

## Psychological Anxiety of COVID-19 Pandemic and its Effect on Academic Performance of University Students

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### Abstract

*The problem and the aim of the study. The COVID-19 pandemic has caused a worldwide emergency, with consequences for more than just physical health, including mental health and educational outcomes. University students are particularly vulnerable since they are dealing with a number of challenges at once, such as the health effects of the pandemic both directly and indirectly, the sudden shift to online schooling, and doubts about their future employment opportunities. Critical to understanding the far-reaching effects of the pandemic on student lives, learning processes, and mental health is research into COVID-19-related psychological anxiety and its impact on academic performance in higher education. This research subject seeks to investigate the extent to which college students are anxious about the COVID-19 pandemic and how this unusual stressor affects their participation in class, grades, and general satisfaction with their education. By looking at it from this perspective, we may identify the many ways in which the epidemic has affected the future generation of researchers and professionals, and then develop strategies to help them cope with the difficulties they will face. Research methods. The study employed a correlational descriptive approach to investigate the psychological distress caused by the COVID-19 epidemic and its influence on the academic performance of university students in Jordan. The sample consisted of 300 undergraduates (male and female) from the College of Educational and Psychological Sciences at Amman Arab University in the 2021–2022 school year, with the entire student body serving as the population. The survey tool was distributed online via social media, leading to 379 respondents, and a chance sample was used because it was feasible to reach a large number of participants—especially during the pandemic. Results. The study results show a detailed range of stress and worry, with average scores varying from 2.8 to 4.1 among 25 items. Major concerns involve social isolation, indicated by an average score of 4.1 for feeling alienated because of social distancing measures, and academic disruptions, with an average score of 4.0 for experiencing a lack of control over academic life owing to the pandemic. There is a significant gender gap between the reported levels of anxiety and its effect on academic performance; 40% of female students and 30% of male students express high levels of anxiety, and the average academic impact score for female students is 3.0 while the average score for male students is 2.5. The data also shows that anxiety levels and the detrimental effect they have on academic performance are getting worse over the years, with fourth-year students having the worst levels of anxiety (45%) and the greatest academic impact score (3.5). The findings highlight the importance of providing students with personalized support to help them cope with the psychological effects of the pandemic. Scientific novelty: Novelty resides in the study's exhaustive examination of COVID-19's psychological effects on Jordanian university students, with a particular emphasis on anxiety levels and how they relate to academic achievement. By looking at the effects of the pandemic across genders and academic years, it shows how anxiety levels rise over time and how there are clear differences between the sexes. The study offers important insights into the many ways in which the pandemic affected students' academic performance and mental health by using a large sample size, a correlational descriptive approach, and social media to reach a wide audience during the epidemic.*

**Keywords:** *Asynchronous virtual education; Covid-19; Factor analysis; ICT; University faculty.*

### Introduction

Upon the appearance of the SARS-CoV-2 virus in multiple nations, it became apparent that its prevalence differed from that of previous comparable epidemics, like SARS. It appears that people are experiencing what may be appropriately described as coronavirus anxiety due to the high incidence rate of coronavirus disease in 2019 (COVID-19) and the fact that there is currently no effective vaccination (World Health Organization (WHO), 2020)

The world has been facing a global health crisis since the end of the year (2019), when COVID-19 pandemic emerged as a health-threatening epidemic. In addition to the increasing number of infected cases and deaths,

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there are social, psychological, and economic implications of this epidemic. As billions of individuals are subject to home quarantine, many institutions and facilities have also been closed to achieve social distancing as a measure to contain the spread of the virus, as the coronavirus pandemic and social distancing have changed the way individuals interact Banerjee & Rai (2020)

There is no doubt that individuals suffer from anxiety in general, and this is a natural part. However, there are individuals who suffer from anxiety until it turns from being a condition to a distinctive feature of a person, which makes the individual suffer from unexplained fears such as lack of sleep, nervousness, tension, and eating disorder, and fears increase when any situation threatens the psychological and security system of the individual, and how with a pandemic such as the COVID-19 pandemic individuals exceeded all families and societies, rather, it reoriented the compass of the entire world to contain the repercussions of this mysterious virus, significantly since the lines of defence have receded in the face of the magnitude of misleading rumours that the media and social media had the first lead, followed by the hourglass of death, as for the absence of social relations, it had a negative impact that worked on the prevalence of fear, anxiety, tension and frustration in society of all sects, which significantly restricted freedoms, especially with the distance education system and their absence from the school environment, and the alarm sounded when the consequences of social distancing, with its effects on mental health and emotional state, became evident to us with more feelings of anxiety and psychological distress (Bandelow & Michaelis, 2015).

Anxiety consists of an emotional component represented in feelings of fear, panic, apprehension, tension, self-panic, and discomfort, and a cognitive component represented in the adverse effects of these feelings on a person's ability to correctly perceive the situation and think about the consequences of failure and fear of the future. In addition to that, there is a physiological component represented as a result of the state of fear of stimulation and activation of the independent nervous system, which leads to many physiological changes, including increased heart rate, rapid breathing, paleness, sweating, as well as a behavioral component that includes the content of caution or avoidance behavior (Alnasraween et al. (2023).

From the preceding, we can say that anxiety is a complex emotional response of fear, tension, and distress - a danger or a real threat or fear of a wave towards the entire personality (Saleh, 2015).

Anxiety also includes a feeling of uneasiness, turmoil, and anxiety related to future events, a feeling of distress, and the thought is preoccupied with pain or an expected or imminent problem (Schaeffer & Milman, 1989).

Anxiety is as old as humanity and was explained by many theories that looked at it from different perspectives. It made it easier for us to diagnose its presence in the community as a poison. The analytic theory is the first to interpret anxiety as a state of psychological pain that acts as a signal to the ego that there is a danger of falling (Slater, 2020).

As for the behavioral school, anxiety was learned from the environment in which the individual lives under positive support and negative support. The behaviorists viewed anxiety as a fear response elicited by stimuli that would not trigger this response. However, it acquired the ability to provoke this response due to a previous learning process, as fear and anxiety are one emotional response. Anxiety is a conditional fear response, and the individual is not aware of its natural stimulus (Dabbeesh, 2011).

Concerning the human viewpoint, they considered that anxiety is the fear of the future and what may be brought about by events threatening man's existence and the individual's humanity. An individual's anxiety increases when he loses some of his energy and abilities due to neglect in health or having an incurable disease, or if he gets older, this means fewer opportunities and a lower success rate in his future (WHO, 2023).

While the cognitive theory is based on the idea that people's emotions are a result of their way of thinking, it focuses on the irrationality of thinking and the confusion of reality, which is one of the leading causes of mental illness. The cognitive model's meaning is based on the idea that what the individual thinks about himself is essential matters closely related to his correct or satisfactory behaviour Ruggiero et al., (2018).

Cognitive social learning theory also showed that anxiety and fear could be learned in four ways: -

Direct experience of pain or discomfort (such as a direct visit to the dentist he was harsh in the dislocation of the tooth)

Alternative experience: Observing another person experience pain or discomfort in a particular situation (a film about a horrific plane crash).

Symbolic teaching (readings on specific dangers or diseases, cancer, for example)

Symbolic reasoning (conclusion: If snakes are dangerous and live in forests, then forests are dangerous)

Moreover, since they see that fears and anxiety occur through learning, their treatment is by re-learning (Saleh, 2015).

### *The Problem of the Study*

Concerns about the COVID-19 pandemic and its possible effects on college students' mental health and academic performance have prompted this investigation. Unprecedented obstacles and unknowns have been thrust upon pupils since the pandemic broke out. These include school cancellations, worries about their own safety, and social isolation as a result of lockdown procedures. Students' capacity to pay attention, concentrate, and actively participate in their studies might be severely affected by this widespread anxiety. It is also unclear how anxiety affects students differently depending on their gender and year in school. Educators, legislators, and mental health professionals must have a thorough understanding of the type and level of COVID-19-related psychological anxiety among university students in order to develop effective strategies to support students and lessen the impact of this illness on their academic performance.

Thus, the study aims to investigate the psychological anxiety experienced by university students during the COVID-19 pandemic and its potential impact on their academic performance.

### *Questions of the Study*

The current study seeks to answer these questions:

1. What is the level of psychological anxiety about the Corona Covid-19 pandemic among the study sample in Jordan?
2. In what ways do the levels of psychological anxiety associated with COVID-19 vary between male and female university students, and how does this variation influence their academic achievement?
3. To what extent does the degree of psychological anxiety attributed to COVID-19 impact the academic performance of students across different academic years, encompassing 1st, 2nd, 3rd, and 4th years?

### *Previous Studies*

Negri et al. (2023) study put Milman and colleagues' (2019) explanatory model for the detrimental effects of the COVID-19 pandemic on mental health to the test. The participants, numbering 680, were asked to fill out an online survey that covered topics such as demographics, COVID-19 stressors, symptoms of mental health issues, and the psychological processes related to the pandemic that we thought might mediate the negative impact of these stressors on participants' mental health. Rather than COVID-19 stressors and demographics taken together, the results showed that the severity of mental health symptoms might be best characterized by the following psychological processes: core belief violation, meaning made of the pandemic, vulnerability, and mortality perspective. These psychological processes further moderated the influence of COVID-19 stresses on all mental health outcomes. Core belief violation, meaning-making,

and felt vulnerability and death were all negatively impacted by COVID-19 stresses. Those whose fundamental beliefs were more severely challenged by the pandemic, who failed to find significance in it, and who felt a greater sense of exposure and impending death, consequently, suffered from a more severe state of mental illness. This study's findings point to potential intervention strategies to mitigate the effects of pandemic-like events at the individual, community, societal, and governmental levels.

Szepietowska et al. (2023) examined how different personality traits moderated the relationships between COVID-19's effects and how people viewed the changes to their lives that occurred throughout the pandemic's two-year duration was the primary motivation for the research. An individual's personality traits, a set of rules for how they process and make sense of the world around them, may act as a buffer to forecast how they will react to and make sense of these changes. A total of 492 persons representing a variety of countries were surveyed online. Polish, Ukrainian, British, and Brazilian nationalities made up the majority. The participants' ages ranged from 18 to 70 ( $M = 34.14$ ,  $SD = 13.17$ ). Our research utilized the following instruments: the COVID-19 Sense of Life Changes Questionnaire, the Revised Impact of Event Scale, and the Ten Item Personality Inventory. The demographic information and health records were collected. Everyone agreed that the epidemic era brought about some undesirable changes to their daily routines. Increased levels of hyperarousal, avoidance, and intrusion occurred alongside a pessimistic view of life changes. People who scored low or moderate on the Conscientiousness and Agreeableness scales and had a low level of emotional stability were also less likely to engage in intrusions or avoidance behaviors and were more likely to assess changes in some areas of their lives positively. Respondents who scored high on these personality qualities did not show these associations. According to research, one's personality plays a significant mediating role in the connections between the traumatic effects of the pandemic and the experience of life-altering changes.

Liu et al. (2023) research aimed to examine how students felt about themselves and their ability to cope with the COVID-19 epidemic. Situated in southern Iran, this cross-sectional study examined 335 schoolchildren from the provinces of Sistan and Baluchestan using convenience sampling. To gather information, a survey was created and disseminated online using various social media platforms. As part of the survey, participants were asked to fill out several standard questions about themselves, as well as answers to questions on COVID-19, their anxiety level, and their self-efficacy level. A significance level of less than 0.05 was used in the data analysis using IBM SPSS version 24. The research showed that there is a strong inverse relationship ( $r = -0.23$ ,  $P < 0.001$ ) between the anxiety levels of children and their confidence in their own abilities. Anxiety was found to be predicted by various factors, such as low self-efficacy ( $\beta = -0.29$ ,  $P < 0.001$ ), being female ( $\beta = 0.27$ ,  $P < 0.001$ ), worrying about family members contracting COVID-19 ( $\beta = 0.18$ ,  $P < 0.001$ ), receiving persistent advice from others to take preventive measures ( $\beta = 0.14$ ,  $P < 0.005$ ), education level ( $\beta = -0.12$ ,  $P < 0.017$ ), and perceived risk of contracting the virus ( $\beta = -0.11$ ,  $P < 0.030$ ). All told, these factors explained 17% of the variation in anxiety. Research like this shows that during epidemics, it is crucial to pay attention to kids' mental health, particularly their anxiety levels. The findings also suggest that boosting students' self-efficacy during a pandemic can effectively support their mental health.

Kindred & Bates (2023), In this meta-analysis, researchers analyzed how the pandemic affected people's social anxiety and compiled their findings qualitatively. In a comprehensive search of several databases, including Web of Science Core Collection, Embase, PsychINFO, Scopus, EBSCOhost, Cochrane Central Register of Controlled Trials, and Proquest Central—Dissertations and Theses, thirty-three studies were found to match the inclusion criteria. Findings indicate that social anxiety has increased across the board as a consequence of the pandemic, with women and those with lower incomes being more at risk. Inadequate coping mechanisms decreased social and mental health, a lack of social support, and infection with the SARS-CoV-2 virus are additional concerns. A decline in mental health overall may be a risk for individuals diagnosed with Social Anxiety Disorder. Most of the studies used in the reviewed literature were cross-sectional, making it difficult to draw any conclusions about cause and effect. Because many studies have failed to include mediation variables, associations may also be exaggerated. Research indicates that social anxiety, whether it was there before the pandemic or developed as a result of the epidemic, has been associated with several unfavorable mental health consequences.

Seidel et al. (2023) used both prospective and cross-sectional methods to study the links between meaning and mental health issues (such as anxiety, sadness, and COVID-19-related PTSD). According to their hypothesis, meaning moderates the link between being negatively affected by the pandemic and distress, and it inversely predicts peri-pandemic distress. From a meaning violations vantage point, we also investigated cross-sectional correlations between meaning components and distress. A total of 109 undergraduates filled out surveys that measured anxiety before (from 2019 to 2020) and during (from 2020 to 2020) pandemic (including subcomponents of anxiety, sadness, anxiety, and post-traumatic stress disorder). We adjusted for errors related to family history, which means that we anticipated a decrease in anxiety and depression but no change in PTSD. After accounting for mistakes within families, there was a persistent relationship between peri-pandemic meaning and distress. There was no moderating effect of meaning on the association between pandemic impact and distress. A meaning violations perspective was partially supported, and a substantial relationship existed between discomfort and the meaning subcomponent comprehension. A sense of purpose became a strong indicator of pre- and post-pandemic anxiety. To confirm the validity of the current results and to investigate the potential causal effect of meaning on suffering, they should be repeated experimentally and longitudinally.

Eroglu et al. (2023) study set out to answer the question, "What factors affect college students' psychological resilience and fear of COVID-19?" by examining the relationship between students' personality qualities and these variables. With 690 pupils, a cross-sectional trial was finished. We computed descriptive statistics and correlations to evaluate the model's fit, looked into direct and indirect effects, and used a path analysis. Fear of COVID-19 was influenced by neuroticism and conscientiousness, while psychological resilience was influenced by neuroticism, openness to experience, and conscientiousness. The examined model adequately accounts for the impact of the research variables.

Flesia et al. (2023) research aimed to determine how the general public's level of hope and psychological distress relates to the COVID-19 pandemic. Five hundred and four Pakistanis who were asked to fill out the Adult Hope Scale and the COVID-19 Peritraumatic Distress Index (CPDI) in a cross-sectional fashion made up the sample. We used hierarchical regression analysis to study the connection between demographics and psychological anguish; to examine the relationship between hope and psychological distress, we used bivariate Pearson correlation analysis. When people had more hope, they reported less emotional and mental suffering. Psychological discomfort was more common among married women, those with lower levels of education, those who lived in metropolitan areas, those who were older, and those who were part of nuclear families. This study adds to our understanding of what factors contribute to positive mental health during emergencies and provides valuable information for public health policy and program implementation by highlighting the protective influence of hope on COVID-19-related psychological discomfort.

Sadeghzadeh et al. (2022) study set out to examine, among other things, how university students in Iran feel about the COVID-19 outbreak and what variables may be contributing to their worry. The survey ran from March 11th to the 18th, 2020, and 264 students from an Iranian institution filled it out electronically. A total of six subscales were featured in the electronic questionnaire. These subscales were as follows: The Corona Anxiety Inventory, the Anxiety Sensitivity Index, the Social Trust Questionnaire, the Health Anxiety List, the Corona Facts Quiz, and the Trust in National Action in The Face of Corona Inventory. Anxiety brought on by the COVID-19 epidemic was found to have a substantial association with the general health concern, the physical component of anxiety sensitivity, and information connected to coronavirus facts, as demonstrated by the findings of the regression analysis. On the other hand, the belief in honesty at the community level and the confidence in the national actions taken against Corona were significant negative predictors of anxiety brought on by the COVID-19 outbreak. Because of these findings, countries now experiencing the COVID-19 pandemic may need to adjust their health programs to accommodate the pandemic.

Ahorsu et al. (2021) research compared COVID-19-related factors, anxiety, and suicide ideation among Taiwanese university students from different cultural backgrounds. College students (n=529) participated



in an online cross-sectional survey distributed via email. The students were evaluated using a battery of questions covering topics such as their level of vulnerability to COVID-19, how much support they felt they had, where they found information about the virus, how satisfied they were with the support they received, anxiety, and thoughts of self-harm or suicide. Comparing overseas students with local students, the former showed a higher vulnerability to COVID-19 ( $p < 0.001$ ), lower levels of resource sufficiency ( $p < 0.001$ ), and anxiety ( $p < 0.001$ ). With all  $p$ -values  $< 0.05$ , staying with family members, contentment with assistance, and seeking information were the factors that predicted anxiety among international students.

In contrast, information-seeking predicted anxiety among local students ( $p < 0.001$ ). In addition, among international students, suicidal ideation was predicted by staying with family members, being susceptible to COVID-19, and having enough resources (all  $p$ -values  $< 0.05$ ). In contrast, among local students, being male and being satisfied with support were the predictors of suicidal ideation (all  $p$ -values  $< 0.05$ ).

Al Qudah et al. (2021) research looks at how often and how high the fear of contracting the COVID-19 virus is in several Middle Eastern nations and how this fear varies by gender, occupational status, and country. Another objective was to determine the relationship between age, daily smartphone use hours, worry of contracting COVID-19, and the likelihood of developing an addiction to smartphones. Six hundred and fifty-one men and women from Egypt, Jordan, Saudi Arabia, and the UAE participated. The ages of the participants varied from eighteen to seventy-three ( $M = 33.36$ ,  $SD = 10.69$ ). Concerns about contracting the COVID-19 virus were assessed using a questionnaire the authors created. In addition, the present study used a translated, modified, and validated version of the Italian Smartphone Addiction Inventory. The results showed that 10.3% of participants had severe anxiety, 37.3% had average anxiety, and 52.4% had low concern about contracting COVID-19. In terms of COVID-19 anxiety, the four nations were approximately average: Egypt ( $M = 2.655$ ), Saudi Arabia ( $M = 2.458$ ), the UAE ( $M = 2.413$ ), and Jordan ( $M = 2.336$ ). Concerns about contracting the COVID-19 virus were significantly lower in Egypt than in Jordan. Among the three samples from Jordan, Egypt, and the United Arab Emirates, there was a statistically significant gender gap that favored the females. When looking at occupational and socioeconomic status, no significant differences were discovered. There was a positive and statistically significant correlation between COVID-19 anxiety, daily smartphone use hours, and age and smartphone addiction. Anxiety about contracting the COVID-19 virus was the most significant predictor of dependence on smartphones, followed by the number of hours used each day. Predicting smartphone addiction by age did not yield statistically meaningful results. The data from this study provide important insight into the relationship between smartphone addiction and fear of contracting the COVID-19 virus, as well as its effects on mental health and cognition.

Tadmouri, R. & Fawaz (2020) study aimed to identify the levels of mental health among the Lebanese during the COVID-19 pandemic in light of some demographic variables such as age, gender, social status, educational level, employment status, and economic level, as the survey method was used, and the study sample consisted of (2347) individuals, whose ages ranged from 13 to 84 years. The results showed that the Lebanese enjoy a high degree of mental health, and the results indicate that those who fall into the category of adolescence suffer more from symptoms than the stage of adulthood and the elderly. Females have more disease symptoms and have lower levels of mental health.

Xiong et al. (2020), in their study entitled “The effect of the COVID-19 pandemic on the mental health of the population of various countries of the world from the beginning of the epidemic”, systematic preventive research was carried out to identify relevant studies. The articles were selected based on limited criteria. The results revealed high rates of anxiety, depression, post-traumatic stress disorder, and psychological distress symptoms in the general population during the Corona pandemic in China, Spain, Iran, the United States of America, Turkey, Nepal, and Denmark.

Cao. et al. (2020) study in China aimed to investigate the psychological impact of the COVID-19 pandemic on students in China from the China Medical College, using the descriptive survey method on a sample of (7143) students using the general anxiety disorder scale. The results showed that 0.9% of the respondents suffer from severe anxiety, 2.7% from moderate anxiety, and 21.3% from mild anxiety.

The results of the Wahhabism et al. (2020) study, entitled The Impact of the Level of Psychological Anxiety of the COVID-19 pandemic among the Omani and Bahraini families and their relationship to some variables on two samples from the two countries, where the number of respondents from the Sultanate of Oman reached (13.5), and the number from the Kingdom of Bahrain reached (731). The groups were from the age of 21-40 and above according to the educational level; note that psychological anxiety levels fall within the framework of anxiety to a moderate degree. Those over 40 are less anxious than others, those with a lower educational level are more anxious than higher academic levels, and those who do not work are more anxious than the rest.

Karpenko et al. (2020) study aimed to investigate the impact of the COVID-19 pandemic on anxiety, depression, and distress - results of an online survey amid the epidemic in Russia. The sample consisted of (352 residents in Russia during their commitment to homes in light of the Corona pandemic in April, and the sample was randomly assigned. The search tool consisted of survey questions on the Hospital Anxiety and Depression Scale (HADS) via the Internet. An analysis of the results showed that most respondents (63.92%) had no personal experience of infection with the Coronavirus. Normal levels of anxiety and depression scores were prevalent in the sample. The leading causes of distress are 1) Fear of financial problems in the future (76.3%). 2) Violating plans and disrupting everyday life (49.5%). 3) Fear for the health of elderly relatives or those with chronic diseases (77.2%) and 4) the percentage of persons in self-isolation (53.1%). The level of anxiety and depression in the study sample of the population in Russia during the COVID-19 pandemic did not exceed normal in non-epidemiological conditions. The evaluation indicated levels of distress and existing emotional problems associated with the need for psychological support during the pandemic.

Son et al. (2020) conducted a study to investigate the effects of the COVID-19 pandemic on the mental health of college students in the United States. The sample consisted of 195 male and female students from a public university in the United States. The study tool consisted of survey questions during the student interview. Results showed that 138 (71%) had increased stress and anxiety due to the COVID-19 outbreak. Multiple stressors that contributed to increased levels of stress, anxiety, and depressive thoughts were identified among the students. These concerns included fear and anxiety about their health and loved ones (177/195); that is, 91% reported the adverse effects of the epidemic, difficulty concentrating (173/195, or 89%), and disturbed sleep patterns (168/195, or 86%), the decrease in social interactions due to physical distancing (167/195) (86%), and increased concerns about academic performance (159/195, i.e., 82%).

Liang et al. (2020) study aimed to assess young people's mental health two weeks after the emergence of Coronavirus (COVID-19) in China and to study mental health factors among youth groups. A cross-sectional study was conducted two weeks after the emergence of the Coronavirus in China. The study included a total of 584 adolescents who completed a form on the cognitive state of Coronavirus, the General Health Questionnaire (GHQ-12), The list of post-traumatic disorder - Civilian Version (PCL-C), and measurement of harmful adaptation methods, where Univariate analysis and univariate logistic regression were used to assess the effect of Coronavirus on youth mental health. This cross-sectional study indicates that approximately 40.4% of youth participants have a risk of psychological problems, and 14.4% of young participants experience post-traumatic disorder symptoms. The univariate logistic regression showed that young people's mental health was statistically related to less educated (OR = 8.71, 95% CI: 1.97--38.43) and related to employees in institutions (OR = 2.36, 95% CI: 1.09--5.09), and who suffers from the symptoms of the post-traumatic disorder (OR = 1.05, 95% CI: 1.03--1.07), and the use of harmful adaptation methods (OR = 1.03, 95% CI: 1.00--1.07). This study indicates that approximately 40.4% of the youth population tends to have psychological problems. Thus, this was conclusive evidence that infectious diseases, such as the Coronavirus, may significantly impact young people's mental health. Therefore, local governments must develop effective psychological interventions for groups of youth. Moreover, it is essential to consider the youth's educational level and occupation during the interventions.

Moussa & Kjour (2020) study aimed to identify the level of psychological anxiety due to the Corona pandemic among the residents of Al-Ahsa Governorate and to reveal the differences in the psychological level that are attributable to some demographic variables (gender, age, educational qualification, identity, and profession). The researchers used the descriptive approach to achieve this goal, and the study sample

consisted of (1511) subjects. The two researchers applied the psychological anxiety questionnaire due to Corona - and the Statistical Package for Social Sciences (SPSS) was used to analyze the data. The results showed a decrease in the level of anxiety due to the Corona epidemic among Al-Ahsa Governorate residents and the presence of differences attributed to variables (gender, age, educational qualification, and profession). There were no differences attributed to the identity variable.

## Materials and Methods

The correlational descriptive approach was used for its suitability for the present study.

### *The Study Population and its Sample*

The population of the study consisted of all students at Amman Arab University in Jordan, while the sample consisted of 300 male and female students from the College of Educational and Psychological Sciences during the academic year 2021/2022.

### *The Study Tool*

## Findings and Discussion

**Results related to the first question:** What is the level of psychological anxiety about the Corona Covid-19 pandemic among the study sample in Jordan?

**Table (1):** Psychological Anxiety Levels among University Students in Jordan Regarding COVID-19

N	Items	Mean	Standard deviation
1	I feel nervous or anxious about the impact of the COVID-19 pandemic on my university studies.	3.8	1.2
2	I find it difficult to control worrying thoughts related to how COVID-19 may affect my academic performance.	3.5	1.1
3	I experience increased worry due to uncertainty about how the pandemic will impact my university education.	4.0	1.0
4	I feel restless or unable to relax because of concerns about COVID-19 and its implications for my studies.	3.6	1.3
5	I have trouble concentrating on my university assignments or exams due to anxiety about COVID-19.	3.7	1.1
6	I feel overwhelmed by the constant updates and changes related to COVID-19 and university policies.	3.9	1.0
7	I experience physical symptoms such as rapid heartbeat or sweating when thinking about the impact of COVID-19 on my academic life.	2.8	1.4
8	I feel irritable or easily agitated because of the challenges posed by COVID-19 for my university studies.	3.3	1.2
9	I have difficulty sleeping due to worries about COVID-19 and its effects on my academic performance.	3.4	1.3
10	I experience a loss of interest in my university courses or extracurricular activities because of the COVID-19 situation.	3.2	1.5
11	I feel hopeless or pessimistic about the future of my university education because of COVID-19.	3.6	1.1
12	I feel isolated or lonely due to social distancing measures and limited interactions with peers and professors at university.	4.1	0.9
13	I experience changes in appetite (increase or decrease) due to stress and anxiety about COVID-19 and its impact on my academic life.	2.9	1.3



14	I feel guilty about not being able to perform as well academically due to challenges caused by COVID-19.	3.0	1.2
15	I have intrusive thoughts or images related to COVID-19 that interfere with my ability to focus on my university studies.	3.1	1.4
16	I feel a sense of dread or doom about the impact of COVID-19 on my academic goals and aspirations.	3.5	1.3
17	I experience physical symptoms such as headaches or stomachaches due to stress and anxiety about COVID-19.	3.2	1.3
18	I feel on edge or easily startled because of concerns about the uncertainty surrounding the pandemic and its effects on my university experience.	3.4	1.1
19	I experience difficulty making decisions or completing tasks at university due to stress and anxiety about COVID-19.	3.3	1.2
20	I feel a sense of disconnection from my university community because of restrictions and changes brought about by COVID-19.	3.8	1.0
21	I experience changes in energy levels (increase or decrease) due to stress and anxiety related to COVID-19.	3.1	1.5
22	I feel overwhelmed by responsibilities related to adhering to COVID-19 precautions (e.g., wearing masks, practicing social distancing) while at university.	3.7	1.1
23	I experience feelings of helplessness or hopelessness about my university education and future career prospects due to the pandemic.	3.9	1.1
24	I feel a loss of control over my academic life because of the disruptions caused by COVID-19.	4.0	1.0
25	I experience changes in mood (e.g., mood swings, irritability) as a result of stress and anxiety about COVID-19 and its impact on my university studies.	3.6	1.2

The data presented in Table 1 provides significant insights into the emotional and academic well-being of 300 male and female university students in Jordan who are afflicted with psychological anxiety as a result of the COVID-19 pandemic. The results, derived from a 25-item survey, reveal a wide range of anxiety levels, with mean scores falling between 2.8 and 4.1 on a 5-point Likert scale. The students' worries about social isolation and the pandemic's effect on their education were particularly high. On one hand, they reported feeling lonely because of social distancing measures (Item 12, Mean = 4.1), and on the other, they reported feeling helpless because of the disruptions brought on by COVID-19 to their academic lives (Item 24, Mean = 4.0). The most significant causes of anxiety, according to these findings, are changes to academic habits and social isolation. They are also quite worried about the future of their education and their careers, as well as the fact that university regulations regarding COVID-19 are always changing, both of which have high mean scores (around 3.9). It appears that there is some variety in replies, as indicated by the standard deviation across all questions. This could mean that some kids are more affected than others by these concerns. There has to be focused support and interventions to address the issues that university students in Jordan have been facing due to the COVID-19 pandemic's substantial impact on their psychological well-being and academic experiences.

**Results related to the second question:** In what ways do the levels of psychological anxiety associated with COVID-19 vary between male and female university students, and how does this variation influence their academic achievement?

**Table 2:** Anxiety Levels by Gender

Gender	High Anxiety (%)*	Moderate anxiety (%) *	Low anxiety (%)*	Average Academic Impact Score (%) *
Male	30%	50%	20%	2.5
Female	40%	45%	15%	3.0

Table 2 shows that male and female college students report different levels of psychological anxiety and that this anxiety has different effects on their academic performance as a result of the COVID-19 pandemic. The average academic impact score among male students was 2.5 on a scale where higher values imply greater negative influence on academic performance; 30% expressed high levels of anxiety, 50% experienced moderate anxiety, and 20% reported low levels of worry. On the other hand, almost half of the female students expressed high anxiety, while almost half reported moderate anxiety, and only 15% indicated low anxiety. Female students were more negatively affected in terms of their academic performance than male students, with an average academic impact score of 3.0. Female students reported higher levels of worry and experienced a bigger impact on their academic performance due to the epidemic, highlighting gender variations in the psychological reaction. As a result, strategies for assisting college students emotionally and academically throughout the pandemic should be gender appropriate.

**Results related to the third question:** To what extent does the degree of psychological anxiety attributed to COVID-19 impact the academic performance of students across different academic years, encompassing 1st, 2nd, 3rd, and 4th years?

Table 3: Anxiety Levels by Academic Year

Academic year	High anxiety	Moderate anxiety	Low anxiety	Average Academic Impact Score
1 <sup>st</sup> year	35%	40%	25%	2.8
2 <sup>nd</sup> year	30%	50%	20%	2.7
3 <sup>rd</sup> year	40%	45%	15%	3.2
4 <sup>th</sup> year	45%	40%	15%	3.5

Table 3 provides an overview of the correlation between anxiety levels and academic performance among university students during various academic years during the COVID-19 pandemic. Anxiety levels among first-year students were evenly distributed: 35% reported high anxiety, 40% moderate anxiety, and 25% low anxiety. Additionally, the average academic impact score was 2.8, indicating that anxiety had a somewhat unfavorable influence on students' studies. The average academic impact score for second-year students was 2.7, demonstrating a little decline in high anxiety (30%) and low anxiety (20%), with a significant increase in intermediate anxiety (50%). The academic impact score was 3.2, suggesting that third-year students' anxiety had a more detrimental influence on their performance in the classroom, and the incidence of severe anxiety was 40% greater. Consistent with previous years, fourth-year students reported the greatest levels of high anxiety (45%) and the most significant academic impact score (3.5), indicating that anxiety and its detrimental effects on academic performance worsen with each passing year. This trend indicates that students' mental health and academic performance are becoming more and more affected by the cumulative impacts of continuous pandemic-related stresses as they proceed through their university careers.

## Discussion of the Results

The survey results from Table 1 show that university students in Jordan are experiencing psychological anxiety as a result of the COVID-19 epidemic. This aligns with the global observations that there were more mental health difficulties during this time. There is a clear congruence between this and the research by Negri et al. (2023), which highlighted the importance of psychological mechanisms in mitigating the effect of COVID-19 stresses on psychological well-being. Consistent with these worldwide tendencies, Jordanian students report high levels of anxiety about academic interruption and social isolation, indicating that the epidemic has had an effect on students' mental health everywhere. The emphasis on academic disruptions and the individual mean scores, however, provide a more nuanced picture of how these worldwide events play out in Jordan.

Table 2 shows that there are gender disparities in anxiety levels and their academic influence. This is in line with what Son, Hegde, Smith, Wang, & Sasangohar (2020) found: that college students experience increased

stress and anxiety, with females generally reporting higher levels. The gendered aspects of pandemic anxiety are brought to light by this agreement, which emphasizes the necessity for mental health interventions that are sensitive to gender in Jordan and other university settings throughout the world.

According to Liu et al. (2023) 's findings on the negative link between anxiety levels and self-efficacy, students' confidence in their capacity to cope reduces as academic expectations grow. Table 3, which details the trajectory of anxiety over academic years, corresponds with this idea. The increasing anxiety levels and its negative effects on academic performance from the first to the fourth year are consistent with previous research, suggesting that the stresses caused by the pandemic have a cumulative effect on students' mental health and academic performance.

In order to put the survey results from Jordanian university students into context within the broader body of research on the psychological impact of COVID-19, these discussions synthesize the insights from prior studies. Similarities with worldwide studies show that the pandemic had similar effects on students' mental health in many settings, while the data from Jordan provide a fresh view on the difficulties students there confront. In light of this integration, it is clear that strategies to promote students' mental health and academic performance throughout the pandemic need to be regionally and nationally tailored to meet the unique requirements of students in various parts of the world, including differences in gender and academic year.

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