

## Coronaphobia and Its Impact on Quality of Life in a Sample of the General Population of Saudi Arabia

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### Abstract

COVID-19 has caused a myriad of public mental health issues, including distress reactions (sleep disorders, rage, and intense fear), health risks, and diminished perceived health. This study aims to investigate COVID-19 phobia and its impact on quality of life (QoL) in a sample of 306 members of the general population of Saudi Arabia. A descriptive, cross-sectional research design study is conducted, simultaneously, in Saudi Arabia during the COVID-19 pandemic. Data are gathered as online responses to a questionnaire that incorporates a sociodemographic datasheet, COVID-19 experiences, the COVID-19 Phobia Scale (C19P-SE), and the COVID-19 Impact on QoL (COV19-QoL). The results show that the highest percentage of the participants are female, more than two-thirds are aged 20 to 29 years (84% and 68%, respectively), and slightly more than three-quarters have a university education and are single (75.5% and 79.4%, respectively). Furthermore, COVID-19 has a low impact on the highest percentage of participants' QoL, and there is a highly statistically significant direct correlation between COV-19-QoL scores and COVID-19 phobia scores for all factors, which means that an increased impact on QoL is associated with an increased level of coronaphobia. Thus, it is recommended that the development of intervention and psychoeducational programs encompassing different populations in more cities throughout the kingdom is necessary to mitigate the psychological impact of the COVID-19 pandemic.

**Keywords:** COVID-19 pandemic, phobia, quality of life, general population, Saudi Arabia.

### Introduction

The novel coronavirus (COVID-19; SARS-CoV-2) has infected millions of people, and this pandemic has severely affected every continent except Antarctica. COVID-19 is a highly contagious virus that can cause a variety of health problems (Hosseiny et al., 2019, Pei et al., 2020). Furthermore, quality of life (QoL) is negatively affected during national crises such as natural disasters, wars, and disease outbreaks (Fenge et al., 2012; Wang et al., 2000), and this reduced QoL can last for at least three years after the crisis (Wen et al., 2012). Given the universal threat of COVID-19, including its significant economic and social impacts, it is anticipated that it has negatively affected QoL.

QoL has been studied extensively in the last decade, mainly in studies concentrating on non-communicable and chronic disorders. It has been defined as "a patient's general subjective perception of the consequence of illness or a medical condition for numerous domains including physical, psychological, social, and

vocational functioning" (Haraldstad et al., 2019). An assessment of QoL across many domains aids in the identification of a wide range of issues that can impact people's daily life. According to the research, QoL is a strong predictor of persistence in overall health and well-being (Fayers & Machin, 2015). However, infectious illness outbreaks, such as that of COVID-19, have a devastating impact on people's health and social and psychological well-being, as well as severe economic implications (Qiu et al., 2020, Yezli & Khan, 2020).

Following stressful situations, a reduction in QoL is directly linked to mental health. QoL is a broad term that incorporates dimensions such as physical health, psychological conditions, social interactions, and surroundings, reflecting an individual's overall satisfaction with their life (World Health Organization [WHO], 2020). Although mental health indicators such as depression and anxiety can be inherently upsetting, they are typically considered within the context of the influence they have on QoL (American Psychiatric Association [APA],

2013). Thus, the most significant outcome in mental health research is QoL, as it is a direct measurement of the influence that conditions have on a person's everyday functioning and well-being (Basu, 2004).

A phobia is a specific anxiety disorder defined as an excessive and continuous fear of an object or situation, and phobias can be classified into three groups, namely social phobias, agoraphobia, and specific phobias (American Psychiatric Association [APA], 2013). Examples of specific phobias include fear of the environment, fear of animals, and fear of blood (needles, taking blood, etc.). Specific phobias are the most widely seen psychiatric disorders. They are a worldwide problem that could lead to additional anxiety disorders (Asmundson & Taylor, 2020; Bandelow & Michaelis 2015). The COVID-19 pandemic has initiated the development of "coronaphobia", a specific phobia of the new coronavirus, and a scale, the COVID-19 Phobia Scale (C1P-S), has been established to quantify this specific phobia (Galvez-Sánchez et al., 2020).

COVID-19 may elicit phobic reactions because of its ambiguity and the magnitude of its threat. Various emotional states, such as psychological fragility, sensitivity to ambiguity, perceived susceptibility to sickness, and disproportional anxiety during the COVID-19 pandemic may manifest as part of coronaphobia according to Asmundson and Taylor (2020). Given that a phobia is defined as a disproportional fear reaction to an anxiety- or fear-provoking object or situation (American Psychiatric Association [APA], 2013), researchers have defined the term "coronaphobia" as excessive fear due to COVID-19 (Asmundson & Taylor, 2020; Arpaci, Alshehabi, et al., 2020; Arpaci, Karatas, et al., 2020). Further, due to infection, uncertainty, and economic decline, people are more likely to develop coronaphobic reactions. In this context, the emergence of phobic situations can result in stress, depression, and psychosomatic and psychosocial disorders (Arpaci, Alshehabi, et al., 2020; Arpaci, Karatas, et al., 2020). As a result, it is critical to operationalize and detect coronaphobia to provide timely psychological treatment for people who have greater degrees of fear and to avoid more serious psychiatric diseases (Arpaci, Alshehabi,

et al., 2020; Arpaci, Karatas, et al., 2020; Duan & Zhu, 2020; Qiu et al., 2020).

COVID-19 has caused a myriad of public mental health issues, including distress reactions (sleep disorders, rage, and intense fear), health risk behaviors (increased substance misuse, social isolation), and diminished perceived health (Mamun, & Griffiths, 2020, Brooks et al., 2020, Shigemura et al., 2020). These responses have an impact on mental health and QoL at the individual and population levels, potentially generating social dysfunction, mass hysteria, stigma, discrimination, xenophobia, and marginalization (Banerjee, 2020 & Horesh & Brown, 2020). COVID-19, in general, challenges the QoL of people around the world, worsening interpersonal issues and generating questions about self-acceptance, meaning in life, and interpersonal relationships (Banerjee, 2020).

### The Aim of the Study

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This study aimed to investigate coronaphobia and its impact on QoL in a sample of the general population of Saudi Arabia.

### Research hypothesis

Coronaphobia has a large impact on QoL.

### Materials and Methods

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#### Research design and setting

A descriptive, cross-sectional research design study was conducted, simultaneously, in Saudi Arabia during the COVID-19 pandemic. This region was selected due to the convenience, accessibility, and availability of a researcher in this country.

#### Study sample

A convenience sample of the general population of Saudi Arabia (306 participants) was recruited. The sample size was calculated according to the target population of Saudi Arabia (around 13,300,000). The prevalence of the psychological effects of COVID-19 was 27.4% (wang et al., 2021), at a confidence level of 95%, and the power of the test was 80%. Therefore, the sample size was determined to be 306 subjects using the Open-Epi version 3.0 software package.

### Data collection tools

**Part I:** The researcher used a self-administered questionnaire form, which included the COVID-19 Phobia Scale (C19P-SE) and the COVID-19 Impact on QoL (COV19-QoL), in addition to the personal characteristics of the study participants, including age, gender, marital status, and level of education. The questionnaire also included questions regarding COVID-19 experiences, such as, “Are you listening to the news about the corona pandemic? Do you suffer from a chronic disease? Have you lost a relative or friend to the emerging coronavirus, or has a relative or friend of yours been infected with the new coronavirus? Have you had the new coronavirus before? Are you following developments regarding the corona pandemic in other countries? Do you think you are taking enough precautions during the corona pandemic?”

### Part II: The COVID-19 Phobia Scale

Based on the specific phobia criteria of the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5), the C19P-SE was developed and validated as a self-report instrument to measure the levels of coronaphobia among a wide range of age groups (Arpaci, Alshehabi et al., 2020; Arpaci, Karatas et al., 2020). In this study, the developers reported the items of the original Turkish version of the C19P-SE with their corresponding English translations. Three independent translators then back-translated these English items into Turkish. Following this, three language experts who are bilingual in Turkish and English examined and verified the back-translated items. The C19P-SE has 20 items with four factors: “psychological”, “psychosomatic”, “economic”, and “social”. The items shown in Appendix A were rated on a five-point Likert scale from *strongly disagree* (1) to *strongly agree* (5). Total scale scores ranged between 20 and 100, and higher scores indicated a greater phobia. The subscales showed high internal consistency ( $.85 < \alpha < .89$ ), and Cronbach’s alpha for the overall scale was .93.

### Scoring 1.

Calculating the total score: All responses were summed. Higher scores indicated greater coronaphobia.

2. Subscale scoring: To calculate a subscale’s score, the below items and their corresponding

factors were used. Higher scores in each subscale indicated higher coronaphobia in the corresponding factor.

- a. Psychological factors: Items 1, 5, 9, 13, 17, and 20;
- b. Somatic factors: Items 2, 6, 10, 14, and 18;
- c. Economic factors: Items 3, 7, 11, 15, and 19;
- d. Social factors: Items 4, 8, 12, and 16.

**Part III:** The COV19-QoL was the primary measure for this study and was utilized to capture the effect of COVID-19 on the main areas related to QoL and mental health (Repišti, et al., 2020). The measure used five-point Likert response options ranging from 1 (*completely disagree*) to 5 (*completely agree*), and participants were asked to reflect on their feelings and thoughts for each item on the scale during the past seven days. The tool had good internal consistency (Cronbach’s  $\alpha > .80$ ) for both clinical and non-clinical samples (Repišti, et al., 2020). The COV19-QoL in other studies had a Cronbach’s alpha of .90. (Rabacal, et al., 2020).

### Pilot study

A pilot study conducted on 10% of the calculated study sample was performed before the main study to determine the clarity of the scales, the feasibility of the study, and the applicability of the data collection tool. Based on the pilot study results, the average time necessary to respond to the tool, including both scales, ranged from 10 to 15 minutes, depending on the respondent’s level of understanding and cooperation. The questionnaire was finalized based on the pilot study’s results, and the pilot subjects were not included in the main study sample. The pilot study was also used to assess the reliability of the scales used.

### Validity and reliability

A panel of five experts in the field of psychiatric mental health nursing reviewed the tool to test the content and face validity of the questionnaire, which was deemed acceptable. Reliability was determined using Cronbach’s alpha coefficient test, which revealed that both of the scales (C19P-SE and COV19-QoL) consisted of relatively homogenous items, as indicated by the moderate to high reliability (internal consistency) of each scale (Cronbach’s alpha coefficients were 0.907 and 0.888, respectively).

## Study procedure

Potential respondents for the pilot and main studies were electronically invited through the researcher's social networks, friends, and colleagues. Data were collected using an electronic questionnaire that took approximately 10–15 minutes to complete. The online questionnaire was designed using Google Forms and was sent to participants via various social media platforms (WhatsApp, Messenger, Facebook, and Imo). The data handling procedures followed all required national data protection standards. The study did not include any form of deception, and participants were debriefed at the end of the questionnaire. The study only collected non-personally identifiable data. Data collection occurred over one month (5<sup>th</sup> August to 5<sup>th</sup> September 2021).

## Ethical considerations

Participation in this study was completely voluntary, and participants were not coerced to participate, nor did they receive any form of financial compensation. Participants were asked to read and approve the included informed consent form before answering the questionnaire. Before participating in this study, subjects were informed of the purpose and type of the study, the researchers' contact information and affiliations, and the participant's rights to refuse to participate in or withdraw from the study at any time. Potential breaches of confidentiality were minimized through the use of questionnaire identification numbers; however, no identifying information, including names, email addresses, or mobile numbers, was requested from the participants, and their responses were completely anonymous. No harm or risk, except for discomfort or inconvenience, was expected as a result of completing the questionnaire. All ethical principles regarding medical research involving human subjects, by the Declaration of Helsinki, were followed [27].

## Statistical analysis

All data were collected, tabulated, and statistically analyzed using SPSS 20.0 for Windows (SPSS Inc., Chicago, IL, USA 2011). Quantitative data were expressed as the mean  $\pm$  standard deviation (SD) and range, while qualitative data were expressed as absolute frequencies (number) and relative frequencies

(percentage). The percentages of the categorical variables were compared using the Chi-square test. The Pearson correlation coefficient was calculated to assess the relationship between various study variables, with a positive (+) sign indicating a direct correlation and a negative (-) sign indicating an inverse correlation. Additionally, values near 1 indicated a strong correlation, while values near 0 indicated a weak correlation. All tests were two-sided. Moreover, a  $p$ -value of  $< 0.05$  was considered statistically significant (S), a  $p$ -value of  $< 0.001$  was considered highly statistically significant (S), and a  $p$ -value of  $\geq 0.05$  was considered statistically insignificant (NS).

## Simple linear regression

We were also interested in the dependency of a dependent variable on an independent variable. Thus, formally, the model for simple linear regression, given  $n$  observations, was:

$$Y = a + \beta_1 * X_1$$

Where  $Y$  = the variable that we are trying to predict

$x$  = the variable that is used to predict

$a$  = the intercept (constant)

$\beta$  = the coefficient of  $x$  representing the mean change in the dependent variable for one unit of change in the predictor variable (independent)

$t$ -test = test for significance

## Results

**Table (1)** shows the sociodemographic characteristics of the study sample (306 participants) who were recruited from Saudi Arabia, which demonstrates that the highest percentage of the participants were female, more than two-thirds were aged 20 to 29 years (84% and 68%, respectively), and slightly more than three-quarters had a university education and were single (75.5% and 79.4%, respectively).

Regarding the COVID-19 experiences of the studied sample, **Table (2)** demonstrates that about four-fifths of participants had a relative or friend who had been infected with the new coronavirus (80.6%), and slightly less than three-quarters of them believed that they were taking enough precautions during the COVID-19 pandemic (73.5%). On the other hand, slightly less than half of the participants reported that they were following developments regarding the COVID-19 pandemic in other countries and

sometimes listened to the news about the COVID-19 pandemic (49.7% and 47.7%, respectively).

**Table (3)** reveals that the highest mean of coronaphobia was for the psychological factor, followed by the psychosomatic factor (13.25±4.88 and 12.25±3.32, respectively).

Regarding the percentage distribution of coronaphobia levels, **Figure (1)** reveals that the highest percentage of study participants had a low coronaphobia level, followed by a moderate level (60.8% and 35.9%, respectively)

**Table (4)** reveals that the highest means of the impact of COVID-19 on QoL for the study sample were for “I feel my personal safety is in danger”, then “I think my quality of life is lower than before” and “I feel more nervous than before” (2.32±1.182, 2.30±1.437, and 2.25±1.090, respectively).

**Figure (2)** reveals that the QoL of participants was hardly affected by COVID-19 (low: 68%), with the highest percentage, while the QoL of only 22.9% of participants was moderately affected.

**Table (5)** indicates that there was a highly statistically significant direct correlation between

the COVID-19-QoL scores and COVID-19 phobia scores for all factors, which means that an increased impact on QoL was associated with an increased level of coronaphobia.

This table shows a highly statistically significant relationship between the impact of COVID-19 on QoL and the age range of 20–29 years and the “single” marital status, with  $p < 0.001$ . It also shows a statistically significant relationship between coronaphobia and the female gender and secondary education, with  $p < 0.05$ .

**Table (7)** shows a highly statistically significant relationship between coronaphobia and the age range of 20–29 years and secondary education, with  $p < 0.001$ . Furthermore, it shows that there is a statistically significant relationship between coronaphobia and the female gender and the marital status of “single”, with  $p < 0.05$ .

The above table defines the main change in the COVID-19-QoL score as being due to the social phobia score ( $\beta = 1.143$ ), followed by the psychological phobia score ( $\beta = .761$ ), then the psychosomatic phobia score ( $\beta = .758$ ), and, lastly, the economic phobia score ( $\beta = .75$ ). Thus, the total COVID-19 phobia score consists of 39.7% of the COVID-19-QoL score.

**Table 1:** Demographic characteristics of the study sample ( $n = 306$ )

Variable	<i>n</i>	%	
Sex	• Female	257	84.0
	• Male	49	16.0
Age	• < 20 years	40	13.1
	• 20–29 years	2088	68.0
	• 30–39 years	19	6.2
	• 40–49 years	39	12.7
Level of education	• Basic	40	13.1
	• Secondary	24	7.8
	• University	231	75.5
	• Postgraduate	11	3.6
Marital status	• Single	243	79.4
	• Married	63	20.6

**Table 2:** Portrayal of the COVID-19 experiences of the studied group ( $n = 306$ )

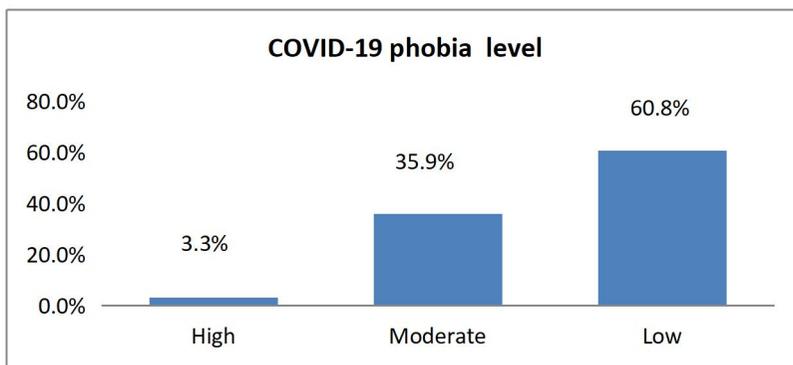
Variable	Yes	
	<i>n</i>	%
Do you suffer from a chronic disease?	32	10.5
Have you lost a relative or friend to the emerging coronavirus?	81	26.5
Has a relative or friend of yours been infected with the new coronavirus?	247	80.7
Have you had the new coronavirus before?	41	13.4
Are you following developments regarding the corona pandemic in other countries?	152	49.7
Do you think that you are taking enough precautions during the corona pandemic?	225	73.5
Are you listening to the news about the corona pandemic?		
Sometimes	146	47.7
Usually	84	27.5
Always	76	24.8

**Table 3:** Distribution of coronaphobia in the study sample (*n* = 306)

Item of the phobia	Mean	SD
Psychological (30) *	13.25	4.88
Somatic (25) *	12.25	3.32
Economic (25) *	10.91	4.07
Social (20) *	8.64	2.91
<b>Total coronaphobia level</b>		
Mean ±SD	45.06±13.52	

(\*) maximum score

**Figure (1):** Percentages of coronaphobia levels in the study sample

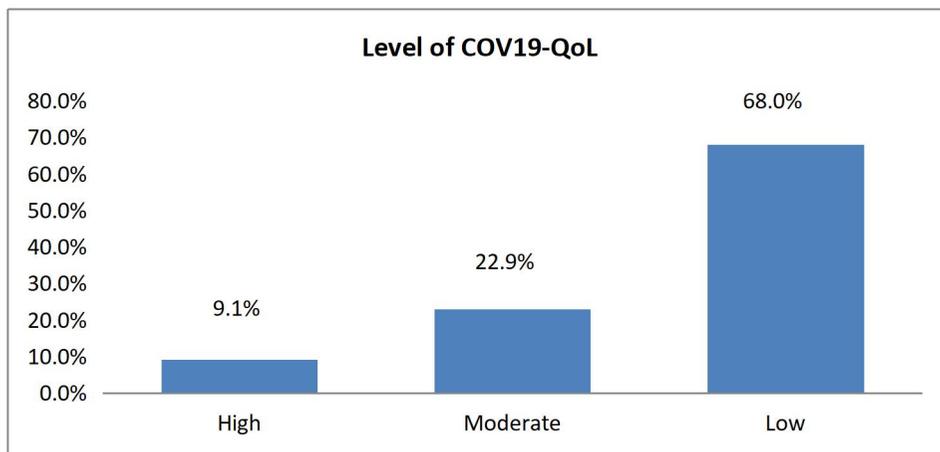


**Table 4:** COVID-19’s impact on the quality of life of the study sample (*n* = 306)

Item of the COVID-19-QoL	Mean	SD
• I think my quality of life is lower than before	2.30	1.437
• I think my mental health has deteriorated	1.87	1.347
• I think my physical health has deteriorated	1.70	1.239
• I feel more nervous than before	2.25	1.090
• I feel more depressed than before	2.05	1.415
• I feel my personal safety is in danger	2.32	1.182
<b>The total level of the impact of COVID-19 on QoL (30) *</b>		
• Mean ±SD	12.48±5.72	

(\*) maximum score

**Figure (2):** Percentage levels of COVID-19’s impact on quality of life for the study sample



**Table 5:** Correlation between the COVID-19 impact on quality of life and COVID-19 phobia scores of the studied sample ( $n = 306$ )

Item of the phobia	COVID-19-QoL score	
	<i>r</i>	<i>p</i>
Psychological factors	0.651**	0.0001
Psychosomatic factors	0.440**	0.0001
Economic factors	0.535**	0.0001
Social factors	0.581**	0.0001
Phobia score	0.630**	0.0001

*r* = Pearson's correlation coefficient; \*\* highly significant  $p < 0.001$

**Table 6:** The relationship between the level of COVID-19's impact on QoL among the study sample and their demographic characteristics ( $n = 306$ )

Variable	COVID-19-QoL level						<i>n</i>	$\chi^2$	<i>p</i>
	High		Moderate		Low				
	No.	%	No.	%	No.	%			
Sex									
Female	17	6.6	58	22.6	182	70.8	257	13.25	0.001*
Male	11	22.4	12	24.5	26	53.1	49		
Age									
< 20 years	7	17.5	15	37.5	18	45.0	40	35.63	0.0001**
20–29 years	9	4.3	43	20.7	156	75.0	208		
30–39 years	7	36.8	4	21.1	8	42.1	19		
40–49 years	5	12.8	8	20.5	26	66.7	39		
Level of education									
Basic	7	17.5	15	37.5	18	45.0	40	18.51	0.005*
Secondary	2	8.3	6	25.0	16	66.7	24		
University	16	6.9	49	21.2	166	71.9	231		
Postgraduate	3	27.3	0	.0	8	72.7	11		
Marital status									
Single	13	5.3	56	23.0	174	71.6	243	20.94	0.0001**
Married	15	23.8	14	22.2	34	54.0	63		

$\chi^2$  = Chi-square test; \* significant  $p < 0.05$ ; \*\* highly significant  $p < 0.001$

**Table 7:** The relationship between coronaphobia levels in the study sample and their demographic characteristics ( $n = 306$ )

Variable	Coronaphobia level						<i>n</i>	$\chi^2$	<i>p</i>
	High		Moderate		Low				
	No.	%	No.	%	No.	%			
Sex									
Female	10	3.9	81	31.5	166	64.6	257	14.496	0.001*
Male	0	.0	29	59.2	20	40.8	49		
Age									
< 20 years	6	15.0	19	47.5	15	37.5	40	49.15	0.0001**
20–29 years	2	1.0	59	28.4	147	70.7	208		
30–39 years	2	10.5	13	68.4	4	21.1	19		
40–49 years	0	.0	19	48.7	20	51.3	39		
Level of education									
Basic	6	15.0	19	47.5	15	37.5	40	28.95	0.0001**
Secondary	0	.0	12	50.0	12	50.0	24		
University	4	1.7	74	32.0	153	66.2	231		
Postgraduate	0	.0	5	45.5	6	54.5	11		
Marital status									
Single	5	2.1	78	32.1	160	65.8	243	15.13	0.001*
Married	5	7.9	32	50.8	26	41.3	63		

$\chi^2$  = Chi-square test; \* significant  $p < 0.05$ ; \*\* highly significant  $p < 0.001$

**Table 8:** Simple linear regression model for predicting the COVID-19-QoL score ( $n = 306$ )

Model	COVID-19-QoL				
	$R$	$R^2$	$\beta$	$t$	$p$
(Constant)			2.392		
Psychological score	.651	.423	.761	14.937	0.0001
(Constant)			3.191		
Psychosomatic score	.440	.194	.758	8.549	0.0001
(Constant)			4.294		
Economic score	.535	.286	.750	11.03	0.0001
(Constant)			2.594		
Social score	.581	.338	<b>1.143</b>	12.456	0.0001
(Constant)			.474		
COVID-19 phobia score	.63	.397	.266	14.134	0.0001

$\beta$  = coefficient of regression, representing the mean change in the dependent variable (COVID-19-QoL score) for one unit of change in the predictor variable

## Discussion

The COVID-19 pandemic is negatively impacting people's physical and mental well-being. Thus, this study aimed to investigate coronaphobia and its impact on QoL among a sample of the general population of Saudi Arabia.

The results of the current study demonstrated that most of the study's participants were female, their age ranged between 20 and 29 years, they had relatives or friends who had been infected with the new coronavirus, and they believed that they were taking enough precautions during the COVID-19 pandemic. Furthermore, they were following developments regarding the COVID-19 pandemic in other countries, and they sometimes listened to the news about the pandemic. Finally, there were statistically significant relationships between coronaphobia and its impact on QoL and the female gender and the age range of 20 to 29 years. These results may be interpreted as the emergence of a new COVID-19 outbreak since there has been a rapid increase in the number of COVID-19 cases and deaths worldwide due to the current absence of definitive treatment and vaccines. Additionally, higher education was associated with higher awareness, which can increase participation in preventive measures and precautionary practices in cases of suspected infection, in addition to following any news about the pandemic. These results were validated by those studies that indicated that due to the pathogenicity of the virus, its rate of spreading, and the resulting high

mortality rate, COVID-19 may affect the mental health of individuals at several layers of society, ranging from the infected patients and healthcare workers to families, children, students, patients with mental illness, and even workers in other sectors (Bao et al., 2020, Chen et al., 2020).

On the other hand, Bai and his colleagues reported in their study at the start of COVID-19 in China that with the absence of effective vaccines and medical and pharmacological treatments, the current social distancing and health-protective behaviors are likely to remain necessary for a long time, especially as many individuals infected with COVID-19 are asymptomatic or have only mild symptoms (Bai et al. 2020). Moreover, El-Zoghby and his colleagues in their study in Egypt reported that higher educational levels were associated with higher awareness, which can increase participation in preventive measures and precautionary practices in cases of suspected infection, limiting people's feelings of stress (El-Zoghby et al., 2020). Additionally, other evidence has shown that the female gender, a younger age, pre-existing chronic and/or psychiatric disorders, unemployment, excessive use of social media, and frequent exposure to news related to COVID-19 may increase the risk of mental distress during the pandemic (Xiong et al., 2020).

The results of the present study demonstrated that there was a highly statistically significant relationship between COVID-19's impact on QoL and usually

listening to news about the pandemic, having lost a relative or friend to the emerging COVID-19, following developments regarding the COVID-19 pandemic in other countries, and being single, which may be because those people who have these demographics perceive the COVID-19 pandemic as being serious due to the loss of family members or friends to COVID-19. Furthermore, frequent waves of COVID-19 lead people to follow the news and development of the pandemic, which impacts their QoL and mental well-being

This result was congruent with that of a study done in middle eastern countries that reported that the majority of participants perceived the COVID-19 pandemic as being serious or very serious, and the mean scores for all items associated with the perception of coronavirus seriousness, in addition to the total score, were the highest among Saudi participants, followed by Egyptian participants and then Jordanian participants (**Shahin & Hussien, 2020**).

Similarly, the evidence suggested that during national crises, such as natural disasters, wars, and disease outbreaks, QoL is negatively affected (**Fenge et al., 2012; Wang et al., 2000**), and reduced QoL can persist for at least three years following the crisis (**Wen et al., 2012**).

The current study revealed that the highest mean of coronaphobia was that of the psychological factor, followed by the psychosomatic factor. Moreover, slightly more than one-third of the study participants had a moderate level of coronaphobia, which may be due to different levels of their perceived emotional responses to the phenomenology of the COVID-19 pandemic. In addition, the widespread COVID-19 outbreaks are generally associated with increased psychological stress and feelings of unpredictability and uncertainty, which may result in coronaphobia. This result was validated by the evidence that reported that people are likely to develop coronaphobic reactions because of infection, uncertainty, and economic deterioration. In this regard, the development of phobic conditions can cause stress, depression, psychosomatic disorders, and psychosocial disorders (**Arpaci, Alshehabi, et al., 2020; Arpaci, Karatas, et al., 2020**).

In the same context, **Hussien and his colleague** found a moderate level of anxiety in their study in middle eastern countries, suggesting that people may be more inclined to experience anxiety, depression, and worry when dealing with unknown issues, challenges, or diseases. When humans become more worried, they become more anxious and, thus, more careful. Anxiety reflects worry regarding anticipated danger, and panic is the dissemination of anxiousness within a group. In this context, the anxiety of individuals continuously disseminates through the rapid transmission of information, advancing into group anxiety and panic. As the reported number of confirmed cases and deaths associated with COVID-19 increases, the public's psychological status is likely to worsen. However, a mild to moderate level of anxiety is likely to improve people's attention to disease prevention, decreasing the incidence of the disease (**Hussien & Shahin, 2020**).

Additionally, other studies supported our findings, as they reported that their participants' COVID-19 fear levels were found to be moderate (**Özmen et al., 2021, Harper et al., 2020**). Similarly, **Ahorsu and his colleagues** identified that the COVID-19 fear status of their participants was slightly above average (**Ahorsu et al., 2020**).

The results of the present study revealed that the highest means of COVID-19's impact on QoL were for feeling that one's personal safety is in danger, then for thinking that one's QoL is lower than before and feeling more nervous than before, which may indicate that the pandemic spreads rapidly, and participants perceived that they were at particular risk of being infected. These results were congruent with much of the evidence suggesting that since the pandemic spreads quickly, COVID-19 is expected to lead to increased psychopathological problems due to the potential for easy transmission, lack of treatment, and higher levels of virus-related deaths (**Duan & Zhu, 2020; Gao et al., 2020; Rothan & Byrareddy, 2020**).

The results of the current study indicated that there was a highly statistically significant direct correlation between the COVID-19-QoL scores and COVID-19 phobia scores for all

factors, which means that an increased impact on QoL is associated with an increased level of coronaphobia. Furthermore, the main change in COVID-19-QoL scores was due, first, to the social phobia score, followed by the psychological phobia score, the psychosomatic phobia score, and, lastly, the economic phobia score. Finally, the total COVID-19 phobia scores determined the COVID-19-QoL score. This may be interpreted as follows: Coronaphobia has a direct psychological impact on QoL. In accordance with this result, the study done in Saudi Arabia indicated that fear of COVID-19 impacts anxiety and depression, which, in turn, adversely impact QoL (Alyami et al., 2021). Additionally, other evidence suggested that the experience of a severe viral pandemic (and its social and economic fallout) creates a sense of uncertainty, triggering psychological distress such as sadness, boredom, worry, fear, anger, annoyance, confusion, frustration, grief, guilt, helplessness, loneliness, and nervousness (Mamun & Griffiths, 2020, Rubin & Wessely, 2020). Similarly, Banerjee reported that overall, COVID-19 challenges the QoL of people worldwide, exacerbating interpersonal issues and raising questions of self-acceptance, meaning in life, and relationships with others (Banerjee, 2020).

### Conclusion

The results of this study concluded that the highest means of coronaphobia were for the psychological factor, followed by the psychosomatic factor. Moreover, slightly more than one-third of the participants had a moderate level of phobia, and the highest means of the impact of COVID-19 on QoL in the study sample were for, “I feel my personal safety is in danger”, then “I think my quality of life is lower than before” and “I feel more nervous than before”. However, the highest percentage of the participants experienced COVID-19 having a low impact on their QoL. There was also a highly statistically significant direct correlation between the COVID-19-QoL scores and COVID-19 phobia scores for all factors, which means that an increased impact on QoL was associated with an increased level of coronaphobia.

### Recommendations

The findings provide baseline evidence and highlight the need to develop intervention and psychoeducational programs encompassing different populations in more cities throughout the kingdom to mitigate the psychological impact of the COVID-19 pandemic.

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### Conflict of interest

The researchers declare that no conflicts of interest exist concerning this research work.

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