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Research Article

Prevalence of Anxiety-Related Disorders among Elementary and Early Adolescents after Suspended Schools during Pandemics of Covid19

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Abstract

Background: Because of the COVID-19 pandemic, schools were closed, resulting in an unplanned transition from physical education to virtual education. Many countries implemented measures and precautions to decrease the spread of the virus, including social distances, and school closures, which affected the socialization and educational process. The aim is to identify the prevalence of Anxiety-Related Disorders among Elementary and Early Adolescents after Suspended Schools during the Covid19 Pandemic.

Methods: A web-based quantitative, comparative cross-sectional survey was conducted with 520 students selected conveniently from 4 schools affiliated with the Ministry of Education in Jeddah after receiving approval of KAIMRC and IRP approval No. (IRB /0942/22/J). To achieve the goal of the study two valid and reliable tools were used including Demographic and personal characteristics and the Spence Children's Anxiety Scale.

Results: The majority of 97.3% of the participants were Saudi, 63.3% were aged 10 years and more, and 53.3% have 5 to less than 5 family members. More than 3 quarters 77.9% were seniors (grade 3-6) compared to 22.1% were in (grade 1-2) and 76.5% of the participants have an adequate economy. Also, the results revealed that only 30.8% of the participants had clinically significant anxiety symptoms compared to 69.2% had a normal range of anxiety symptoms with no significant correlation between OCD, agoraphobia, and fear of physical injury while a significant relation was found between students 'age, grade, and socioeconomic status and generalized anxiety disorders, post-traumatic stress disorders and panic anxiety at (P. 0.01).

Conclusion: Based on our study methodology, we were able to better understand the COVID-19 lockdown's impact on students and identify the target interventions that could be implemented quickly to help those children. ***ASEAN Journal of Psychiatry, Vol. 24 S (Mental health and Prevention II), February-April 2023; 1-22.***

Keywords: Anxiety, COVID-19, School closure, Early adolescent, Precautions

Introduction

Since December 2019 until now the world is facing a serious pandemic caused by a new virus called Coronavirus (COVID-19) which began in China and spread all over the world [1]. For a quick response to slow down the spread of the virus, most of the countries implemented measures and precautions such as social distancing, home quarantine, and school closure, which impacted the socialization and educational process of children as well as early adolescents [2]. This closing of schools due to the COVID-19 pandemic resulted in an unplanned transfer from traditional physical education to digital virtual education [3]. In the implementation of the educational process shift the Saudi Ministry of Education had made a massive effort to try as

much as possible to deliver and provide online education to all the students through multiple channels such as the Mnsty website, Zoom, and Microsoft Team [4]. However, other studies found that the E-learning methods may constitute an obstacle for students due to the inability to communicate and interact verbally and visually with their colleagues and teachers, which leads to low quality of education [3].

Moreover, according to the physicians and healthcare workers in Saudi Arabia, the prevalence of anxiety disorder was up to 15% due to economic burden and increased facilitation of healthcare services. School-age adolescents during the COVID-19 pandemic showed more frequency of anxiety disorder because of the negative impact on their academic performance, academic grades, and professional development [5].

Many recent studies highlighted the effect of the pandemic on preschool children and early adolescents' health; they found emotional disturbance, depression, stress, mood swings, irritability, insomnia, and anxiety [6]. According to DSM-5 Anxiety disorder is a type of mental health condition classified as generalized anxiety disorder, social anxiety disorder, separation anxiety disorder, and other specified anxiety disorders [7]. Moreover, it is characterized by feeling restless, irritable, uncertain distribution in daily routine, and uncontrollable feelings of worry about family and loved ones [8].

In the Kingdom of Saudi Arabia, the chance of contracting mental illness had been increased among school age and early adolescents during the COVID-19 pandemic due to several reasons including fear of transmission of infection, confinement at home for a long time, and pressure on services and health centres. Because of the lack of knowledge and awareness of the importance of paying attention to mental illnesses in this age, especially during the pandemic, few research studies had been conducted to determine the number of people suffering from mental illness.

On the other hand, the COVID-19 pandemic has negatively affected a big number of people with mental disorders, therefore it is important to highlight these groups and take preventive measures and early detection of concern so that the results do not become more complex [5]. Despite the presence of all these obstacles, the Kingdom of Saudi Arabia had been able to provide many vaccination centres throughout the kingdom so that the immunity ratio reached the expected percentage as much as possible in a short period. In addition, we received vaccinations and the World Health Organization (WHO) approved those children at 5 years old can take vaccines and go back to school. However, we are still under the threat of developing new types of this virus. In this study, we will look at the prevalence of anxiety-related disorders to early detect and support children and early adolescents during this critical time of the pandemic [9].

By observing many children and early adolescents when they returned to school. We found that children and adolescents had feelings of anxiety, tension, and a state of shock after months of physical school interruption, due to several reasons, including Children separated from their families after a long period of studying near them at home, especially children in the first grades. Secondly; Presence of preventive precautions that children must follow when returning to school, such as wearing face masks throughout the day, washing hands and using sanitizer frequently, and leaving a safe distance between children and their classmates [10]. The Ministry of Education also issued a decision stipulating the application of the group system (A and B groups), which led to an increase in the feeling of anxiety among students, knowing that their close friends might not be in the same group, then the students will resort to isolating themselves [11].

Significance of the Study

The closing of schools due to the COVID-19 pandemic resulted in an unplanned transfer from traditional physical education to digital virtual education [3]. In the implementation of the educational process shift the Saudi Ministry of Education had made a massive effort to try as much as possible to deliver and provide online education to all the students through multiple channels such as the Mensty website, Zoom, and Microsoft Team [4]. School-age students and adolescents during the COVID-19 pandemic showed more frequency of anxiety disorder because of the negative impact on their academic performance, academic grades, communication, and interactions with their colleagues and teachers and their professional development [5]. As far as we know, most of the previous studies examined the connection between coronavirus and anxiety disorders. In particular, they did not

analyse the impact of Corona on primary school students, or the increase in anxiety rates among them after returning to school. Therefore, the current study will examine the prevalence of anxiety-related disorders in elementary school students (second grade -sixth grade) and early adolescents (grade 4-6), examining the extent to which anxiety levels increased among them, particularly those who had never attended school before, compared to other students at the same level.

Materials and Methods

Study Design

To achieve the goals of this study, a web-based quantitative, comparative cross-sectional survey design was used. Tools of the study were transferred into Google Forms and the distribution was done either face-to-face with the students or through different social networks such as WhatsApp, Messenger, and Facebook.

Participants and Study Setting

All Elementary students from the second grade to the sixth grade were recruited from four governmental Saudi schools. Exclusion criteria were the first-grade elementary, middle-level, and secondary-level, students. According to governmental educational statistics located in Jeddah Saudi Arabia, there are four main offices present in Jeddah as follows south, east, north, and middle of Jeddah city from each region one Elementary school was selected randomly from the list of all government schools at those regions to collect the data of the third study.

Sample Size Calculations

The sample size was calculated using the Epi Info 7 software. As there were scares or no similar studies related to anxiety-related disorders among children and early adolescents during the coronavirus disease pandemic, the calculations assumed that the probability of anxiety-related disorders among the selected group will be 50.0% at a 95% confidence interval, precision of 5%, with a design effect of 1 and then the calculated sample size will be 384 respondents at least. Accordingly, the survey will be conducted among 25% of the students affiliated with each grade starting from grade two to grade six of the previously selected schools considering that the selected students fulfill the inclusion criteria and accept to participate in the study, and they will be selected randomly, then the total number of the students expected to be 738 students.

Sampling Technique

A purposive sample of students from elementary levels G2-G6 was selected using a non-probability convenient sampling technique. In addition to being posted online, the study was directed at teachers or parents of young children (grades 2-6) as well as early adolescent students (grades 3-6). As illustrated in the following table (1), grade 2 students at each school as well as grade 3 to 6 students were counted as a group of a total of 738 students from grades 2 to 6 across all regions (Tables 1 and 2).

Table 1. A purposive sample of students from elementary levels G2-G6

School office or region	School name	No. of grade 2	Expected	No. of students from G 3 – G6	No expected	Total of both 2^{nd} -6^{th} from all school
South Jeddah	Elementary 63	80	20	504	126	
East Jeddah	Elementary 77	102	26	618	156	
Middle Jeddah	Elementary 37	144	36	646	162	
North Jeddah	Elementary 110	132	33	714	179	
			115		623	738

Data Collection Instrument

To achieve the current study objectives two main tools were used as follow:

1. Demographic and personal characteristics which enquire the students about their age, grade level, rank order, level of parent education, residence area, and socioeconomic.
2. The Spence Children's Anxiety Scale is a self-report 38-item scale developed by Spence in 1997, used to assess the severity of anxiety symptoms in children aged 8 years-15 years. The child was asked to rate the degree to which they experience each symptom on a 4-point Likert scale ranging from 0-3 assessing six domains of anxiety which constitute six subscales include Separation Anxiety, Social Phobia, OCD, Panic/Agoraphobia, Physical Injury, and GAD. The sub-scales are computed by summing the following items:

- Separation anxiety (items 5,8,12,15,16, and 44).
- Social phobia (items 6,7,9,10,29, and 35).
- Obsessive-compulsive (items 14,19,27,40,41, and 42).
- Panic/agoraphobia (items 13,21,28,30,32,34,36,37, and 39).
- Physical Injury (items 2,18,23,25, and 33).
- Generalized anxiety (items 1,3,4,20,22, and 24)

The total score ranged from 0 to 114 (38*3) with higher scores indicating greater severity of anxiety symptoms. These scores are also converted into percentages a score of less than 60% indicates the normal range, while any subscale score or the total SCAS score that 60% or more indicates clinically significant anxiety symptoms / higher than normal anxiety.

Consider that the scores should be interpreted in comparison to population norms for age and gender groups. This is because the mean scores tend to be different between boys and girls and tend to change with age, as the children must be divided into two age groups (8-11 and 12-15) for both genders. Once you have added up the total scores and subscale scores, you can compare the results against the percentile scores and T-scores for the appropriate age and gender of the child using the automatic scoring template at the following website (Table 1).

Table 2. Automated scoring template website

Gender	**Age**	**Automated scoring template website**
Boys	08-Dec	https://www.scaswebsite.com/wp-content/uploads/2021/07/scas-boys-8-11-scorer-June2018Final1.pdf
Girls	08-Dec	https://www.scaswebsite.com/wp-content/uploads/2021/07/scas-girls-8-11-scorer-June2018Final1.pdf

Furthermore, the scale includes non-scored items (items 11, 17, 26, 31, 32, and 43) relating to the child's experience of a traumatic event. These items relate to whether the child exhibits behaviour indicative of post-traumatic stress reactions following trauma. Finally, the last two items of the scale (items 45 and 46) are added as open-ended questions, to declare if the child has something else that they are afraid of, and if they are afraid of something else, they are asked to write down what it is and how often are they afraid of this thing?

Validity and reliability

The Spence Children's Anxiety Scale (SCAS-Child) version is translated into 35 languages. The Arabic language translated version is made by Dr. Numan S. Ali FRCPsych (Fellow of the Royal College of Psychiatrists), Consultant Psychiatrist & Head, Department of Psychiatry Baghdad Teaching Hospital, and Dr. Tori Snell MSc, Doctoral Student in Clinical Psychology, School of Psychology, University of Leicester, Leicester–UK. This version will be used for data collection.

As regards the validity of the scale, Spence (1998) validated the SCAS Child Version in a sample of Australian children (N=218). The SCAS demonstrated convergent validity with other measures of anxiety in children, as well as discriminant validity with a measure of depressive symptoms in children. SCAS scores on all six subscales were significantly higher among clinically anxious children than in a non-clinical control group in the same study. Furthermore, the reliability and validity of the Spence Children's Anxiety Scale (SCAS) are evaluated by Essau, Muris, and Ederer (2002) in a sample of 556 primary school children in Germany, the SCAS alpha was 0.92 which indicates that the scale has high internal consistency.

Data Collection Procedure

Once the proposed study was approved by the research committee of the Research Unit at the College of Nursing, King Saud bin Abdul-Aziz University for health sciences, KAIMRC and IRB data collection were initiated after arranging with the principles of the selected setting. To receive consent from students a letter will be sent to the parents of the target groups of students to receive their agreement through the school principal. So, students were included in the study after receiving the agreement from their parents either by returning the letter or by phone call.

The data collection process in this study was done through a web-based survey using Google Forms. The survey was designed to assess anxiety-related disorders among elementary school students in Jeddah, Saudi Arabia, during the COVID-19 pandemic. The survey consisted of both demographic information and questions related to anxiety symptoms and their impact on daily life. The survey was distributed to the selected students either through face-to-face interactions or through different social media platforms such as WhatsApp, Messenger, and Facebook.

Data Analysis and Management

The collected data was analysed using descriptive and inferential statistical methods. Descriptive statistics such as frequency and percentage were used to summarize the demographic information of the participants. Inferential statistics such as the chi-square test, t-test, and Pearson correlation test were used to determine the association between demographic variables and anxiety symptoms. All statistical analysis was conducted using SPSS software and the significance level was adjusted and tested at $p<0.05$.

The Ethical and Legal Issues

The study was submitted for official approval from the research unit at the College of Nursing, Jeddah, KAIMRC, and the IRB number is (IRB /0942/22/J). After that, study subjects were approached for explaining the purposes and the procedure for the study. They were informed that their participation in the study is voluntary and they can withdraw without any penalty at any time. They were assured that their answers were kept anonymous during the study and that their data were kept confidential. The PI assured all participating schools' principles that all data both hard and soft copies were stored within MNGHA premises and accessed by the research team only.

Result

Table 3. Distribution of the studied students according to their demographic data No. (520)

Demographic Data	**No. (520)**	**%**
Nationality		
Non-Saudi	14	2.7
Saudi	506	97.3
Age (Years)		
Less than 10 years	191	36.7
10 years and more	329	63.3
Number of family members		
Less than 5 members	213	41
5 to less than 10 members	277	53.3

10 members and more	30	5.8
Rank in family		
Less than 5 members	372	71.5
5 to less than 10 members	132	25.4
10 members and more	16	3.1
Studying grade		
Grade 2	115	22.1
Grade 3	71	13.7
Grade 4	54	10.4
Grade 5	97	18.7
Grade 6	183	35.2
Students' classification		
Junior (grades 2 and 3)	115	22.1
Senior (grade 4-6)	405	77.9
Father's educational level		
Elementary	43	8.3
Middle	49	9.4
Secondary	352	67.7
University and above	76	14.6
Mother's educational level		
Elementary	9	1.7
Middle	57	11
Secondary	349	67.1
University and above	105	20.2
Socio-economic situation		
Inadequate	398	76.5
Adequate	122	23.5

Table 3 showed the Demographic characteristics of the studied students. The majority (97.3%) were Saudi, more than two third (63.3%) were 10 years and above, and 71.5 were ranked 10 and more. As regard study grades more than one-third (35.2%) were in grades 6 and 77.9 % were in the senior group (3-6), while, more than 2third (67.7%) of the parents' participants educational level have a secondary level of education and 76.5 % have an inadequate economic state.

Table 4. Distribution of studied groups according to Spence Children's Anxiety Scale (SCAS)(N=520)

Spence Children's Anxiety Scale (SCAS)	**No. (520)**	**%**
Separation anxiety		
Normal range of separation anxiety symptoms	308	59.2
Clinically significant separation anxiety symptoms	212	40.8
Social phobia		
Normal range of social phobia symptoms	332	63.8
Clinically significant social phobia symptoms	188	36.2

Obsessive-compulsive disorders		
Normal range of obsessive-compulsive disorders symptoms	263	50.6
Clinically significant obsessive-compulsive disorders symptoms	257	49.4
Panic agoraphobia		
Normal range of Panic Agoraphobia symptoms	400	76.9
Clinically significant Panic Agoraphobia symptoms	120	23.1
Physical injury fear		
Normal range of Physical injury fear symptoms	259	49.8
Clinically significant Physical injury fear symptoms	261	50.2
Generalized anxiety disorders		
Normal range of generalized anxiety symptoms	283	54.4
Clinically significant generalized anxiety symptoms	237	45.6
Post-traumatic stress reactions		
Normal range of post-traumatic stress reactions symptoms	126	24.2
Clinically significant post-traumatic stress reactions symptoms	394	75.8
Normal range of anxiety symptoms	360	69.2
Clinically significant anxiety symptoms	160	30.8

Table 4 represented the total score of the studied participants on the Spence Children's anxiety scale reported that 30.8 % suffer from clinically significant anxiety symptoms. More specifically, more than 3 quarters (75.8%) reported Clinically significant post-traumatic stress reactions symptoms, (50.2%) of the studied participants described clinically significant physical injury fear symptoms, followed by 45.6% had GAD, and only 23.1% suffering from panic agoraphobia. While 40.8 % of the participant had separation anxiety,36.8 % suffered from social phobia, and 49.4% experienced obsessive-compulsive disorders (Figure 1).

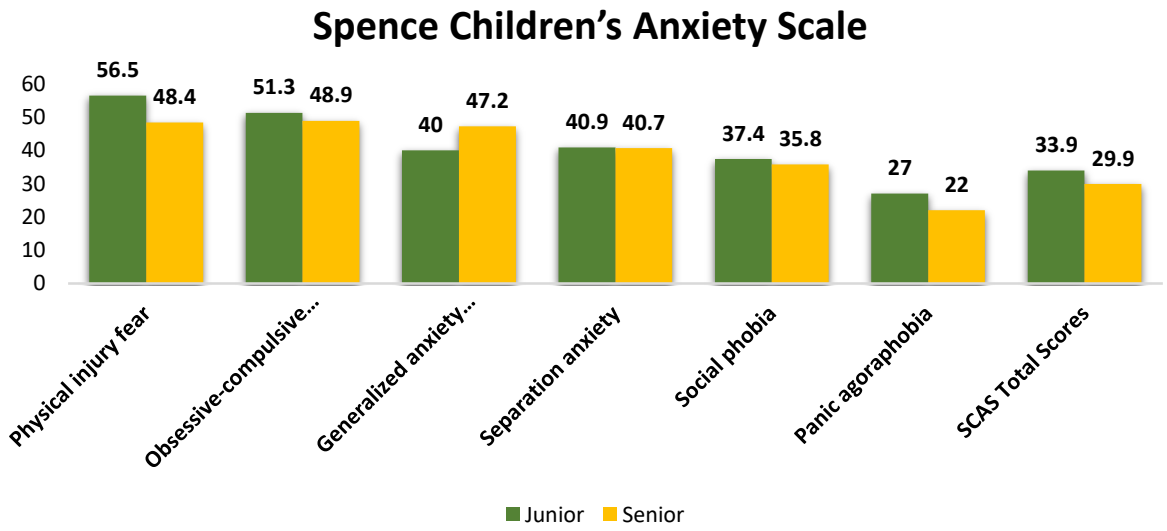

Figure 1. This shows that Junior (2-3) and Seniors (4-6) had approximately similar scores in separation anxiety, social phobia, and OCD. However, the Junior (56.5%) had a high score in physical injury fear

than the senior (48.4%), and in generalized anxiety disorder, the senior's score (47.2%) is higher than the Junior (40%).

Table 5. Correlation between studied participants' demographic characteristics and separation anxiety (N.=520)

Demographic data	Separation Anxiety						
	Normal range of separation anxiety symptoms		Clinically significant separation anxiety symptoms		Total		Test of significance
	No.	%	No.	%	No.	%	
Nationality							
Non-Saudi	10	71.40%	4	28.60%	14	100.00%	FET:0.418
Saudi	298	58.90%	208	41.10%	506	100.00%	
Age (Years)							
Less than 10 years	109	57.10%	82	42.90%	191	100.00%	FET:0.460
10 years and more	199	60.50%	130	39.50%	329	100.00%	
Number of family members							
Less than 5 members	114	53.50%	99	46.50%	213	100.00%	
5 to less than 10 members	176	63.50%	101	36.50%	277	100.00%	MC^P:0.077
10 members and more	18	60.00%	12	40.00%	30	100.00%	
Rank in family							
Less than 5 members	222	59.70%	150	40.30%	372	100.00%	
5 to less than 10 members	77	58.30%	55	41.70%	132	100.00%	FET:0.919
10 members and more	9	56.30%	7	43.80%	16	100.00%	
Studying grade							
Grade 2	68	59.10%	47	40.90%	115	100.00%	X^2:7.458
Grade 3	39	54.90%	32	45.10%	71	100.00%	
Grade 4	24	44.40%	30	55.60%	54	100.00%	P:0.117
Grade 5	63	64.90%	34	35.10%	97	100.00%	
Grade 6	114	62.30%	69	37.70%	183	100.00%	
Father's educational level							
Elementary	31	72.10%	12	27.90%	43	100.00%	X^2:4.298
Middle	31	63.30%	18	36.70%	49	100.00%	P:0.219
Secondary	205	58.20%	147	41.80%	352	100.00%	
University and above	41	53.90%	35	46.10%	76	100.00%	
Mother's educational level							
Elementary	6	66.70%	3	33.30%	9	100.00%	
Middle	41	71.90%	16	28.10%	57	100.00%	MC^P:191
Secondary	199	57.00%	150	43.00%	349	100.00%	
University and above	62	59.00%	43	41.00%	105	100.00%	
Socio-economic situation							
Inadequate	228	57.30%	170	42.70%	398	100.00%	X^2:2.656
Adequate	80	65.60%	42	34.40%	122	100.00%	P:0.103

Table 5 tabulated that there is no significant relationship between separation anxiety and students' demographic data.

Table 6. Correlation between studied participants' demographic characteristics and social phobia (N. =520)

Demographic data	Social Phobia						
	Normal range of social phobia symptoms		Clinically significant social phobia symptoms		Total		Test of significance
	No.	%	No.	%	No.	%	
Nationality							
Non-Saudi	9	64.30%	5	35.70%	14	100.00%	FET:1.00
Saudi	323	63.80%	183	36.20%	506	100.00%	
Age (Years)							
Less than 10 years	136	71.20%	55	28.80%	191	100.00%	X^2: 7.081
10 years and more	196	59.60%	133	40.40%	329	100.00%	P:0.008*
Number of family members							
Less than 5 members	124	58.20%	89	41.80%	213	100.00%	FET:0.074
5 to less than 10 members	189	68.20%	88	31.80%	277	100.00%	
10 members and more	19	63.30%	11	36.70%	30	100.00%	
Rank in family							
Less than 5 members	228	61.30%	144	38.70%	372	100.00%	FET:0.120
5 to less than 10 members	94	71.20%	38	28.80%	132	100.00%	
10 members and more	10	62.50%	6	37.50%	16	100.00%	
Studying grade							
Grade 2	72	62.60%	43	37.40%	115	100.00%	X^2: 17.127
Grade 3	60	84.50%	11	15.50%	71	100.00%	P:0.002*
Grade 4	34	63.00%	20	37.00%	54	100.00%	
Grade 5	62	63.90%	35	36.10%	97	100.00%	
Grade 6	104	56.80%	79	43.20%	183	100.00%	
Father's educational level							
Elementary	28	65.10%	15	34.90%	43	100.00%	X^2:0.479
Middle	31	63.30%	18	36.70%	49	100.00%	P:0.923
Secondary	222	63.10%	130	36.90%	352	100.00%	
University and above	51	67.10%	25	32.90%	76	100.00%	
Mother's educational level							
Elementary	7	77.80%	2	22.20%	9	100.00%	X^2:2.179
Middle	38	66.70%	19	33.30%	57	100.00%	P:0.536
Secondary	216	61.90%	133	38.10%	349	100.00%	
University and above	71	67.60%	34	32.40%	105	100.00%	
Socio-economic situation							
Inadequate	244	61.30%	154	38.70%	398	100.00%	X^2:4.740
Adequate	88	72.10%	34	27.90%	122	100.00%	P:0.029*

Table 6 showed that there is a significant relationship between social phobia and the age of the students studying grade, and their socioeconomic status at (P:0.008), (P:0.002), and (P:0.029) respectively. While no statistically significant relationship with children's rank order, parents' education, and the number of family members.

Table 7. Correlation between studied participants' demographic characteristics and obsessive-compulsive disorders (N. =520).

Demographic data	Obsessive-compulsive						
	Normal range of Obsessive-compulsive symptoms		Clinically significant Obsessive-compulsive symptoms		Total		Test of significance
	No.	%	No.	%	No.	%	
Nationality							
Non-Saudi	8	57.10%	6	42.90%	14	100.00%	FET:0.788
Saudi	255	50.40%	251	49.60%	506	100.00%	
Age (Years)							
Less than 10 years	94	49.20%	97	50.80%	191	100.00%	X^2:0.224
10 years and more	169	51.40%	160	48.60%	329	100.00%	P:0.636
Number of family members							
Less than 5 members	110	51.60%	103	48.40%	213	100.00%	X^2: 0.164
5 to less than 10 members	138	49.80%	139	50.20%	277	100.00%	P:0.932
10 members and more	15	50.00%	15	50.00%	30	100.00%	
Rank in family							
Less than 5 members	67	50.80%	65	49.20%	132	100.00%	FET:0.595
5 to less than 10 members	6	37.50%	10	62.50%	16	100.00%	
10 members and more	190	51.10%	182	48.90%	372	100.00%	
Studying grade							
Grade 2	56	48.70%	59	51.30%	115	100.00%	X2: 5.384
Grade 3	37	52.10%	34	47.90%	71	100.00%	P:0.250
Grade 4	22	40.70%	32	59.30%	54	100.00%	
Grade 5	45	46.40%	52	53.60%	97	100.00%	
Grade 6	103	56.30%	80	43.70%	183	100.00%	
Father's educational level							
Elementary	24	55.80%	19	44.20%	43	100.00%	X^2:0.741
Middle	23	46.90%	26	53.10%	49	100.00%	P:0.871
Secondary	178	50.60%	174	49.40%	352	100.00%	
University and above	38	50.00%	38	50.00%	76	100.00%	
Mother's educational level							
Elementary	4	44.40%	5	55.60%	9	100.00%	FET:0.871
Middle	31	54.40%	26	45.60%	57	100.00%	
Secondary	165	47.30%	184	52.70%	349	100.00%	
University and above	63	60.00%	42	40.00%	105	100.00%	
Socio-economic situation							
Inadequate	204	51.30%	194	48.70%	398	100.00%	X^2:0.313
Adequate	59	48.40%	63	51.60%	122	100.00%	P:0.06

Table 7 exhibited that there is no significant relationship between the demographic data of the studied participant and obsessive-compulsive clinical symptoms.

Table 8. Correlation between studied participants' demographic characteristics and panic agoraphobia (N. =520).

Demographic data	Panic agoraphobia						
	Normal range of Panic Agoraphobia symptoms		Clinically significant Panic Agoraphobia symptoms		Total		Test of significance
	No.	%	No.	%	No.	%	
Nationality							
Non-Saudi	12	85.70%	2	14.30%	14	100.00%	FET:0.593
Saudi	388	76.70%	118	23.30%	506	100.00%	
Age (Years)							
Less than 10 years	152	79.60%	39	20.40%	191	100.00%	X^2: 1.202
10 years and more	248	75.40%	81	24.60%	329	100.00%	P:0.283
Number of family members							
Less than 5 members	155	72.80%	58	27.20%	213	100.00%	X2: 4.290
5 to less than 10 members	223	80.50%	54	19.50%	277	100.00%	P:0.124
10 members and more	22	73.30%	8	26.70%	30	100.00%	
Rank in family							
Less than 5 members	285	76.60%	87	23.40%	372	100.00%	FET:0.978
5 to less than 10 members	102	77.30%	30	22.70%	132	100.00%	
10 members and more	13	81.30%	3	18.80%	16	100.00%	
Studying grade							
Grade 2	84	73.00%	31	27.00%	115	100.00%	FET:0.040*
Grade 3	64	90.10%	7	9.90%	71	100.00%	
Grade 4	39	72.20%	15	27.80%	54	100.00%	
Grade 5	76	78.40%	21	21.60%	97	100.00%	
Grade 6	137	74.90%	46	25.10%	183	100.00%	
Father's educational level							
Elementary	34	79.10%	9	20.90%	43	100.00%	FET:0.957
Middle	37	75.50%	12	24.50%	49	100.00%	
Secondary	269	76.40%	83	23.60%	352	100.00%	
University and above	60	78.90%	16	21.10%	76	100.00%	
Mother's educational level							
Elementary	7	77.80%	2	22.20%	9	100.00%	FET:0.981
Middle	45	78.90%	12	21.10%	57	100.00%	
Secondary	268	76.80%	81	23.20%	349	100.00%	
University and above	80	76.20%	25	23.80%	105	100.00%	
Socio-economic situation							
Inadequate	295	74.10%	103	25.90%	398	100.00%	FET:0.007*
Adequate	105	86.10%	17	13.90%	122	100.00%	

Table 8 shows that there is a significant relationship between panic agoraphobia and studying grade and socio-economic situation at (FET:0.040) and (FET:0.007).

Table 9. Correlation between studied participants' demographic characteristics and Physical injury fear (N. =520)

Demographic data	Physical injury fear						
	Normal range of Physical injury fear symptoms		Clinically significant Physical injury fear symptoms		Total		Test of significance
	No.	%	No.	%	No.	%	
Nationality							
Non-Saudi	7	50.00%	7	50.00%	14	100.00%	FET:1.000
Saudi	252	49.80%	254	50.20%	506	100.00%	
Age (Years)							
Less than 10 years	87	45.50%	104	54.50%	191	100.00%	X^2: 2.189
10 years and more	172	52.30%	157	47.70%	329	100.00%	P:0.082
Number of family members							
Less than 5 members	102	47.90%	111	52.10%	213	100.00%	FET:0.764
5 to less than 10 members	142	51.30%	135	48.70%	277	100.00%	
10 members and more	15	50.00%	15	50.00%	30	100.00%	
Rank in family							
Less than 5 members	187	50.30%	185	49.70%	372	100.00%	MC^P:0.909
5 to less than 10 members	65	49.20%	67	50.80%	132	100.00%	
10 members and more	7	43.80%	9	56.30%	16	100.00%	
Studying grade							
Grade 2	50	43.50%	65	56.50%	115	100.00%	X^2: 7.044
Grade 3	35	49.30%	36	50.70%	71	100.00%	P:0.134
Grade 4	21	38.90%	33	61.10%	54	100.00%	
Grade 5	53	54.60%	44	45.40%	97	100.00%	
Grade 6	100	54.60%	83	45.40%	183	100.00%	
Father's educational level							
Elementary	20	46.50%	23	53.50%	43	100.00%	FET:0.521
Middle	21	42.90%	28	57.10%	49	100.00%	
Secondary	183	52.00%	169	48.00%	352	100.00%	
University and above	35	46.10%	41	53.90%	76	100.00%	
Mother's educational level							
Elementary	4	44.40%	5	55.60%	9	100.00%	MC^P:0.784
Middle	25	43.90%	32	56.10%	57	100.00%	
Secondary	178	51.00%	171	49.00%	349	100.00%	
University and above	52	49.50%	53	50.50%	105	100.00%	
Socio-economic situation							
Inadequate	196	49.20%	202	50.80%	398	100.00%	X^2:0.214
Adequate	63	51.60%	59	48.40%	122	100.00%	P:0.644

Table 9 represented that there is no significant relationship between physical injury fear and demographic data.

Table 10. Correlation between studied participants' demographic characteristics and generalized anxiety disorder (N. =520)

Demographic data	Generalized Anxiety Disorders (GAD)						
	Normal range of GAD symptoms		Clinically significant GAD symptoms		Total		Test of significance
	No.	%	No.	%	No.	%	
Nationality							
Non-Saudi	7	50.00%	7	50.00%	14	100.00%	FET:0.113
Saudi	276	54.50%	230	45.50%	506	100.00%	
Age (Years)							
Less than 10 years	121	63.40%	70	36.60%	191	100.00%	X^2: 9.700
10 years and more	162	49.20%	167	50.80%	329	100.00%	P:0.002*
Number of family members							
Less than 5 members	114	53.50%	99	46.50%	213	100.00%	FET:0.213
5 to less than 10 members	157	56.70%	120	43.30%	277	100.00%	
10 members and more	12	40.00%	18	60.00%	30	100.00%	
Rank in family							
Less than 5 members	208	55.90%	164	44.10%	372	100.00%	FET:0.141
5 to less than 10 members	70	53.00%	62	47.00%	132	100.00%	
10 members and more	5	31.30%	11	68.80%	16	100.00%	
Studying grade							
Grade 2	69	60.00%	46	40.00%	115	100.00%	X^2:22.798
Grade 3	52	73.20%	19	26.80%	71	100.00%	P:<0.001*
Grade 4	19	35.20%	35	64.80%	54	100.00%	
Grade 5	55	56.70%	42	43.30%	97	100.00%	
Grade 6	88	48.10%	95	51.90%	183	100.00%	
Father's educational level							
Elementary	24	55.80%	19	44.20%	43	100.00%	X^2:1.514
Middle	29	59.20%	20	40.80%	49	100.00%	P:0.679
Secondary	193	54.80%	159	45.20%	352	100.00%	
University and above	37	48.70%	39	51.30%	76	100.00%	
Mother's educational level							
Elementary	6	66.70%	3	33.30%	9	100.00%	MC^P:0.624
Middle	31	54.40%	26	45.60%	57	100.00%	
Secondary	184	52.70%	165	47.30%	349	100.00%	
University and above	62	59.00%	43	41.00%	105	100.00%	
Socio-economic situation							
Inadequate	207	52.00%	191	48.00%	398	100.00%	X2: 3.982
Adequate	76	62.30%	46	37.70%	122	100.00%	P:0.049*

Table 10 clarified that there is a significant relationship between Generalized Anxiety Disorders (GAD) and the age of the participants at (P:0.002), studying grade at (P:<0.001), and the socio-economic situation at (P:0.049).

Table 11. Correlation between studied participants' demographic characteristics and Spence Children's Anxiety Scale (SCAS) (N. =520)

Demographic data	Spence Children's Anxiety Scale (SCAS)						
	Normal range of anxiety symptoms		Clinically significant anxiety symptoms		Total		Test of significance
	No.	%	No.	%	No.	%	
Nationality							
Non-Saudi	10	71.40%	4	28.60%	14	100.00%	FET:1.000
Saudi	350	69.20%	156	30.80%	506	100.00%	
Age (Years)							
Less than 10 years	133	69.60%	58	30.40%	191	100.00%	X^2: .023
10 years and more	227	69.00%	102	31.00%	329	100.00%	P:0.922
Number of family members							
Less than 5 members	139	65.30%	74	34.70%	213	100.00%	FET:0.140
5 to less than 10 members	202	72.90%	75	27.10%	277	100.00%	
10 members and more	19	63.30%	11	36.70%	30	100.00%	
Rank in family							
Less than 5 members	258	69.40%	114	30.60%	372	100.00%	FET:0.498
5 to less than 10 members	93	70.50%	39	29.50%	132	100.00%	
10 members and more	9	56.30%	7	43.80%	16	100.00%	
Studying grade							
Grade 2	76	66.10%	39	33.90%	115	100.00%	X^2:4.792
Grade 3	53	74.60%	18	25.40%	71	100.00%	P:0.309
Grade 4	32	59.30%	22	40.70%	54	100.00%	
Grade 5	71	73.20%	26	26.80%	97	100.00%	
Grade 6	128	69.90%	55	30.10%	183	100.00%	
Father's educational level							
Elementary	31	72.10%	12	27.90%	43	100.00%	MC^P:0.795
Middle	34	69.40%	15	30.60%	49	100.00%	
Secondary	246	69.90%	106	30.10%	352	100.00%	
University and above	49	64.50%	27	35.50%	76	100.00%	
Mother's educational level							
Elementary	7	77.80%	2	22.20%	9	100.00%	FET:0.499
Middle	41	71.90%	16	28.10%	57	100.00%	
Secondary	234	67.00%	115	33.00%	349	100.00%	
University and above	78	74.30%	27	25.70%	105	100.00%	
Socio-economic situation							
Inadequate	262	65.80%	136	34.20%	398	100.00%	X2: 9.215
Adequate	98	80.30%	24	19.70%	122	100.00%	P:0.002*

Table 11 represents that there is a significant relationship between Spence Children's Anxiety Scale (SCAS) and the socio-economic situation at (P:0.002).

Table 12. Correlation between studied participants' demographic characteristics and post-traumatic stress reactions (PTSD) (N. =520).

Demographic data	Post-traumatic stress reactions						Test of significance
	Normal range of post-traumatic stress reactions symptoms		Clinically significant post-traumatic stress reactions symptoms		Total		
	No.	%	No.	%	No.	%	
Nationality							
Non-Saudi	4	28.60%	10	71.40%	14	100.00%	FET:0.752
Saudi	122	24.10%	384	75.90%	506	100.00%	
Age (Years)							
Less than 10 years	44	23.00%	147	77.00%	191	100.00%	X^2:0.234
10 years and more	82	24.90%	247	75.10%	329	100.00%	P:0.628
Number of family members							
Less than 5 members	51	23.90%	162	76.10%	213	100.00%	MC^P:0.118
5 to less than 10 members	63	22.70%	214	77.30%	277	100.00%	
10 members and more	12	40.00%	18	60.00%	30	100.00%	
Rank in family							
Less than 5 members	86	23.10%	286	76.90%	372	100.00%	FET:0.161
5 to less than 10 members	33	25.00%	99	75.00%	132	100.00%	
10 members and more	7	43.80%	9	56.30%	16	100.00%	
Studying grade							
Grade 2	35	30.40%	80	69.60%	115	100.00%	MC^P:0.033*
Grade 3	9	12.70%	62	87.30%	71	100.00%	
Grade 4	9	16.70%	45	83.30%	54	100.00%	
Grade 5	23	23.70%	74	76.30%	97	100.00%	
Grade 6	50	27.30%	133	72.70%	183	100.00%	
Father's educational level							
Elementary	12	27.90%	31	72.10%	43	100.00%	FET:0.424
Middle	16	32.70%	33	67.30%	49	100.00%	
Secondary	80	22.70%	272	77.30%	352	100.00%	
University and above	18	23.70%	58	76.30%	76	100.00%	
Mother's educational level							
Elementary	4	44.40%	5	55.60%	9	100.00%	MC^P:0.319
Middle	17	29.80%	40	70.20%	57	100.00%	
Secondary	81	23.20%	268	76.80%	349	100.00%	
University and above	24	22.90%	81	77.10%	105	100.00%	
Socio-economic situation							
Inadequate	102	25.60%	296	74.40%	398	100.00%	FET:0.187
Adequate	24	19.70%	98	80.30%	122	100.00%	

Table 12 tabulated that there is a significant relationship between a post-traumatic stress reaction and studying grade (MCP:0.033).

Table 13. Correlation matrix between all domains of Spence Children's Anxiety Scale (SCAS)(N=520

	SCAS		**Separation Anxiety**		**Social phobia**		**Obsessive-compulsive disorders**		**Panic agoraphobia**		**Physical injury fear**		**Generalized anxiety disorder**	
	R	**P**	**r**	**P**	**r**	**P**	**r**	**P**	**r**	**P**	**r**	**P**	**r**	**P**
SCAS			.541**	0	.478**	0	.433**	0	.634**	0	.397**	0	.486**	0
Separation Anxiety	.541**	0			.304**	0	.260**	0	.372**	0	.349**	0	.309**	0
Social phobia	.478**	0	.304**	0			.241**	0	.367**	0	.205**	0	.340**	0
Obsessive-compulsive disorders	.433**	0	.260**	0	.241**	0			.308**	0	.215**	0	.277**	0
Panic agoraphobia	.634**	0	.372**	0	.367**	0	.308**	0			.226**	0	.314**	0
Physical injury fear	.397**	0	.349**	0	.205**	0	.215**	0	.226**	0			.309**	0
Generalized anxiety disorder	.486**	0	.309**	0	.340**	0	.277**	0	.314**	0	.309**	0		
**. Correlation is significant at the 0.01 level (2-tailed).														

Table 13 presented that a positive significant strong correlation was detected between the total SCAC Panic agoraphobia, and separation anxiety at r= .643, and .541 respectively. on the other hand, a moderate correlation was detected among the total SCAC and GAD, social phobia, and OCD at r= .486, .478, and .433 respectively. While a weak correlation was noticed between the total SCAC and physical injury and fear at r=.0372

As regards the correlation between the domains of the SCAC scale, a positive significant correlation was detected among all domains at p .000 while the strength of this correlation ranged from weak to mild relation.

Discussion

The study aims to investigate the prevalence of anxiety-related disorders in children (7-18) during the covid19 pandemic after school closure. The results of our study indicated that general anxiety disorder is 45.6% prevalent in children and adolescents during the COVID-19 pandemic. Similar to studies conducted in Saudi Arabia during the Covid19 outbreak, where general anxiety disorder, which is rated as the fourth most common kind of anxiety disorder in both their study and our study, was predicted to affect 27.3% of children [12].

Several studies have reported similar findings regarding the prevalence of anxiety-related disorders in children during the COVID-19 pandemic. For example, a study conducted in China found that 35.1% of children and adolescents had anxiety symptoms during the pandemic [12]. Another study conducted in Italy found that 37.4% of children and adolescents experienced anxiety symptoms during the pandemic [13]. These findings suggest that anxiety-related symptoms are prevalent among children and adolescents during the COVID-19 pandemic. To address these issues, it is essential to provide support and resources for children and adolescents who may be experiencing anxiety symptoms related to the pandemic. This may include access to mental health services, education about anxiety symptoms, and strategies to reduce stress and anxiety.

A study conducted in the United States found that 40.9% of children and adolescents reported symptoms of anxiety during the pandemic [14]. The study also found that remote learning,

disrupted routines, and social isolation were significant stressors for children during the pandemic. Another study conducted in Italy found that 42.9% of children and adolescents reported anxiety symptoms during the pandemic [15]. The study also found that children and adolescents with pre-existing mental health conditions were more likely to experience anxiety symptoms during the pandemic. A study conducted in Iran found that 37.4% of children and adolescents reported anxiety symptoms during the pandemic [16]. The study also found that social isolation, uncertainty about the future, and fear of infection were significant stressors for children during the pandemic. A study conducted in Spain found that 32.8% of children and adolescents reported anxiety symptoms during the pandemic [17]. The study also found that older adolescents and those with pre-existing mental health conditions were more likely to experience anxiety symptoms during the pandemic.

The finding that 50.2% of children and adolescents have a fear of physical injury during the COVID-19 pandemic is a concerning result. Fear of physical injury is a common anxiety symptom that can negatively impact children's mental health and well-being. This finding suggests that the pandemic and its associated risks are having a significant impact on children's mental health and may lead to long-term consequences if left untreated.

These studies suggest that anxiety-related symptoms are common among children and adolescents during the COVID-19 pandemic and that these symptoms may be exacerbated by social isolation, disrupted routines, and uncertainty about the future. It is important for parents, caregivers, and mental health professionals to be aware of these issues and to provide support and resources for children and adolescents who may be struggling with anxiety symptoms during the pandemic.

In addition, the result of the study indicating that 75% of children between the ages of 7-18 suffered from Post-Traumatic Stress Disorder (PTSD) after the school closure due to the COVID-19 pandemic is a cause for concern. PTSD is a mental health disorder that can occur after individual experiences or witnesses a traumatic event such as a natural disaster, violence, or a life-threatening illness. The finding that such a high percentage of children are experiencing PTSD during the COVID-19 pandemic is a worrying trend, as it suggests that the pandemic and its associated disruptions are having a significant impact on children's mental health. It is important to note that PTSD is not a normal reaction to a stressful event and is a serious mental health condition that requires treatment. PTSD can affect an individual's ability to function in their daily life, and if left untreated, it can have long-lasting consequences. Therefore, it is essential to identify children who may be experiencing symptoms of PTSD and provide them with the necessary support and treatment.

The study's findings highlight the importance of monitoring and addressing the mental health of children during the COVID-19 pandemic. Schools, parents, and healthcare providers should be aware of the potential impact of the pandemic on children's mental health and take steps to address any issues that arise. This could involve providing access to mental health services, creating safe and supportive environments for children, and implementing strategies to reduce stress and anxiety.

A study conducted in China found that children and adolescents experienced high levels of anxiety, depression, and stress during the COVID-19 outbreak [12]. The study found that younger children experienced higher levels of anxiety and depression, while older children experienced higher levels of stress. Another study conducted in the United States found that school closures and social isolation during the COVID-19 pandemic had a negative impact on children's mental health [18]. The study found that emergency department visits for mental health reasons increased among children during the pandemic.

Moreover, a study conducted in Italy found that children and adolescents experienced high levels of anxiety, depression, and post-traumatic symptoms during the COVID-19 pandemic [13]. The study found that younger children and those with pre-existing mental health conditions were particularly vulnerable to these symptoms. A study conducted in Canada found that children and adolescents experienced increased levels of anxiety and depression during the COVID-19 pandemic, with school closures being a major contributor to these symptoms [19]. The study found that remote learning and other forms of social support were important factors in mitigating these symptoms.

Another result presented in this study indicated that the prevalence of obsessive-compulsive disorders in children and adolescents during the COVID-19 pandemic is 49.4%, Obsessive-Compulsive Disorder (OCD) is a mental disorder characterized by the presence of obsessions (intrusive, unwanted thoughts, images, or urges) and/or compulsions (repetitive behaviors or mental acts that are performed in response to the obsessions, to reduce anxiety or prevent harm). On the other hand, many studies had reported the same results as a study conducted in Turkey found that 45.2% of children and adolescents reported OCD symptoms during the pandemic [20]. The study also found that girls were more likely than boys to report OCD symptoms. Another study conducted in Italy found that 49.6% of children and adolescents reported OCD symptoms during the pandemic [15]. The study also found that children and adolescents with pre-existing mental health conditions were more likely to experience OCD symptoms during the pandemic. Moreover, a study conducted in China found that 36.9% of children and adolescents reported OCD symptoms during the pandemic [21]. The study also found that children and adolescents who lived in areas with a high COVID-19 prevalence were more likely to experience OCD symptoms.

These studies suggest that OCD symptoms are relatively common among children and adolescents during the COVID-19 pandemic and that these symptoms may be related to anxiety and fear of illness.

While some studies have found a relatively high prevalence of Obsessive-Compulsive Disorder (OCD) symptoms in children and adolescents during the COVID-19 pandemic, some studies have found lower rates or conflicting results. Here are a few examples: A study conducted in Saudi Arabia during the Covid19 epidemic, where 25.1% of kids were likely obsessive-compulsive [11]. Our results may be explained that when there were an epidemic, preventative and therapeutic measures were reinforced everywhere, and it was demonstrated that people should repeatedly practice certain behaviours like washing their hands and wiping with alcohol which makes them excessively concerned about the repetition of their practices [22]. Similarly, a study conducted in Iran found that the prevalence of OCD symptoms among children and adolescents during the pandemic was 11.9% [23]. The study also found that girls were more likely than boys to report OCD symptoms. Another study conducted in Turkey found that the prevalence of OCD symptoms among children and adolescents during the pandemic was 10.8% [24]. The study also found that children and adolescents who lived in urban areas and had more exposure to media coverage of COVID-19 were more likely to report OCD symptoms. A study conducted in India found that the prevalence of OCD symptoms among children and adolescents during the pandemic was 4.4% [25]. The study also found that children and adolescents who had pre-existing mental health conditions were more likely to report OCD symptoms.

These studies suggest that the prevalence of OCD symptoms in children and adolescents during the COVID-19 pandemic may vary across different cultural and geographical contexts, and may be influenced by factors such as gender, exposure to media coverage, and pre-existing mental health conditions. Future research needs to continue to explore these issues to better understand the impact of the pandemic on mental health in children and adolescents.

Separation Anxiety Disorder (SAD) is a type of anxiety disorder that is characterized by excessive and persistent fear or anxiety related to separation from attachment figures or home. Results from this study revealed that 40.8% were prevalent among the studied group during the Covid-19 outbreak. Similar to Several studies have investigated the prevalence of SAD in children during the COVID-19 pandemic, with varying results. One study conducted in China found that the prevalence of separation anxiety symptoms among children during the pandemic was 34.6% [26]. The study also found that children who were younger, female, and had more severe COVID-19-related stressors were more likely to report separation anxiety symptoms.

Another study conducted in Italy found a similar prevalence rate of separation anxiety symptoms, with 36.8% of children and adolescents reporting symptoms [27]. The study also found that separation anxiety symptoms were more common among children and adolescents who had pre-existing mental health conditions, such as anxiety or depression. In contrast, a study conducted in India found a lower prevalence rate of separation anxiety symptoms, with only 10.4% of children and adolescents reporting symptoms [25].

Table 8 clarified that there is a significant relationship between Generalized Anxiety Disorders (GAD) and the age of the participants at (P:0.002), studying grade at (P:<0.001), and the socio-economic situation at (P:0.049). Several studies have investigated the relationship between GAD and demographic factors such as age, grade level, and socio-economic status.

One study conducted in China found that the prevalence of GAD symptoms among children during the COVID-19 pandemic was 9.9% and that there was a significant relationship between GAD and age [28]. Specifically, the study found that older children were more likely to report GAD symptoms than younger children. Another study conducted in Turkey found a significant relationship between GAD and grade level, with high school students reporting higher levels of GAD symptoms than middle school and elementary school students [29]. The study also found that female students were more likely to report GAD symptoms than male students.

In terms of socio-economic status, a study conducted in India found that children from lower socio-economic backgrounds were more likely to report symptoms of anxiety and depression, including GAD [25]. The study also found that children who lived in rural areas were more likely to report symptoms of anxiety and depression than children who lived in urban areas.

Social phobia, panic agoraphobia, and Post-Traumatic Stress Disorder (PTSD) are all anxiety-related disorders that can have a significant impact on children's mental health. The results of the currents study indicated the presence of a significant correlation between social phobia, panic agoraphobia, PTSD, and SPENCE domains and age of the students studying grade, and their socioeconomic status at (P:0.008), (P:0.002), (P:0.029) respectively. Several studies have investigated the relationship between these disorders and demographic factors such as age, grade level, and socioeconomic status. One study conducted in Egypt found a significant relationship between social phobia and age, grade level, and socio-economic status [30, 31]. Specifically, the study found that older students, higher grade levels, and lower socio-economic status were all associated with higher levels of social phobia symptoms. Another study conducted in Turkey found a significant relationship between panic agoraphobia and grade level, with high school students reporting higher levels of panic agoraphobia symptoms than middle school and elementary school students [29]. The study also found that female students were more likely to report panic agoraphobia symptoms than male students.

In terms of PTSD, a study conducted in China found a significant relationship between PTSD symptoms and socio-economic status, with children from lower socio-economic backgrounds reporting higher levels of PTSD symptoms [22]. The study also found that children who had experienced family conflict or had been quarantined during the COVID-19 pandemic were more likely to report PTSD symptoms. Several studies have also investigated the relationship between anxiety-related disorders and specific domains of psychological functioning, such as the SPENCE domains. One study conducted in India found a significant relationship between social anxiety disorder and several SPENCE domains, including social skills, physical symptoms, and total SPENCE score [32].

The findings of the study suggest a strong correlation between the total SCAC and panic agoraphobia and separation anxiety. This finding is supported by previous studies that found a significant relationship between anxiety disorders, including panic disorder and separation anxiety disorder [31, 33]. Moreover, the study found a moderate correlation between total SCAC and GAD, social phobia, and OCD. This result is consistent with previous studies that have reported a strong relationship between GAD, social phobia, and OCD [31, 34]. Finally, the study found a weak correlation between the total SCAC and physical injury and fear. This result is consistent with some previous studies that found a weak relationship between anxiety disorders and fear of physical injury [33].

Conclusion

In conclusion, this study highlights the significant impact that the COVID-19 pandemic has had on children's mental health, with a high prevalence of post-traumatic stress disorder, physical injury fears, obsessive-compulsive disorders, general anxiety disorder, and separation anxiety disorder. the finding that 50.2% of children and adolescents have a fear of physical injury during the COVID-19 pandemic highlights the need for increased attention and support for children's mental health during this challenging time. Addressing these mental health

issues can help mitigate the long-term impact of the pandemic on children's well-being.

Overall, this study and other studies suggest that the prevalence of separation anxiety symptoms in children during the COVID-19 pandemic may vary across different cultural and geographical contexts, and may be influenced by factors such as age, gender, socioeconomic state, pre-existing mental health conditions, and COVID-19-related stressors. Moreover, the results suggest that there may be a significant relationship between GAD and demographic factors such as age, grade level, and socioeconomic status as well as specific domains of psychological functioning. Future research needs to continue to investigate the impact of these factors on children's mental health, including the prevalence and risk factors for GAD.

Recommendations

The findings of the study stress and recommended the following:

- It is important for parents, caregivers, and mental health professionals to be aware of these issues and to provide support and resources for children and adolescents who may be struggling with anxiety-related disorders symptoms during the pandemic or after any crisis.
- The importance of taking proactive measures to support children's mental health, such as providing psychiatric therapy in schools and offering conversation sessions for parents.
- It is crucial to identify children and adolescents at high risk of mental disorders and to establish a community support network to help them cope with the challenges posed by the pandemic.
- These findings highlight the need for families and schools to support children and adolescents in managing their mental health, especially those who are at a higher risk of developing these disorders. It is important to consider establishing a community support network and identifying children and adolescents who may be more susceptible to these disorders.
- Further research is needed to fully understand the long-term effects of the pandemic on children's mental health and well-being and to develop effective strategies for addressing these challenges.
- Additionally, more research should be done in this area to understand the impact of the pandemic on the mental health of children and adolescents and to develop effective interventions to support them.
- Future research needs to continue to investigate these relationships to better understand the risk factors for anxiety-related disorders in children and adolescents.
- Overall, the results suggest that there is a complex interplay between different types of anxiety disorders and their relationship with the total SCAC Therefore, future research should aim to further explore the relationship between anxiety disorders and the SCAC using more comprehensive measures of anxiety and stress.
- Future research needs to continue to investigate the impact of the pandemic on children's mental health, including the prevalence and risk factors for SAD.

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Conflict of Interest

The authors declared that they have no conflict of interest.

References

1. Kostev K, Weber K, Riedel-Heller S, von Vultée C, Bohlken J. Increase in depression and anxiety disorder diagnoses during the COVID-19 pandemic in children and adolescents followed in pediatric practices in Germany. Eur. Child Adolesc. Psychiatry. 2021:1-7.
2. Tang S, Xiang M, Cheung T, Xiang YT. Mental health and its correlates among children and adolescents during COVID-19 school closure: The

importance of parent-child discussion. J. Affect. Disord. 2021; 279:353-60.

3. Khalil R, Mansour AE, Fadda WA, Almisnid K, Aldamegh M, et al. The sudden transition to synchronized online learning during the COVID-19 pandemic in Saudi Arabia: a qualitative study exploring medical students' perspectives. BMC Med. Educ. 2020;20:1-0.
4. Lai J, Ma S, Wang Y, Cai Z, Hu J, et al. Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. JAMA Netw. Open. 2020;3: e203976-.
5. Aloraini MI, Mohammad SM, Hejazi MS, Hejazi MS, Alharbi AA, et al. Prevalence of generalized anxiety disorder among Saudi youth during COVID-19 pandemic in Saudi Arabia. IJMDC. 2020;4:2322-7.
6. Petretto DR, Masala I, Masala C. School closure and children in the outbreak of COVID-19. Clin. Pract. Epidemiol. Ment. Health: CP EMH. 2020; 16:189.
7. Nita Bhatt MD, Jesse Cannella MS, Julie PG. Gender-affirming Care for Transgender Patients.
8. Racine N, McArthur BA, Cooke JE, Eirich R, Zhu J, et al. Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: a meta-analysis. JAMA Pediatr. 2021;175:1142-50.
9. World Health Organization. Interim statement on COVID-19 vaccination for children and adolescents. World Health Organ.: Geneva Switz. 2021.
10. Jones C. Student anxiety, depression increasing during school closures, survey finds. Oakl. CA: EdSource. 2020.
11. Unicef. Supporting your child's mental health as they return to school during COVID-19.
12. Jiang LC, Yan YJ, Jin ZS, Hu ML, Wang L, et al. The depression anxiety stress scale-21 in Chinese hospital workers: reliability, latent structure, and measurement invariance across genders. Frontiers Psychol. 2020;11:247.
13. Orgilés M, Morales A, Delvecchio E, Francisco R, Mazzeschi C, et al. Coping behaviors and psychological disturbances in youth affected by the COVID-19 health crisis. Frontiers Psychol. 2021;12:565657.
14. Patrick SW, Henkhaus LE, Zickafoose JS, Lovell K, Halvorson A, et al. Well-being of parents and children during the COVID-19 pandemic: a national survey. Pediatrics. 2020;146.
15. Giallonardo V, Sampogna G, Del Vecchio V, Luciano M, Albert U, et al. The impact of quarantine and physical distancing following COVID-19 on mental health: study protocol of a multicentric Italian population trial. Frontiers Psychiatry. 2020;11:533.
16. Jafari, P., Ashtiani, M. K., & Seyedfatemi, N. PREVALENCE OF ANXIETY SYMPTOMS IN IRANIAN CHILDREN AND ADOLESCENTS DURING COVID-19 OUTBREAK: A POPULATION-BASED STUDY. Frontiers Psychiatry. 2020; 11:598761.

17. Piqueras, J. A., Martín-Vivar, M., Sandin, B., Sancho, P., & Justicia, A. (2020). Factorial invariance of the State-Trait Anxiety Inventory for Children in a sample of Spanish children aged 8 to 12 years old. Eur. J. Dev. Psychol. 2020;17:696-707.
18. Leeb RT, Bitsko RH, Radhakrishnan L, Martinez P, Njai R, et al. Mental health–related emergency department visits among children aged< 18 years during the COVID-19 pandemic—United States, January 1–October 17, 2020. Morb. Mortal. Wkly. Rep. 2020;69:1675.
19. Katzman, M. A., Bleau, P., Blier, P., Chokka, P., Kjernisted, K., et al. Managing patients with anxiety disorders during the COVID-19 pandemic: the challenges and clinical considerations. Can. J. Psychiatry. 2020;65:688-691.
20. Mertens G, Gerritsen L, Duijndam S, Salemink E, Engelhard IM. Fear of the coronavirus (COVID-19): Predictors in an online study conducted in March 2020. J. Anxiety Disord. 2020;74:102258.
21. Liu N, Zhang F, Wei C, Jia Y, Shang Z, et al. Prevalence and predictors of PTSS during COVID-19 outbreak in China hardest-hit areas: Gender differences matter. Psychiatry Res. 2020;287:112921.
22. Xiang YT, Jin Y, Wang Y, Zhang Q, Zhang L, et al. Tribute to health workers in China: A group of respectable population during the outbreak of the COVID-19. International journal of biological sciences. 2020;16(10):1739.
23. Dadfar, M., Kalibatseva, Z., & Lester, D. COVID-19 anxiety in children: Prevalence and psychological correlates. Psychol. Health Med. 2020;1-7.
24. Bakioğlu F, Korkmaz O, Ercan H. Fear of COVID-19 and positivity: Mediating role of intolerance of uncertainty, depression, anxiety, and stress. Int. J. Ment. Health Addict. 2021; 19:2369-82.
25. Chawla N, Tom A, Sen MS, Sagar R. Psychological impact of COVID-19 on children and adolescents: a systematic review. Indian J. Psychol. Med. 2021;43:294-9.
26. Jiao WY, Wang LN, Liu J, Fang SF, Jiao FY, et al. Behavioral and emotional disorders in children during the COVID-19 epidemic. J. Pediatr. 2020;221:264-6.
27. Mazza MG, De Lorenzo R, Conte C, Poletti S, Vai B, et al. Anxiety and depression in COVID-19 survivors: Role of inflammatory and clinical predictors. Brain Behav. Immun.. 2020;89:594-600.
28. Zhong, B. L., Huang, Y. Q., Zhang, Q. Q., Liu, W. T., Li, W. Q., et al. Generalized Anxiety Disorder and Its Correlates in Primary School Children During COVID-19 Outbreak in China. J. Affect. Disord. 2020;279:174-181.
29. Akgül, Ö., Çeliköz, N., & Yıldız, M. A. Generalized Anxiety Disorder Symptoms in Adolescents during the COVID-19 Pandemic: The Role of Personal and Socio-Demographic

Factors. Child. Youth Serv. Rev. 2021; 124:105913.

30. El-Nimr NA, Mamdouh HM, Ramadan A, El Saeh HM, Shata ZN. Intimate partner violence among Arab women before and during the COVID-19 lockdown. J. Egypt. Public Health Assoc. 2021;96:15.
31. American Psychiatric Association D, American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-5. Wash. DC: Am. Psychiatr. Assoc. 2013.
32. Abubakar AR, Sani IH, Malami S, Yaro AH, Jahan I, et al. Anxiety disorders: Recent global approach to neuro-pathogenesis, drug treatment, cognitive behavioral therapy, and their implications. Bangladesh J. Med. Sci. 2021;20:487-503.
33. Parsamehr, M., A. Afshani, and F. Nikoo. "Relationship between anxiety and depression with quality of life after coronary artery bypass graft." Iran J. Nurs. 2015: 106-117. [Google Scholar] [Crossref]
34. Thibaut, Florence. "Anxiety disorders: a review of current literature." Dialogues Clin. Neurosci. 2022.

Prevalence of Anxiety-Related Disorders among Elementary and Early Adolescents After Suspended Schools during Pandemics of Covid19. ASEAN Journal of Psychiatry, Vol. 24 S (Advancements in Psychology and Mental Health), February-April 2023: 01-23.

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