

# Fear of the Second Wave of COVID-19 Pandemic and Quality of life in a Sample of Teenage Egyptian Female Students

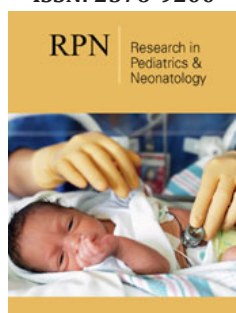
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## Abstract

**Objective:** The study aimed to (1) determine the levels of quality of life and fear of the second wave of the Corona pandemic among a sample of adolescent students in the Egyptian society and (2) to study the extent of the pandemic fear contribution to predicting the two dimensions of quality of life (social and personal).

**Methodology:** Researchers used more than one instrument in order to assess participants' fear and to explore its effect on their quality of life across various dimensions. Research Tool (I) An electronic survey was utilized with 435 female students, with an average age of 19.50, with a standard deviation of 1.46 years, while they utilized Research Tool II "Amer's quality of life scale" Amer AE [1] to assess participants' quality of life ( $\alpha=0.908$ ), plus assessing the Fear of Corona Pandemic through the use of Research Tool III Amer Fear scale(2020c), which included 12 items ( $\alpha=0.8971$ ). data were analyzed using descriptive statistics, Pearson correlation coefficient and simple regression through the SPSS statistical package (V 26).

**Results:** Study results demonstrated low levels of quality of life, and moderate degree of fear of Corona pandemic as 73.10% of participants suffered from various degrees of fear symptoms ranged from medium to severe, plus a very weak positive correlation  $r= 0.107$ ,  $p < 0.05$  between fear of The pandemic and the quality of social life, while showed a zero relationship between the quality of personal life and fear of the second wave of the pandemic contributed to explaining that 0.9% of the variance in the quality of social life, which is a very weak effect, while fear of the pandemic supported the quality of social life at a very low level. Recommendations: Research investigators recommend that Governmental Institutions need to raise community awareness and develop programs to reduce the level of pandemic fear among young people that have a specific impact on adolescent mental health and their future.

**Keywords:** Fear of Corona pandemic; Corona pandemic second wave; Quality of life; Adolescents' mental health

## Introduction

The new Corona virus, known as COVID-19, appeared in the city of Wuhan, the capital city of the Chinese province of Hubei, in December 2019, and in March 2020, the World Health Organization described it as a Pandemic, and in summer of 2020 incidence level and deaths decreased, while in the fall season of the same year, the incidence and death rates increased once again. With the rapid increase of incidence rates and deaths all over the world, the pandemic was given a new name "the second wave of COVID-19 pandemic, in which more than 110 million people were affected, and the number of deaths exceeded 2 million people around the world at the time of writing this research report. This pandemic has had enormous impacts not only on physical health, but also on mental health aspects and quality of life.

Among the effects of this pandemic, is the appearance of panic state, fear and anxiety among everyone, changing lifestyle and social relationships. Coronian fear is an unpleasant emotional state accompanied by tension, anxiety, terror and panic as a result of the threat from the Corona pandemic that society is going through. A psychological impact on individuals' personal and social aspects of their lives and consequently on the quality of their lives [1,2]. Amer AE [3] concluded that the levels of fear of COVID 19 were moderate on a sample from

the Arab community, as well as on a sample from the Egyptian community late in July 2020. Amer AE et al. [4] concluded that 72% of the youth sample acknowledged their fear of COVID-19 in a moderate or severe degree, while 34.6% of that study participants had depression in a medium to large degree, 52.2% of them suffered from psychological pressure (medium to severe levels), and 54.1% of them were feeling boredom and distressed (medium to severe levels), while 39.6% of them demonstrated and suffered from various degrees of depression.

The spread of epidemics affects the quality of life of individuals through precautionary measures and home isolation, and this in turn reduces social contact and the formation of friendships and relationships, and it does affect the economic situation of individuals, family relations, that are important indicators of individuals' quality of life. The pandemic has also caused psychological symptoms such as depression, anxiety, stress, and others [4,5]. In the context of the relationship between fear or anxiety about epidemics in general and fear and anxiety about the Corona pandemic in particular, many studies have found a weak negative association or effect of fear or anxiety from the Corona pandemic on various aspects of the quality of life [6-9]. In Germany, a sample of children and adolescents from the age of 7 to 17 years, Sieberer UR et al. [10] indicated that 40.2% suffer from a decrease in the quality of life due to the Corona pandemic. Amer AE [2] concluded that the quality of life was negatively associated with fear of the Corona pandemic with a very weak degree (-0.09), a function of 0.05, and the significance as a result of the large sample size and this is consistent with the logical analysis where increased fear leads to lack of mental health and in turn a low quality of life. The size of the correlation is that there is nothing in common between the quality of life and the fear of Corona, and this seems to be the case in the Egyptian community in particular and the Arab society in general. In this context, it is clear that fear of the second wave of the Corona pandemic plays a role in affecting the quality of life.

Adolescence is considered one of the most important stages of growth, as it includes psychological and physiological changes such as independence from parents, building identity and the growth of social relations in the environment in which they live and freedom from restrictions imposed on them, especially in light of the Corona pandemic and what it requires of isolation and quarantine, which is not commensurate with their personalities, especially teenage girls. As many studies in the field of the Corona pandemic have shown that females are more afraid than males [3,11]. To some extent, there is a dearth of Arab studies that dealt with the impact of the Corona pandemic on the quality of life in general and with a special opportunity among adolescent societies, except for a few studies, including Amer AE [1] that dealt with the contribution of psychological resilience to the quality of life in light of the Corona pandemic for a sample in the Arab community.

**In light of the above, the study questions can be asked as follows:**

A. What are the levels of fear of the second wave Corona pandemic (COVID-19) among a sample of teenage female students in the Egyptian community?

B. What are the quality of life levels in light of the second wave of the pandemic among a sample of teenage female students in Egyptian society?

C. What is the relative contribution of fear of the second wave of Corona pandemic to the two dimensions of quality of life (social, personal)?

Therefore, the main objective of the study is to (1) determine the levels or degree of fear of the second wave of Corona pandemic and (2) the quality of life of a sample of adolescent female students in the Egyptian society, and (3) to determine the role of fear of the second wave of Corona pandemic on their quality of life.

## Methodology

### Study design

The study relied on designing cross-sectional studies using an electronic survey through a link on Google

### Participants

A snowball sampling was used where the two scales were sent to adolescent female students in high schools and universities on Facebook and What's app groups, and in turn they were sent to their high school and university classmates via smartphones through Link on Google form. Sample size of the participants was 435 participants and their ages ranged from 13 to 20 years with an average age of 19.50 years and a standard deviation (SD =1.46 years), distributed to 22 (13.1%) female students at the secondary level, and 413 (86.9%) at the university level distributed among the first to third group in the community of Ismailia Governorate, one of the canal governorates in the Arab Republic of Egypt.

### Research Instruments

**The study included the following research instruments:**

Abbreviated Quality of Life Scale for Amer AE [1]: prepared by Amer AE [1]. This scale is composed of 15 items driven from the WHO's Scale of Life Measure (1995) are used. These terms were chosen in line with life situations to deal with Corona pandemic, including social relations. Family, academic, public health, psychological, housing, self-satisfaction. The vocabulary was formulated in questions such as to what degree do you feel happy in your life ?, to what degree are you satisfied with yourself ?, Do you feel at ease and peace of mind ?, and were corrected in light of a scale The pentagonal Likert and the word "What is the degree of negative feelings you have (frustration, depression, anxiety)?"

Because it is a negative expression and it was deleted during the analysis of the scale vocabulary because it reduces scale stability. The quality of the subjective life of the individual, and the second includes the quality of life of the individual in his relationship with others or social interactions (Do you feel satisfied in your family life?) [1]. For the data of the current sample, the coefficient of stability of internal consistency, Cronbach's Alpha for the scale, was estimated as=0.908, which is a good value, while the stability of the first dimension (quality of personal life) 11 (singular), is=0.895, while the dimension of quality of life in others i.e. social (3 vocabulary) 0.79, which are very satisfactory stability values for the analysis.

### Corona Pandemic Fear Scale for the year (2020 c)

Amer AE [3] prepared the Corona Pandemic Fear Scale of 12 singles and corrected in light of Likert's five-year scale, to : a very large degree (5), a large degree (4), medium (3), a very small degree (2), a small degree (1). The reliability and validity of the scale was estimated on a sample in the Arab community (N=538), and its reliability coefficient using the Cronbach Alpha coefficient 0.90.=0.815) and the second represents the fear associated with daily behaviors in seven terms ( $\alpha=0.894$ ), and the confirmatory factor analysis showed a good fit of the workers' model with the data and one-dimensional data could be accepted for the scale. The stability of the first dimension was=0.812 and the second dimension=0.894

### Procedures

The two study scales, in addition to the basic data, were applied through social media, especially What's App and Facebook, on an electronic link in the Google from 20/11/2020 until 2/1/2021, and adolescent students were alerted that the data is confidential to be used for scientific research purposes. These measures assess fear of the pandemic and the quality of life during the second wave of the Corona pandemic, and the Excel data file was converted into a SPSS file.

### Statistical analysis:

The SPSS program ( V 26) was relied on to analyze the study data through the use of frequency distributions and descriptive statistics to determine the levels of fear of the second wave of a pandemic in addition to the levels of quality of life, and the Pearson boot strap correlation coefficient was used to study the relationship

between fear of Corona pandemic and the quality of life during the 2<sup>nd</sup> wave of Corona, and a simple regression analysis was used to study the extent of the pandemic fear contribution to predicting the two dimensions of the quality of personal and social life.

## Results

### The first question

What are the levels of fear of the second wave Corona pandemic (COVID-19) on a sample of teenage female students in Egyptian society?

Averages and standard deviations as well as kurtosis and kurtosis were estimated to check for moderateness of the data:

It is evident from (Table 1) that the torsion values do not exceed 1.0 for all vocabulary except for the word "I have terrifying dreams" and the kurtosis values do not exceed 2.0 for all vocabulary except for "I have terrifying dreams", which indicates a good moderation, and that the mean values Most of the individuals' responses are close to 3.0, which indicates the quality of the vocabulary as it is centered around the mediating response. In the general overall, the sample of adolescent girls suffers from fear of corona with a moderate degree for most of the vocabulary except for single "I have terrifying dreams during sleep of having a corona, and it was a little and unique" feel Panicked to hear the news about the deaths of the Corona virus, "it was to a large extent. The lowest and highest quadrants were estimated to determine the distribution of the sample participants on the fear levels of the second wave of Corona pandemic, as the lowest quadrant reached P<sub>25</sub>=27 while the highest quartile was P<sub>75</sub>=42.

**Table 1:** Averages, standard deviations, torsion and kurtosis for fear vocabulary of the second wave of the Corona pandemic (N=435).

Kurtosis	Skewness	SD	Average	Types of Vocabulary
-0.48	0.09	1.1	2.71	I avoid leaving the house to avoid meeting anyone.
1.07-	0.12	1.32	2.78	Avoid praying in congregation for fear of touching others.
-0.77	0.16	1.22	2.8	I avoid visiting my relatives for fear of catching corona.
-0.57	-0.28	1.18	3.32	I am afraid of others so as not to catch the virus.
-0.77	-0.26	1.22	3.31	I am afraid to greet someone for fear of touching his hand.
-0.77	0.25	1.2	2.7	I am afraid of buying daily necessities because they suspect it includes the Corona virus
-1.09	-0.12	1.34	3.07	I avoid touching my face for fear of catching corona
-1.3	0.03	1.44	2.95	I am afraid of contracting corona for fear of death
2.05	1.74	1.08	1.62	I have terrifying dreams during sleep for fear of catching corona.
-1.26	0.09	1.42	2.88	I am terrified of catching corona.
-0.9	0.31	1.28	2.69	I constantly suspect I have Corona symptoms
-0.8	-0.51	1.3	3.51	I am alarmed to hear the news about the Coronavirus deaths

Therefore, the distribution of the sample participants is as follows (Table 2): This means that almost a quarter of adolescent female students suffer from fear of the second wave of Corona pandemic to a large extent, and nearly a quarter of them suffer from fear of the second wave of Corona pandemic to a small degree,

while almost half of the study participants suffer from fear of the second wave of the pandemic to a moderate degree. In other words, 73.10% of the total sample of teenage female students suffer from fear of the second wave Corona pandemic, with a degree of moderate to severe.

**Table 2:** Distribution of the sample of adolescent students on the fear levels of the second pandemic of the Corona pandemic.

Percentage (%)	Number	Degree of Fear
26.9	117	Less than average (less than 26)
47.82	208	Average (26 to less than 42)
25.28	110	Large (more than 42)
100	435	

### The second question

What are the levels of quality of life in light of the second wave of the pandemic of a sample of teenage female students in Egyptian society? The averages and standard deviations as well as kurtosis and kurtosis were estimated to check for moderateness of the data: It is evident from (Table 3) that the values of torsion and kurtosis do not exceed 1.0 for all vocabulary, which indicates

the availability of moderation to a large extent, and the averages of the individual responses to most of the items increase or approach 3, which indicates the quality of the vocabulary as it is centered around the mediating response. In general, individuals feel a great degree of quality of life in terms of how good is your relationship with your parents and relatives ?, Are you currently having new relationships ?, Do you feel satisfied in your family life ?, Are you satisfied with your home in which you live ?, To what degree Are you satisfied with yourself ?, as the average value increased to 3.50 while they feel an average score for other aspects of quality of life such as "How comfortable are you in your studies?", "Do you have enough money to meet your daily needs?" And "To what degree are you enjoying your life?" ? And "How good is your quality of life?" In light of the second quadrant,  $P_{50}=47$ , it is clear that 251 (57.50%) of the sample of adolescent female students showed medium and high levels of quality of life, while (109) 25.06% showed low levels of quality of life.

**Table 3:** Averages and standard deviations, torsion, and kurtosis of the quality of life vocabulary in the time of the Corona pandemic (N=435) T.

kurtosis	skewness	SD	Average	Questions
0.31	-0.3	0.95	3.06	To what degree do you feel happy in your life?
0.54	-0.89	0.99	3.97	How good is your relationship with your parents and relatives?
0.35	-0.67	0.94	3.83	Are you forming new relationships?
0.26	-0.99	1.2	3.85	Do you feel satisfied in your family life?
-0.06	-0.19	0.98	2.91	To what degree are you comfortable in your studies?
0	-0.24	1.02	3.15	Do you have enough money to meet your daily needs?
-0.24	-0.22	1.05	3.34	Do you feel physical health and wellness?
-0.27	-0.01	1.07	3.07	Do you feel safe and secure in your daily life?
-0.43	-0.22	1.09	3.28	Do you feel at ease and peace of mind?
0.35	0.96-	1.06	3.98	Are you satisfied with the place you live in?
0.44	-0.17	0.88	3.21	To what degree are you able to do your daily work?
-0.14	-0.45	1.06	3.5	To what degree are you satisfied with yourself?
-0.09	-0.21	1.02	3.08	To what degree are you enjoying your life?
0.92	-0.13	0.83	3.19	What is your quality of life score?

### The third question

What is the relative contribution of fear from the second wave of Corona pandemic to the two dimensions of quality of life (quality of life with others, social, and quality of personal life)? The Pearson bootstrap correlation coefficient was estimated for the relationship between the two dimensions of quality of life and fear of the Corona pandemic, and it was found that the correlation coefficient between quality of personal life and fear of the pandemic  $r_{435} = -0.01$ ,  $p > 0.05$  and the correlation coefficient is very weak and not statistically significant at 0.05, while the value of the correlation coefficient between Social quality of life and fear of a pandemic  $r_{435} = 0.11$ ,  $p < 0.05$ , which is a very weak positive relationship and statistically significant at 0.05.

By conducting a simple regression analysis, it became clear that an equation can be constructed to predict fear from the second wave

of the pandemic with the quality of social life, where  $F_{(1,433)} = 4.98$ ,  $p < 0.05$ . Fear of the Corona pandemic, the second wave, contributed to the prediction of social quality of life with a value of a standard regression coefficient of 0.11. An increase of 0.11 standard units of fear of the Corona pandemic was matched by an increase of one standard unit of the quality of social life dimension, and the explained variance ratio was ( $R_{adj}^2 = 0.009$ ) meaning that the fear of the Corona pandemic, the second wave, explained only 0.9% of the variance after the quality of life Character This represents a very weak influence size.

### Discussion

The results of the study showed that the fear of the second wave of the Corona pandemic (COVID-19) among adolescent female students was present to a moderate degree, and that 73.10% of the participants suffer from fear of the second wave of the Corona

pandemic, with a degree of moderate to severe. This result may be due to the fact that fear is normal at this age, and the increase in the number of deaths is significant, especially at the local level, which reflects the fear that is sweeping the souls of these adolescent girls. This result is consistent with Amer AE [2,3] which indicated that levels of fear of Corona pandemic was of a moderate degree on a sample from the Arab community as well as on a sample from the Egyptian community. Generalization of the results of cross-validation, and this result is also due to academic pressures and cases of infection between parents and relatives, especially since 64.4% of the study sample admitted that they had relatives and acquaintances who were infected with Coronavirus, and this raises the level of pessimism and fear they have about its natural limit known in their age stage. Teenage girls are possessed of fear and panic about being infected with Coronavirus, or a member of their family. All of this constitutes a means of pressure, tension, fear, and pessimism, with what the coming days will bear, especially since adolescence has strong preparations to interact with this negative emotion. The results showed the availability of aspects of quality of life with a moderate degree and that 25.06% of the study sample showed low levels of quality of life, and this result contradicts Sieberer UR et al. [10]. Which assumed that 40.2% suffer from a decrease in the quality of life due to Corona pandemic at the age of 7-17 years

The study found a very weak positive correlation with a function of 0.05 between fear of the pandemic and the quality of personal life (0.11). Fear of the second wave of the pandemic contributed to the explanation of 0.9% of the variation in the quality of social life, which is a very weak effect size, and this contradicts Amer AE [2]. This weak positive relationship may be due to the nature of the personality of adolescent girls in the Arab environment, where the presence of distress helps family and family communication and the question of others, and it can be said that this is the case of the teenage community in the Egyptian environment as fear of Corona pandemic contributes to strengthening family and family relations with their colleagues and not This is a requirement through direct visits, but through various means of communication, and this indicates the existence of the practice of social relations, albeit with a weak degree, and this is due to the traditions and customs in Arab society. It seems that the effect of Coronian fear on the quality of life is very weak, and this could give the impression that the individual in the Arab environment coexists with this situation without negatively affecting the quality of his life, and this result partly contradicts [6-8], which indicated a weak negative association or effect of fear or anxiety from the Corona pandemic on various aspects of the quality of life.

The study has some limitations, which are collecting data from electronic means (phone, tablet and personal computer) and this excludes a wide range of teenage girls who do not have the skills to deal with social media such as WhatsApp and Facebook, but this seems to be a non-serious determinant in light of its availability for all individuals in society, but it turns out that the quality of the

data is at an appropriate degree for statistical analyzes. In spite of the limitations, however, the results of the study are not subject to generalization unless other confirmatory studies are conducted on other samples in the Egyptian environment, where the study sample was in one of its governorate, and this gives doubts about generalizing the results of the study to adolescent girls in the Egyptian society in general. Finally, the study is considered an addition in the field of studies of the impact of fear of the second wave of Corona pandemic in particular and epidemics in general on the quality of life of a sample of adolescent female students in the Egyptian environment.

## Conclusion

A large percentage of a sample of adolescent students in the Egyptian society suffers from fear of the second wave of the Corona pandemic in a moderate to severe degree, that is why governmental and private institutions and universities should prepare awareness programs to reduce the level of fear of the pandemic because this has a negative impact on their academic and psychological lives, as well as fear of the second wave of the pandemic has a very weak positive impact on the quality of social life, that is, the relationship of a teenager with her family, relatives and friends, while it has no effect on the quality of personal life in her relationship with herself.

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