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The Impact of Covid-19 on the Mental Health and Academic Achievement of the Students at North Border University in Saudi Arabia

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Abstract

The main objective of this research was to analyze the influence of covid-19 on the mental health (mental status, risk perception) and academic achievement. A specific aim guided the research; to evaluate mental health and academic achievement of the students in the north border university in Saudi Arabia during the outbreak of covid-19. Furthermore, questionnaires were given based on a simple random sampling to select sample size of 377 from 1875 academics in the north border university in Saudi Arabia. The number of 320 questionnaires was returned with a 88% response rate for all those selected to participate. Descriptive analysis, reliability test, correlation test, was applied in this research. Moreover, this study's results a strong correlation between covid-19 and students mental health (mental status, risk perception) also their academic achievements in the north borders university in Saudi Arabia.

Keywords: Covid-19, mental health, mental status, risk perception, academic achievement.

* Introduction

The Corona-virus disease (covid-19) outbreak that began in December 2019 has become a global threat. To control the rate of infection, several countries have adopted

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isolation strategies. Early in the development of infectious diseases, these strategies have proven to be an effective prevention and control strategy that can significantly reduce the number of susceptible and infected people (Zhou et al., 2019).

The core logic of the isolation strategy is to reduce the spread of the pandemic by implementing social distancing in the local community. Faced with the spread of covid-19, young people are an extremely vulnerable group. Research on pandemic influenza found that closing schools and requiring them to stay at home reduces the infection rate by more than 90% (Glass and Glass, 2008). However, a long-term and strict isolation policy widely used to ensure social distancing will significantly change young individuals' social networks and behaviors. For example, they may use mobile phones more to obtain information, resulting in internet addiction. This may cause young people to experience poor sleep quality (Liu et al., 20 The Coronavirus disease (covid-19) outbreak that began in December 2019 has become a global threat. To control the rate of infection, several countries have adopted

2017), greater loneliness (Hidayati, 2019), and depressive symptoms (Jun 2016), as well as a sense of estrangement from family, school, and peers, and even

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loss of self-control (Huang and Leung, 2009) or psychiatric disorders (Santos et al., 2015).

Moreover, students also have to communicate with their families more often at close quarters, perhaps leading to family conflicts (Su et al., 2018). The social panic caused by covid-19 is a growing catastrophe for young individuals, which may cause anxiety, affective disorders, post-traumatic stress disorder, and a series of other adverse effects. Through applying school, family, community, and self-education programs, their ability to respond to the crisis could be effectively improved (Codreanu et al., 2014).

Social isolation due to the outbreak of covid-19 has affected mental health and academic achievement for students worldwide. Northern Border University in Saudi Arabia is one of the universities that applied E-learning due to the social isolation during the outbreak of covid-19. This study aimed to analyze the impact of Covid-19 on the mental health (mental statutes and risk perception) and academic achievement of the students in the northern border university in Saudi Arabia from the perception of the university academics.

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* Problem Statement and Research Questions

The mental health of students is one of the most critical issues that should be taken into consideration by academics and specialists. Furthermore, the latest outbreak of covid-19 and its effect on all sectors, especially the educational sector and the quarantine, then shifting to e-learning in the schools and universities worldwide, make the student's mental health issue one of the most critical issues that should be studied.

The university students have been affected by the spread of Covid-19, and most students have many symptoms of stress, fear, and anxiety; this affects their attendance in distance learning classes, and consequently, their academic achievement. Northern Border University is one of the universities that implemented e-learning in the period of the spread of

Covid-19, but what is the impact of the social isolation experienced by students during the epidemic, and how was it affected? Accordingly, their mental health and how their academic achievement has been affected, this study will answer these questions by measuring the impact of Covid-19 on students' mental health through the dimensions of psychological state and anticipation of danger and the extent of the impact of Covid-19 on their academic achievement.

The main question of this study is; what are the effect of Covid-19 on mental health (mental status and risk perception) and students' academic achievement in the north border university in Kingdom Saudi Arabia. The following sub-questions can be derived from the main research question:-

1- Is there any effect covid-19 on the mental health (mental status) among the students in the north border university in Kingdom Saudi Arabia?

2- Is there any effect covid-19 on the mental health (risk perception) among the students in the north border university in Kingdom Saudi Arabia?

3- Is there any effect covid-19 on the academic achievement among the

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students in the north border university in Kingdom Saudi Arabia?

* Research Objectives

The main objective of this study is to analyze the effect of Covid-19 on the mental health (mental status and risk perception) and the academic achievement of the students in the north border university in Kingdom Saudi Arabia. The following sub-objectives can be derived from the main research question:-

1- To examine the effect of covid-19 on the mental health (mental status) among the students in the north border university in Kingdom Saudi Arabia

2- To analyze the effect of covid-19 on the mental health (risk perception) among the students in the north border university in Kingdom Saudi Arabia

3- To investigate the effect of covid-19 on the academic achievement among the students in the north border university in Kingdom Saudi Arabia.

* Research Hypotheses

H1: There is a significant effect of covid-19 on the mental health (mental status) among the students in the north border university in Kingdom Saudi Arabia at significance level α ≤ 0.05.

H1: There is a significant effect of covid-19 on the mental health (risk perception) among the students in the north border university in Kingdom Saudi Arabia at significance level α ≤ 0.05.

H1: There is a significant effect of covid-19 on the academic achievement among the students in the north border university in Kingdom Saudi Arabia at significance level α ≤ 0.05.

* Literature Review

1- Covid-19 and Mental Health

Mental health issues are the leading impediment to academic success. Mental illness can affect students' motivation, concentration, and social interactions, crucial factors for succeeding in higher education**.** The covid-19 pandemic has brought into focus the mental health of various affected populations. It is known that the prevalence of epidemics accentuates or creates new stressors, including fear and worry for oneself or loved ones, constraints on physical movement and social activities due to quarantine, and sudden and radical lifestyle changes. A recent review of virus outbreaks and pandemics documented stressors such as infection fears, frustration, boredom, inadequate supplies, inadequate information, financial loss,

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and stigma Son et al. (2020). Much of the current literature on the psychological impacts of covid-19 has emerged from the earliest hot spots in China. Although several studies have assessed mental health issues during epidemics, most have focused on health workers, patients, children, and the general population Jean-Baptiste et al. (2020).

Moreover, a recent poll by The Kaiser Family Foundation showed that 47% of those sheltering in place reported adverse mental health effects resulting from worry or stress related to covid-19 Araújo et al., (2020). Nelson et al. (2020) have found elevated anxiety and depressive symptoms among general population samples in North America and Europe. However, except for a few studies, notably from China Cao et al. (2020), there is sparse evidence of the current pandemic's psychological or mental health effects on college students, who are known to be a vulnerable population. Although the findings from these studies thus far converge on the uptick of mental health issues among college students, the contributing factors may not necessarily be generalizable to populations in other countries. As highlighted in multiple recent correspondences, there is an urgent need to assess the effects of the current pandemic on the mental health and well-being of college students Zhai and Du (2020). This study aims to identify the effect of a covid-19 pandemic on university students' mental health. Mental health in this study was measured by two dimensions based on a study by (Chen, Sun & Feng, 2020).

2- Mental Status

Mental status was assessed according to five symptoms, namely, depression, neurasthenia, fear, obsessive-compulsive disorder (OCD), and hypochondria, referring to the mental and behavioral questionnaire (Chen, 2002; World Health Organization [WHO], 2018). Participants were asked to rate their feelings during the outbreak of covid-19 (e.g., less energy than before or no interest in anything) on a 5-point scale from 1 (not at all) to 5 (extremely).

3- Risk Perception

Due to the significant uncertainty about the pandemic spread, young individuals' risk perception was divided into three types: anxiety,

vulnerability, and controllability (Ajzen, 2002). Among them, anxiety refers to the degree of anxiety of pandemic, the degree of pandemic's impact on individuals and society, and the continuity of pandemic's consequences, representing the risk dimensions that have the most significant impact on the individual's anxiety; Vulnerability refers to the estimates of the probability of respondents and the general population suffering from pandemic; Controllability refers to the sense of control of pandemic and the degree of mastery of pandemic related knowledge.

* Previous studies

1- Study of AlAteeq, Aljhani, and AlEesa (2020). The objective of this research was to discuss covid-19 as a newly discovered infectious that became pandemic. Since disease outbreaks can have mental health consequences, this study explored the perceived stress level among students during the covid-19 outbreak and suspension of in-person teaching in Saudi Arabia. A cross-sectional survey of a sample consisting of 367 students living in Saudi Arabia assessed socio-demographic characteristics, Perceived Stress Scale (PSS), and their emotions and concerns during the outbreak. Most participants were female (74.7%) and secondary school (79.8%) students. More than half of the participants showed moderate stress levels (55%), while 30.2% registered high levels. Females and university students showed a significant association with stress levels (p-value = 0.003 and 0.049, respectively). There was a moderate to a high level of stress among students in KSA at the start of the COVID-19 outbreak. This study found a significant correlation between a high level of stress and female university students. The integration of online counseling and stress management programs would help mitigate students' stress during distance learning.

2- Study Ghazawy et al. (2021). This study applied to university students at elevated risk for mental health problems. The covid-19 pandemic and subsequent public health measures to combat it burdened the students' lives with additional dramatic psychological impacts. This study aimed to investigate the psychological impacts that affected university students in Egypt during the covid-19 pandemic.

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An online survey was sent to the Egyptian university students via all means of online communication during the first week of May 2020 using non-probability snowball sampling. A survey included a short version of the Depression Anxiety Stress Scale-21 (DASS-21) and socio-demographic data. Overall, 70.5, 53.6, and 47.8% of Egyptian students had depression, anxiety, and stress, respectively. Being a female, having a relative or acquaintance infected with covid-19, having a preexisting chronic disease, and lacking psychological support from families, community, and universities increase the risk of depression, anxiety, and stress among Egyptian students. Being a medical student is associated with depression, while following news of the covid-19 pandemic is associated with increased anxiety. Egyptian students experience varying levels of psychological disturbance during a covid-19 pandemic. This study suggests that the mental health of the university students should be careful, monitored during the crisis, and the universities should provide psychological-oriented services adapted to these circumstances to mitigate their emotional impact on the students

3- Study of Usher et al. (2020). This study investigated covid-19 which spread rapidly, causing comprehensive scale loss of life and economic devastation. Efforts to contain it have resulted in measures such as closing borders and restrictions around travel, social activities, and attending places of worship. This rapid review has been conducted to systematically examine, synthesize, and critically appraise the available evidence on the relationship between pandemic-related behaviors and psychological outcomes. The methods were compliant with the PRISMA guidelines. A literature search was conducted from January 2010 to April 2020 using ProQuest, Web of Science, PsycINFO, PsycARTICLES, Scopus, SAGE Journals, and CINAHL. Of 3844 articles identified, the researchers included 11 quantitative articles in the final synthesis, representing data from 32 and 049 individual respondents from eight countries. Researchers also identified several behaviors during pandemics and categorized them into protective, preparedness, and perverse behaviors. The review showed that

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despite limited evidence regarding pandemic-related behaviors and psychological outcomes, the current findings showed that the psychological outcomes significantly impacted the adoption of the pandemic-related behaviors. Given the adverse effects of psychological outcomes on behaviors, the study recommends that mental health professionals promote mental health support to people exhibiting psychological distress resulting from similar events in the future. Also, we recommend that future research test the hypothesized effects of pandemics and psychological outcomes on behavior change.

4- A study by Al-Hanawi **et al. (2020) conducted on** Saudi Arabia has taken unprecedented and stringent preventive and precautionary measures against covid-19 to control its spread, safeguard citizens and ensure their well-being. Their knowledge and attitude toward COVID-19 influence public adherence to preventive measures. This study investigated the Saudi public's knowledge, attitudes, and practices toward COVID-19 during the pandemic. This study applied a cross-sectional, using data collected via an online self-reported questionnaire from 3,388 participants. To assess the differences in mean scores and identify factors associated with knowledge, attitudes, and practices toward COVID-19, the data were run through univariate and multivariable regression analyses, respectively. The majority of the study participants were knowledgeable about COVID-19. The mean COVID-19 knowledge score was 17.96 (SD = 2.24, range: 3–22), indicating a high level of knowledge. The mean score for attitude was 28.23 (SD = 2.76, range: 6–30), indicating optimistic attitudes. The mean score for practices was 4.34 (SD = 0.87, range: 0–5), indicating good practices. However, the results showed that men have less knowledge, less optimistic attitudes, and less good practice toward COVID-19 than women. We also found that older adults are likely to have better knowledge and practices than younger people. The study findings suggest that targeted health education interventions should be directed to this particularly vulnerable population, who may be at increased risk of contracting COVID-19. For example, COVID-19 knowledge may increase significantly

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if health education programs are specifically targeted at men.

5- Study of Wang et al. (2020). This paper surveys the mental health status and severity of depression and anxiety of college students in an extensive university system in the United States during the COVID-19 pandemic. An online survey was conducted among undergraduate and graduate students recruited from Texas A&M University via email. The survey consisted of two standardized scales—the Patient Health Questionnaire-9 and the General Anxiety Disorder-7—for depression and anxiety, and additional multiple-choice and open-ended questions regarding stressors and coping mechanisms specific to covid-19. Among the 2031 participants, 48.14% (n=960) showed a moderate-to-severe level of depression, 38.48% (n=775) showed a moderate-to-severe level of anxiety, and 18.04% (n=366) had suicidal thoughts. A majority of participants (n=1443, 71.26%) indicated that their stress/anxiety levels had increased during the pandemic. Less than half of the participants (n=882, 43.25%) indicated that they could cope adequately with the stress related to the current situation. The proportion of respondents showing depression, anxiety, and suicidal thoughts is alarming. Respondents reported academic-, health-, and lifestyle-related concerns caused by the pandemic. Given the unexpected length and severity of the outbreak, these concerns need to be further understood and addressed.

6- Study of Zha and Du (2020). This study applied on the College students encounter unique challenges leading to poor mental health in the wake of the covid-19 outbreak. Before the pandemic started, one in five college students experienced one or more diagnosable mental disorders worldwide. The covid-19 pandemic affects collegiate mental health underscores the urgent need to understand these challenges and concerns to inform the development of courses of action and public health messaging that can better support college students in this crisis. This article provides recommendations that prepare higher education institutions and health professionals for addressing collegiate mental health needs and challenges posed by covid-19.

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* Theoretical Framework

Hence, based on the above arguments, the conceptual framework below clarifies the influence of Covid-19 on mental status, risk perception, and academic achievement among the students at the Northern Border University in Kingdom Saudi Arabia. Covid-19 was the variable, while mental status, risk perception, and academic achievement were the dependent variables. Finally, Figure 1 represents the conceptual framework.
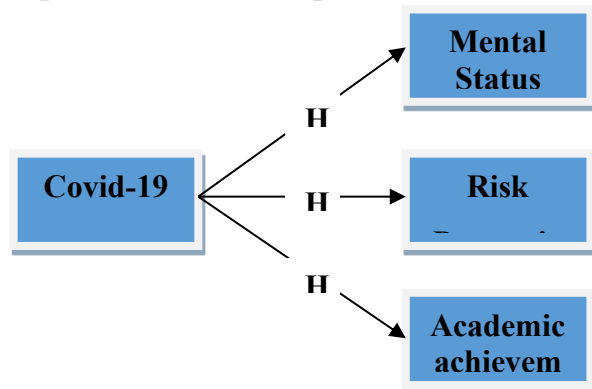

Figure 1: Research Framework

* Methodology

The researcher demonstrates the empirical research method needed to analyze the relationships between the independent and dependent variables among the students of the Northern Border University in the Kingdom of Saudi Arabia. Moreover, to meet the objectives of this research, to examine the effect of Covid-19 as an independent variable on mental status,

risk perception, and academic achievement as the dependent variables with one unique model using the statistical methods will be clarified in the following sections.

1- Research Methods and Design

In order to achieve the objectives of this study, a quantitative, descriptive research approach based on the survey to collect data from respondents adopted from the previous literate. The quantitative, descriptive survey method was employed to investigate the relationship between Covid-19, mental status, risk perception, and academic achievement among the Northern Border University in Kingdom Saudi Arabia**.**

2- Data Collection

Primary and secondary data collection techniques were utilized. Also, primary data were collected using questionnaires given to the academics in the Northern Border University in Saudi Arabia. The questionnaire is divided into distinct sections. The first part includes questions about the background information of the participants. The second part, which is part B, includes questions that will measure the perception of the respondent about the

Covid-19, and part C, which includes questions about their perception about the mental health of the students (mental status), part D contains a question that measures mental health of the students (risk perception). The last section, E, includes questions related to the respondent perceptions about students' academic achievement. Furthermore, the secondary data gathered contains a literature review on studies conducted on the same topic.

3- Data Analysis

Data were only gathered through an online survey due to the corona virus pandemic conditions resulting in the closing of the universities in Kingdom Saudi Arabia when conducting the recent research. Data were analyzed using Statistical Package for the Social Sciences (SPSS):-

1- Descriptive statistics, such as means, and standard deviations, are utilized.

2- The Cronbach's alpha coefficient for each of the four measures was calculated to evaluate the reliability and examine the validity of construct discrimination.

3- The hypothesis relationship proposed in this study was tested through simple regression analysis to determine the impact of the independent variable on the three dependent variables and to which extent they predict them.

4- Target Population

According to Sekaran and Bougie (2016), the population is the complete set of cases from which a sample is acquired. The target population for this study is the academics of the Northern Border University in the Kingdom of Saudi Arabia. The targeted respondent was selected randomly using a random sampling method; the questionnaire was designed using Google drive and sent to the academics by their emails. The number of the whole population in this study referring to the Northern Border University website was 1853. According to Krejci and Morgan (1970), the appropriate sample for the population is 377 respondents.

5- Response Rate

The sample size of this research contained 377 questionnaires sent to the academics of the Northern Border University. Table 1 shows that the 377 questionnaires administered, 320

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answered, giving an 85% response rate. Hair et al. (2010) indicated that the statistically significant response rate for analysis should be at least 50%. Table1 shows the research response rate.

Table1: Response Rate

Response Rate	Sample Size	Percentage
Returned questionnaires	320	%85
Unreturned questionnaires	57	%15
Total	377	%100

6- Descriptive Statistics

Descriptive analysis was appropriated to analyze the data by expressing or explaining the descriptive evaluation of the participants as a study variable. Moreover, descriptive analysis of participants' responses was employed to determine the participant's evaluation standards with average value scores. Based on Table 2, 320 valid answers' mean and standard deviation for each variable were investigated. The results reveal that the mean of the answers for the independent variables where necessary. The highest mean was for Covid-19 and the lowest for mental status. It appears that there is no low level of mean scores. Furthermore, the

participants agree that these variables impact digital marketing development.

Table 2: Means and Standard Deviations

Component	Mean	Std. Deviation
Covid-19	4.05	1.061
Mental status	3.89	1.501
Risk perception	3.97	1.316
Academic achievement	3.92	1.363

7- Scale Validity

Scale validity is the relationship between the degrees of the scale items to the total score if it measures, and the correlation coefficients indicate that components or items measure a standard variable (Murad and Suleiman, 2015). In order to achieve that, a correlation coefficient (Pearson) was extracted, which shows the ability of each item of the scale and its relation to the dimension to which it belongs. Negative items (-) or those whose correlation coefficient is less than (0.25) are considered low. It is preferable to delete it (Linn & Gronlund, 2012).

The following tables (1-5) showed that all the items of the independent variable covid-19 and independent variables (mental status, risk perception, and academic achievement) achieved scale validity because the Pearson correlation

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coefficient for all items with their dimensions was positive and was more significant than (0.25).

Table 3: Correlation Coefficients of covid-19 items

No.	Items	correlation coefficients	Sig
1	The impact of the covid-19 on the educational behavior of students	0.388	*.000
2	Covid-19 has changed the traditional view of learning	0.737	*.000
3	Covid-19 has increased anxiety and tension among students	0.699	*.000
4	Covid-19 has caused the so-called negative development of emotions in students	0.718	*.000
5	Covid-19 has caused so-called depression and pessimism among students	0.666	*.000
6	Covid-19 has affected the level of academic achievement of students	0.472	*.000
7	Covid-19 has reduced the degree of memory and concentration among students	0.621	*.000
8	Covid-19 has led to an increase in student absenteeism from electronic exams	0.662	*.000
9	The reason for the absence of school activities is due to the Covid-19 to	0.577	*.000

	psychological problems for students		

Table 4: Correlation Coefficients of mental status items

No.	Items	correlation coefficients	Sig
1	Students were experiencing feelings of depression during the isolation due to Covid-19	0.466	*.000
2	Students were suffering from neurasthenia during sanitary isolation due to Covid-19	0.626	*.000
3	Students were suffering from feelings of fear during the sanitary isolation due to Covid-19	0.610	*.000
4	The students were suffering from obsessive during Covid-19	0.596	*.000

Table 5: Correlation Coefficients of risk perception items

No.	Items	correlation coefficients	Sig
1	The degree of anxiety the students were experiencing during the outbreak of covid-19	0.597	*.000
2	The degree of weakness and physical and mental weakness that the students were suffering from during the outbreak of covid-19	0.552	*.000

No.	Items	correlation coefficients	Sig
3	The degree of students not controlling themselves and their emotional and mental emotions during the outbreak of covid-19	0.450	*.000
4	The degree of control of fear of the epidemic on students during the outbreak of covid-19	0.644	*.000

Table 6: Correlation Coefficients of academic achievement items

No.	Items	correlation coefficients	Sig
1	The level of interaction with the educational material was high among students during outbreak of covid-19	0.600	*.000
2	The medicine got good results in the tests that were conducted during the outbreak of covid-19	0.683	*.000
3	Students were interacting well with e-learning during outbreak of covid-19	0.567	*.000
4	The level of students in activities and homework was high during the outbreak of covid-19	0.641	*.000
5	Students were participating with their colleagues in the activities that are implemented during distance learning lectures during the outbreak of covid-19	0.635	*.000

8- Scale Reliabilities

Cronbach's alpha was utilized to measure and assess the instrument's internal consistency efficiency and reliability. In addition to this, Cronbach's alpha was utilized to examine the reliability of the findings, which came from measurements based on correlations between the factors of the study, also referred to as internal consistency. Furthermore, Cronbach's alpha is frequently utilized to test the average of items evaluated in tests and their relationships. More specifically, SPSS software is applied to analyze the reliability of the data collected. Finally, the consistency of the general scale of the current and selected conditions is confirmed by Cronbach's alpha, which should exceed the acceptable scale of 0.70 (Hair et al., 2010). In this study, Cronbach's alpha was used to measure item reliability. As shown below, the calculated Cronbach's alpha is between 0.88 and 0.93, which is an excellent result (see Table 7).

Table7: Reliability Analysis

Variables	Number of items	Alpha
Covid-19	9	0.871
Mental status	4	0.906
Risk perception	4	0.922

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Academic achievement	5	0.896

9- Normal Distribution

For further tests, data should be normally distributed. Skewness and Kurtosis are used to find the normality of the data distribution. Based on the test data shown in Table (7), which indicates that the data distribution was normal, as the (Skewness) values did exceed the range (±1) and the value of (Kurtosis) does not exceed (±1.96) at the level (0.05)

Table8: Normal distribution test

	Covid-19	Mental status	Risk perception	Academic achievement
Skewness	-0.050	0.309	0.086	0.296
Kurtosis	-0.012	-0.303	-0.298	-0.771

* Testing Hypotheses

Three hypotheses were generated for this study, as stated earlier. These call for the use of a Pearson correlation (for hypotheses 1, 2, and 3). The results of these tests and their interpretation are discussed as follows.

Correlation analysis was applied to investigate the relationships between Covid-19 as the independent variable and mental health measured by mental status, risk perception, and academic achievement. In the present study, the Pearson correlation coefficient was calculated. However, there are many opinions relating to the Pearson correlation (r) value interpretations for correlation analysis. After reviewing the literature and evaluating the comments, it was decided that Pallant (2005) suggestion should be chosen as the guideline for evaluating the value of the Pearson correlation coefficients, as explained in Table 9

Table 9: The guidelines for interpretation of the value of Pearson correlation (r)

The value of Pearson correlation (r)	Interpretation
0.10 to 0.29 or -.10 to -.29	Weak
0.30 to 0.49 or -.30 to -.49	Moderate
0.50 to 1.0 or -.50 to -1.0	Strong

Source: (Pallant, 2005)

Hypothesis H1: There is a significant relationship between covid-19 and mental health (mental status) among the students in the north border university in Kingdom Saudi Arabia at significance level $\alpha \leq 0.05$. The Pearson correlation (r) values from the correlation analysis are shown in Table 3.1. All coefficients were statistically significant. Table 3.2 shows that the correlations between covid-19 and mental status o among the students in the north border university in Kingdom Saudi Arabia were strong (r = 0. **615****

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respectively). Thus, **Hypothesis 1 was substantiated**.

Hypothesis H2: There is significant relationship between covid-19 and mental health (risk perception) among the students in the north border university in Kingdom Saudi Arabia at significance level α ≤ 0.05. The results of the Pearson correlation (r) values from the correlation analysis are shown in Table 3.1. All coefficients were statistically significant. Table 3.2 shows that the correlations between covid-19 and risk perception among the students in the north border university in Kingdom Saudi Arabia were strong (r = 0. **519**** respectively). Thus, **Hypothesis 2 was substantiated**.

Hypothesis H3: There is a significant relationship between covid-19 and academic achievement among the students in the north border university in Kingdom Saudi Arabia at a significance level α ≤ 0.05. The Pearson correlation (r) values from the correlation analysis are shown in Table 3.1. All coefficients were statistically significant. Table 3.2 shows that the correlations between covid-19 and academic achievement among the students in the north border university

in Kingdom Saudi Arabia were strong (r = 0. **777**** respectively). Thus, **Hypothesis 3 was substantiated**.

Table 9 : Correlations

		mental	risk	academic	Covid-19
Mental status	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	320			
Risk perception	Pearson Correlation	.685**	1		
	Sig. (2-tailed)	.000			
	N	280	320		
Academic achivment	Pearson Correlation	.487**	.391**	1	
	Sig. (2-tailed)	.000	.000		
	N	280	280	320	
Covid-19	Pearson Correlation	.615**	.519**	.777**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	320	320	320	320

**. Correlation is significant at the 0.01 level (2-tailed).

* Discussion and Conclusion

COVID-19 and its accompanying effects will continue profoundly impacting collegiate mental health and well-being; meanwhile, mental health plays a

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crucial role in combating the epidemic. It is thus imperative for universities to build awareness of students' mental health needs and concerns and empower their students to seek help and support during this biological disaster. College students should tailor coping strategies to meet their specific needs and promote their psychological resilience. Considerable efforts made by universities should be dedicated to helping students thrive in this crisis. With the experience attained supporting students in these pandemics, universities will be well-positioned to help college students stay well in mind, body, and spirit during other challenging times

* Recommendation

Notwithstanding that some universities have responded to the public health emergency; universities should continue to develop courses of action and public health messaging to address better collegiate mental health issues caused by the disruptions of education and career trajectory. First, in addition to remote education, student advising should continue and transition to telecommunication (e.g., phone calls, online meetings) to provide academic support for students.

Faculty and staff should consider offering virtual office hours to students, and they need to work together to maintain the connection and help students process and address academic concerns caused by the disruption of the semester. Second, for students whose internships or research projects were affected by the pandemic, internship site supervisors and research advisors should actively engage in helping students seek alternative plans, enabling them to work from home to maximize internship and research experiences. Third, universities should work on innovative methods to support students to move research projects and capstones forward so that students can fulfill graduation requirements; meanwhile, university career centers should switch to virtue services, continuing to facilitate career development for college students

Of importance is that university counseling centers should set up options to continue to provide college students with counseling services at a distance (i.e., Tele-mental health counseling) within the constraints of the pandemic outbreak. Tele-mental health has been found effective in

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treating anxiety and depressive symptoms (Brenes et al., 2015), and implementing Tele-mental health will facilitate the delivery of counseling services to address students' pressing mental health concerns (Dorsey and Topol, 2020). University counseling centers can also provide options for students to join online support groups that enable them to share common concerns and receive social support (Rollman et al., 2018). Further, university counseling centers and other departments should rally to develop and pass public health messaging onto students, sharing coping resources, and encouraging them to take action to protect their mental health

* References

Alkhamees, A. A., & Aljohani, M. S. (2021). The psychological impact of COVID-19 pandemic on the students of Saudi Arabia. *The Open Public Health Journal*, *14*(1).

AlAteeq, D. A., Aljhani, S., & AlEesa, D. (2020). Perceived stress among students in virtual classrooms during the COVID-19 outbreak in KSA. *Journal of Taibah University Medical Sciences*, *15*(5), 398-403.

Ghazawy, E. R., Ewis, A. A., Mahfouz, E. M., Khalil, D. M., Arafa, A., Mohammed, Z., ... & Mohammed, A. E. N. S. (2021). Psychological impacts of COVID-19 pandemic on the university students in Egypt. *Health Promotion International*, *36*(4), 1116-1125.

Al-Hanawi, M. K., Angawi, K., Alshareef, N., Qattan, A., Helmy, H. Z., Abudawood, Y., ... & Alsharqi, O. (2020). Knowledge, attitude and practice toward COVID-19 among the public in the Kingdom of Saudi Arabia: a cross-sectional study. *Frontiers in public health*, *8*, 217.

Wang, X., Hegde, S., Son, C., Keller, B., Smith, A., & Sasangohar, F. (2020). Investigating mental health of US college students during the COVID-19 pandemic: cross-sectional survey study. *Journal of medical Internet research*, *22*(9), e22817.

Zhai, Y., & Du, X. (2020). Addressing collegiate mental health amid COVID-19

The Impact of Covid-19 on the Mental Health and Academic Achievement of the Students at North Border University in Saudi Arabia

43

pandemic. *Psychiatry research*, *288*, 113003.

Usher, K., Jackson, D., Durkin, J., Gyamfi, N., & Bhullar, N. (2020). Pandemic-related behaviours and psychological outcomes; A rapid literature review to explain COVID-19 behaviours. *International Journal of Mental Health Nursing*, *29*(6), 1018-1034.

Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of medical internet research*, *22*(9), e21279.

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.

Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of medical internet research*, *22*(9), e21279.

Jean-Baptiste, C. O., Herring, R. P., Beeson, W. L., Dos Santos, H., & Banta, J. E. (2020). Stressful life events and social capital during the early phase of COVID-19 in the US. *Social Sciences & Humanities Open*, *2*(1), 100057.

Araújo, L. A. D., Veloso, C. F., Souza, M. D. C., Azevedo, J. M. C. D., & Tarro, G. (2021). The potential impact of the COVID-19 pandemic on child growth and development: a systematic review. *Jornal de Pediatria*, *97*, 369-377.

Nelson, B. W., Pettitt, A., Flannery, J. E., & Allen, N. B. (2020). Rapid assessment of psychological and epidemiological correlates of COVID-19 concern, financial strain, and health-related behavior change in a large online sample. *PLoS One*, *15*(11), e0241990.

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19

The Impact of Covid-19 on the Mental Health and Academic Achievement of the Students at North Border University in Saudi Arabia

44

epidemic on college students in China. Psychiatry research, 287, 112934.

Zhai, Y., & Du, X. (2020). Addressing collegiate mental health amid COVID-19 pandemic. *Psychiatry research*, *288*, 113003.

Chen, Y. F. (2002). Chinese classification of mental disorders (CCMD-3): towards integration in international classification. Psychopathology 35, 171–175. doi: 10.1159/000065140

World Health Organization [WHO] (2018). ICD-11 for Mortality and Morbidity Statistics. Geneva: WHO.

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior 1. J. Appl. Soc. Psychol. 32, 665–683. doi: 10.1111/j.1559-1816. 2002.tb00236.x

Rollman, B.L., Belnap, B.H., Abebe, K.Z., Spring, M.B., Rotondi, A.J., Rothenberger, S.D., Karp, J.F., 2018. Effectiveness of online collaborative care for treating mood and anxiety disorders in primary care: a randomized clinical trial. JAMA Psychiatry. https://doi.org/10.1001/jamapsychiatry.2017.3379.

Brenes, G.A., Danhauer, S.C., Lyles, M.F., Hogan, P.E., Miller, M.E., 2015. Telephonedelivered cognitive behavioral therapy and telephone-delivered nondirective supportive therapy for rural older adults with generalized anxiety disorder: a randomized clinical trial. JAMA Psychiatry. https://doi.org/10.1001/jamapsychiatry. 2015.1154.

Dorsey, E.R., Topol, E.J., 2020. Telemedicine 2020 and the next decade. Lancet. https://doi.org/10.1016/S0140-6736(20)30424-4.

Zhou, M., Xiang, H., and Li, Z. (2019). Optimal control strategies for a reaction– diffusion epidemic system. Nonlinear Anal. Real World Appl. 46, 446–464.

Glass, R. J., Glass, L. M., Beyeler, W. E., and Min, H. J. (2006). Targeted social distancing designs for pandemic influenza.

The Impact of Covid-19 on the Mental Health and Academic Achievement of the Students at North Border University in Saudi Arabia

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Emerg. Infect. Dis. 12:1671. doi:

Liu, Q. Q., Zhou, Z. K., Yang, X. J., Kong, F. C., Niu, G. F., and Fan, C. Y. (2017). Mobile phone addiction and sleep quality among Chinese adolescents: a moderated mediation model. Comput. Hum. Behav. 72, 108–114. doi: 10.1016/j.chb.2017.02.042

Hidayati, D. S. (2019). "Smartphone addiction and loneliness in adolescent," in Proceedings of the 4th ASEAN Conference on Psychology, Counselling, and Humanities (ACPCH 2018), Paris.

Huang, H., and Leung, L. (2009). Instant messaging addiction among teenagers in China: shyness, alienation, and academic performance decrement. Cyber Psychol. Behav. 12, 675–679. doi: 10.1089/cpb.2009.0060

Santos, V., Egidio Nardi, A., and Anna Lucia Spear King, (2015). Treatment of internet asddiction in patient with panic disorder and obsessive-compulsive disorder: a case report. CNS Neurol. Disord. Drug Targets 14, 341–344. doi: 10.2174/1871527314666615022 5123532

Su, B., Yu, C., Zhang, W., Su, Q., Zhu, J., and Jiang, Y. (2018). Father–child longitudinal relationship: parental monitoring and internet gaming disorder in Chinese adolescents. Front. Psychol. 9:95. doi: 10.3389/fpsyg.2018.00095

World Health Organization [WHO] (2018). ICD-11 for Mortality and Morbidity Statistics. Geneva:WHO.

The Impact of Covid-19 on the Mental Health and Academic Achievement of the Students at North Border University in Saudi Arabia

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