Empowering Resilience: Understanding the Sociological Impact of COVID-19 on Adolescent Social Anxiety in the Middle East

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Abstract

This study investigates the sociological impact of the COVID-19 pandemic on social anxiety symptoms among adolescents in the Middle East. Understanding this impact is of vital importance, given the pressing need to address the mental health challenges faced by young individuals in the region. A sample of 470 adolescents, aged 11-19, from middle and secondary schools in Egypt, Saudi Arabia, and the United Arab Emirates participated in this research. To assess social anxiety symptoms, participants completed a researcher-designed questionnaire. The data analysis involved rigorous statistical tests, including a three-dimensional Likert scale to measure participants' views on the level of their social anxiety due to the COVID-19 pandemic. The data analysis involved a three-dimensional Likert scale and descriptive analysis methods, allowing for a comprehensive understanding of the sociological impact. Additionally, statistical techniques such as frequencies, percentages, and the one-way analysis of variance (ANOVA) test were utilized to analyze the data. These rigorous data analysis techniques ensure the reliability and validity of our findings. The results revealed a significant sociological impact of the pandemic on various dimensions of social anxiety symptoms among adolescents. Physical symptoms ranked first, with 73.36% of participants experiencing increased redness of the face, sweating, and physical discomfort during social interactions. Behavioral symptoms ranked second at 66.55%, characterized by negative behavior, anticipation of negative judgment, and avoidance of social gatherings. Cognitive symptoms ranked third at 64.24%, involving negative thought patterns, avoiding self-expression, and suppressing unique thoughts. Lastly, psychological symptoms ranked fourth at 64.11%, encompassing low self-esteem, depression, and thoughts of suicide. Based on our findings, we emphasize the urgent need for targeted interventions to address the mental health challenges faced by adolescents in the Middle East. Practical and policy implications include implementing mental health support systems, raising awareness about social anxiety symptoms, implementing social skills training programs, promoting online safety measures, engaging parents in supporting their children's mental well-being, and implementing school-based interventions. These recommendations aim to mitigate the sociological impact of the pandemic on social anxiety symptoms among adolescents in the region and foster their overall mental health.

Introduction

The COVID-19 pandemic has introduced significant sociological changes and challenges for adolescents in the Middle East, potentially exacerbating symptoms of social anxiety. Measures such as school closures, social distancing, and limited social interactions have disrupted the normal routines and support systems for adolescents, leading to increased feelings of isolation and loneliness. The shift to remote learning and reduced face-to-face interactions may contribute to heightened social anxiety symptoms among this population.

Furthermore, the pandemic has brought about uncertainties and changes in social norms, which can intensify social anxiety symptoms for adolescents. The fear of contracting the virus, concerns about the health of loved ones, and constant exposure to pandemic-related news and information can contribute to increased anxiety levels. Adolescents may also experience a heightened fear of negative evaluation in virtual social settings, as the online environment may amplify self-consciousness and perceived scrutiny (Elsayed, 2021a).

Theoretical perspectives support the importance of studying social anxiety in the context of crises. Morrison and Heimberg (2013) and Turk et al. (2005) refer to social anxiety disorder as a common form of anxiety that affects individuals across genders and age groups, characterized by the fear of embarrassment or appearing weak in front of others. It particularly manifests during adolescence, where affected individuals tend to avoid eye contact, shy away from social interactions, and refrain from engaging in activities in the presence of others (Morrison & Heimberg, 2013; Turk et al., 2005). Studies have shown that social anxiety disorder ranks as the third most prevalent mental health disorder following depression and alcoholism, with severe consequences such as significant social challenges in individuals' lives, including the inability to confront people, avoidance of social events, and gradual withdrawal from social relationships (Hofmann, Anu Asnaani, & Hinton, 2010; Leichsenring & Leweke, 2017).

Against this backdrop, understanding the sociological impact of the COVID-19 pandemic on social anxiety among adolescents, particularly in the Middle East, is crucial. The significance of this study lies in addressing the gap in the existing literature regarding the sociological effects of the pandemic on social anxiety in this specific population. Therefore, the primary objective of this study is to investigate the sociological impact of the COVID-19 pandemic on social anxiety levels among adolescents in the Middle East.

To provide a comprehensive understanding of the sociological impact of the pandemic on social anxiety, this study adopts a structured approach. The research questions will be addressed through the examination of various symptoms of social anxiety among adolescents in the Middle East. This structured approach ensures a systematic investigation of the sociological impact of the COVID-19 pandemic on social anxiety symptoms.

The study will address the following research questions:

Main question of the study: What is the sociological impact of the COVID-19 pandemic in the Middle East on the symptoms of social anxiety among adolescents?

To answer this main question, the study will explore the sociological impact of the pandemic on different aspects of social anxiety among adolescents. The specific sub-questions that will guide the investigation include:

Q1: What is the sociological impact of the COVID-19 pandemic in the Middle East on the level of physical symptoms associated with social anxiety among adolescents?

Q2: What is the sociological impact of the COVID-19 pandemic in the Middle East on the level of behavioral symptoms related to social anxiety among adolescents?

Q3: What is the sociological impact of the COVID-19 pandemic in the Middle East on the level of psychological symptoms associated with social anxiety among adolescents?

Q4: What is the sociological impact of the COVID-19 pandemic in the Middle East on the level of cognitive symptoms related to social anxiety among adolescents?

Q5: Do awareness and experiences of increased exposure to social anxiety due to the COVID-19 pandemic vary among adolescents in the Middle East based on gender, age, educational level, social status of the adolescent's parents, and the financial level of the adolescent's family?

By structuring the study around these research questions, the findings will provide a comprehensive understanding of the sociological impact of the COVID-19 pandemic on social anxiety among adolescents in the Middle East. This structured approach ensures a systematic exploration of the various dimensions of social anxiety and facilitates a nuanced analysis of how different sociological factors contribute to the manifestation of social anxiety symptoms.

The results of this study will not only contribute to the existing literature on mental health during crises but also inform the development of targeted interventions and support systems to address the mental health needs of adolescents in the region. By recognizing and addressing these challenges, policymakers, educators, and mental health professionals can work together to implement effective strategies and support mechanisms to mitigate the negative impact of the pandemic on social anxiety among adolescents.

Literature Review

Concept of Social Anxiety Disorder Among Adolescents in The Middle East

In the Middle Eastern context, social anxiety disorder among adolescents can be understood as a state of anxiety, tension, or avoidance experienced by individuals in various social and functional interactions. It is characterized by the fear of evaluation by others, especially in relatively small groups, leading to the avoidance of social situations (Leichsenring & Leweke, 2017; Mennin et al., 2002). This disorder often emerges during adolescence and may manifest in specific social situations or be pervasive, affecting various aspects of an individual's social life (Hofmann, 2007; Rytwinski et al., 2009).

The American Psychiatric Association first introduced the term "social anxiety" in 1980, defining it as a cognitive, emotional, and behavioral experience triggered by negative perceptions of social situations. Individuals with social anxiety disorder often focus on the possibility of negative evaluation by others, leading to avoidance behaviors. These fears are often irrational and not objectively justified. Symptoms may include shivering, palpitations, shortness of

breath, dry throat, sweating, lightheadedness, and a strong urge to urinate. The avoidance of social situations further reinforces fears and weakens self-confidence, perpetuating the cycle of social anxiety (Bögels et al., 2010; Ollendick & Hirshfeld-Becker, 2002).

Prevalence of Social Anxiety Disorder Among Adolescents in The Middle East

The prevalence of social anxiety disorder among adolescents varies across societies, with educational, social, and cultural factors playing significant roles in its distribution. Clinical studies indicate that adolescents from educated and financially affluent backgrounds are more likely to seek medical treatment for social anxiety disorder (Katzelnick et al., 2001). This may be attributed to their access to treatment and financial resources. However, in poorer societies and third-world countries, the prevalence of social anxiety disorder cases may be higher. This could be due to the diminished importance given to adolescents' opinions, opportunities for self-expression, and social roles compared to more advanced Western societies (Lecrubier et al., 2000).

Social anxiety disorder is generally more prevalent among females than males, with a ratio ranging from 3:2. It is more commonly observed among adolescents with lower socioeconomic status and less education. Social phobia is associated with conduct disorders, poor academic performance, limited social interaction, and compromised physical health (Goldin & Gross, 2010). According to diagnostic criteria, around 2.7% of the sample population met the criteria for social anxiety disorder, and based on the Fourth Diagnostic Statistical Manual, social anxiety disorder affects between 3% and 20% of adolescents with clear anxiety disorders. Approximately 10% of adolescents worry about attending social events with others, and 13% seek treatment at psychiatric clinics for social anxiety-related concerns. The disorder is prevalent among adolescents aged 12 to 18, with studies indicating higher susceptibility among females (Acarturk et al., 2009; Asher, Asnaani, & Aderka, 2017).

It is important to note that anxiety has become a defining feature of the current era, affecting adolescents of various backgrounds and cultures. They experience

distressing symptoms that can significantly disrupt their personal relationships, academic performance, and social lives. Social anxiety disorder primarily revolves around adolescents' fear of negative evaluation during social interactions, leading to avoidance of such situations as a perceived solution. However, avoidance exacerbates the problem and expands the scope of feared social situations. This is particularly challenging for adolescents, as their new social and educational environments differ from previous settings where they could freely express themselves and their thoughts. Adolescents feel under scrutiny, observation, and evaluation by others, resulting in negative consequences such as poor academic performance, psychological and social maladjustment, low self-confidence, increased suicide risk, panic disorder, phobias, alcohol use, and depression. Social anxiety often precedes these disturbances, suggesting a causal relationship (Aderka et al., 2012).

Despite the seriousness of social anxiety disorder, it has not received sufficient attention from scientists and social and psychological researchers until it was recognized as a distinct disorder in the Diagnostic and Statistical Manual of Mental Disorders in 1980. Its widespread occurrence poses social challenges for individuals in their future lives, depleting human resources and impeding creative abilities, particularly among adolescents (Heimberg, Brozovich, & Rapee, 2010).

Symptoms of Social Anxiety Disorder Among Adolescents in The Middle East

Physical symptoms: Social anxiety disorder manifests through a range of physical symptoms caused by the hyperactivation of the nervous system. When faced with social situations or even the anticipation of such situations, adolescents with social anxiety disorder experience pronounced physiological reactions. These reactions include flushing or blushing of the face, trembling hands and limbs, nausea, excessive sweating, trembling, palpitations, frequent urination, and voice tremors (Connor et al., 2001; Mathew, Coplan, & Gorman, 2001; Stein, Ipser, & van Balkom, 2004).

Behavioral symptoms: The impact of social anxiety disorder on adolescents' behavior is characterized by an excessive need for mastery and perfectionism, often leading to avoidance or inability to perform tasks due to the fear of falling short. This

extreme behavior negatively affects their well-being and productivity. Additionally, adolescents may exhibit behaviors such as chronic tardiness, school avoidance, evading responsibility and decision-making, avoiding social events, susceptibility to substance abuse, isolation, hyperactivity, sexual behavior disorders, and a constant sense of anticipation and fear of others (Eng et al., 2001; Erwin et al., 2004).

Psychological symptoms: Social anxiety disorder manifests through a range of psychological symptoms, including hypersensitivity, fear of negative evaluations, avoidance of anxiety-provoking situations, emotional distress, difficulties in communication, avoidance of social interactions, excessive self-consciousness, hyperactivity, and anxiety. These symptoms contribute to a sense of shyness, excessive self-doubt during social interactions, and challenges in social interviews (Kashdan & Herbert, 2001).

Cognitive symptoms: The cognitive component of social anxiety disorder involves negative beliefs, thoughts, assumptions, and expectations that are incongruent with individuals' actual experiences. This cognitive aspect plays a role in the persistence of social anxiety disorder, characterized by negative self-talk, erroneous beliefs, exaggerated negative evaluations of social performance, excessive self-imposed standards of social performance, and selective attention to negative information about oneself in social situations. Thus, success or failure in social interactions is often attributed to physical causes (Keller, 2003).

Figure 1 illustrates the most common situations that show symptoms of social anxiety disorder among adolescents. These situations encompass a range of social interactions and events that often trigger anxiety and distress in affected individuals. Giving a speech in front of an audience, meeting new people, participating in personal interviews, facing oral exams, attending social events such as weddings and parties (Bandelow et al., 2006; Elsayed, 2021b). Figure 1 provides a valuable resource for understanding and identifying the specific contexts in which social anxiety symptoms may arise among adolescents. It serves as a visual guide to enhance awareness and recognition of the challenges faced by young individuals dealing with social anxiety disorder, and it can contribute to the development of targeted interventions and support strategies.
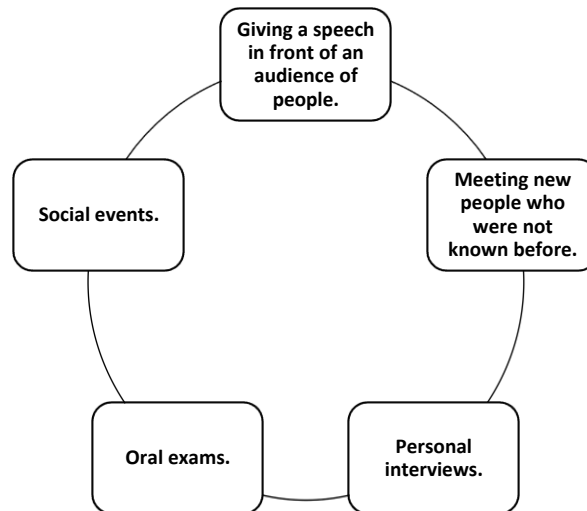
Figure 1: Social Anxiety Symptoms.

Sociological Factors That May Contribute to Increased Social Anxiety Among Adolescents in The Middle East

Cultural Expectations: Middle Eastern societies often place a strong emphasis on honor, reputation, and conformity to societal norms. Adolescents may experience heightened social anxiety due to the fear of judgment or ostracism if they deviate from cultural expectations or norms. This pressure to conform can lead to anxiety in social situations.

Gender Roles: The Middle East has distinct gender roles and expectations, which can contribute to social anxiety among adolescents. Traditional gender roles may impose restrictions on interactions between males and females, leading to anxiety and discomfort when navigating social situations involving the opposite gender.

Family Influence: Family dynamics and parental expectations can significantly impact an adolescent's social anxiety. In some Middle Eastern cultures, there may be a strong emphasis on the family's reputation and the behavior of individual family members. Adolescents may experience anxiety and pressure to conform to familial expectations, fearing the consequences of deviating from societal norms (Elsayed, 2020).

Social Hierarchies: Middle Eastern societies often have hierarchical structures, such as tribal or religious affiliations. Adolescents may feel anxious in social situations due to the perceived scrutiny and evaluation of their status within

these hierarchies. The fear of judgment or rejection based on one's social standing can contribute to social anxiety.

Stigma Surrounding Mental Health: There may be cultural stigma associated with mental health issues in some Middle Eastern societies. This stigma can discourage adolescents from seeking help or openly discussing their social anxiety symptoms, leading to increased internalized anxiety and isolation.

Media and Social Media Influence: Media portrayals and the rise of social media platforms can have a significant impact on adolescent social anxiety. Unrealistic beauty standards, comparisons with others, and cyberbullying can contribute to feelings of inadequacy, self-consciousness, and social anxiety (Spence & Rapee, 2016).

Previous Studies on Social Anxiety Disorder (SAD)

Study: "Metacognitive therapy versus disorder-specific CBT for comorbid anxiety disorders: a randomized controlled trial. Journal of anxiety disorders" by Johnson et al. (2017). Methodology: This study utilized a randomized controlled trial (RCT) design. Participants with SAD were randomly assigned to either a CBT group or a control group. The CBT group received therapy sessions focused on cognitive restructuring and exposure techniques, while the control group received no treatment. Data Analysis Technique: The researchers conducted pre- and post-intervention assessments, including self-report measures of social anxiety symptoms, functional impairment, and quality of life. They employed statistical analyses such as t-tests and effect sizes to compare the treatment and control groups. Findings: The study found that participants in the CBT group showed significant reductions in social anxiety symptoms compared to the control group. The CBT group also demonstrated improved functional impairment and quality of life post-treatment (Johnson et al., 2017).

Study: " Neural correlates of context-dependent extinction recall in social anxiety disorder: relevance of intrusions in response to aversive social experiences" by Fricke et al. (2024). Methodology: This study employed functional magnetic resonance imaging (fMRI) to investigate the neural correlates of SAD. Participants with SAD and a control group underwent fMRI scans while performing tasks involving social

stimuli. Data Analysis Technique: The fMRI data were analyzed using various techniques, such as voxel-based morphometry (VBM) to examine structural differences and functional connectivity analysis to investigate network-level interactions. Statistical tests, such as independent samples t-tests, were used to compare neural activation patterns between groups. Findings: The study identified specific brain regions and networks associated with SAD. For instance, participants with SAD exhibited increased activation in the amygdala, a key region involved in fear processing, when exposed to social stimuli. Additionally, altered connectivity patterns were observed among brain regions involved in emotion regulation and social perception (Fricke et al., 2024).

Study: " Current status of cognitive remediation for psychiatric disorders: a review" by Kim et al. (2018). Methodology: This study conducted a meta-analysis, which involved pooling data from multiple independent studies on the efficacy of selective serotonin reuptake inhibitors (SSRIs) in treating SAD. Various databases were searched for relevant studies that met inclusion criteria. Data Analysis Technique: The researchers used a random-effects model to calculate overall effect sizes and confidence intervals. Heterogeneity across studies was assessed using statistical tests such as the Q statistic and I² index. Findings: The meta-analysis revealed that SSRIs were significantly more effective than placebos in reducing social anxiety symptoms. The effect sizes varied across different SSRIs, with some medications showing greater efficacy than others. However, the study also highlighted the importance of considering potential side effects and individual differences in treatment response (Kim et al., 2018).

Study: "Cognitive factors that maintain social anxiety disorder: A comprehensive model and its treatment implications" by Hofmann (2007). Methodology: This study proposed a comprehensive cognitive model of social anxiety disorder. The author reviewed existing literature on cognitive factors in social anxiety disorder and synthesized it into a cohesive framework. Findings: Hofmann's model incorporated various cognitive factors to explain the maintenance of social anxiety. These factors included attentional biases towards threat, self-focused attention (excessive self-consciousness), safety behaviors (e.g., avoiding eye contact), and

negative self-beliefs. The study discussed the implications of this model for cognitive-behavioral interventions targeting social anxiety, emphasizing cognitive restructuring techniques and exposure-based interventions (Hofmann, 2007).

Study: "A cognitive-behavioral model of anxiety in social phobia" by Rapee and Heimberg (1997). Methodology: This study presented a cognitive-behavioral model of anxiety in social phobia. The authors synthesized existing literature and integrated cognitive and behavioral theories to develop their model. Findings: Rapee and Heimberg discussed how maladaptive cognitive processes interact with avoidance and safety behaviors to maintain social anxiety. They highlighted attentional biases towards social threat, negative self-beliefs (e.g., fear of negative evaluation), and anticipatory processing (excessive worry about upcoming social situations) as key cognitive factors. The authors emphasized the importance of exposure-based interventions and cognitive restructuring techniques in the treatment of social anxiety disorder (Rapee & Heimberg, 1997).

Study: "A cognitive model of social phobia" by Clark and Wells (1995). Methodology: This influential study proposed a cognitive model of social phobia. The authors presented a theoretical framework based on their clinical observations and research findings. Findings: Clark and Wells suggested that negative beliefs and interpretations about oneself, others, and social situations contribute to the development and maintenance of social anxiety. They described how cognitive biases, such as attentional biases towards threat and memory biases for negative social events, perpetuate social anxiety symptoms. The authors also highlighted the role of safety behaviors, such as avoiding social situations or using safety objects, in maintaining social anxiety (Clark & Wells, 1995).

Position of the Current Study Among Previous Studies

The current study focuses on the sociological impact of the COVID-19 pandemic on social anxiety symptoms among adolescents in the Middle East. This study is unique because it specifically examines the effects of the pandemic on social anxiety symptoms in this specific population, which has not been extensively studied before.

Novelty of the Study

Our study offers several unique and novel contributions to the existing body of knowledge. These aspects include:

Targeted Population: Our research focuses on a specific and understudied population, namely adolescents in the Middle East. By narrowing our scope to this group, we provide valuable insights into the sociological impact of the COVID-19 pandemic on social anxiety symptoms within a distinct cultural context. This targeted approach allows us to unravel unique experiences and challenges faced by adolescents in this region.

Geographic Context: Our study encompasses three countries in the Middle East: Egypt, Saudi Arabia, and the United Arab Emirates. This regional diversity adds novelty to our research as it considers variations in cultural, social, and economic factors that can influence the experiences of adolescents during the pandemic. By examining multiple countries, we contribute to a more comprehensive understanding of the sociological impact on social anxiety symptoms within the Middle Eastern context.

Comprehensive Methodology: Our study employs a comprehensive approach to data collection and analysis. We utilize a three-dimensional Likert scale and descriptive analysis methods to assess social anxiety symptoms among adolescents. This multidimensional approach enables us to capture a nuanced understanding of the impact of the pandemic on various dimensions of social anxiety. By exploring physical, behavioral, cognitive, and psychological symptoms, we provide a comprehensive picture of the effects of the pandemic on adolescents' mental well-being.

Practical Recommendations: In addition to identifying the sociological impact, our study provides practical recommendations for addressing the mental health challenges faced by adolescents in the Middle East. These recommendations include implementing mental health support systems, raising awareness about social anxiety symptoms, and implementing targeted interventions. By offering actionable suggestions, our research contributes to the development of evidence-based strategies that can effectively support the mental well-being of adolescents in the region.

By emphasizing these aspects, our study offers novelty in terms of the population, geographic context, methodology, and practical implications. These unique contributions add to the existing knowledge base and provide valuable insights for researchers, practitioners, and policymakers seeking to address the mental health challenges faced by adolescents in the Middle East during the COVID-19 pandemic.

Methodological Procedures

Sample

The sample consisted of adolescents aged 11-19 years from middle and secondary schools. A simple random survey method was employed, resulting in a sample size of 470 participants in Egypt, Saudi Arabia, United Arab Emirates. Table 1 presents the demographic information of the participants.

Table 1: Demographic Information on Participants.

Percentage	Frequencies	Statement	Variables
47.7%	224	Male	
52.3%	246	Female	**Gender**
100%	470	Total	
49.1%	231	11 – 14 years	
50.9%	239	15 – 19 years	**Age**
100%	470	Total	
51.3%	241	Middle school	
48.7%	229	Secondary school	**Educational level**
100%	470	Total	
33.8%	159	Married	
31.7%	149	Divorced	**Social status of the**
34.5%	162	One or both of the parents are dead	**adolescent's parents**
100%	470	Total	
29.4%	138	Poor	
41.5%	195	Normal	**Financial level of the**
29.1%	137	Rich	**adolescent's family**
100%	470	Total	

In light of these results, it is evident that the study sample comprises a higher percentage of females (52.3%) compared to males (47.7%). The majority of participants fall within the age group of 15 -19 years (50.9%%), followed by 11-14 years (49.1%).

Regarding the educational level, 51.3% of the participants are enrolled in middle school, while 48.7% in secondary school. In addition, the social status of the adolescent's parents is as follows: one or both of the parents are dead (34.5%), Married (33.8%), and Divorced (31.7%). Furthermore, the financial level of the adolescent's family indicates that 41.5% have a normal economic level, 29.4% have a poor economic level, and 29.1% have a rich economic level. These findings are consistent with studies (Cheng, Zhang, & Ding, 2014; Knappe, Beesdo-Baum, & Wittchen, 2010; Xiao et al., 2006) that link a low economic level to a higher prevalence of social anxiety disorder.

Informed Consent

Before starting the survey, all adolescents' participants and their parents gave their informed consent to apply the Questionnaire to their children. Participants' data were completely analyzed without revealing their identity. In addition to assurance that the researcher followed all applicable ethical regulations to keep the participants' details confidential.

Study Instrument

Questionnaire: A questionnaire was designed to assess the sociological impact of the COVID-19 pandemic in the Middle East affect the symptoms of social anxiety among adolescents. The questionnaire was developed based on the theoretical framework of the current study and by referring to previous studies related to the topic. The dimensions of the study were determined, and appropriate items were formulated for each dimension. The validity and reliability of the questionnaire were ensured through the following steps:

Validity of the questionnaire: The initial version of the questionnaire, along with a list of study questions, was presented to 14 university teaching staff members for expert validation. Their feedback and recommendations were used to refine the content of the questionnaire. An agreement percentage of not less than 85% was considered, resulting in the deletion and reformulation of certain items. The questionnaire was then finalized based on the recommendations provided by the experts.

Reliability of the questionnaire: The researcher verified the reliability of the questionnaire by using the test-retest method. The questionnaire was applied to a small random sample consisting of 32 adolescents, and fifteen days after, the test was reapplied to the same sample of adolescent's again, after that, the Spearman correlation coefficient between the two applications was calculated, it is worth noting that the reliability coefficient was calculated according to Spearman's law of correlation coefficient as shown in Equation 1: -

$$R_S = 1 - \frac{6\left(\sum D^2\right)}{n\left(n^2 - 1\right)}$$

Table 2: Questionnaire Stability and Variables.

Variables of the Questionnaire	Rs	Vs
Level of physical symptoms associated with social anxiety among adolescents	0.706	0.840
Level of behavioral symptoms associated with social anxiety among adolescents	0.680	0.825
Level of psychological symptoms associated with social anxiety among adolescents	0.714	0.845
Level of cognitive symptoms associated with social anxiety among adolescents	0.667	0.817
TOTEL	0.692	0.832

In light of results in Table 2, the correlation coefficients of the Questionnaire and its axes are high, which makes us confident in the stability of the resolution, and the self-validity factor was calculated by calculating the square root of the stability factor of the resolution, and the self-validity of the resolution was = $\overline{0.692}$ = 83.2%, Therefore, the questionnaire form is characterized by validity and stability, given that all statements of the tool's axes have a high degree of validity and reliability.

Data Analysis Measures

To find out the views of adolescents about the degree of the level of their social anxiety due to the Covid-19 pandemic, a three-dimensional Likert scale is adopted as follows: agree (3), neutral (2), and disagree (1).

Data Analysis Methods

This study adopts a descriptive research design to understand and evaluate the variables related to the sociological impact of COVID-19 on adolescent social anxiety in the Middle East. Descriptive analysis methods are employed to collect, analyze, and interpret the data. This systematic and analytical approach involves describing and quantifying phenomena to provide accurate results through explanation, comparison, and interpretation. The aim is to examine the nature of the sociological impact of COVID-19 on adolescent social anxiety in the Middle East. Additionally, the study explores differences in awareness levels of adolescents regarding social anxiety based on gender, age, educational stage, marital status of the adolescent's parents, and the economic level of the adolescent's family. Accurate conclusions and recommendations are derived from the monitoring, analysis, and interpretation of the accessible data within the study sample.

Statistical Analysis

The researcher utilized the Statistical Package for the Social Sciences (SPSS) software and various statistical coefficients to address the study questions. The analysis includes calculating frequencies, percentages, weighted relative weights, and total weights to provide a comprehensive understanding of the data. Additionally, the one-way analysis of variance (ANOVA) test is employed to assess the significance of variations in means across different groups or categories.

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Results

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Study Findings Related to RQ1

The question was: " What is the sociological impact of the COVID-19 pandemic in the Middle East on the level of physical symptoms associated with social anxiety among adolescents?" (see Table 3).

Table 3: Sociological Impact of COVID-19 on Physical Symptoms of Social Anxiety in Adolescents.

Ranking	Percentage %	Weighted Relative Weight %	Total Weights	Physical Symptoms
3	7.29	80.23	1136	I feel annoyed when my heart beats faster in social situations due to the pandemic's impact on social interactions.
12	6.16	67.80	960	Speaking in a group makes me dizzy, especially with the changes in social dynamics caused by the pandemic.
9	6.50	71.54	1013	I get headaches in new social situations, possibly because of the altered social interactions during the pandemic.
4	7.11	78.18	1107	My throat becomes dry when I interact with others, reflecting the changes in social norms during the pandemic.
8	6.57	72.32	1024	I shiver during conversations with people, possibly due to increased social anxiety resulting from the COVID-19 pandemic.
1	7.52	82.70	1171	The redness of my face bothers me in front of others, intensifying with the self-consciousness brought on by the societal changes during the pandemic.
2	7.37	81.07	1148	I experience increased sweating when around others, especially during the anxiety-inducing effects of the COVID-19 pandemic.
10	6.32	69.56	985	I have stomach cramps when I feel the urgency to fulfill responsibilities, reflecting the changes in daily routines and expectations caused by the pandemic.
15	6.05	66.53	942	I feel numbness in my hands and feet when disagreeing with someone, possibly due to the heightened stress and tension during the COVID-19 pandemic.
10	6.32	69.56	985	I struggle with shortness of breath when facing someone, which is exacerbated by the anxiety-provoking nature of social interactions during the pandemic.

5	6.98	76.84	1088	I stutter when talking and interacting with others, possibly because of the increased social pressure and anxiety resulting from the COVID-19 pandemic.
6	6.89	75.85	1074	I have conflicting thoughts when expressing my desires to others, reflecting the uncertainty and changing social dynamics during the pandemic.
7	6.67	73.38	1039	I often forget details and events when recounting them to others, possibly due to heightened stress and anxiety during the COVID-19 pandemic.
14	6.11	67.23	952	I experience oral secretions when pressured to speak, intensifying with the heightened social pressure and anxiety resulting from the COVID-19 pandemic.
13	6.14	67.58	957	Making mistakes with my colleagues causes stomach pain and acidity, possibly influenced by the increased stress and pressure in social and work environments during the pandemic.
100%			**15581**	**Total**
		73.36%		**Weighted relative weight of the variable**
		Moderate		**Level of weight representation**

Based on the results presented in Table 3, we observed a moderate level of physical symptoms associated with social anxiety among adolescents due to the societal changes resulting from the COVID-19 pandemic. This finding suggests that the pandemic and its associated changes have had a noticeable impact on the physical well-being of adolescents experiencing social anxiety.

In reality, the moderate level of impact indicates that these changes have likely affected the daily lives of adolescents, potentially leading to increased stress, discomfort, or physical manifestations of anxiety. This information is crucial for understanding the real-world implications of our study and highlights the importance of addressing the needs of adolescents in managing and mitigating the physical symptoms of social anxiety during times of significant societal change.

By recognizing the moderate level of impact, we can better tailor interventions and support strategies to help adolescents manage and mitigate the physical symptoms of social anxiety in the context of the COVID-19 pandemic. This understanding is crucial for providing targeted assistance and promoting the well-being of adolescents as they navigate the challenges posed by the pandemic and societal changes.

Study Findings Related to RQ2

The question was: What is the sociological impact of the COVID-19 pandemic in the Middle East on the level of behavioral symptoms related to social anxiety among adolescents? (see Table 4).

Table 4: Sociological Impact of COVID-19 on Behavioral Symptoms of Social Anxiety in Adolescents.

Ranking	Percentage %	Weighted Relative Weight %	Total Weights	Behavioral Symptoms
8	6.64	66.31	939	I obsessively strive for perfection in my schoolwork, especially during the COVID-19 pandemic when remote learning adds more pressure to excel academically.
7	6.76	67.44	955	The shift to online interactions during COVID-19 has increased the pressure to conform to certain behaviors or expectations, leading me to feel anxious about virtual presence and fitting in.
9	6.45	64.41	912	I fear failure in remote schooling more intensely during COVID-19, which often leads to procrastination and difficulties in meeting my academic responsibilities.
13	6.09	60.73	860	The lack of face-to-face interactions in remote learning has made me more inclined to avoid school or skip classes, as it allows me to escape potential conflicts or uncomfortable situations.

10	6.30	62.92	891	The transition to online education has amplified my tendency to shy away from taking on leadership roles or responsibilities within virtual school settings.
11	6.19	61.79	875	Making decisions has become more challenging during remote learning and limited social interactions, especially when they involve other students or virtual social situations.
5	7.07	70.62	1000	I increasingly avoid virtual social gatherings or events during the pandemic to shield myself from potential criticism or judgment in online environments.
14	6.08	60.66	859	The isolation and stress caused by the COVID-19 pandemic have sometimes led me to seek solace in substance use as a way to cope with the pressures of school and social interactions.
15	6.02	60.10	851	I find myself turning to alcohol more frequently during COVID-19 to deal with negative comments or perceptions from peers in online learning environments.
4	7.10	70.83	1003	The remote learning environment has driven me to seek solitude as a means of escaping constant blame or scrutiny from peers, exacerbating my social anxiety.
6	6.96	69.49	984	The limitations of remote learning and reduced social interactions pose challenges in maintaining social and romantic relationships, leading to feelings of difficulty and isolation.
12	6.16	61.51	871	The pressures and negative interactions experienced during remote learning have at times influenced unhealthy sexual behavior, impacting my well-being and worsening social anxiety symptoms.
2	7.42	74.08	1049	The increased online presence and constant exposure to virtual interactions during COVID-19 heighten my anticipation of negative judgment from peers and the virtual school environment.
3	7.25	72.39	1025	The expectations placed on me by family members for academic performance during remote learning have sometimes caused me to emotionally distance myself as a coping mechanism.

1	7.51	74.93	1061	The social disruptions caused by COVID-19 have intensified my negative behavior towards others as a defense mechanism to protect myself from potential harm or rejection in the virtual environment.
	100%		**14135**	**Total**
			66.55%	**Weighted relative weight of the variable**
			Moderate	**Level of weight representation**

Based on the results presented in Table 4, we observed a moderate level of behavioral symptoms associated with social anxiety among adolescents due to the societal changes resulting from the COVID-19 pandemic. This finding suggests that the pandemic and its associated changes have had a noticeable impact on the behavioral patterns of adolescents experiencing social anxiety.

In reality, the moderate level of impact indicates that these changes have likely influenced the behaviors and actions of adolescents, potentially leading to avoidance, withdrawal, or other behavioral manifestations of social anxiety. This information is crucial for understanding the real-world implications of our study and highlights the importance of addressing the needs of adolescents in managing and adapting their behaviors to cope with social anxiety during times of significant societal change.

By recognizing the moderate level of impact, we can better tailor interventions and support strategies to help adolescents navigate and overcome the behavioral challenges associated with social anxiety in the context of the COVID-19 pandemic.

Study Findings Related to RQ3

The question was: What is the sociological impact of the COVID-19 pandemic in the Middle East on the level of psychological symptoms associated with social anxiety among adolescents? (see Table 5).

Table 5: Sociological Impact of COVID-19 on Psychological Symptoms of Social Anxiety in Adolescents.

Ranking	Percentage %	Weighted Relative Weight %	Total Weights	Psychological Symptoms
11	6.44	62.01	878	I feel extra sensitive when interacting with others.
14	6.13	58.90	834	I'm scared that people will judge me negatively.
8	6.74	64.83	918	I try to avoid situations that make me feel bad.
7	6.76	64.97	920	I often feel upset and distressed.
10	6.57	63.14	894	I have trouble communicating with others.
13	6.26	60.24	853	I avoid interacting with people around me.
15	6.07	58.33	826	I feel overwhelmed when facing others.
9	6.65	63.91	905	I get stressed in social situations.
2	7.12	68.43	969	I feel depressed.
1	7.15	68.71	973	I have low self-esteem.
4	6.98	67.09	950	I become shy when people direct their attention to me.
11	6.44	62.01	878	I get confused during social interviews.
3	6.98	67.16	951	I feel insecure when someone talks to me.
6	6.84	65.82	932	I miss feeling reassured and loved, even by my family.
5	6.87	66.03	935	Sometimes, I think about suicide to escape criticism.
	100%		**13616**	**Total**
			64.11%	**Weighted relative weight of the variable**
			Moderate	**Level of weight representation**

Based on the results presented in Table 5, we observed a moderate level of psychological symptoms associated with social anxiety among adolescents due to the societal changes resulting from the COVID-19 pandemic. This finding suggests that the pandemic and its associated changes have had a noticeable impact on the psychological well-being of adolescents experiencing social anxiety.

In reality, the moderate level of impact indicates that these changes have likely affected the emotional and psychological state of adolescents, potentially leading to increased stress, anxiety, or other psychological manifestations of social anxiety. This

information is crucial for understanding the real-world implications of our study and highlights the importance of addressing the psychological needs of adolescents in managing and coping with social anxiety during times of significant societal change.

By recognizing the moderate level of impact, we can better design interventions and support strategies to help adolescents navigate and improve their psychological well-being in the context of the COVID-19 pandemic.

Study Findings Related to RQ4

The question was: What is the sociological impact of the COVID-19 pandemic in the Middle East on the level of cognitive symptoms related to social anxiety among adolescents? (see Table 6).

Table 6: Sociological Impact of COVID-19 on Cognitive Symptoms of Social Anxiety in Adolescents.

Ranking	Percentage %	Weighted Relative Weight %	Total Weights	Cognitive Symptoms
11	6.32	60.95	863	I practice negative self-talk daily because Feelings of isolation and increased stress during the pandemic may contribute to negative self-talk as a coping mechanism.
13	6.11	58.90	834	I have thoughts that others describe as wrong thoughts because Social isolation and reduced opportunities for discussion may lead to a lack of diverse perspectives and labeling of unconventional thoughts as "wrong."
5	7.02	67.66	958	I evaluate myself negatively in an exaggerated way to please others because Inadequate social validation and increased reliance on virtual interactions may contribute to seeking validation through negative self-evaluation.
8	6.70	64.48	913	I show others that I believe in their ideas to gain social acceptance because Heightened need for social connection and acceptance during the pandemic may lead to conforming to others' ideas to maintain social bonds.

4	7.11	68.50	970	Sometimes I give up my personal point of view to avoid confrontation because Reduced opportunities for face-to-face communication and increased reliance on digital platforms may discourage open discussions and lead to avoidance of conflicts.
15	5.89	56.78	804	I constantly pay attention to my shortcomings and performance in social situations because Heightened self-awareness and increased self-evaluation during virtual interactions may lead to a focus on personal shortcomings.
1	7.37	71.05	1006	I have bad memories that constantly dominate me because Isolation and lack of social support during the pandemic contribute to the persistence of negative memory
12	6.21	59.82	847	I accept the culture of those around me, even if I'm not convinced because Inaccessible cultural experiences and limited exposure to alternative viewpoints during the pandemic may lead to conforming to prevailing cultural norms.
3	7.29	70.27	995	I believe that the ends justify the means, even if the behavior is wrong because Social disconnection and reduced moral guidance during the pandemic may contribute to this belief system.
2	7.32	70.55	999	I avoid discussing my ideas with others to avoid blame because Limited social interactions and fear of judgment may lead to avoidance of expressing personal ideas.
9	6.61	63.70	902	I have liberating ideas that those around me do not accept because Resistance to new ideas and limited exposure to diverse perspectives during the pandemic may hinder acceptance of unconventional thoughts.
10	6.41	61.79	875	I worry about other people's views and opinions of me because Increased social scrutiny and fear of judgment during virtual interactions may contribute to heightened concern about others' perceptions.
6	6.90	66.45	941	I tend to have out-of-the-ordinary ideas but don't express them because Limited social interactions and reduced opportunities for creative expression during the pandemic may result in suppressing unique ideas.
14	5.98	57.63	816	I prefer short discussions with others in social situations because Decreased attention span and limited face-to-face interactions during the pandemic may contribute to a preference for shorter discussions.

7	6.76	65.11	922	Freedom of expression is theoretical and not achieved in practice with those around me due to mistrust because Loss of trust in social interactions and increased reliance on virtual communication may contribute to a perception of limited freedom of expression.
	100%		**13645**	**Total**
			64.24%	**Weighted relative weight of the variable**
			Moderate	**Level of weight representation**

Based on the results presented in Table 6, we observed a moderate level of cognitive symptoms associated with social anxiety among adolescents due to the societal changes resulting from the COVID-19 pandemic. This finding suggests that the pandemic and its associated changes have had a noticeable impact on the cognitive processes of adolescents experiencing social anxiety.

In reality, the moderate level of impact indicates that these changes have likely influenced the thought patterns, perceptions, and cognitive functioning of adolescents, potentially leading to increased rumination, negative self-talk, or cognitive distortions related to social anxiety. This information is crucial for understanding the real-world implications of our study and highlights the importance of addressing the cognitive needs of adolescents in managing and adapting their thought processes to cope with social anxiety during times of significant societal change.

By recognizing the moderate level of impact, we can better tailor interventions and support strategies to help adolescents improve their cognitive functioning, challenge negative thought patterns, and develop effective coping mechanisms in the context of the COVID-19 pandemic.

Study Findings Related to RQ5

The question was: Do awareness and experiences of increased exposure to social anxiety due to the COVID-19 pandemic vary among adolescents in the Middle East based on gender, age, educational level, social status of the adolescent's parents, and the financial level of the adolescent's family?

The researcher carried out an independent one-way ANOVA test to answer the eighth research question in the study to assess the significance of the differences between the averages of adolescent's awareness of their increased exposure to the social anxiety due to the Covid-19 pandemic based on their demographic variables. The results are detailed in the following section (see Table 7):

Table 7: One-Way ANOVA Test of Adolescent's Responses.

		Sum of Squares	df	Mean Square	F Statistic	F critical	Sig. level
Gender	Between Groups	179	1	179	5.33	3.84*	Significant
	Within Groups	15725	468	33.60			
	Total	15904	469				
Age	Between Groups	188	1	188	5.59	3.84*	Significant
	Within Groups	15716	468	33.58			
	Total	15904	469				
Educational level	Between Groups	206	1	206	6.14	3.84*	Significant
	Within Groups	15698	468	33.54			
	Total	15904	469				
Social status of the adolescent's parents	Between Groups	374	2	187	5.62	3.00*	Significant
	Within Groups	15530	467	33.25			
	Total	15904	469				
Financial level of the adolescent's family	Between Groups	427	2	213.5	6.44	3.00*	Significant
	Within Groups	15477	467	33.14			
	Total	15904	469				

*Statistically significant at (α 0.05).

The results presented in Table 7 indicate statistically significant differences in adolescent's perspectives based on various variables.

Firstly, we observed statistically significant differences in adolescent's perspectives based on gender. This finding suggests that gender plays a role in shaping the awareness of increased exposure to social anxiety due to the COVID-19 pandemic among adolescents. These differences may reflect varying experiences, coping mechanisms, or societal expectations related to social anxiety.

Additionally, significant differences were found based on age, educational level, social status of the adolescent's parents, and the financial level of the adolescent's family. These results indicate that these demographic variables contribute to variations in adolescent's perspectives regarding their awareness of increased exposure to social anxiety. It is likely that factors such as developmental stage, educational opportunities, family support, and financial resources influence how adolescents perceive and experience social anxiety during the pandemic.

By recognizing these statistically significant differences, we can gain insights into the diverse realities and needs of adolescents in different demographic contexts. This information is crucial for tailoring interventions, support, and resources to address the specific challenges and concerns faced by adolescents from different backgrounds.

In light of the above results that answered all the sub-questions of the study, we can answer the main question of the study, which is {What is the sociological impact of the COVID-19 pandemic in the Middle East affect the symptoms of social anxiety among adolescents?}. (see Table 8, Figure 2).

Table 8: Sociological Impact of COVID-19 on Symptoms of Social Anxiety in Adolescents.

Ranking	Level of weight representation	Percentage %	Weighted relative weight of the variable	Total weights	Sociological impact of COVID-19 on symptoms of social anxiety in adolescents in the Middle East
1	Moderate	14.65	73.36%	15581	Physical symptoms
2	Moderate	13.29	66.55%	14135	Behavioral symptoms
4	Moderate	12.81	64.11%	13616	Psychological symptoms
3	Moderate	12.83	64.24%	13645	Cognitive symptoms
		100%		**56977**	**Total**
				67.06%	**Weighted relative weight of the all variables in the questionnaire**
				Moderate	**Level of weight representation**

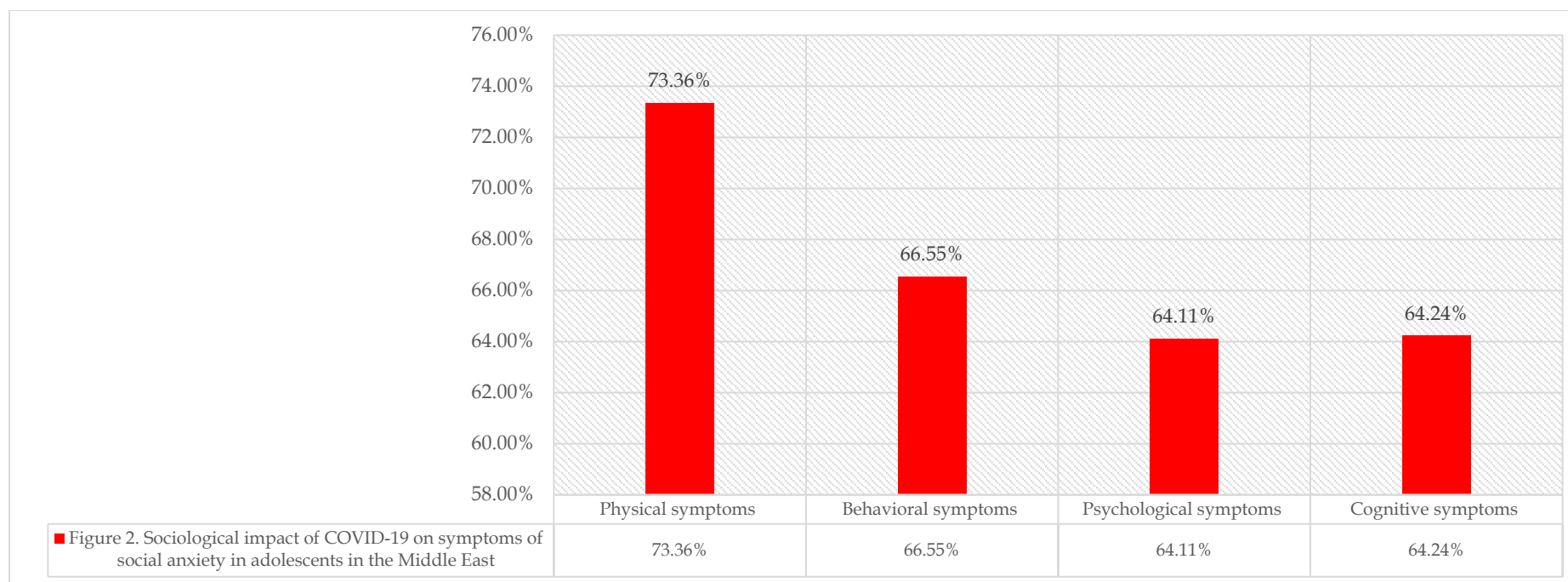|	Physical symptoms	Behavioral symptoms	Psychological symptoms	Cognitive symptoms
■ Figure 2. Sociological impact of COVID-19 on symptoms of social anxiety in adolescents in the Middle East	73.36%	66.55%	64.11%	64.24%

Figure 2: Sociological Impact of COVID-19 on Symptoms of Social Anxiety in Adolescents in the Middle East.

Table 8 and Figure 2 present the results regarding the sociological impact of the COVID-19 pandemic on the symptoms of social anxiety among adolescents in the Middle East. The findings indicate a moderate level of impact of the COVID-19 pandemic on all levels of social anxiety among adolescents. This suggests that the pandemic has had noticeable effects on various aspects of social anxiety experienced by adolescents in the Middle East.

Specifically, the highest level of impact was observed in "Physical symptoms associated with social anxiety among adolescents" with a score of 73.36%. This indicates that the pandemic has had notable consequences on the physical manifestations of social anxiety, potentially leading to increased physiological arousal, somatic symptoms, or discomfort in social situations.

The second-highest level of impact was observed in "Behavioral symptoms associated with social anxiety among adolescents" with a score of 66.55%. This suggests that the pandemic has influenced the behavioral patterns of adolescents experiencing social anxiety, potentially leading to avoidance, withdrawal, or changes in social interactions.

"Cognitive symptoms associated with social anxiety among adolescents" ranked third with a score of 64.24%, indicating that the pandemic has affected the thought processes, perceptions, and cognitive functioning of adolescents experiencing social anxiety.

Finally, "Psychological symptoms associated with social anxiety among adolescents" ranked fourth with a score of 64.11%, highlighting the impact of the pandemic on the emotional and psychological well-being of adolescents with social anxiety.

These findings underscore the real-world implications of the COVID-19 pandemic on the experiences of social anxiety among adolescents in the Middle East. By recognizing the moderate level of impact across various symptom domains, we can better understand the challenges faced by adolescents and develop targeted interventions and support strategies to address their specific needs.

Discussion

This study aimed to identify the sociological impact of the COVID-19 pandemic in the Middle East affect the symptoms of social anxiety among adolescents.

In Table 3. which showed that the level of sociological impact of the COVID-19 pandemic in the Middle East on the level of physical symptoms associated with social anxiety among adolescents obtained a total weight of (15581), weighted relative weight of (73.36%). This indication is a Moderate, indicating that the level of impact is Moderate. We have observed that the majority of adolescents' responses indicate that they experience bothersome redness of their face in front of others, which intensifies with self-consciousness caused by societal changes during the pandemic, with a prevalence rate of 82.70%. They also report increased sweating when around others, particularly during the anxiety-inducing effects of the COVID-19 pandemic, at a rate

of 81.07%. Additionally, they feel annoyed when their heart beats faster in social situations due to the pandemic's impact on social interactions, with a prevalence rate of 80.23%. Moreover, their throat becomes dry when they interact with others, reflecting changes in social norms during the pandemic, at a rate of 78.18%. They also experience stuttering when talking and interacting with others, possibly due to increased social pressure and anxiety resulting from the COVID-19 pandemic, with a prevalence rate of 76.84%. Furthermore, they have conflicting thoughts when expressing their desires to others, reflecting the uncertainty and changing social dynamics during the pandemic, at a rate of 75.85%. Additionally, they report forgetting details and contents of events when sharing them with others, with a prevalence rate of 73.38%.

The seven types of physical symptoms associated with social anxiety among adolescents due to the COVID-19 pandemic that we have reviewed are the most prevalent types, negatively affecting adolescents. These symptoms have significantly increased after the COVID-19 pandemic, posing a significant threat to adolescents who experience them and affecting their normal relationships with others. These findings align with previous studies (Alvares et al., 2013; Dell'Osso et al., 2015; Simon et al., 2009; Von Dawans et al., 2018), which highlight that prominent physical symptoms accompany the individual's heightened anxiety, such as high anxiety strikes, increased sweating, redness of the face, and headaches.

As well, that the obtained results are shown in Table 4 which showed that the level of behavioral symptoms associated with social anxiety among adolescents due Covid-19 pandemic obtained a total weight of (14135), weighted relative weight of (66.55%). This indication is a Moderate, indicating that the level of impact is Moderate.

We have observed that most adolescents' responses indicate that they consistently exhibit negative behavior towards others as a defense mechanism, aiming to protect themselves from potential harm or rejection in the virtual environment (74.93%). Additionally, the increased online presence and constant exposure to virtual interactions during COVID-19 have heightened their anticipation of negative judgment from peers and the virtual school environment (74.08%). Moreover, at times, the expectations placed on them by family members for academic performance during

remote learning have led them to emotionally distance themselves as a coping mechanism (72.39%). Furthermore, some adolescents have resorted to seeking solace in substance use as a way to cope with the pressures of school and social interactions due to the isolation and stress caused by the COVID-19 pandemic (70.83%). They increasingly avoid virtual social gatherings or events during the pandemic to shield themselves from potential criticism or judgment in online environments (70.62%). The limitations of remote learning and reduced social interactions pose challenges for maintaining their social and romantic relationships, resulting in feelings of difficulty and isolation (69.49%). Additionally, the shift to online interactions during COVID-19 has increased the pressure to conform to certain behaviors or expectations, leading them to feel anxious about virtual presence and fitting in (67.44%).

These seven types of behavioral symptoms associated with social anxiety among adolescents due to the COVID-19 pandemic are the most prevalent and have clearly increased after the pandemic. They pose a significant threat to adolescents, affecting their normal relations with others. This aligns with a study (Hedman et al., 2013; Moitra, Herbert, & Forman, 2008; Olfson et al., 2000; Schneier et al., 2002) that emphasizes the direct relationship between abnormal and exaggerated behaviors stemming from high social anxiety. Prominent examples of these behaviors include strictness and extreme exaggeration in words and actions, as well as avoiding cooperation with others to avoid blame and minimizing interactions with others whenever possible.

Furthermore, the results obtained from Table 5 indicate that the level of psychological symptoms associated with social anxiety among adolescents due to societal changes resulting from the COVID-19 pandemic has a total weight of 13,616 and a weighted relative weight of 64.11%. This suggests a moderate level of impact.

We have observed that most adolescents' responses indicate that they experience low self-esteem (68.71%). Additionally, they report feelings of depression (68.43%), insecurity when someone talks to them (67.16%), and shyness when others direct their attention towards them (67.09%). Moreover, some adolescents express thoughts of suicide as a means to escape criticism from others (66.03%). They also miss the reassurance and warmth, even from their families (65.82%). Furthermore, they feel

distressed and emotionally upset (64.97%).

These seven types of psychological symptoms associated with social anxiety among adolescents due to the COVID-19 pandemic are the most prevalent and have clearly increased after the pandemic. They pose a significant threat to adolescents, affecting their normal relationships with others. This aligns with a study (Kuo et al., 2011; Manning et al., 2017; Shaw et al., 2015; Starr & Davila, 2008) that emphasizes the direct relationship between social anxiety and poor psychological well-being. Prominent symptoms indicating a poor psychological state for individuals include the emergence of depressive symptoms, an increased desire to commit suicide due to the constant feeling of non-acceptance by others, and an elevated sense of insecurity towards others.

As well, that the obtained results are shown in Table 6 which showed that level of cognitive symptoms associated with social anxiety among adolescents due to the societal changes resulting from the COVID-19 pandemic obtained a total weight of (13645), the weighted relative weight of (64.24%). This indication is a Moderate, indicating that the level of impact is Moderate.

We have observed that most adolescents' responses indicate that they are plagued by recurring negative memories because isolation and lack of social support during the pandemic contribute to the persistence of these memories (71.05%). Additionally, they tend to avoid discussing their ideas with others to evade blame, as limited social interactions and fear of judgment may lead to the avoidance of expressing personal thoughts (70.55%). Moreover, some adolescents believe that the ends justify the means, even if the behavior is wrong, potentially influenced by social disconnection and reduced moral guidance during the pandemic (70.27%). Furthermore, at times, they relinquish their personal viewpoints to avoid confrontation, as reduced opportunities for face-to-face communication and increased reliance on digital platforms discourage open discussions and encourage conflict avoidance (68.50%). They also tend to evaluate themselves negatively in an exaggerated manner to please others, driven by inadequate social validation and increased reliance on virtual interactions (67.66%). Additionally, they may have unique and unconventional ideas but refrain from expressing them due to limited

social interactions and reduced opportunities for creative expression during the pandemic, resulting in the suppression of their unique thoughts (66.45%). Lastly, they perceive freedom of expression as a theoretical concept rather than a practical reality with those around them, influenced by a loss of trust in social interactions and increased reliance on virtual communication (65.11%).

These seven types of cognitive symptoms associated with social anxiety among adolescents due to the COVID-19 pandemic are the most prevalent and have clearly increased after the pandemic. They pose a significant threat to adolescents, affecting their normal relationships with others. This aligns with a study (Banerjee & Henderson, 2001; Brozovich et al., 2015; Hindmarch, 2009; Kingsep, Nathan, & Castle, 2003; Mills et al., 2014) that emphasizes the most important cognitive symptoms associated with social anxiety, including the individual's struggle with recurring negative memories that dominate their thoughts and influence their behavior in a negative manner. Additionally, there may be unconventional ideas that are not accepted by those around them, and individuals may have difficulty presenting their own viewpoints to avoid clashing with others' ideas.

On the other hand, the obtained results, as shown in Table 7 that there are statistically significant differences in adolescent's perspectives according to the variable of the gender, where $F_{Statistic}$ 5.33 is greater than $F_{Critical}$ 3.84 at the level of statistical significance 0.05. In addition to there are statistically significant differences in adolescent's perspectives according to the variable of the age, where $F_{Statistic}$ 5.59 is greater than $F_{Critical}$ 3.84 at the level of statistical significance 0.05. Also, there are statistically significant differences in adolescent's perspectives according to the variable of the educational level, where $F_{Statistic}$ 6.14 is greater than $F_{Critical}$ 3.84 at the level of statistical significance 0.05. Besides, there are statistically significant differences in adolescent's perspectives according to the variable of the social status of the adolescent's parents, where $F_{Statistic}$ 5.62 is greater than $F_{Critical}$ 3.00 at the level of statistical significance 0.05. In addition to there are statistically significant differences in adolescent's perspectives according to the variable of the financial level of the adolescent's family, where $F_{Statistic}$ 6.44 is greater than $F_{Critical}$ 3.00 at the level of statistical significance 0.05.

In light of the above results that answered all the sub-questions of the study, we were able to answer the main question of the study as shown in Table 8 and Figure 2 present the results related to the main question regarding the sociological impact of the COVID-19 pandemic on the symptoms of social anxiety among adolescents in the Middle East. The total weighted score for the impact is 56,977, with a weighted relative weight of 67.06%. These findings indicate a moderate level of impact of the COVID-19 pandemic on all levels of social anxiety among adolescents.

The level of impact was highest for "Physical symptoms associated with social anxiety among adolescents" with a score of 73.36%, followed by "Behavioral symptoms associated with social anxiety among adolescents" in second place with a score of 66.55%. "Cognitive symptoms associated with social anxiety among adolescents" ranked third with a score of 64.24%, and finally, "Psychological symptoms associated with social anxiety among adolescents" ranked fourth with a score of 64.11%.

Conclusions and Recommendations

Based on the findings presented, several conclusions can be drawn regarding the sociological impact of the COVID-19 pandemic on the symptoms of social anxiety among adolescents in the Middle East:

Physical Symptoms: The COVID-19 pandemic has had a significant impact on the physical symptoms associated with social anxiety among adolescents. The most prevalent physical symptoms reported by adolescents include bothersome redness of the face, increased sweating, annoyance when the heart beats faster, dry throat, stuttering, conflicting thoughts when expressing desires, and forgetting details when sharing events. These symptoms have clearly increased after the pandemic, negatively affecting adolescents and their normal relationships with others.

Behavioral Symptoms: The COVID-19 pandemic has also affected the behavioral symptoms associated with social anxiety among adolescents. Common behavioral symptoms observed include negative behavior towards others as a defense mechanism, increased anticipation of negative judgment, emotional distancing as a coping mechanism, seeking solace in substance use, avoiding virtual social gatherings, challenges in maintaining social and romantic relationships, and increased anxiety

about fitting in. These symptoms have significantly increased after the pandemic, posing a threat to adolescents' well-being and social interactions.

Psychological Symptoms: Adolescents have reported experiencing psychological symptoms associated with social anxiety due to societal changes resulting from the COVID-19 pandemic. These symptoms include low self-esteem, feelings of depression, insecurity when being approached by others, shyness when receiving attention, thoughts of suicide, missing reassurance and warmth, and distress and emotional upset. These symptoms have clearly increased after the pandemic, affecting adolescents' psychological well-being and their relationships with others.

Cognitive Symptoms: The COVID-19 pandemic has had an impact on the cognitive symptoms associated with social anxiety among adolescents. Common cognitive symptoms reported include recurring negative memories, avoiding expressing personal thoughts, belief that the ends justify the means, relinquishing personal viewpoints to avoid confrontation, negative self-evaluation, suppression of unique thoughts, and perceiving freedom of expression as theoretical rather than practical. These symptoms have increased after the pandemic, affecting adolescents' thought patterns and social interactions.

Overall, these findings underscore the detrimental effects of altered social dynamics, heightened social pressure, and increased anxiety resulting from the pandemic. The high prevalence of these symptoms highlights the urgent need for targeted interventions and support systems to address the mental health challenges faced by adolescents in the region.

Based on these findings, the following recommendations can be made:

- Mental Health Support: It is crucial to provide adequate mental health support and interventions for adolescents in the Middle East who are experiencing increased social anxiety symptoms due to the pandemic. This can include access to counseling services, online support groups, and educational programs to help them cope with and manage their symptoms.

- Education and Awareness: Raising awareness among parents, educators, and the broader community about the impact of the pandemic on social anxiety symptoms is important. Providing information and resources on recognizing and supporting adolescents with social anxiety can help create a supportive environment and reduce stigma.

- Social Skills Training: Developing and implementing social skills training programs can help adolescents build resilience, enhance their social interactions, and reduce social anxiety. These programs can focus on effective communication, assertiveness, conflict resolution, and coping strategies.

- Online Safety Measures: Given the increased reliance on virtual interactions, it is essential to educate adolescents about online safety and promote responsible online behavior. This can help minimize the negative impact of virtual interactions on social anxiety symptoms and protect adolescents from cyberbullying or excessive exposure to judgment and criticism.

- Parental Engagement: Engaging parents in supporting their adolescents' mental health is crucial. Providing parents with resources, guidance, and support to understand and address social anxiety symptoms can contribute to a more supportive home environment.

- School Interventions: Schools should prioritize mental health and incorporate strategies to address social anxiety symptoms. This can involve training teachers to recognize and support students with social anxiety, implementing social-emotional learning programs, and fostering a positive and inclusive school climate.

- Further Research: Continued research on the long-term effects of the pandemic on adolescents' social anxiety symptoms is necessary. This can help identify additional risk factors, effective interventions, and inform policy decisions to support adolescent mental health in similar contexts.

References

Acarturk, C., Cuijpers, P., van Straten, A., & de Graaf, R. (2009). Psychological treatment of social anxiety disorder: a meta-analysis. *Psychological Medicine, 39*(2), 241-254*. https://doi.org/10.1017/S0033291708003590

Aderka, I. M., Hofmann, S. G., Nickerson, A., Hermesh, H., Gilboa-Schechtman, E., & Marom, S. (2012). Functional impairment in social anxiety disorder. *Journal of Anxiety Disorders, 26*(3), 393-400. https://doi.org/10.1016/j.janxdis.2012.01.003

Alvares, G. A., Quintana, D. S., Kemp, A. H., Van Zwieten, A., Balleine, B. W., Hickie, I. B., & Guastella, A. J. (2013). Reduced Heart Rate Variability in Social Anxiety Disorder: Associations with Gender and Symptom Severity. *PloS One, 8*(7), e70468. https://doi.org/10.1371/journal.pone.0070468

Asher, M., Asnaani, A., & Aderka, I. M. (2017). Gender differences in social anxiety disorder: A review. *Clinical Psychology Review, 56*, 1-12. https://doi.org/10.1016/j.cpr.2017.05.004

Bandelow, B., Baldwin, D. S., Dolberg, O. T., Andersen, H. F., & Stein, D. J. (2006). What is the threshold for symptomatic response and remission for major depressive disorder, panic disorder, social anxiety disorder, and generalized anxiety disorder? *Journal of Clinical Psychiatry, 67*(9), 1428-1434. https://doi.org/10.4088/jcp.v67n0914

Banerjee, R., & Henderson, L. (2001). Social-cognitive factors in childhood social anxiety: A preliminary investigation. *Social Development, 10*(4), 558-572. https://doi.org/10.1111/1467-9507.00180

Bögels, S. M., Alden, L., Beidel, D. C., Clark, L. A., Pine, D. S., Stein, M. B., & Voncken, M. (2010). Social anxiety disorder: questions and answers for the DSM-V. *Depression and Anxiety, 27*(2), 168-189. https://doi.org/10.1002/da.20670

Brozovich, F. A., Goldin, P., Lee, I., Jazaieri, H., Heimberg, R. G., & Gross, J. J. (2015). The effect of rumination and reappraisal on social anxiety symptoms during cognitive-behavioral therapy for social anxiety disorder. *Journal of Clinical Psychology, 71*(3), 208-218. https://doi.org/10.1002/jclp.22132

Cheng, G., Zhang, D., & Ding, F. (2014). Self-esteem and fear of negative evaluation as mediators between family socioeconomic status and social anxiety in Chinese emerging adults. *International Journal of Social Psychiatry, 61*(6), 569-576. https://doi.org/10.1177/0020764014565405

Clark, D. M., & Wells, A. (1995). A Cognitive Model of Social Phobia. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social Phobia: Diagnosis, Assessment, and Treatment* (pp. 69-93). The Guilford Press.

Connor, K. M., Kobak, K. A., Churchill, L. E., Katzelnick, D., & Davidson, J. R. (2001). Mini-SPIN: A brief screening assessment for generalized social anxiety disorder. *Depression and Anxiety, 14*(2), 137-140. https://doi.org/10.1002/da.1055

Dell'Osso, L., Abelli, M., Pini, S., Carpita, B., Carlini, M., Mengali, F., Tognetti, R., Rivetti, F., & Massimetti, G. (2015). The influence of gender on social anxiety spectrum symptoms in a sample of university students. *Rivista di Psichiatria, 50*(6), 295-301. https://doi.org/10.1708/2098.22688

Elsayed, W. (2020). Students and the Risk of Virtual Relationships in Social Media: Improving Learning Environments. *International Journal of Emerging Technologies in Learning (iJET), 15*(21), 118-132. https://doi.org/10.3991/ijet.v15i21.15063

Elsayed, W. (2021a). Covid-19 pandemic and its impact on increasing the risks of children's addiction to electronic games from a social work perspective. *Heliyon, 7*(12), e08503. https://doi.org/10.1016/j.heliyon.2021.e08503

Elsayed, W. (2021b). Social Work Practices in the Multiethnic Urban Reality of Covid-19 in the Middle East: The Case of UAE. *Journal of Ethnic and Cultural Studies, 8*(4), 307-320. https://doi.org/10.29333/ejecs/900

Eng, W., Heimberg, R. G., Hart, T. A., Schneier, F. R., & Liebowitz, M. R. (2001). Attachment in individuals with social anxiety disorder: the relationship among adult attachment styles, social anxiety, and depression. *Emotion, 1*(4), 365. https://doi.org/10.1037/1528-3542.1.4.365

Erwin, B. A., Turk, C. L., Heimberg, R. G., Fresco, D. M., & Hantula, D. A. (2004). The Internet: home to a severe population of individuals with social anxiety disorder? *Journal of Anxiety Disorders, 18*(5), 629-646. https://doi.org/10.1016/j.janxdis.2003.08.002

Fricke, S., Seinsche, R. J., Neudert, M. K., Schäfer, A., Zehtner, R. I., Stark, R., & Hermann, A. (2024). Neural correlates of context-dependent extinction recall in social anxiety disorder: relevance of intrusions in response to aversive social experiences. *Psychological Medicine, 54*(3), 548-557. https://doi.org/10.1017/S0033291723002179

Goldin, P. R., & Gross, J. J. (2010). Effects of mindfulness-based stress reduction (MBSR) on emotion regulation in social anxiety disorder. *Emotion, 10*(1), 83-91. https://doi.org/10.1037/a0018441

Hedman, E., Ström, P., Stünkel, A., & Mörtberg, E. (2013). Shame and Guilt in Social Anxiety Disorder: Effects of Cognitive Behavior Therapy and Association with Social Anxiety and Depressive Symptoms. *PloS One, 8*(4), e61713. https://doi.org/10.1371/journal.pone.0061713

Heimberg, R. G., Brozovich, F. A., & Rapee, R. M. (2010). A Cognitive Behavioral Model of Social Anxiety Disorder: Update and Extension. In S. G. Hofmann & P. M. DiBartolo (Eds.), *Social Anxiety (Second Edition)* (pp. 395-422). Academic Press. https://doi.org/10.1016/B978-0-12-375096-9.00015-8

Hindmarch, I. (2009). Cognitive Toxicity of Pharmacotherapeutic Agents Used in Social Anxiety Disorder. *International Journal of Clinical Practice, 63*(7), 1085-1094. https://doi.org/10.1111/j.1742-1241.2009.02085.x

Hofmann, S. G. (2007). Cognitive Factors that Maintain Social Anxiety Disorder: a Comprehensive Model and its Treatment Implications. *Cognitive Behaviour Therapy, 36*(4), 193-209. https://doi.org/10.1080/16506070701421313

Hofmann, S. G., Anu Asnaani, M. A., & Hinton, D. E. (2010). Cultural Aspects in Social Anxiety and Social Anxiety Disorder. *Depression and Anxiety, 27*(12), 1117-1127. https://doi.org/10.1002/da.20759

Johnson, S. U., Hoffart, A., Nordahl, H. M., & Wampold, B. E. (2017). Metacognitive therapy versus disorder-specific CBT for comorbid anxiety disorders: A randomized controlled trial. *Journal of Anxiety Disorders, 50*, 103-112. https://doi.org/10.1016/j.janxdis.2017.06.004

Kashdan, T. B., & Herbert, J. D. (2001). Social Anxiety Disorder in Childhood and Adolescence: Current Status and Future Directions. *Clinical Child and Family Psychology Review, 4*(1), 37-61. https://doi.org/10.1023/A:1009576610507

Katzelnick, D. J., Kobak, K. A., DeLeire, T., Henk, H. J., Greist, J. H., Davidson, J. R., Schneier, F. R., Stein, M. B., & Helstad, C. P. (2001). Impact of Generalized Social Anxiety Disorder in Managed Care. *American Journal of Psychiatry, 158*(12), 1999-2007. https://doi.org/10.1176/appi.ajp.158.12.1999

Keller, M. B. (2003). The lifelong course of social anxiety disorder: a clinical perspective. *Acta Psychiatrica Scandinavica, 108*, 85-94. https://doi.org/10.1034/j.1600-0447.108.s417.6.x

Kim, E. J., Bahk, Y.-C., Oh, H., Lee, W.-H., Lee, J.-S., & Choi, K.-H. (2018). Current Status of Cognitive Remediation for Psychiatric Disorders: A Review. *Frontiers in Psychiatry, 9*, 461. https://doi.org/10.3389/fpsyt.2018.00461

Kingsep, P., Nathan, P., & Castle, D. (2003). Cognitive behavioural group treatment for social anxiety in schizophrenia. *Schizophrenia Research, 63*(1), 121-129. https://doi.org/10.1016/S0920-9964(02)00376-6

Knappe, S., Beesdo-Baum, K., & Wittchen, H.-U. (2010). Familial risk factors in social anxiety disorder: calling for a family-oriented approach for targeted prevention and early intervention. *European Child & Adolescent Psychiatry, 19*(12), 857-871. https://doi.org/10.1007/s00787-010-0138-0

Kuo, J. R., Goldin, P. R., Werner, K., Heimberg, R. G., & Gross, J. J. (2011). Childhood trauma and current psychological functioning in adults with social anxiety disorder. *Journal of Anxiety Disorders, 25*(4), 467-473. https://doi.org/10.1016/j.janxdis.2010.11.011

Lecrubier, Y., Wittchen, H. U., Faravelli, C., Bobes, J., Patel, A., & Knapp, M. (2000). A European perspective on social anxiety disorder. *European Psychiatry, 15*(1), 5-16. https://doi.org/10.1016/S0924-9338(00)00216-9

Leichsenring, F., & Leweke, F. (2017). Social Anxiety Disorder. *New England Journal of Medicine, 376*(23), 2255-2264. https://doi.org/10.1056/NEJMcp1614701

Manning, R. P. C., Dickson, J. M., Palmier-Claus, J., Cunliffe, A., & Taylor, P. J. (2017). A Systematic Review of Adult Attachment and Social Anxiety. *Journal of Affective Disorders, 211*, 44-59. https://doi.org/10.1016/j.jad.2016.12.020

Mathew, S. J., Coplan, J. D., & Gorman, J. M. (2001). Neurobiological Mechanisms of Social Anxiety Disorder. *American Journal of Psychiatry, 158*(10), 1558-1567. https://doi.org/10.1176/appi.ajp.158.10.1558

Mennin, D. S., Fresco, D. M., Heimberg, R. G., Schneier, F. R., Davies, S. O., & Liebowitz, M. R. (2002). Screening for social anxiety disorder in the clinical setting: using the Liebowitz Social Anxiety Scale. *Journal of Anxiety Disorders, 16*(6), 661-673. https://doi.org/10.1016/S0887-6185(02)00134-2

Mills, A. C., Grant, D. M., Judah, M. R., & Lechner, W. V. (2014). Consequences of anticipatory processing on cognitive symptoms of social anxiety. *Anxiety, Stress, & Coping, 27*(4), 394-409. https://doi.org/10.1080/10615806.2013.866229

Moitra, E., Herbert, J. D., & Forman, E. M. (2008). Behavioral avoidance mediates the relationship between anxiety and depressive symptoms among social anxiety disorder patients. *Journal of Anxiety Disorders, 22*(7), 1205-1213. https://doi.org/10.1016/j.janxdis.2008.01.002

Morrison, A. S., & Heimberg, R. G. (2013). Social Anxiety and Social Anxiety Disorder. *Annual Review of Clinical Psychology, 9*(1), 249-274. https://doi.org/10.1146/annurev-clinpsy-050212-185631

Olfson, M., Guardino, M., Struening, E., Schneier, F. R., Hellman, F., & Klein, D. F. (2000). Barriers to the Treatment of Social Anxiety. *American Journal of Psychiatry, 157*(4), 521-527. https://doi.org/10.1176/appi.ajp.157.4.521

Ollendick, T. H., & Hirshfeld-Becker, D. R. (2002). The Developmental Psychopathology of Social Anxiety Disorder. *Biological Psychiatry, 51*(1), 44-58. https://doi.org/10.1016/S0006-3223(01)01305-1

Rapee, R. M., & Heimberg, R. G. (1997). A Cognitive-Behavioral Model of Anxiety in Social Phobia. *Behaviour Research and Therapy, 35*(8), 741-756. https://doi.org/10.1016/S0005-7967(97)00022-3

Rytwinski, N. K., Fresco, D. M., Heimberg, R. G., Coles, M. E., Liebowitz, M. R., Cissell, S., Stein, M. B., & Hofmann, S. G. (2009). Screening for social anxiety disorder with the self-report version of the Liebowitz Social Anxiety Scale. *Depression and Anxiety, 26*(1), 34-38. https://doi.org/10.1002/da.20503

Schneier, F. R., Blanco, C., Antia, S. X., & Liebowitz, M. R. (2002). The Social Anxiety Spectrum. *Psychiatric Clinics, 25*(4), 757-774. https://doi.org/10.1016/S0193-953X(02)00018-7

Shaw, A. M., Timpano, K. R., Tran, T. B., & Joormann, J. (2015). Correlates of Facebook Usage Patterns: The Relationship Between Passive Facebook Use, Social Anxiety Symptoms, and Brooding. *Computers in Human Behavior, 48*, 575-580. https://doi.org/10.1016/j.chb.2015.02.003

Simon, N. M., Herlands, N. N., Marks, E. H., Mancini, C., Letamendi, A., Li, Z., Pollack, M. H., Van Ameringen, M., & Stein, M. B. (2009). Childhood Maltreatment Linked to Greater Symptom Severity and Poorer Quality of Life and Function in Social Anxiety Disorder. *Depression and Anxiety, 26*(11), 1027-1032. https://doi.org/10.1002/da.20604

Spence, S. H., & Rapee, R. M. (2016). The Etiology of Social Anxiety Disorder: An Evidence-Based Model. *Behaviour Research and Therapy, 86*, 50-67. https://doi.org/10.1016/j.brat.2016.06.007

Starr, L. R., & Davila, J. (2008). Differentiating Interpersonal Correlates of Depressive Symptoms and Social Anxiety in Adolescence: Implications for Models of Comorbidity. *Journal of Clinical Child & Adolescent Psychology, 37*(2), 337-349. https://doi.org/10.1080/15374410801955854

Stein, D. J., Ipser, J. C., & van Balkom, A. J. (2004). Pharmacotherapy for Social Anxiety Disorder. *Cochrane Database of Systematic Reviews,* (4), CD001206. https://doi.org/10.1002/14651858.CD001206.pub2

Turk, C. L., Heimberg, R. G., Luterek, J. A., Mennin, D. S., & Fresco, D. M. (2005). Emotion Dysregulation in Generalized Anxiety Disorder: A Comparison with Social Anxiety Disorder. *Cognitive Therapy and Research, 29*(1), 89-106. https://doi.org/10.1007/s10608-005-1651-1

Von Dawans, B., Trueg, A., Kirschbaum, C., Fischbacher, U., & Heinrichs, M. (2018). Acute Social and Physical Stress Interact to Influence Social Behavior: The Role of Social Anxiety. *PloS One, 13*(10), e0204665. https://doi.org/10.1371/journal.pone.0204665

Xiao, R., Wu, W.-l., Hu, J.-m., Qiu, C.-j., Wang, Q., Wei, G., Sun, J.-h., Yang, C., Song, P., Ye, A.-h., & Zhang, W. (2006). Prevalence and risk factors of social anxiety disorder in high schools and universities in Chengdu. *Journal of Sichuan University. Medical Science Edition, 37*(4), 636-640. https://europepmc.org/article/med/16909621