



A thematic analysis of the pandemic impact on universities students' mental health

Zunaira Iftikhar^{1*}, Mir Sayed Shah Danish², Alexey Mikhaylov³

¹Department of Physiotherapy & Allied Health Sciences, Faculty of Medical and Health Sciences, University of Sargodha, Punjab, Pakistan

²Department of Electrical and Electronics Engineering, Faculty of Engineering, University of the Ryukyus, Okinawa, Japan

³Research Center of Monetary Relations, Financial University under the Government of the Russian Federation, Moscow, Russian Federation

Special Issue Article

Open Access

Published

ABSTRACT

COVID-19 pandemic has made the future uncertain for many in general, but students in particular because institutes suddenly shutting down, while this new transition has hit everyone differently. Still, it has left significant pressure on the students specifically. This pandemic has changed the ways of living - financially, physically, emotionally, and mentally. This study analyses the impact of COVID-19 on students' mental health. It covers the globe, how they have been dealing with it, and which coping mechanisms worked best for them during this time. The study also discussed how different financial backgrounds had left a different psychological impact on the students. The methodology adopted utilizes all the previous research and their data, which helped us determine the most worked solution vs the least worked solution. In addition to literature, data from UNICEF about education and COVID-19 are utilized to determine the adverse impact of COVID-19. This study has also briefly touched on the impact of remote learning on students' mental health and how students have coped with this sudden yet uncertain new change. The research has come up with some proven solutions for students to perform better academically during this uncertain time without compromising their mental health.

Keywords

- Pandemic impact
- Universities students' mental health
- Pandemic recovery options
- Educational system resiliency
- Pandemic mental concerns

Received: March 03, 2022; Revised: March 28, 2022; Accepted: April 14, 2022; Published: June 30, 2022

© 2022 REPA. All rights reserved.

1. Introduction

SARS-COV-2, also known as COVID-19, is a dreadful viral disease and its official name is "severe acute respiratory syndrome corona virus 2". It is the cause of the ongoing pandemic, a strain of corona virus, and causes respiratory illness. It has further subdivisions (four types of genera): alphacoronavirus, betacoronavirus, gammacoronavirus and deltacoronavirus [1]. Betacoronavirus is responsible for severe acute respiratory syndrome in human. At the same time, gammacoronavirus is related to the virus of birds and whales, and deltacoronavirus is isolated from birds and pigs.

COVID-19 has a devastating impact on the mental and physical health of millions of people all over the world. To control such kind of crisis, the United Kingdom government took different measures, including quarantine, to control this viral spread. It is definitely an important measure to save millions of lives [2]. Due to pandemic many people in societies are facing different kinds of problems related to their mental health due to quarantine. Because of the fear of getting infected by this disease, many people have gone through depression and many other mental problems [3]. They are facing different kinds of mental issues, which they cannot even explain and all of us have lost our communication and social behaviour and we cannot even express over point of view or debate with others face to face freely, and this is all due to the lack of confidence because there is a decrease in social activities due to pandemic. Studies show that rates of mental health issues are rising in society, especially in educational institutes, including university, college and school students all over the world. Studies found that students' three most

commonly reported mental health problems are depression, anxiety, and stress. A lack of strong mentality training and coaching classes contributes to mental health problems among students. This should be normally available in the educational institutes because they are sufficient to increase students' confidence, and currently another main factor imposing this problem is pandemic. At times it may seem like everyone has mental illness.

In this study, different kinds of surveys are preferred to discuss events and experiences that cause trauma on people's mental health. A research initiative in Psychological Sciences (PS) is conducted to promote high-quality research to encourage cross-disciplinary collaboration between researchers from different departments within PS. This cross-disciplinary approach to psychology has greatly impacted psychological science in general because it challenges psychologists to consider alternative theories than their own. University students are commonly considered a microcosm of society as a whole, and their mental health problems may thus be representative of broader social trends. The World Health Organization (WHO) has identified increasing rates of mental illness across all age groups, with major depression being one of the most common diagnoses. For young people aged 15–29, suicide is one of leading causes of death. To support the young generation, who are losing themselves to depression, anxiety and many other mental health issues, should solve their problems, increase their confidence, and build them strong to face every kind of issue in life. Due to pandemic, we have lost over social behaviour to the extent that we cannot even make face-to-face contact with



friends and lose our confidence to state our points and ideology [4]. As there is an increase in sedentary behaviour of students, because there is a decrease in their physical activities and daily activities, it impairs the people's capacity to communicate with others. WHO suggested different kinds of measures to improve students' mental health, as mental health is one of the most serious concerns of educational institutions worldwide [5]. The government is taking all the possible measures to improve the mental health of society and also further problems are investigated, but the main objective of this study is to find out the pandemic effect on the mental health of university students and what is the difference between their activities, before and after the lockdown. And this study is also related to physical health related behaviours. This time we must work together to remove this risk to society and the loss of young generation's mental health as they are the country's future.

2. Materials and methods

2.1. Data collection procedure

For the study design, authors have decided to send email to those young students with a history of mental health issues and has sent emails to 947 students asking them to solve the survey to complete this research and participate in further activities. Out of them, only 477 students responded and solved the initial survey, but only 246 students agreed for further participation. This activity was held from the 14th of October 2019 to the 27th of April 2020. 200 students participated in all the activities and considered the study sample. Survey data is kept confidential throughout this research study and have also guaranteed ethical approval from the ethics committee of the universities.

2.2. Study design

Social demographic questions are included in this survey. It includes information about age, gender, living arrangements, ethnicity, and more than eight items. And the questions related to the health history like; do you have any diagnosis of mental or health related disease or do you have any disease like anxiety, depression, cancer cardiac illness, diabetes, asthma, etc., are also included. Furthermore, questions related to the participant's physical activity levels, exercise vital signs and sedentary behaviours are added. This study uses the WEMWBS (Warwick-Edinburgh Mental Well-Being Scale) for the answering method. This scale accesses the mentality of the answer by using five points from 1 to 5. If participant highlights point 1 then it means "none of them" and if the participant highlights point 2, it means "really" and if highlights point 3 it means "some of time" and if 4th point is highlighted, then it means "often" and at last 5th point means "all of the time". After highlighting all the points, the final outcome score is generated, and the higher the score is, the higher the positive results and the score range usually ranges from 14 to 70.

All the participants have different kinds of expectations and experiences. However, it is a fact that they face different kinds of challenges and they want to improve their lifestyles. Some of them also support those measures the government takes, but there are also those people who oppose them. So, at the end, another section of comments is also added to this questionnaire, in which the participant can talk about any personal experience and state their point of view on the current situations and measures taken by the government in case of COVID-19.

2.3. Statistical analysis used

Collected data is analyzed and entered into MS Excel spreadsheets for statistical analysis. This procedure involves content analysis, interpretation, preliminary data inspection and transcription and uses percentages to analyze epidemiological variables in this research study. SPSS computer package is used to analyze all kinds of data related to this research study.

3. Results

3.1. Socio-demographic results

The social demographic results of all of the 214 participants included in this research study and the study sample are summarised using statistical measures in tabular form, as shown in Table 1. From the study sample, 87% of the participants have an average age of 25 years or younger and from which 65% of participants are of 21 years or under. Age distribution concludes that out of 214 participants, 21 are of age 18, 35 participants are of age 19, 47 participants are of age 20, 35 participants are of age 21, and 47 participants are of age ranging from 22 to 25 and 16 participants are of age 26 to 35 and the remaining 13 participants are of above 35 years old.

And the distribution according to gender concludes that 60 participants are males and 154 are female. And according to ethnicity, 176 participants are white, 5 participants are mixed, 12 are Asian, 9 are black, and 8 are other. Prefer not to say it includes 4 participants. And from the section on living arrangements, it is concluded that 7 participants live on campus, 93 participants live off campus without parents, and 114 participants live off campus with parents.

Among these students, 58 students are in their first year of university, 46 students are in their second year, 63 students are in their third year, and the remaining 29 students are in their fourth year, while others include 18 participants. From the smoking status section, it is concluded that 164 participants are non-smokers and 16 participants are ex-smokers, 24 are occasional smokers, and the remaining 10 are daily smokers. And from the pre-existing mental health conditions action, it is reported that 150 participants do not have any mental health condition, while the remaining 64 have any kind of mental health condition. 19 respondents say that they have anxiety, and some of their responses that they have depression, and

some of them also said that they have both. So, all the social demographic information is concluded into a tabular form so it can be easy to evaluate the results in percentage, and all of this is concluded as the collected data.

Table 1: Socio-demographic results of the conducted survey.

Participant information	Number of participants	Percentage %
Age (year)		
18	21	9.8
19	35	16.4
20	47	22.0
21	35	16.4
22-25	47	22.0
26-35	16	7.5
35 plus	13	6.1
Gender		
Male	60	28.0
Female	154	72.0
Ethnicity		
White	176	82.2
Mixed	5	2.3
Asian	12	5.6
Black	9	4.2
Other	8	3.7
Prefer not to say	4	1.9
Living arrangement		
On campus	7	3.3
Off campus without parents	93	43.5
Off campus with parents	114	53.4
University year		
Year 1	58	27.1
Year 2	46	21.5
Year 3	63	29.4
Year 4	29	13.6
Other/ not specified	18	8.4
Smoking status		
Non-smoker	164	76.6
Ex-smoker	16	7.5
Occasional smoker	24	11.2
Daily smoker	10	4.7
Pre-existing mental health condition		
No mental health condition	150	70.1
Any mental health condition	64	29.9
Anxiety	19	29.7
Depression	11	17.2
Anxiety and depression	30	46.9
OCD	2	3.1
Personality disorder	1	1.6
Eating disorder	1	1.6

3.2. Changes in behaviour and physical activities

Study samples of 214 participants are divided into four groups based on the years: T1, T2, T3 and T4. And

graphical representation is generated in Figure 1. It can be seen that mental well-being is much higher in class T1 as compared to class T4.

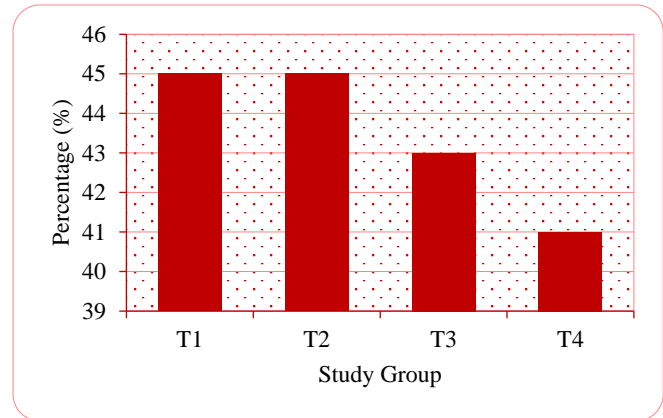


Figure 1. Mental well-being behaviour and physical activities of participants groups.

Next, this study measured the perceived stress level of participants in all classes. And it is concluded that T1 class has less perceived stress than T4, as shown in Figure 2.

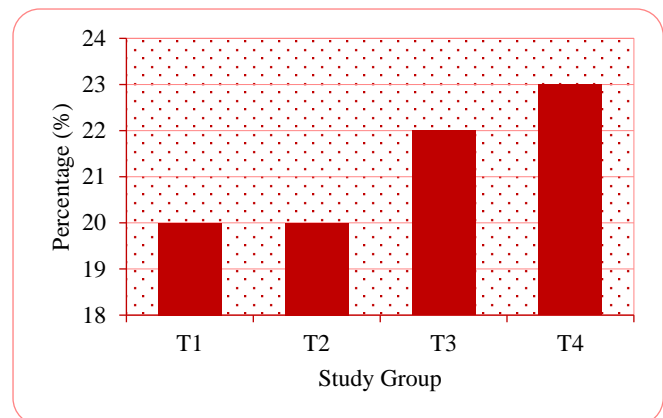


Figure 2. The perceived stress level of participants groups.

As seen in Figure 3, sedentary behaviours are less in class T1 as compared to the other age groups.

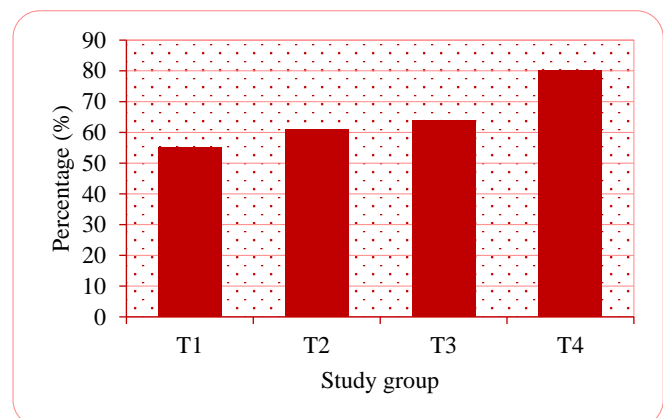


Figure 3. Sedentary behaviours of participants groups.

The correlation between all these independent variables is noted, and it is concluded that a negative association exists between mental well-being and perceived stress. This means they do not affect each other. Still, the sedentary behaviour is positively associated with perceived stress, which means they are responsible for each other, but sedentary behaviour has no relation with mental well-being.

4. Discussions

4.1. The main findings

This study examined the changes in participants before, during and after the imposed lockdown by the government due to COVID-19 and examined the changes in their movement behaviours and mental well-being. The main finding is that the lockdown has affected the participants' mental and physical health and impaired their mental well-being and physical activity. Because of it, there is an increase in both sedentary behaviour and perceived stress during this pandemic. But there is no relation between mental well-being and physical activity. There is a weak association between them because a person with a healthy mental state remains physically active. Therefore, findings suggest that many institutes have declined mental and movement health behaviours during the pandemic, which resulted in the students' poor mental state during the COVID-19 pandemic. Still, these situations do not have a strong relationship, but they are responsible for each other.

4.2. Changes in mental health

Before the COVID-19 outbreak, the participants' perceived stress and mental well-being were consistent. All of them had a kind of good mental state, after when government enforced the lockdown, the starting weeks are quite consistent. Still, after 5 weeks, the increase in perceived stress of the participants is seen and their ability to socialize with them and communicate with others is also reduced. There is a consistent loss and mental well-being. From the survey, starting weeks of average points for mental well-being are four points, while it reduces to 3 points as time passes. It means that there is a meaningful decline in mental well-being, and such results are concerning for those students who are doing their higher education because their mental health is everything.

Moreover, some data are collected from China which indicates that not only students but also workers are facing high levels of mental illness symptoms, and the reason is COVID-19. And the sense of their mental illness includes stress, anxiety, depression and fear of the viral disease because it haunts them that they might get infected or their family might get infected, and they will lose each other. Moreover, they cannot go outside openly and talk to others freely, which leads to bad mental health.

From the recorded data, it is concluded that cautions in such conditions are needed because the control measures and pandemic related to COVID-19 directly affect the

mental health of the people and many other health issues are influenced over time. And from the previous data collection, it is proposed that the prevalence of cases of anxiety and depression increased during pandemic as compared to the normal time. More than 30% of students reported themselves as a patient of mental health issue because in pandemic, students cannot even interact with their universities or other students. They lost their social and communication skills. So, the main conclusion of this research study is to highlight the reason for current mental illness in university students and to highlight this factor because it needs attention.

4.3. Changes in mental behaviour

As the governments took measures for COVID-19 pandemic, there was an order or social distancing, and there was also restriction on movements. All these factors have influenced the changes in movement behaviour because people have to stay at their home all time. They are not allowed to leave their house despite having any emergency, and even during their study times, they must stay home. The average moderate to vigorous physical activity rate is high in the current studies, but after the first five weeks of lockdown, it is noted that there is an increase in MVPA levels.

And the interesting fact of this study is that there is a considerable decrease in the physical activities of males compared to females. Similar findings are also reported in other areas of the world that the pandemic has highly affected the physical activities of males. And the only explanation which is responsible for this result is that males have to perform physical jobs and they are more social as compared to the females. So due to lockdown, when no one can go outside and social distancing is imposed, males are highly affected by it.

Recent studies are noted that there is a very high increase in sedentary behaviour day by day. And this acute increase is due to the loss of physical and mental health of the participants as there is less metabolic activity, less exercise and less communication, proposing unwilling psychological and physical health. And these are relatively associated with depression and anxiety, and as the lockdown extension increases, negative impacts will also increase.

4.4. Limitations and strengths

This study has specific designs that enable us to identify the mental health problems and movement behaviours related to the students due to COVID-19 pandemic. From this, we cannot identify the prevalence of mental health condition issues due to pandemic. The accuracy level of research material is high because the response collections are conducted and provide survey questions, which strengthens this research study, but everything has its limitations. This study is only able to perform the survey on a small population. It would be more helpful if represent the broader population of students, but it is not

possible due to COVID-19 pandemic. However, this study clearly shows that University students are affected by stress, anxiety, depression and other mental well-being issues due to the measures taken by governments, which play an important role in this issue.

5. Conclusions

This study concluded that the COVID-19 pandemic has affected students' mental well-being and physical activity and increased sedentary behaviour and perceived stress. And the reduction in mental condition and increase in stress levels are not related to the physical activity changes, but there is a weak association between these variables. Summarized findings indicate that COVID-19 pandemic has negatively affected the mental health and movement behaviours of the students and this study. The evidence suggests that there is a reduction in mental well-being of students due to social distancing and pandemic. Findings suggest that universities and other educational institutes should consider these findings and provide support to their students to overcome this problem and face this difficult time.

References

- [1] Harapan H, Itoh N, Yufika A, Winardi W, Keam S, et al. (2020) "Coronavirus disease 2019 (COVID-19): A literature review" *J Infect Public Health* (vol. 13, no. 5, pp. 667–673) <https://doi.org/10.1016/j.jiph.2020.03.019>
- [2] Machado W, Isac C, Leal T, Couto L, Silva D (2020) "Evaluating students' apprehension about remote learning during the COVID-19 pandemic: A Brazilian sample" 2020 IEEE Learning With MOOCS (LWMOOCS) Antigua Guatemala, Guatemala, *IEEE* - pp. 162–167. <https://doi.org/10.1109/LWMOOCS50143.2020.9234371>
- [3] Novel coronavirus(2019-nCoV): Situation report - 11 (2020) Geneva, Switzerland, *World Health Organization (WHO)*. (<https://apps.who.int/iris/bitstream/handle/10665/330776/nCoVsitrep31jan2020-eng.pdf>)
- [4] Savage MJ, James R, Magistro D, Donaldson J, Healy LC, et al. (2020) "Mental health and movement behaviour during the COVID-19 pandemic in UK university students: Prospective cohort study" *Ment Health Phys Act* (vol. 19, pp. 100357) <https://doi.org/10.1016/j.mhpa.2020.100357>
- [5] Chierichetti M (20AD) "Understanding the role that non-academic factors play on students' experience during the COVID-19 pandemic" 2020 IFEEES World Engineering Education Forum - Global Engineering Deans Council (WEEF-GEDC) Cape Town, South Africa, *IEEE* - pp. 1–5. <https://doi.org/10.1109/WEEF-GEDC49885.2020.9293665>