 Loades ME, Chatburn E, Higson-Sweeney N, Reynolds S, Shafran R, Brigden A, et al. Rapid Systematic Review: The Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19. J Am Acad Child Adolesc Psychiatry 2020;59(11):1218-1239.e3.

2 Singh S, Roy D, Sinha K, Parveen S, Sharma G, Joshi G. Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. Psychiatry Res 2020;293:113429.

3 Theberath M, Bauer D, Chen W, Salinas M, Mohabbat AB, Yang J, et al. Effects of COVID-19 pandemic on mental health of children and adolescents: A systematic review of survey studies. SAGE Open Med 2022;10.

4 Hojeij M, El Khatib D, Salameh P. Assessing the Effects of the 2023 Turkish Earthquakes on Mental Health in Lebanon: A Cross-sectional Study. International Journal of Clinical Research 2024;4(1):28-35.

5 Luyckx K, Vanderhaegen J, Raemen L, Claes L. Identity formation in adolescence and emerging adulthood: a process-oriented and applied perspective. Eur J Develop Psychol 2023;1-20.

6 Cherewick M, Lebu S, Su C, Richards L, Njau PF, Dahl RE. Promoting gender equity in very young adolescents: targeting a window of opportunity for social emotional learning and identity development. BMC Public Health 2021;21(1):2299.

7 Civelek E. Adolesan Dönemi ve Özkıyım Girişimi. Turkish Journal of Pediatric Disease 2019;1.

8 Bonardi O, Wang Y, Li K, Jiang X, Krishnan A, He C, et al. Effects of COVID-19 Mental Health Interventions Among Children, Adolescents, and Adults Not Quarantined or Undergoing Treatment Due to COVID-19 Infection: A Systematic Review of Randomised Controlled Trials. Canadian J Psychiatr 2022;67(5):336-50.

9 Efendi GY, Temeltürk RD, Çakmak IB, Dinçer M. Surviving the Immediate Aftermath of a Disaster: A Preliminary Investigation of Adolescents' Acute Stress Reactions and Mental Health Needs after the 2023 Turkey Earthquakes. Children 2023;10(9):1485.

10 Ataya J, Soqia J, Ataya J, AlMhasneh R, Batesh D, Alkhadraa D, et al. Sleep quality and mental health differences following Syria-Turkey earthquakes: A cross-sectional study. Int J Social Psychiatr 2024;70(4):700-8.

11 Miao R, Liu C, Zhang J, Jin H. Impact of the COVID-19 pandemic on the mental health of children and adolescents: A systematic review and meta-analysis of longitudinal studies. J Affect Disord 2023;340:914-22.

12 Ahmed SK, Saied AA, Nashwan AJ. The impact of the 2023 Türkiye-Syria earthquakes on the mental health of children. Int J Social Psychiatr 2024 Sep 6;

13 Singhal R, Kumar A, Singh H, Fuller S, Gill SS. Digital device-based active learning approach using virtual community classroom during the COVID-19 pandemic. Computer Applications in Engineering Education 2021;29(5):1007-33.

14 Yılmaz Akbaba A, Eldeklioğlu J. Adaptation of Positive Mental Health Scale into Turkish: A Validity and Reliability Study. J Family Counseling Educ 2019;4(1):44-54.

15 Avan H, Güngör S. COVID-19 Pandemisinin Geç Adölesanların Duygu Durumlarına ve Yaşam Kalitesine Etkisi. BANÜ Sağlık Bilimleri ve Araştırmaları Dergisi 2021;3(1):126-33.

16 Köse M, Öztürk M, Acar A. Sosyal İlişkiler Ölçeği'nin Geliştirilmesi ve Psikometrik Özellikleri. İstanbul Univ J Sociol 2022;42(1):0-0.

17 Benton T, Njoroge WFM, Ng WYK. Sounding the Alarm for Children's Mental Health During the COVID-19 Pandemic. JAMA Pediatr 2022;176(4):e216295.

18 Kiss O, Alzueta E, Yuksel D, Pohl KM, de Zambotti M, Műller-Oehring EM, et al. The Pandemic's Toll on Young Adolescents: Prevention and Intervention Targets to Preserve Their Mental Health. J Adolescent Health 2022;70(3):387-95.

19 Jellinek M, Benheim TS, Dutta A, Bergmann P, Sturner R, Howard B, et al. Identifying Children and Adolescents at Elevated Mental Health Risk Before and During COVID-19. J Developmental Behavioral Pediatr 2024;45(4):e341-8.

20 de Matos MG, Carvalho M, Branquinho C, Noronha C, Moraes B, Gaspar T, et al. COVID-19, Wellness and Life Satisfaction in Adolescence: Individual and Contextual Issues. Int J Environ Res Public Health 2023;20(8):5600.

21 Wolf K, Schmitz J. Scoping review: longitudinal effects of the COVID-19 pandemic on child and adolescent mental health. Eur Child Adolesc Psychiatry 2024;33(5):1257-312.

22 Kurz D, Braig S, Genuneit J, Rothenbacher D. Trajectories of child mental health, physical activity and screen-time during the COVID-19 pandemic considering different family situations: results from a longitudinal birth cohort. Child Adolesc Psychiatry Ment Health 2023;17(1):36.

23 Kaya İ, Karayagmurlu A, Kitapçıoğlu S, Bakman N, Erbay MF, Dinçel M, et al. Increased Hyperactivity with Decreased Parental Perceived Social Support Among Turkish Children with Autism Spectrum Disorder during Coronavirus Disease 2019 Pandemic. Alpha Psychiatr 2024;25(3):350-5.

24 Avan H, Koç ET, Vural B. Çocukları Salgın Sürecinde Okula Devam Eden Ebeveynlerin Kaygı Düzeylerinin Belirlenmesi: 6-12 Yaş Örneği. J Health Pro Res 2021;3(2):65-74.

25 Gustafsson J, Lyyra N, Jasinskaja-Lahti I, Simonsen N, Lahti H, Kulmala M, et al. Mental health profiles of Finnish adolescents before and after the peak of the COVID-19 pandemic. Child Adolesc Psychiatry Ment Health 2023;17(1):54.

26 Perdana ARA, Vall Castelló J. Shattered ground, shaken minds: Mental health consequences of earthquakes. Econ Hum Biol 2025;56:101448.

27 Alamolhoda SH, Zare E, Nasiri M. The status of adolescent health during the COVID-19 pandemic. J Med Life 2022;15(5):675-8.

28 Kurt A, Topan A, Akkoç B. The relationship between media exposure and mental health in children following Kahramanmaraş earthquakes in Turkey. J Pediatr Nurs 2024;78:7-13.

29 Shahrbabaki PM, Zeidabadinejad S, Abolghaseminejad P, Dehghan M, Asadilari M, Zakeri MA, et al. The relationship between COVID-19 anxiety and self-efficacy among adolescent students: A cross-sectional study. PLoS One 2024;19(12):e0310434.