

DOI: <https://doi.org/10.24297/jssr.v17i.9112>

## Exploring the quality of life and psychological symptoms of university students in Cyprus during the Covid-19 pandemic

Hadjicharalambous Demetris<sup>1</sup>, Loucia Demetriou<sup>2</sup>, Koulla Erotocritou<sup>3</sup>,

Frederick University, Cyprus

[soc.cd@frederick.ac.cy](mailto:soc.cd@frederick.ac.cy)<sup>1</sup>, [pre.dl@frederick.ac.cy](mailto:pre.dl@frederick.ac.cy)<sup>2</sup>, [soc.ek@frederick.ac.cy](mailto:soc.ek@frederick.ac.cy)<sup>3</sup>

### Abstract:

The onset of the infectious disease Covid19 originating in Wuhan, China, took over the world in December 2019 and was declared a pandemic in January 2020. Empirical evidence resulting from relevant research illustrated that the effects of the pandemic itself but also of the strict measures to contain the spread of the virus on the mental health and well-being of affected populations were just as unanticipated as the pandemic itself. Data led to the identification of six idioms of distress: (1) Demoralization and pessimism towards the future, (2) anguish and stress, (3) self-depreciation, (4) social withdrawal and isolation, (5) somatization, (6) withdrawal into oneself. Our research explores the psychological impact of the Covid19 pandemic on college students and their quality of life. The study took place in Cyprus with 356 young participants, whereas 256 were female (72%) and 100 were male (28%). They all completed the General Health Questionnaire-28 and the Life Satisfaction Inventory (LSI). The present study's findings revealed that six factors, including residence without family, the deterioration of the financial situation of the family, the loss of employment, the deterioration of social relationships, young age, and gender, have significantly affected in a negative way the mental health and quality of life of young people. Research findings revealed that the strict lockdown and physical/social isolation measures had a significant adverse effect on our sample, whereas participants showed increased symptoms of anxiety and insomnia, social dysfunction, and somatization. Young adults who lost their jobs during the pandemic or had a significant decrease in their family income, and students who stayed away from their families, experienced a negative impact on their quality of life and had to cope with more mental health problems.

**Keywords:** Anxiety; Covid19; Depression; Mental health; Pandemic; Quality of life; Students.

### 1. Introduction

#### 1.1. General psychological impact of the Covid19 pandemic on affected populations

The Covid19 outbreak rapidly emerged as a worldwide pandemic and caused significant disruptions in the social, economic, educational, and other essential areas of life in the populations of the affected countries. In their efforts to contain the spread of the virus, most governments imposed strict measures, such as lockdowns, quarantines, and isolation, social and physical distancing, as significant prevention policies for the broader spread of the virus (Batra et al., 2021; Cao et al., 2020; Chang et al., 2020; Demetriou et al., 2021; Lai et al., 2020; Liu et al., 2020; Ma et al., 2020; Qiu et al., 2020; Wang et al., 2020b, 2020c, 2020d; Pfefferbaum & North, 2020; Wang et al., 2020; Rajkumar, 2020; Cao et al., 2020; Shah et al., 2020; Brooks et al., 2020). Social distancing refers to a measure implemented in all affected countries, which consists of avoiding close contact with other people, maintaining a safe physical distance (usually two meters) from other people, and limiting gatherings of large numbers of people in places such as schools, restaurants, shops, churches. Social distance from family, friends, and relatives presents an aggravating factor in people's mental health and quality of life as it could severe personal freedoms, social life, recreation, and entertainment, cause a disruption of communication, and serious rifts in social bonds and networks.

Given the incidence and mortality rates of the Covid19 virus worldwide, and its negative impact on both social and economic aspects, relevant studies illustrated increasingly adverse effects on peoples' mental health due to physical distancing, quarantining processes, and social isolation (Tanhan et al., 2020), inducing psychological mediators, such as sadness, worry, fear, anger, annoyance, frustration, guilt, helplessness, loneliness and nervousness (Mamun and Griffiths 2020). These are grave indicators of psychological distress and suffering which individuals may experience during and after pandemics. Emotions such as fear, sadness, depression, and symptoms such as panic attacks, somatization, and social dysfunction have prevailed since March 2020 in the



populations of all affected countries across the globe. These emotions can be overwhelming, especially for people who have already faced anxiety, severe depression, and other mental health problems, and may have detrimental effects on their mental health and quality of life.

According to the World Health Organization (2002), mental health is the emotional well-being, where the individual can live and work comfortably in the community and be satisfied with his personal characteristics and achievements. Quality of life refers to the individual's living conditions that, together with material goods, compose the daily well-being of people (Møller & Roberts, 2021). Well-being requires the provision of tangible and intangible resources such as health, harmonious coexistence of individuals, respect for dignity, optimism, perspective, and the social environment. Factors that may negatively impact the quality of life are any stressful experiences or negative situations that significantly increase the possibility of a person experiencing adversities in his/her psychosocial adjustment or even psychological problems. Financial difficulties of the family, parent's mental health, school or community with high rates of delinquency, death of a family member and, parent's divorce (McGregor, 2020) can be considered aggravating factors in a person's overall well-being (Masseé, 2000).

## **1.2. Effects of Covid19 restrictive measures on university student populations**

Recent studies conducted worldwide, show clearly that the Covid19 pandemic has severely affected young adults' mental health and subsequent quality of life (Cao et al., 2020; Chang et al., 2020; Lai et al., 2020; Liu et al., 2020; Qiu et al., 2020; Wang et al., 2020b, 2020c, 2020d; Pfefferbaum & North, 2020; Wang et al., 2020, Rajkumar, 2020; Cao et al., 2020; Shah et al., 2020; Brooks et al., 2020, Demetriou et al., 2021). The restrictions in movement and in gathering capacities have negatively impacted productivity and performance and, especially in young adults, have suspended personal freedoms, independence and perhaps adulthood itself.

College students are a particular population, going through a critical period of life and often experiencing stressful events (Buchanan, 2012). In Cyprus all tertiary education institutions have been closed to students and face-to-face teaching was suspended for an out of the ordinary timeframe (March to June 2020, September, mid-October to May 2020, September 2020 to May 2021), with short intervals of onsite, conventional operations. Hossein et al. (2019) illustrated that such closures trigger uncertainty amongst students regarding academic matters and intensify persistent mental health challenges in the student population.

University students' lives changed drastically due to the physical distancing and social isolation measures that led to switching from conventional learning to distance learning. Students were confined at home, and all teaching, learning, and evaluation took place online (Demetriou et al., 2021). At the same time, insecurities regarding employment and the financial future were accentuated. Negative emotions such as the fear of death and the fear of an "unknown enemy" (as this was depicted in the media) created a generalized fear in the people, as they did not know exactly where the threats were coming from (Van Bavel et al., 2020; Nguyen et al., 2020; Cao et al., 2020; Xu et al., 2020; Shimizu et al., 2020; Ho et al., 2020; Park et al., 2020).

Research conducted with students in Cyprus earlier this year (Demetriou et al., 2021) showed that more than 70% of the participating students experienced high to medium stress during the lockdowns. In this framework, working students experienced significantly more anxiety and stress than those who did not have to juggle studies with work, and it manifested in somatic symptoms, such as difficulty breathing and general nervousness. Asif and her associates (2020) also determined higher stress levels in students, who found that anxiety was the most prevalent issue, followed by stress as the second most prevalent problem among her sample's college students. Students reported a more frequent appearance of fear, dizziness, and numbness than those that were not employed or worked part-time during the lockdown. Islam et al. (2020) have pointed to the disruption of regular income and employment as a critical factor in understanding the increased frequency of anxiety and depression in university students. It seems that student adaptation to online classes contributed to the increase in their stress levels.

## 2. Materials and methods

### 2.1 Purpose and Research Questions of the study

The purpose of this study was to investigate the psychological impact of the measures of social distancing of the Covid-19 pandemic on the mental health and quality of life of college and university students in Cyprus. In this framework, we placed the following two research questions:

- (a) What is the impact of the lockdown and social distancing measures on university students' mental health and quality of life during the Covid19 pandemic?
- (b) Which factors may be considered either aggravating or protective to tertiary education students' mental health and quality of life?

### 2.2. Procedure – Data collection

We surveyed a sample of university students in Cyprus. Participants completed two questionnaires in the Greek language: The General Health Questionnaire (GHQ-28) and the Life Satisfaction Inventory (LSI). In addition, we collected demographic information, including age, gender, place of residence, and information relating to the COVID-19 pandemic, such as parents working status and quality and frequency of interpersonal, social relationships during the pandemic. Authors used a web-based survey design and obtained the approval from the Psychology and Social Sciences Department at Frederick University. All participants gave their consent online before responding to the survey questions. The participants answered the questionnaires anonymously on the Internet platform Enklikanketa, from May to June 2021, and they were allowed to terminate the survey at any time they wished.

### 2.3. Sample

The survey took place in May 2021 and focused on a sample of 356 Cypriot participants. The sample included 256 young women (72%) and 100 young men (28%). The mean age for our participants was 23+5 years old. The majority of the participants (75%) resided in urban areas, and 25% resided in rural areas. 50% of participants were employed before the pandemic outbreak, whereas 25% of the subjects remained employed during the pandemic. More than half of the participants (52%) experienced a decrease in their family income. Regarding their residential situation, 38% resided without their family during the lockdown measures (Table 1).

**Table 1. Participants' distribution and socio-demographic variables (in percentage)**

Variables	Demographic characteristics	n=356	%
<b>Gender</b>	Men	100	28
	Women	256	72
<b>Residence</b>	Urban areas	267	75
	Rural Areas	89	25
<b>Employment before pandemic</b>	Yes	178	50
	No	178	50
<b>Employment during pandemic</b>	Yes	89	25
	No	267	75
<b>Residing with family during pandemic</b>	Yes	221	62
	No	135	38
<b>Family income</b>	Affected	185	52
	Non-affected	171	48

## 2.4. Measures

### 2.4.1. General Health Questionnaire – 28 (Goldberg and Hillier 1979)

The General Health Questionnaire is a self-report tool used to compare the current psychological state of the participants with their usual state of psychological health. We applied the 28-item version, whereas factor analysis of the GHQ-28 identified four 7-item subscales (<https://strokengine.ca/en/assessments/general-health-questionnaire-28-ghq-28/>): Somatic symptoms (items 1-7); Anxiety/insomnia (items 8-14); Social dysfunction (items 15-21); Severe depression (items 22-28). The possible score ranges from 28 being the lowest to 112 being the highest. The higher score shows the participants' more deficient psychological state. There is a high correlation between the anxiety subscale and the total score, illustrating that anxiety is a common indicator of psychiatric disorders (Goldberg & Hillier, 1979). The Cronbach's alpha coefficients of reliability of the subscales are 0.84 to 0.94, and the internal consistency of the total scale is 0.93 (ibid).

### 2.4.2. Life Satisfaction Inventory (LSI) (Muthny et al., 1990)

The Greek version of the Life Satisfaction Inventory (LSI) (Muthny et al., 1990; Fountoulakis et al., 1997) assesses not only people's quality of life but also their social economic situation, their employment status, and the family and married couples' life. The LSI consists of 13 questions and focuses on the participants' quality of life during their last week of the lockdown period. One may answer each question based on a Likert scale ranging from 1 = very disappointed to 5 = very satisfied. The minimum scale score ranges 13 and the maximum, 65. The scale shows good internal consistency assessed according to the Cronbach's Alpha 0.82. A higher score shows a higher quality of life.

## 2.5. Data Analysis

We analyzed the data using the Statistical Package for Social Sciences (SPSS) version 25.0. Data analysis included descriptive statistics, such as mean, standard deviation, frequencies, and percentages, to describe the participants' demographic characteristics. The level of significance (p-value) in questionnaires was set at  $p < 0.05$ . In order to examine our research questions applied the following data analysis methods: t-test, two-way ANOVA, and the multivariate ANOVA (MANOVA) to compare the means between participants' demographic characteristics (gender, age, family income, occupation) and their impact on their overall quality of life and mental health dimensions. Furthermore, we applied Pearson's correlation coefficient to examine whether correlations (positive or negative) could be found between mental health dimensions and quality of life.

## 3. Findings

### 3.1. Impact of the lockdown and social distancing measures on university students' mental health and quality of life during the Covid19 pandemic

The findings of the present study underlined that the measures taken during the pandemic have significantly affected the mental health ( $p < 0.001$ ) and quality of life of young people ( $p < 0.05$ ). About half of our sample population (51%) experienced symptoms of anxiety and insomnia ( $p < 0.05$ ), and 48% experienced physical symptoms ( $p < 0.01$ ). More than half of the participants (55%) reported social dysfunction ( $p < 0.001$ ), 10% experienced severe depression ( $p < 0.05$ ), and 34% felt that during the pandemic, their quality of life had been impacted negatively ( $p < 0.05$ ) (Table 2).

**Table 2. Percentages on Mental Health dimensions - Quality of Life**

<i>Variables</i>	<i>Level</i>	<i>Percentage</i>	<i>Sig</i>
Quality of life	Low	34%	0.02
	High	66%	
Insomnia/Anxiety	Low	49%	0.05
	High	51%	

Physical Symptoms	Low	52%	0.01
	High	48%	
severe depression	Low	90%	0.05
	High	10%	
social dysfunction	Low	45%	0.001
	High	55%	

### 3.2. Aggravating or protective factors to tertiary education students' mental health and quality of life

As aggravating factors which contributed to the increase of student stress levels our results record the following:

(a) *Residence with or without family*: Students living away from their family during the lockdown measures [F (1,355) = 5,882 p <0.001] had significantly higher stress levels than those who went through the lockdown and social distancing measures while residing with their family.

(b) *Financial situation of family and self during the lockdowns*: Another factor with a negative impact on their quality of life and mental health was the financial situation of students' themselves, but also of their family [F (1,355) = 5,430 p <0.05]. Our data analysis showed that the mental health of participants whose family income was affected experienced more insomnia and anxiety symptoms than participants whose family income was unaffected [F (1,355) = 7,012 p <0.000].

(c) *Employment status*: Young people who became unemployed during the pandemic were found to be more anxious [F (1,355) = 4,212 p <0.005] and reported more severe physical symptoms [F (1,355) = 6,550 p <0.001] and a lower quality of life [F (1,355) = 3,802 p <0.001] than the students who were able to sustain their employment during the pandemic.

(d) *Relationship with friends*: A relatively high percentage of our participants (58%) reported a deterioration in their social relations with their friends in the duration of the lockdown and social distancing measures for the containment of the spread of the Covid19 virus claiming that the relationship with their friends was negatively affected due to the pandemic measures [F (1,355) = 4,224 p <0.005].

(e) *Age*: Younger participants aged 18-20 seem to have been impacted more, they, namely, stated that they experienced more frequently symptoms of anxiety [F (1,355) = 3,789 p <0.005], social dysfunction [F (1,355) = 3,424 p <0.004] and a lower quality of life [F (1,355) = 2,155 p <0.005] than our participants above the age of 20 years.

(f) *Gender*: The analysis of the results of the present study showed that there is a statistically significant difference between men and women in the dependent variable severe depression [F (1,355) = 2,220 p <0.05], whereas women reported a higher frequency of symptoms of severe depression than men.

**Table 3. Correlations coefficients between participants' Social dysfunction, Depression, Somatic Symptoms and Quality of Life**

<b>Variables</b>	<b>Quality of life</b>	<b>Insomnia/Anxiety</b>	<b>Physical Symptoms</b>	<b>severe depression</b>	<b>social dysfunction</b>
Quality of life	-	-,632**	-,588**	-,690**	-,618**
Insomnia/Anxiety		-	,754**	,819**	,834**
Physical Symptoms			-	,662**	,656**
severe depression				-	,830**
social dysfunction					-

### 3.3. The relationship between the Quality of Life and Mental Health Dimensions

Our findings suggest a significant negative correlation between the Quality of Life and the following Mental Health dimensions: Severe Depression, Insomnia/Anxiety, Physical Symptoms and Social Dysfunction ( $r=-0.632$   $p<0.001$ ;  $r=-0.588$   $p<0.002$   $r=-0.690$   $p<0.001$  and  $r=-0.618$   $p<0.000$  respectively). On the other hand, Insomnia/Anxiety displayed a positive correlation with the dimensions Physical Symptoms ( $r=0.754$   $p<0.001$ ), Severe Depression ( $r=0.819$   $p<0.001$ ) and Social Dysfunction ( $r=0.834$   $p<0.001$ ). Regarding the dimension Physical Symptoms, we detected a positive correlation with Severe Depression ( $r=0.662$   $p<0.001$ ) and social dysfunction ( $r=0.656$   $p<0.001$ ), whereas Severe Depression showed a positive correlation with the dimension of social dysfunction ( $r=0.830$   $p<0.001$ ) (Table 3).

### 4. Discussion

The present study aimed at exploring the extent of the impact of the lockdown and social distancing measures on university students' mental health and quality of life and researching the factors that either aggravate or protect students' mental health and quality of life in the duration of the pandemic. Our findings answered both questions. Our results showed that the pandemic had significantly affected the mental health and quality of life of young people. Participating students reported symptoms of anxiety and insomnia (51%), physical symptoms (48%), social dysfunction (55%), and 10% severe depression symptoms. One-third of the participants (34%) reported a significant decrease in their quality of life. Research by Cao et al. (2020) showed that similar highly restrictive measures to contain the pandemic lead 24.9% of students to experience intense stress and anxiety.

Additional findings posed that the pandemic as a stress factor is positively related to anxiety, stress, family income, and the academic life of students. Aslan, Ochnik, & Çınar (2020) revealed that students' mental health has been at high risk during the pandemic. More than half of the students met the diagnostic criteria of a generalized anxiety disorder (52%) and depression (63%). Kecojevic et al., (2020) stated that the pandemic revealed widespread concerns about the impact of social isolation, social distance, increased stress, depression, anxiety, and other negative emotions and has generated financial difficulties.

Regarding the factors that play an aggravating role in students' mental health, our findings showed that six factors seem to have a detrimental effect on students' mental and psychological states, namely: Residence without family during the lockdowns, the deterioration of the financial situation of the family, the loss of employment of the students themselves, their lack of close contact with friends, young age and gender.

A significant factor contributing to increased stress in young people is related to *residing with or without their family* during the measures to contain the spread of the virus. Our findings agree with similar research, confirming that the quality of the relationships with family members can be a significant dimension of people's mental health and quality of life (Xiao, 2020; Thompson et al., 2016; Chen et al., 2020; Stavrova & Fetchenhauer, 2015; Greenfield & Marks, 2006). Zhang and Ma (2020) examined the impact of Covid19 on people's mental health and quality of life. They found that the virus outbreak caused panic and anxiety, and they underlined how crucially important it is to enjoy family support in this situation. Also, Hadjicharalambous et al. (2021) confirmed that people who enjoyed good cooperation between their family members regarding daily activities exhibited higher scores on general health and quality of life, positive mood, and physical and psychological health. Furthermore, Demetriou et al. (2021) revealed that students who resided with their families during the lockdown had significantly lower stress levels than those who did not; in fact, the students who were surrounded by family reported less frequent terror symptoms than the students who were living alone during that time.

Our data analysis showed that the *deterioration of the family's financial situation* during the consecutive lockdowns significantly impacted our subjects' well-being. The mental health of our participants who became bystanders as their family income kept shrinking reported more insomnia and anxiety symptoms than participants whose family income remained stable during the time. Similar research in Cyprus (Hadjicharalambous et al., 2020) showed that the mental health of participants whose family income was negatively affected presented more depression, anxiety, and insomnia symptoms than those whose family income was not affected by the quarantine and lockdown measures. In fact, participants whose family income



had remained stable also reported a better quality of life than those whose family income has been affected. Nguyen et al. (2020), Nguyen et al. (2017), Ha et al. (2014) showed similar results, namely that people with higher family income enjoy a better quality of life and are more resilient toward mental health problems. Shigemura et al. (2020), Zettler et al. (2020), Rajbhandari (2020) supported that there is an economic impact of the Covid19, which affects people's mental health and quality of life.

The *employment status* of young adults during the pandemic also seems to negatively impact their mental health and quality of life. Participants who lost their jobs during the lockdown measures presented higher stress levels, reported more frequent psychosomatic symptoms and, consequently, had lower scores on their quality of life. According to Epifanio et al. (2021), people who became unemployed due to the Covid19 outbreak reported significantly lower levels on both physical and psychological quality of life measures than individuals who maintained their job with no changes and did not have to move back with their parents due to financial distress. Brydsten et al. (2015), Norström et al. (2019) highlighted a significant relationship between unemployment and poorer health-related quality of life due to unemployment's economic and social consequences. Work has a central part in most individuals' lives and offers income security and social protection, participation in society, and healthier self-esteem.

In the months of the pandemic's peak and while the restraining measures were at their strictest (lockdowns and physical/social distancing), over half of our participants (58%) stated their *social relations with their network of friends* were negatively affected or disrupted. Similar findings regarding Cypriot university students were recorded by Demetriou (2021), who underlined that students exhibited many adverse psychosocial effects from the strict implementation of lockdown measures, experienced a deterioration of their social and sexual relations, and felt that they received less support from their immediate social network.

The *younger population* of our sample, namely students in the age group 18-20 years, reported more symptoms of anxiety, social dysfunction, and a lower quality of life than their older colleagues. Qui et al. (2020) posed similar findings where the young adult population presented the highest score on the CPDI (COVID-19 Peritraumatic Distress Index) with a mean (SD) of 27.76 (15.69). In his study, younger age, female gender, a history of stressful events, having a friend infected with Covid19, and medical problems were associated with higher stress levels. Horesh et al. (2020), Pieh, Budimir & Probst (2020), and Rossi et al. (2020) reported that younger adults showed lower quality of life and higher levels of stress, anxiety, and depression. Also, findings are confirmed by Hadjicharalambous et al. (2020), whereas young participants experienced higher anxiety and depression levels and reported more frequent incidents of depression and somatic symptoms than the older ones. Similar results by Wang et al. (2020) showed that young participants were more affected psychologically than older ones during the Covid19 pandemic crisis. Demetriou et al. (2020) suggested that older people showed higher levels of psychological resiliency and adaptation than the younger participants.

Lastly, our findings revealed a significant difference between the *genders* regarding symptoms of severe depression; women reported a higher frequency of such symptoms than men in our sample. Similar results related to our research are presented by Guo et al., (2016), stating that women are more likely to experience increased anxiety and depression compared to men. Aslan, Ochnik, & Çınar, (2020), illustrated that female students had higher perceived stress levels. In relation to other studies, female students reported significantly higher stress levels compared to male students (Wang, et. al., 2020; Zhang, et. al., 2020; Rogowska, et. al., 2020; Qiu, et. al., 2020; Stanton, et. al., 2020; Solomou & Constantinidou, 2020; Fujiwara, et. al., 2020; Sallam, et. al., 2020). Demetriou's findings (2021) resulting from the application of Beck's Anxiety Inventory in a sample of

Cypriot students confirm our findings. She reported that young women exhibited significantly higher levels of stress compared to the men of their sample. Of the 33,8% of the participants with acute anxiety, 76% were women, and 23,8% were men, and out of the 56,8% of the students with moderate stress, 76,2% were women, and 23% were men.

## 5. Conclusion

Research shows that populations affected by Covid19 have been experiencing multiple threats to their mental health and well-being. The psychological strain across these populations owes to factors such as quarantine and the constant changes in one's perceived reality, being in contact with possibly infected patients, and the



constant looming existential anxiety. All these factors, plus many more, have a detrimental impact on the well-being of an individual. This impact is well documented among general populations and among university students (Andrews and Wilding 2004). Understanding the factors affecting peoples' psychological well-being during the Covid19 pandemic crisis is, therefore, of paramount importance.

Increasing reports and studies inform of higher frequencies of depression, anxiety, psychological distress and suicidal behaviors during COVID-19 which necessitates an in-depth understanding of the mental health epidemiology during this pandemic (Hossain et al., 2020).

It seems that younger adults are more vulnerable to higher levels of distress due to more exposure to a large amount of information from social media that can easily trigger stress (Cheng et al., 2014). Moreover, the younger adult group is prone to more unstable relationships, lack of economic independence, and less adaptive coping strategies (Jackson, 2002) compared to those who have had years of experience behind them (Demetriou, 2020). These factors may also contribute to the higher level of distress young adults face when confronted with harsh life situations.

We believe that individuals and society, in general, will require extensive and systematic interventions to heal the wounds in the aftermath of the Covid19 pandemic crisis. In this framework, governments must give vital importance and attention to the mental health of their citizens and especially to the well-being of their young citizens. Research results showed no magic formulas or characteristics that enable young people to adapt and cope with the difficulties in this situation. Young adults showed psychological resilience in some circumstances but not in others; the power of protective factors as a shield against difficulties and obstacles can change at different times in their lives. Therefore, it is crucial to design preventive programs to empower and support young people to successfully manage and adapt to the environment, despite the challenges, difficulties, and obstacles that will arise in their lives.

Given the Covid19 pandemic, crisis research has shown that the networks of family and friends, the community, and the individual characteristics of young adults play an essential role in the coping strategies they will implement to develop and maintain ongoing mental health and a high quality of life. Adaptation to the crisis requires, amongst other things, maintaining high activity levels, self-care, and keeping friends and family close. Learning to focus more on the positives rather than prioritizing the negatives is also essential for well-being in these times of adversity.

### Acknowledgements

The authors are grateful to the people who participated in the research.

**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

### References

1. Andrews, B., & Wilding, J. M. (2004). The relation of depression and anxiety to life-stress and achievement in students. *British journal of psychology*, 95(4), 509-521
2. Arslan, G., & Yildirim, M. (2021). Coronavirus stress, meaningful living, optimism, and depressive symptoms: a study of moderated mediation model. *Australian Journal of Psychology*, 73(2), 113-124. doi:<https://doi.org/10.1080/00049530.2021.1882273>
3. Aslan, I., Ochnik, D., & Çınar, O. (2020). Exploring perceived stress among students in Turkey during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 17(23), 8961. doi:<https://doi.org/10.3390/ijerph17238961>
4. Bao, Y., Sun, Y., Meng, S., Shi, J., & Lu, L. (2020). 2019-nCoV epidemic: address mental health care to empower society. *The Lancet*, 395(10224), e37–e38. doi:[https://doi.org/10.1016/S0140-6736\(20\)30309-3](https://doi.org/10.1016/S0140-6736(20)30309-3)
5. Batra, K., Sharma, M., Batra, R., Singh, T. P., & Schvaneveldt, N. (2021). Assessing the Psychological Impact of COVID-19 among College Students: An Evidence of 15 Countries. *Healthcare*, 9, (2) 222. Multidisciplinary Digital Publishing Institute. doi:<https://doi.org/10.3390/healthcare9020222>



6. Bhuiyan, A. I., Sakib, N., Pakpour, A. H., Griffiths, M. D., & Mamun, M. A. (2020). COVID-19-related suicides in Bangladesh due to lockdown and economic factors: case study evidence from media reports. *International Journal of Mental Health and Addiction*, 1-6. doi: <https://doi.org/10.1007/s11469-020-00307-y>.
7. Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395, 912-920. doi:[https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8).
8. Brydsten, A., Hammarström, A., Strandh, M., & Johansson, K. (2015). Youth unemployment and functional somatic symptoms in adulthood: results from the Northern Swedish cohort. *The European Journal of Public Health*, 25(5), 796-800. doi: <https://doi.org/10.1093/eurpub/ckv038>
9. Buchanan, J.L. (2012). Prevention of depression in the college student population: a review of the literature. *Arch Psychiatr Nurs*. 26(1):21-42. doi: 10.1016/j.apnu.2011.03.003. PMID: 22284078
10. Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry research*, 287 (5), 112934-40. doi: [10.1016/j.psychres.2020.112934](https://doi.org/10.1016/j.psychres.2020.112934)
11. Chang J, Yuan Y and Wang D (2020) Mental health status and its influencing factors among college students during the epidemic of new coronavirus pneumonia. *Journal of Southern Medical University* 40, 171–176.
12. Chen, C. Y., & Hong, R. Y. (2010). Intolerance of uncertainty moderates the relation between negative life events and anxiety. *Personality and Individual Differences*, 49(1), 49-53. doi:10.1016/j.paid.2010.03.006
13. Demetriou, L. (2021). The Impact of the Covid19 Lockdown Measures on Mental Health and Well-Being and the role of Resilience: A Review of Studies in Cyprus. *Journal of Humanities and Social Science*, 4 (3), 54-65. DOI: 10.9790/0837-2604035465
14. Demetriou, L., Drakontides, M., & Hadjicharalambous, D. (2020). Psychological Resilience, Hope, and Adaptability as Protective Factors in Times of Crisis: A Study in Greek and Cypriot Society During the Covid-19 Pandemic. *Social Education Research*, 2 (1), 20-34. doi: <https://doi.org/10.37256/ser.212021618>
15. Demetriou, L., Keramioti, L., & Hadjicharalambous, D. (2021). Examining the Relationship between Distance Learning Processes and University Students' Anxiety in Times of COVID-19. *European Journal of Social Sciences Studies*, 6(2), 123-141. doi: 10.46827/ejsss.v6i2.1012
16. Epifanio, M. S., Andrei, F., Mancini, G., Agostini, F., Piombo, M. A., Spicuzza, V., ... & La Grutta, S. (2021). The impact of COVID-19 pandemic and lockdown measures on quality of life among Italian general population. *Journal of Clinical Medicine*, 10(2), 289. <https://doi.org/10.3390/jcm10020289>
17. Fountoulakis K, Iakovidis B, Iakovidis A, Christofidis A, Hierodiakonou Ch. (1997). The adjustment of Life Satisfaction inventory in the Greek population. *Psychiatry*, 8: 292-304
18. Fujiwara, D., Dolan, P., Lawton, R., Behzadnejad, F., Lagarde, A., Maxwell, C., Peytrignet, S. (2020). The Wellbeing Costs of COVID-19 in the UK: An Independent Research Report, Simetrica-Jacobsand; the London School of Economics and Political Science: 1–14. doi:10.3390/ijerph17238961
19. Garyfallos, G., Karastergiou, A., Adamopoulou, A., Moutzoukis, C., Alagiazidoy, E., Mala, D., & Garyfallos, A., (1991). Greek version of the General Health Questionnaire: Accuracy of translation and validity. *Acta psychiatrica Scandinavica*, 84, 371-37.
20. Goldberg DP, Hillier VF. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine*, 9:139-145.
21. Greenfield, E. A., & Marks, N. F. (2006). Linked lives: Adult children's problems and their parents' psychological and relational well-being. *Journal of Marriage and Family*, 68(2), 442-454.
22. Gunnell, D., Appleby, L., Arensman, E., Hawton, K., John, A., Kapur, N., Khan, M., O'Connor, R. C., Pirkis, J., & COVID-19 Suicide Prevention Research Collaboration. (2020). Suicide risk and prevention during the COVID-19 pandemic. *The Lancet Psychiatry*, 7, 468–471. [https://doi.org/10.1016/S2215-0366\(20\)30171-1](https://doi.org/10.1016/S2215-0366(20)30171-1).

23. Guo, X., Meng, Z., Huang, G., Fan, J., Zhou, W., Ling, W., ... & Su, L. (2016). Meta-analysis of the prevalence of anxiety disorders in mainland China from 2000 to 2015. *Scientific reports*, 6(1), 1-15. doi:<https://doi.org/10.1038/srep28033>
24. Ha, N. T., Duy, H. T., Le, N. H., Khanal, V., & Moorin, R. (2014). Quality of life among people living with hypertension in a rural Vietnam community. *BMC Public Health*, 14(1), 833. doi:<https://doi.org/10.1186/1471-2458-14-833>
25. Hadjicharalambous, D., Athanasiadi-Charchanti, D., & Demetriou, L. (2021). The Impact of the Covid-19 Social Isolation Measures on the Resilience and Quality of Life of Working Mothers. *Social Education Research*, 2(1), 41-51. doi: <https://doi.org/10.37256/ser.212021619>
26. Hadjicharalambous, D., Parlalis, S., & Erotocritou, K. (2020). The psychological impact of COVID-19 lockdown measures on Cypriots' mental health and quality of life. *Journal of Interdisciplinary Sciences*, 4(2), 15-28.
27. Ho, C. S., Chee, C. Y., & Ho, R. C. (2020). Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Ann Acad Med Singapore*, 49(1), 1-3.
28. Horesh, D., Kapel Lev-Ari, R., & Hasson-Ohayon, I. (2020). Risk factors for psychological distress during the COVID-19 pandemic in Israel: Loneliness, age, gender, and health status play an important role. *British Journal of Health Psychology*, 25(4), 925-933. doi: [10.1111/bjhp.12455](https://doi.org/10.1111/bjhp.12455)
29. Hossain, M. M., Tasnim, S., Sultana, A., Faizah, F., Mazumder, H., Zou, L., & Ma, P. (2020). Epidemiology of mental health problems in COVID-19: A review. PMID: 33093946 PMCID: PMC7549174 doi: 10.12688/f1000research.24457.1
30. Kecojevic, A., Basch, C. H., Sullivan, M., & Davi, N. K. (2020). The impact of the COVID-19 epidemic on mental health of undergraduate students in New Jersey, cross-sectional study. *PloS one*, 15(9), e0239696. doi:<https://doi.org/10.1371/journal.pone.0239696>
31. Khan, A. H., Sultana, M. S., Hossain, S., Hasan, M. T., Ahmed, H. U., & Sikder, M. T. (2020). The impact of COVID-19 pandemic on mental health & wellbeing among home-quarantined Bangladeshi students: a cross-sectional pilot study. *Journal of affective disorders*, 277, 121-128. doi: [10.1016/j.jad.2020.07.135](https://doi.org/10.1016/j.jad.2020.07.135)
32. Lai J, Ma S, Wang Y, Cai Z, Hu J, Wei N, Wu J, Du H, Chen T, Li R, Tan H, Kang L, Yao L, Huang M, Wang H, Wang G, Liu Z and Hu S (2020) Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA Network Open* 3, 1–12. doi:10.1001/jamanetworkopen.2020.3976
33. Liu N, Zhang F, Wei C, Jia Y, Shang Z, Sun L, Wu L, Sun Z, Zhou Y, Wang Y and Liu W (2020) Prevalence and predictors of PTSS during COVID-19 outbreak in China hardest-hit areas: gender differences matter. *Psychiatry Research* 287, 1–7. doi: [10.1016/j.psychres.2020.112921](https://doi.org/10.1016/j.psychres.2020.112921)
34. Ma, Z., Zhao, J., Li, Y., Chen, D., Wang, T., Zhang, Z., & Liu, X. (2020). Mental health problems and correlates among 746 217 college students during the coronavirus disease 2019 outbreak in China. *Epidemiology and psychiatric sciences*, 29, e181. doi:<https://doi.org/10.1017/S2045796020000931>
35. Mamun, M. A., & Griffiths, M. D. (2020). First COVID-19 suicide case in Bangladesh due to fear of COVID-19 and xenophobia: Possible suicide prevention strategies. *Asian Journal of Psychiatry*, 51, e102073. doi: [10.1016/j.ajp.2020.102073](https://doi.org/10.1016/j.ajp.2020.102073)
36. Massé R. (2000). Qualitative and quantitative analyses of psychological distress: methodological complementarity and ontological incommensurability. *Qual Health Res.*, 10(3):411-23. doi: 10.1177/104973200129118426. PMID: 10947485
37. McGregor, S. L.T. (2020). Conceptualizing family well-being [McGregor Monograph Series 202001]. Seabright, NS: McGregor Consulting Group. [www.consultmcgregor.com](http://www.consultmcgregor.com)
38. Møller, V., & Roberts, B. J. (2021). *Quality of life and human well-being in Sub-Saharan Africa: prospects for future happiness*. Springer Nature.
39. Mudenda, S., Mukosha, M., Mwila, C., Saleem, Z., Kalungia, A. C., Munkombwe, D., & Kazonga15, E. (2021). Impact of the coronavirus disease on the mental health and physical activity of pharmacy students at the University of Zambia: a cross-sectional study. *International Journal of Basic & Clinical Pharmacology*, 10(4), 324. doi: <https://dx.doi.org/10.18203/2319-2003.ijbcp20211010>

40. Muthny FA, Koch U, Stump S., (1990). Quality of life in oncology patients. *Psychotherapy and Psychosomatics*, 54, 145-160.
41. Nguyen, H. C., Nguyen, M. H., Do, B. N., Tran, C. Q., Nguyen, T. T., Pham, K. M., & Duong, T. H. (2020). People with Suspected Covid-19 Symptoms Were More Likely Depressed and Had Lower Health-Related Quality of Life: The Potential Benefit of Health Literacy. *Journal of Clinical Medicine*, 9(4), 965. doi:<https://doi.org/10.3390/jcm9040965>
42. Nguyen, L. H., Tran, B. X., Le, Q. N. H., Tran, T. T., & Latkin, C. A. (2017). Quality of life profile of general Vietnamese population using EQ-5D-5L. *Health and Quality of Life Outcomes*, 15(1), 199. doi:<https://doi.org/10.1186/s12955-017-0771-0>
43. Norström, F., Waenerlund, A. K., Lindholm, L., Nygren, R., Sahlén, K. G., & Brydsten, A. (2019). Does unemployment contribute to poorer health-related quality of life among Swedish adults? *BMC Public Health*, 19(1), 1-12. doi:<https://doi.org/10.1186/s12889-019-6825-y>
44. Park, M., Cook, A. R., Lim, J. T., Sun, Y., & Dickens, B. L. (2020). A systematic review of COVID-19 epidemiology based on current evidence. *Journal of Clinical Medicine*, 9(4), 967. doi:10.3390/jcm9040967
45. Pfefferbaum, B., & North, C. S. (2020). Mental Health and the Covid-19 pandemic. *New England Journal of Medicine*. 383, doi:510-512 10.1056/NEJMp2008017
46. Pieh, C., Budimir, S., & Probst, T. (2020). The effect of age, gender, income, work, and physical activity on mental health during coronavirus disease (COVID-19) lockdown in Austria. *Journal of psychosomatic research*, 136, doi:[10.1016/j.jpsychores.2020.110186](https://doi.org/10.1016/j.jpsychores.2020.110186)
47. Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *General psychiatry*, 33(2). doi:[10.1136/gpsych-2020-100213](https://doi.org/10.1136/gpsych-2020-100213)
48. Rajbhandari, M. M. S. (2020). Economy Pandemic: A Crisis Management towards Post COVID-19. A Commentary Opinion. *Journal of Interdisciplinary Sciences*, 4(1), 1-8.
49. Rajkumar, R. P. (2020). Covid-19 and mental health: A review of the existing literature. *Asian Journal of Psychiatry*, doi:[10.1016/j.ajp.2020.102066](https://doi.org/10.1016/j.ajp.2020.102066)
50. Rogowska, A. M., Kuśnierz, C., & Bokszczanin, A. (2020). Examining anxiety, life satisfaction, general health, stress and coping styles during COVID-19 pandemic in Polish sample of university students. *Psychology Research and Behavior Management*, 13, 797-811. doi:[10.2147/PRBM.S266511](https://doi.org/10.2147/PRBM.S266511)
51. Rossi, R., Socci, V., Talevi, D., Mensi, S., Niolu, C., Pacitti, F., ... & Di Lorenzo, G. (2020). COVID-19 pandemic and lockdown measures impact on mental health among the general population in Italy. *Frontiers in psychiatry*, 11, 790. doi:<https://doi.org/10.3389/fpsy.2020.00790>
52. Sallam, M., Dababseh, D., Yaseen, A., Al-Haidar, A., Ababneh, N. A., Bakri, F. G., & Mahafzah, A. (2020). Conspiracy beliefs are associated with lower knowledge and higher anxiety levels regarding COVID-19 among students at the University of Jordan. *International journal of environmental research and public health*, 17(14), 4915. doi:10.3390/ijerph17144915
53. Shah, K., Kamrai, D., Mekala, H., Mann, B., Desai, K., & Patel, R. S. (2020). Focus on mental health during the coronavirus (Covid-19) pandemic: applying learnings from the past outbreaks. *Cureus*, 12(3), e-7405. doi:[10.7759/cureus.7405](https://doi.org/10.7759/cureus.7405)
54. Shigemura, J., Ursano, R. J., Morganstein, J. C., Kurosawa, M., & Benedek, D. M. (2020). Public responses to the novel 2019 coronavirus (2019-nCoV) in Japan: mental health consequences and target populations. *Psychiatry and Clinical Neurosciences*, 74(4), 281. doi: [10.1111/pcn.12988](https://doi.org/10.1111/pcn.12988)
55. Shimizu, K. (2020). 2019-nCoV, fake news, and racism. *The Lancet*, 395(10225), 685-686. doi:[https://doi.org/10.1016/S0140-6736\(20\)30357-3](https://doi.org/10.1016/S0140-6736(20)30357-3)
56. Solomou, I., & Constantinidou, F. (2020). Prevalence and predictors of anxiety and depression symptoms during the COVID-19 pandemic and compliance with precautionary measures: Age and sex matter. *International Journal of Environmental Research and Public Health*, 17(14), 4924. doi:10.3390/ijerph17144924
57. Stanton, R., To, Q. G., Khalesi, S., Williams, S. L., Alley, S. J., Thwaite, T. L., ... & Vandelanotte, C. (2020). Depression, anxiety and stress during COVID-19: associations with changes in physical activity, sleep, tobacco and alcohol use in Australian adults. *International Journal of Environmental Research and Public Health*, 17(11), 4065. doi:10.3390/ijerph17114065

58. Stavrova, O., & Fetchenhauer, D. (2015). Married and cohabiting parents' well-being: The effects of a cultural normative context across countries. *Journal of Social and Personal Relationships*, 32(5), 601-632.
59. Tanhan, A., Yavuz K. F., Young, J. S., Nalbant, A., Arslan, G., Yıldırım, M., Ulusoy, S., Genç, E., Uğur, E., & Çiçek, İ. (2020). A proposed framework based on literature review of online contextual mental health services to enhance wellbeing and address psychopathology during COVID-19. *Electronic Journal of General Medicine*. 17 (6): em254 . doi:<https://doi.org/10.29333/ejgm/8316>
60. Thompson, A. E., Anisimowicz, Y., Miedema, B., Hogg, W., Wodchis, W. P., & Aubrey-Bassler, K. (2016). The influence of gender and other patient characteristics on health care-seeking behaviour: a QUALICOPC study. *BMC family practice*, 17(1), 1-7. doi:<https://doi.org/10.1186/s12875-016-0440-0>
61. Van Bavel, J. J., Boggio, P., Capraro, V., Cichocka, A., Cikara, M., Crockett, M., & Ellemers, N. (2020). Using social and behavioural science to support Covid-19 pandemic response. *Nature Human Behaviour*, 1-12. doi:<https://doi.org/10.1038/s41562-020-0884-z>
62. Wang C, Horby PW, Hayden FG and Gao GF (2020a). A novel coronavirus outbreak of global health concern. *The Lancet* 395, 470–473. doi: [10.1016/S0140-6736\(20\)30185-9](https://doi.org/10.1016/S0140-6736(20)30185-9)
63. Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS and Ho RC (2020b). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health* 17, 1–25. doi:10.3390/ijerph17051729
64. Wang J, Cheng Y, Zhou Z, Jiang A, Guo J, Chen Z and Wan Q (2020c). Psychological status of Wuhan medical staff in fighting against COVID-19. *Medical Journal of Wuhan University*, 41, 547–550.
65. Wang Y, Gao J, Chen H, Mao Y, Chen S, Dai J, Zheng P and Fu H (2020d). The relationship between media exposure and mental health problems during COVID-19 outbreak. *Fudan University Journal of Medical Sciences*, 47, 1–6.
66. Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., McIntyre, R. S., ... & Ho, C. (2020). A longitudinal study on the mental health of general population during the Covid-19 epidemic in China. *Brain, Behavior, and Immunity*, 87, 40–48. [10.1016/j.bbi.2020.04.028](https://doi.org/10.1016/j.bbi.2020.04.028).
67. Wang, X., Lei, S. M., Le, S., Yang, Y., Zhang, B., Yao, W., ... & Cheng, S. (2020). Bidirectional influence of the COVID-19 pandemic lockdowns on health behaviors and quality of life among Chinese adults. *International journal of environmental research and public health*, 17(15), 5575. doi:10.3390/ijerph17155575
68. Waseem, M., Aziz, N., Arif, M. U., Noor, A., Mustafa, M., & Khalid, Z. (2020). Impact of post-traumatic stress of covid-19 on mental wellbeing of undergraduate medical students in Pakistan. *PAFMJ*, 70(1), S220-24.
69. World Health Organization. (2002). *The world health report 2002: reducing risks, promoting healthy life*. World Health Organization.
70. World Health Organization. (2020). *Mental health and psychosocial considerations*.
71. Xiao H, Zhang Y, Kong D, Li S and Yang N (2020) The effects of social support on sleep quality of medical staff treating patients with Coronavirus Disease 2019 (COVID-19) in January and February 2020 in China. *Medical Science Monitor*, 26, 1–8. doi: [10.12659/MSM.923549](https://doi.org/10.12659/MSM.923549)
72. Xu, Z., Li, S., Tian, S., Li, H., & Kong, L. Q. (2020). Full spectrum of Covid-19 severity still being depicted. *Lancet* (London, England), 395(10228), 947.
73. Zandifar, A., & Badrfam, R. (2020). Iranian mental health during the COVID-19 epidemic. *Asian Journal of Psychiatry*, 51, 101990. <https://doi.org/10.1016/j.ajp.2020.101990>.
74. Zettler, I., Schild, C., Lilleholt, L., & Böhm, R. (2020). Individual differences in accepting personal restrictions to fight the Covid-19 pandemic: Results from a Danish adult sample. *PsyArXiv Preprints*, 10
75. Zhang, S. X., Wang, Y., Rauch, A., & Wei, F. (2020). Unprecedented disruption of lives and work: Health, distress and life satisfaction of working adults in China one month into the COVID-19 outbreak. *Psychiatry research*, 288, doi: [10.1016/j.psychres.2020.112958](https://doi.org/10.1016/j.psychres.2020.112958)
76. Zhang, Y., & Ma, Z. F. (2020). Impact of the Covid-19 Pandemic on Mental Health and Quality of Life among Local Residents in Liaoning Province, China: A Cross-Sectional Study. *International Journal of Environmental Research and Public Health*, 17(7), 2381. doi:10.3390/ijerph17072381