

Prevalence Of Depression And Anxiety During Covid-19 Among Female College Students In Diar, Jazan University

Nida Akhtar^{1*}, Mohd Sadiq S. Zarger²

^{1*}Department of Nursing, University College of Al-Diar, Jazan University (KSA)

²Department of Science, Riyadh Jazan International School, Saudi Arabia

*Corresponding Author: - Nida Akhtar

^{*}Department of Nursing, University College of Al-Diar, Jazan University (KSA)

Email: nakhtar@jazanu.edu.sa

Abstract

The outbreak of coronavirus diseases (COVID-19) has been substantially influencing the life and living of people across the world, especially after the declaration of a global pandemic by the World Health Organization in the second week of March 2020. The purpose of this study was to investigate the prevalence of depression and anxiety among female students of University College in Al-Diar, Jazan University, Saudi Arabia, during the COVID-19 pandemic. Our objective was to assess the prevalence of depression and anxiety in college students during pandemic. A total of 137 female students of University College of Al-Diar, living in Jazan, Saudi Arabia, participated in this web-based study.

A standardized e-questionnaire was designed using the Google form, and the link was shared through the WhatsApp groups and E-mail. We had collected sociodemographic information of the participants and assessed their COVID-19-related knowledge assessment. The Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder-7 (GAD-7) were used to assess depression and anxiety. The anxiety level, using GAD-7 Scale, was found highest value moderate in 49% cases, moderately severe anxiety in 10.21% while severe anxiety 11.67%. Depression level, using PHQ-9 scale was found same like anxiety highest value moderate type 43.06%, moderately severe 14.59 % and severe depression 9.5% cases. The statistical prediction for depression showed a good fit. This depression could be related both directly and positively by fear of COVID-19 and stress, and indirectly, as a result of these two factors, positively mediated by anxiety. Our study concludes by highlighting the important role that the complex relationships between fear, stress, and anxiety can play in the development of depression symptoms and how they can be taken into account in programs aimed at preventing and alleviating this disorder. Results of our study suggest that specific programs should be designed to control and overcome anxiety and depression among college students. Researchers are encouraged to focus their future studies on how to develop strategies to boost students' resilience and enhance their adaptability skills for similar disasters in the future.

Keywords: Anxiety; Depression; COVID-19; GAD-7; PHQ-9

Introduction

COVID-19 is the worst pandemic of this millennium, and it is considered to be the "public enemy number one". It is commonly known as the novel Coronavirus is believed to have originated from a wet market in Wuhan, China, and has spread all over the world, resulting in a large number of hospitalizations and deaths¹. Not only has it threatened our existence and health status, but the damage associated with it could equally affect our economic, social, and educational systems. Universities and schools were closed, switching to virtual classes, to ensure uninterrupted teaching. Students were expected to continue studies from their place of residence. The spread of COVID-19 presents serious risks globally and in Saudi Arabia, which has reported 393377 cases and 6704 deaths as of 06 April 2021². Literature showed that such measures can result in several psychological problems, and students, in

particular, are more vulnerable. In addition, isolation from campus life, the need to adapt to the new online educational environment, and the uncertainty about the academic and occupational future can carry additional burdens. The anxiety levels of the 149 students of Almaarefa University were assessed via the GAD-7 Scale, which found that the highest level was the moderate level, followed by mild, severe, and normal levels³. A study conducted on school and university students in China during the early months of the COVID-19 pandemic showed increased fear and anxiety⁴. Another study from Jordan found that the level of anxiety among university students was higher than that in medical professions and the general population⁵. Other studies including university students from the US, Egypt, Malaysia, Emirates, and Spain showed varying degrees of psychological problems related to the COVID-19 pandemic⁶⁻¹⁰. Symptoms of depression, anxiety, and stress were common among Saudi university students during the COVID-19 pandemic.

Psychological counselling and support should be provided to university students in Saudi Arabia¹¹.

The purpose of this study was to investigate the prevalence of depression and anxiety among students of University College in Al-Diar, during the COVID-19 pandemic. The outbreak of corona virus diseases (COVID-19) has been substantially influencing the life and living of people across the world, especially after the declaration of a global pandemic by the World Health Organization in the second week of March 2020. In the Kingdom of Saudi Arabia (KSA), the Ministry of Health (MOH) announced the first COVID-19 case on March 2, 2020, and by the end of the month, 154 new COVID-19 cases were reported. Anticipating widespread infection, government agencies swiftly implemented several control measures to combat the spread of the virus. Saudi Arabia took extreme measures to respond to COVID-19 which contributed to limiting the spread and effect of the disease¹².

The psychological problems among university students in Saudi Arabia were not comprehensively assessed during the COVID-19 pandemic. Determining the psychological impacts of the COVID-19 on university students and the correlating factors can help in initiating risk-prevention procedures and counselling programs to relieve this burden. We have investigated the prevalence of anxiety and depression among female students of Diar College, Jazan University, Jazan, Saudi Arabia.

Methodology

Study population and sample collection

A google survey was designed and the link to the survey was sent by WhatsApp and E-mail to students of University College of Al Diar, Jazan University in Saudi Arabia. The last date of data collection was the August 2020. Data was collected from April to August, 2020. We assume 5% precision, a confidence interval of 95%, and an estimated accuracy of 5%. Taking into consideration a 20% non-response rate, the minimal target sample size was 137 participants. The inclusion criteria were current female students registered in Nursing, Mathematics and English department of University College of Al Diar, Jazan. All participants voluntarily participated in the study and were thus considered exempt from written informed consent. The study aims and objectives were clearly explained at the beginning of the survey. We included a random sampling of 137 female students of Jazan University of Diar College.

Data collection Instrument

Depression and anxiety assessment scales, the Patient Health Questionnaire (PHQ)-9, and Generalized Anxiety Disorder 7-item (GAD-7) were used to assess depression and anxiety among the study participants. These screening instruments were frequently used and validated as brief screening tools among various populations for depression and

anxiety¹³. Also, the following information was collected: participants' demographics (age, gender, education level and marital status). Furthermore, participants were asked whether they were worried about being infected with COVID-19 or transmitting it to family members (yes/no question) and whether they had underlying chronic conditions (yes/no question). The PHQ-9 scale is a 9-questions instrument given to participants to screen for the presence and severity of depression. The GAD-7 instrument was used to screen for anxiety.

The PHQ-9 and the GAD-7 instruments asked the participants about the degree of applicability of each item (question), using a 4-point Likert scale. Participants' responses ranged from 0 to 3, where 0 means "Not at all" and 3 means "Nearly every day". The PHQ-9 instrument includes 9 items. Items are scored from 0 to 3 generating a total score ranging from 0 to 27. A total score of 0–4 indicates minimal depression, 5–9 mild depression, 10–14 moderate depression, 15–19 moderately severe depression, and 20–27 severe depression. The GAD-7 instrument includes 7 items. Items are scored from 0 to 3 generating a total score ranging from 0 to 21. A total score of 5–9 indicates mild anxiety, 10–14 moderate anxiety, and 15–21 severe anxiety. An estimate of prevalence and classification of depression and anxiety. Prevalence rates of depression and anxiety were determined using a cut-off point, as recommended by the authors of the PHQ-9 and GAD-7 scale¹⁴. In this study, depression was defined as a total score of (≥ 15) in the PHQ-9 instrument, indicating a case with moderately severe or severe depression. Anxiety was defined using the GAD-7 instrument with a total score of (≥ 15), indicating a case with severe anxiety. The higher the score, the more severe the case identified by any scale. The prevalence rate of depression was estimated by dividing the number of participants who exceeded the borderline score (≥ 15) by the total number of participants in the same population. The prevalence rate of anxiety was calculated using the same procedure.

Statistical analysis

The data were analyzed by using Statistical Package for the Social Sciences (SPSS) software version 22.0 for Microsoft windows. The numbers and percentages were calculated.

Results

The aim of this study was to examine the Depression and Anxiety level of female students of University college in Al Diar, Jazan University, Saudi Arabia during the COVID-19 pandemic. A total of 137 Female students from the Nursing, Mathematics and English Department students of all levels of graduate programs completed the survey. The majority of the participants ($n = 74$, 54%) were aged 21-25 years, and about 44% ($n = 60$) were aged 15-20. In case of marital status 78% students were single and 21.2%

were married. 72.3% Female students don't have children while 29.2% having children at that time of sample collection. 92.7% of students were living with their families however 7.3% of participants were

living alone during lockdown. Diar is a village area of Jazan Province in Saudi Arabia, in case of residency 63.6% rural and 36.4% urban population participated in this study (Table 1).

Table 1: Demographic characteristics of Respondents

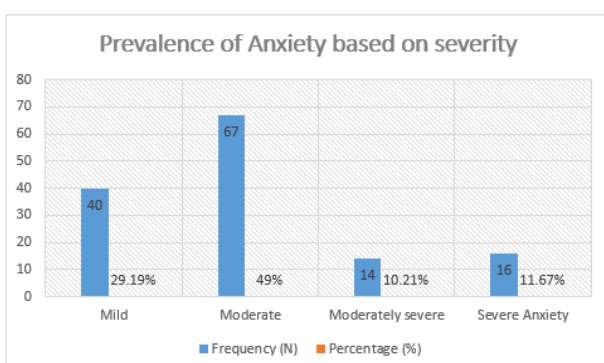
Variables	Frequency (N)	Percentage (%)
Age		
15-20 years	60	43.8%
21-25 years	74	54%
26-30 years	3	2.2%
Marital Status		
Single	107	78.1%
Married	29	21.2%
Divorced	0	0%
Widow	1	0.7%
Do you have children		
Yes	38	29.2%
No	99	72.3%
Living with family		
Yes	127	92.7
No	10	7.3
Residence		
Rural	86	63.6%
Urban	51	36.4%

Levels of Anxiety

Finding show that majority of this college student sample scored moderate level of anxiety as assessed by GAD-7 scale. Table 2 show that 49% of students had moderate level, 29% showed mild level of anxiety followed by 11.67% severe anxiety and 10.21 % moderately severe.

Table 2: Prevalence of Anxiety based on Severity

Level of Anxiety	Frequency (N)	Percentage (%)
Mild	40	29.19%
Moderate	67	49%
Moderately severe	14	10.21%
Severe Anxiety	16	11.67%

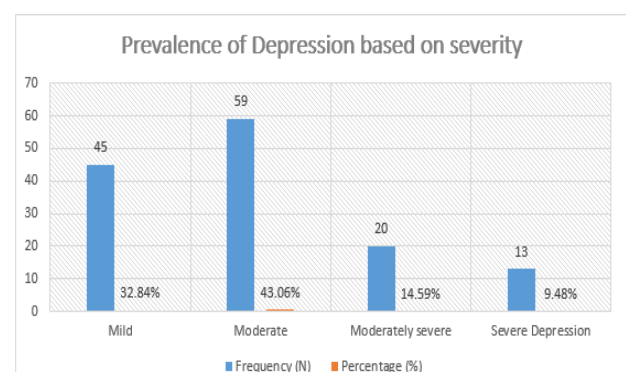


Level of Depression

As reported in Table 3; female college students showed highest value of moderate level of depression 43%, mild 32.84%, moderately severe 14.59% and 9.48% participants showed severe depression during COVID-19.

Table 3: Prevalence of Depression based on Severity

Level of Depression	Frequency (N)	Percentage (%)
Mild	45	32.84%
Moderate	59	43.06%
Moderately severe	20	14.59%
Severe Depression	13	9.48%



Discussion

College students around the world suffer from psychological morbidity, particularly depression and anxiety, due to concerns about the future and academic pressure such as managing stressful tasks and assignments and pursuit to improve their academic performance.¹⁵⁻¹⁸ A variety of studies have shown that college students in Saudi Arabia share the same symptoms of anxiety and stress and recorded a prevalence of depression and anxiety ranging from 14 to 50%^{19, 20}. The presence of COVID-19 is an additional factor for students to be stressed and anxious²¹. The fact that the female students experienced higher levels of anxiety is also not surprising. Previous studies showed that college female students report more stress than male students in general²²⁻²⁴. Students might be severely affected by the COVID-19 pandemic with significant impacts on academic achievement and social life. Depression level of 137 respondents showed higher level is the moderate (59), mild (45), moderately severe (20) and severe depression (13). In case of anxiety levels were assessed via the GAD-7 Scale. We found the highest level is the moderate (67), followed by mild (40), severe anxiety (16) and moderately severe (14). Results of our study suggest that specific programs should be designed to control and overcome anxiety among college students. These findings can enlighten government agencies and policy makers on the importance of making prompt, effective decisions to address students' anxiety during the COVID-19 pandemic.

Conclusion

This study concludes by highlighting the important role that the complex relationships between fear, stress, and anxiety can play an important role in the development of depression symptoms and how they can be taken into account in programs aimed at preventing and alleviating this disorder. As COVID-19 has been a very bad experience; in the blink of an eye, this dreadful pandemic abruptly changed the way we live. As reported in the literature, pandemics are expected to have undesirable consequences not only in terms of health but also on economic, political, and educational systems. Researchers are encouraged to focus their future studies on how to develop strategies to boost students' resilience and enhance their adaptability skills for similar disasters in the future. Prioritizing research on the mental health, anxiety, and coping strategies of students, along with psychological effects, needs to occur on an urgent basis.

Limitations

This study is not without limitations, the most important of them related to the fact that the survey included only students of one college no other colleges in Jazan university and therefore data from other populations should be further considered.

Conflict of interest

Authors declare that there is no conflict of interest

Acknowledgement

The authors express their gratitude to University College of Al-Diar, Jazan University for supporting and successful completion of this research work.

References

1. Wang W, Tang J, Wei F. Updated understanding of the outbreak of 2019 novel coronavirus (2019-nCoV) in Wuhan, China. *J Med Virol.* 2020. 17: 1729.
2. Hamad S. Alyami, Abdallah Y. Naser, Eman Zmaily ahmash, Moham-med H. Alyami, and Musfer S. Alyami; Depression and anxiety during the COVID-19 pandemic in Saudi Arabia: A cross-sectional study; *Int J Clin Pract.* 2021; 75(7): e14244.
6. Khaldoun I. Marwa, Hanadi Abdullah AlKthiri, Hassan Idriss Shicker, Banan Yakoub Neyaz, Amkalthom Hussian Almohammed Ali, Hakimah Abdulrah-man Albalawi, Sarah Hassan Alhilal. Impact of distance learning during COVID-19 on the anxiety of college students of Almaarefa University. *IJMDC.* 2020; 4(11): 1844-1846
7. Wang C and Zhiao H., The Impact of COVID-19 on Anxiety in Chinese University Students *Front. Psychol.*, 22 May 2020 Sec. Psychology for Clinical Settings 2020 (11).
8. Iman A. Bashedi, Qassim N. Mhaidat, and Hala N. Mhaidat,; *PLoS One.* Prevalence of anxiety and depression during COVID-19 pandemic among healthcare students in Jordan and its effect on their learning process: A national survey; 2021; 16(4): e0249716.
9. Sundarasan S, Chinna K, Kamaludin K, et al. Psychological impact of COVID-19 and lockdown among university students in Malaysia: Implications and policy recommendations. *Int J Environ Res Public Health.* 2020; 17:6206.
10. Abuhmaidan Y, Al-Majali S. The impact of the Coronavirus pandemic on mental health among Al Ain university students in light of some demographic variables. *Psychiatr Danub.* 2020; 32:482–490.
11. Son C, Hegde S, Smith A, et al. Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *J Med Internet Res.* 2020;22: 21279.
12. Ghazawy ER, Ewis ER, Mahfouz EMet al. Psychological impacts of COVID-19 pandemic on the university students in Egypt. *Health Promot Int.* 2021; doi: 10.1093/heapro/daaa147.
13. Odriozola-González P, et al. Psychological effects of the COVID-19 outbreak and lockdown among students and workers of a Spanish university. *Psychiatry research.* 2020;290: 113108–113108.
14. Zeinab Mohammed, Ahmed Arafa, El-Sayed Atlam, Nader El-Qerafi, Momen El-Shazly, Omar Al-

Hazazi, and Ashraf Ewis Psychological problems among the university students in Saudi Arabia during the COVID-19 pandemic. *Int J Clin Pract.* 2021 Nov; 75(11): e14853.

15 Khan AA; Alsofayan YM; Alahmari AA; Alowais JM; Algwizani AR; Alserehi HA; et al. COVID-19 in Saudi Arabia: the national health response. *East Mediterr Health J.* 2021; 48

16 Kroenke K, Spitzer RL, Williams JBW, et al. The Patient Health Questionnaire Somatic, Anxiety, and Depressive Symptom Scales: a systematic review. *Gen Hosp Psychiatry.* 2010; 32(4):345–59.

17 Tomitaka S. Patterns of item score and total score distributions on depression rating scales in the general population: evidence and mechanisms. *Heliyon.* 2020; 6: e05862.

18 Adewuya AO, Ola BA, Aloba OO, Mapayi BM, Oginni OO. Depression amongst Nigerian university students: prevalence and sociodemographic correlates. *Soc Psychiatry Psychiatry Epidemiol.* 2006; 41:674–8.

19 Nerdrum P, Rustøen T, Rønnestad MH. Student psychological distress: a psychometric study of 1750 Norwegian 1st-year undergraduate students. *Scand J Educ Res.* 2006; 50:95–109.

20 Ovuga E, Boardman J, Wasserman D. Undergraduate student mental health at Makerere University, Uganda. *World Psychiatry.* 2006; 5:51–2.

21 Stewart-Brown S, Evans J, Patterson J, Petersen S, Doll H, Balding J, et al. The health of students in institutes of higher education: an important and neglected public health problem? *J Public Health Med.* 2000; 22:492–9.

22 Al-Gelban KS. Prevalence of psychological symptoms in Saudi secondary school girls in Abha, Saudi Arabia. *Ann Saudi Med.* 2009; 29:275–9. doi: 10.4103/0256-4947.55308

23 Amr M, Amin TT, Saddichha S, Al Malki S, Al Samail M, Al Qahtani N, et al. Depression and anxiety among Saudi University students: prevalence and correlates. *Arab J Psych.* 2013;24:1–7. doi: 10.12816/0000092

24 Praghlapati A. Covid-19 impact on students. *EdArXiv [Preprint].* 2020; 1-6.

25 Bahhawi TA, Albasheer OB, Makeen AM, Arishi A, Hakami O, Maashi S, et al. Depression, anxiety, and stress and their association with khat use: a cross-sectional study among Jazan University students, Saudi Arabia. *Neuropsychiatr Dis Treat.* 2018; 14:2755–61.

26 Inam B. Anxiety and depression among students of a medical college in Saudi Arabia. *Int J Health Sci.* 2007; 1:295–300.

27 Sehlo MG, Al-Zaben FN, Khelifa DA, Agabawi AK, Akel MS, Nemri IA, et al. Stress among medical students in a college of medicine in Saudi Arabia: sex differences. *Middle East Curr Psychiatry.* 2018; 25:150–4.