Pakistan Journal of Social Research ISSN 2710-3129 (P) 2710-3137 (O) Vol. 4, No. 1, March 2022, pp. 765-777. www.pjsr.com.pk

IMPACT OF COVID-19 LOCKDOWN ON INTERNATIONAL STUDENTS IN MELBOURNE AUSTRALIA

Ansa Riaz*

Consultant, Disaster Risk Reduction in Pakistan project, UNDP, Pakistan aansaariaz@gmail.com

Aftab Ahmed

PhD Scholar, Department of Sociology, Quaid-i-Azam University, Islamabad Chaftab.qau@gmail.com

Sanam Ali Khan

Student of Master of Development Studies University of Melbourne Australia sanamalikhan@gmail.com

ABSTRACT

The study aimed to explore impact of COVID-19 related extended lockdown in Melbourne Australia on international student's daily lives. Data was collected from 61 international students residing in Melbourne during lockdown and impact was found on their mental, physical, social health, learning (social and peer), and academic performance along with coping strategies used, and any support students received from the Victorian government. A data was collected through using purposive sampling and students from 10 countries participated in this study (51 percent male and 49 percent female). Study findings show that regardless of age, gender, nationality, and mode of study finance (scholarships or self-finance) majority of the students mentioned severe impact of COVID-19 related restrictions particularly lockdown on all dimensions of their lives mentioned above. The highest impact has been found on the academic performance (98 percent) following the mental health (94 percent), physical health (87 percent), social lives (84 percent). Study inquired about the coping strategies students used and results show that studies and use of social media was among the highly used coping methods (70 percent) following face time with family (32 percent) and excessive sleeping (39 percent). While responding to the support received from Victorian government 74 percent students mentioned no support and flagged the assistance required from Australian government in sectors like finances (43 percent), repatriation flights, visa issues (21 percent) and lease agreements (28 percent).

Keywords: COVID-19, Lockdown, International Students, Covid-19 Impact, Australia

BACKGROUND

The history of the world has witnessed several pandemics and epidemics in its lifetime, which destroyed millions of lives around the globe. These pandemic and epidemics have previously resulted in the breakdown of sophisticated systems of health, economics, politics, and societies on the road of prevention and control of the contagion diseases. There are multiple examples found in the history. such as the sixth century faced a huge challenge of Justinian plague. which alone killed around 50 million people. Similarly, the 14th century had the deadliest Black Death, which damaged 200 million people. The unforgettable event of the human history, the Spanish flu, which killed 50 to 100 million people amounting a death rate higher than in the World War 1 (Walsh, 2020). However, the recent past shows that continuous advancements in the field of medicine had still left the life-threatening disease of HIV to be a pandemic killing around 32 million people (Walsh, 2020).

Similarly, the year 2019 witnessed a catastrophe of human lives due a deadly outbreak of an infectious disease named Coronavirus caused by SARS CoV-2 (Landi et al., 2020). It was first confirmed as a pandemic and an international level public health emergency by the World Health Organization (WHO) on 11 March 2020 (WHO, 2020). When a highly contagious viral infection originated in the city of Wuhan, China in December 2019 (Paules et al. 2020). By January 2020 the

-

^{*} Corresponding Author

WHO had declared that its spread will not be limited to only one country but that it would unroll in other parts of the world. (World Health Organization, 2020). Consequently, September 2021, there have been 233,136,147 confirmed cases of COVID-19, including 4,771,408 deaths, reported to WHO globally (WHO, 2021).

Moreover, the COVID-19 infection is hugely spreadable and transmittable through bodily contacts and a respiratory bead from the infected patients, which is now the primary origin of transmission of the disease. The virus exists on a contacted surface up to 12 hours or two days (Fong et al., 2020). Its main clinical symptoms include headache, cough, pharyngitis, fever, lethargy, myalgia, and shortness of breath. Furthermore, few patients have also been found with gastrointestinal symptoms such as vomiting and diarrhea. The COVID-19 disease varies from asymptomatic contagion to complete collapse of the respiratory system (Baj et al., 2020). However, it is pertinent to highlight that it has not only impacted millions of people around the world physically (sickness, deaths) but also long-term social, economic, and psychological consequences (Osofsky et al., 2020).

To prevent the spread of virus vast number of countries have adopted strict strategies which includes Australia. The strategies adopted range from border closures, flights cancellations, off-campus education, closure of shopping centers, restriction on large gatherings and migration (MPI, 2020). This level lockdown has led to a global level economic recession with rising numbers of unemployed people. Further, social, and psychological breakdown has led to feeling of depression, anxiety, and social isolation (Khan, 2020). As a result, the governments of the both the developed and the developing world face a challenge in mitigating the post Covid-19 lockdown impact its residents (Weingarten, Slotkin, & Alkire, 2020).

International Students in Australia

The Organization for Economic Co-operation and Development (OECD) shared that in 2017, estimated 5.3 million students studying worldwide were international students (cited in Martel, 2020). Similarly, education sector in Australia has become one of its most important export industries. After the US, UK & Canada, Australia is now one of the attractive destinations for international students acquiring higher education (DESE, 2020). According to the Australian Government Department of Education, Skills and Employment data on international students 2020, the top five countries such as China (28%), India (17%), Nepal (8%), Vietnam (4%) and Brazil (3%) constitute 59% of Australia's international students.

Australian education industry has seen a fast-paced and persistent growth since the late 1980s, with an annual increase of 21 per cent between the period of 1988 to 1995. This increase is viewed as a comparative advantage for Australian economy due to its closeness to Asian region, which is its largest exporter of higher education (Mazzarol, Savery, & Kemp, 1996). The repute of the Australia as a desirable education destination is associated with maintaining high standards of education with affordable education services as compared to US and UK. Similarly, its climate, multicultural society and its relative reputation of a safe, clean & affordable country recognizes it as a favorable education destination (Maringson, 2009; Mazzarol, Savery, & Kemp, 1996). This is due to its friendly education policies by the government of Australia, which has played an important role in marketing education. The Australian's overseas marketing model for international education is acknowledged by other countries for replication (Khawaja & Dempsey, 2008).

Thus, the recent past data for the period of 2014-2019 indicates there has been an annual average growth rate of 10.8% (Department of Education, Skills and Employment, 2019). This illustrates a persistent increase in overseas students coming to Australia. In the year 2019 overseas students injected AUD\$ 40.4 billion into the Australian economy. Thus, making it the fourth-largest export after gas, coal, and iron ore. This in turn created an employment of for over 250,000 jobs (Tehan, 2019).

In contrast, the year 2020 has shown a sharp decline of -9% in the number of international students coming to Australia for education (DESE, 2020). Similarly, according to the Australia Bureau of Statistics (ABS) 2019, the international student arrivals to Australia in December 2019 were reported 38,700, while in the year December 2020, a total of 230 international students entered Australia. Moreover, only 150 students in higher education and 40 postgraduate research students arrived in the year December 2020 compared to 23,780 and 2350 in the year 2019. This sharp decline of (-99.4%) was due to covid-19 pandemic travel bans. Further, in the state of Victoria only 40 international students arrived in the year December 2020. Thus, a decrease of 13,970 students (-99.7%) compared to the previous year (DESE, 2019).

In terms of enrolment, the year 2019 had 956,773 enrolments including 758,154 full fee-paying international students in Australia on a student visa. This represents a growth rate of 9.7% increase in enrolments as compared to 2018. The highest number of enrolments in 2019 were in higher education (46.2%) (Department of Education, Skills, and Employment, 2019). While the year 2020 saw a drop of 7% in higher education enrolments in Australia (DESE, 2020).

Study Objectives

This study was undertaken to explore impact of COVID-19 restrictions on international students studying in Melbourne, Victoria. The main objectives of the study were.

- 1. To document impact of extended and strict lockdown on physical, mental, social health financial conditions and academic performance of international students.
- 2. To find out that students received any support from the Victorian government and their opinion about extended lockdowns as best strategy to curb the virus.
- 3. To explore what difference they think could be between their conditions in lockdown in Australia compared to their home countries.
- 4. To inquire from students in which areas they still need assistance from the Australian government.

Research Design

The present research is exploratory in nature, which adopted a quantitative research method for primary data collection.

Research Questions

- 1. Are COVID-19 restrictions particularly lockdown is affecting student's daily lives such as mental, physical, and social health?
- 2. Is COVID-19 related lockdown impacting student's academic performance s in terms of their learning?
- 3. Did students receive any support from Victorian government during lockdown?
- 4. What type of support international students need from the state government?
- 5. What student think about extended lockdown as effective strategy to curb virus spread?
- 6. What difference students had if they were in their home countries during the lockdown?
- 7. What kind of support international students need from the Australian government?

Study Hypothesis

The strict and extended lockdown in Victoria state is negatively impacting international students' lives studying and living in Victoria.

Sampling Method

The study applied purposive sampling (as list of international students could not be obtained due to COVID) in line with its objective to access only those students who were foreign origin and studying as well as residing in Melbourne at the time of lockdown. In this regard, sample size was not initially decided rather data collection was stopped on the saturation of data. Thus, a total number of 61 students participated in this survey out of which 51 percent reported themselves as males and 49 percent as females.

Data Collection Method

Considering strict lockdown policy of the Victorian Government at the time of survey, physical and face to face data collection was not possible so to counter this limitation a tool was designed in google survey form and shared with the international students electronically mainly using emails and WhatsApp. It was self-administered tool with an option to be filled online.

Data Collection Tool

A semi structured questionnaire with multiple options (for each question) was developed for data collection. The tool was developed by the researcher and have never been used before. The tool was pilot tested on few students before sending to wider population and was amended in line with their feedback received.

Study Variables

Dependent: The research variables were international students who were physically present as well as studying at any of the following three levels such as undergraduate, graduate, or post-graduate in any institute in Melbourne Australia.

Independent: COVID-19 related lockdown which includes no movement except these three reasons 1) grocery, 2) medical, 3) essential work.

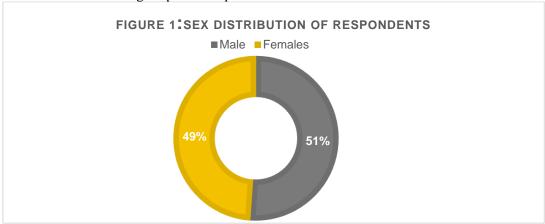
Data Entry and Analysis

The data collected from students was later transferred to MS Excel and analyzed whereas tabular, and graphic presentation of findings was prepared in MS Word.

STUDY FINDINGS

Genre /Sex of Study Respondents

The total number of students who responded to online survey was 61 out of which 51 percent reported them as males and remaining 49 percent reported themselves as females.



Study Level Distribution of Respondents

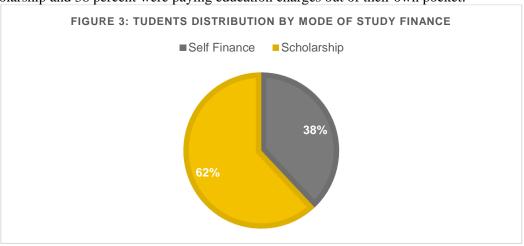
The respondent has been distributed into three study categories and 79 percent of respondents were enrolled in post-graduate study at the time of interview, following 11 percent undergraduate and 10 percent at PhD level.

Table No. 1 Present Distribution of Respondents by their Study Level

Study Level	Number	Percentage
Under-graduate	7	11
Post-graduate	6	10
PhD	48	79
Total	61	100

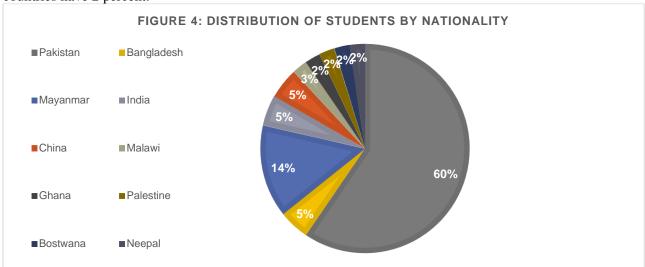
Mode of Study Finance of Respondents

The survey inquired about the source of study funding and data shows that out of total, 62 percent were on scholarship and 38 percent were paying education charges out of their own pocket.



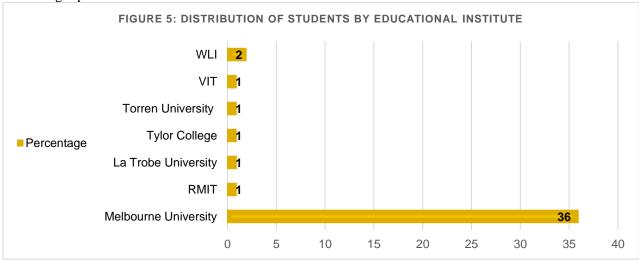
Distribution of Respondents by Nationality

In this survey, students from 10 countries participated, among these 60 percent were from Pakistan following Myanmar 14 whereas China, India and Bangladesh's participation is 5 percent and remaining countries have 2 percent.



Distribution of Respondents by Educational Institutions

As data shows that out of total 84 percent of the respondents are from the university of Melbourne and remaining 6 percent from different other institutes from Melbourne.



Type of Respondent's Accommodation

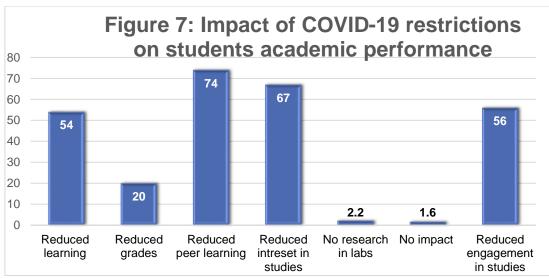
The survey asked students about their living arrangement and overall 67 percent of respondents reported a shared accommodation (with other students and/or some families) and 33 percent were living alone in studio apartment, university accommodation and or in a house.

Table No. 2 Presents Respondnets Distributiob by their Living Arrnagments

Study Level	Number	Percentage
Shared accommodation	41	67
Living alone	20	33
Total	61	100

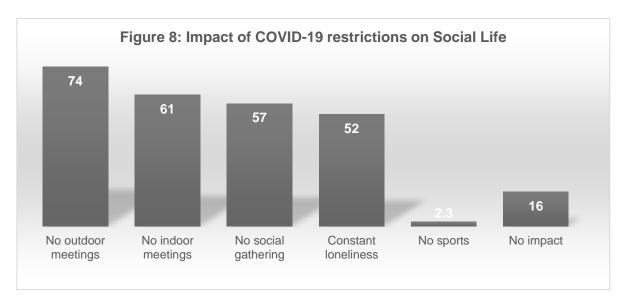
Impact of COVID-19 on Respondents Academic Performance

The survey provided multiple options to respond, and data shows that only 1.6 percent students reported no impact and 98.4 percent reported one or more than one impact on their academic performance. The highest impact is reported on peer and social learning 74 percent following reduced interest in studies 67 percent, reduced learning 54 percent and reduced engagement in studies 56 percent.



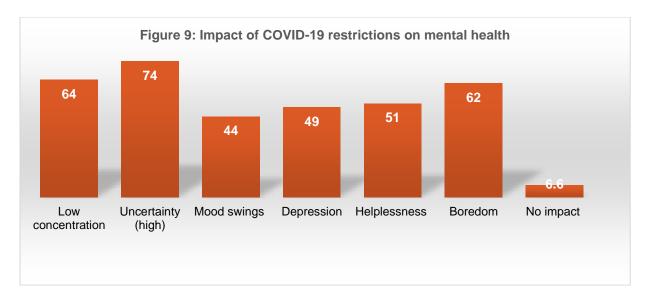
Impact of COVID-19 restrictions on Social Life

While responding to impact of COVID-19 restrictions on student's social life, 16 percent said no impact, whereas remaining 84 percent of the students mentioned some form of impact for example, 74 percent reported no outdoor meetings, 61 percent mentioned no indoor meetings, following 52 percent mentioned constant loneliness.



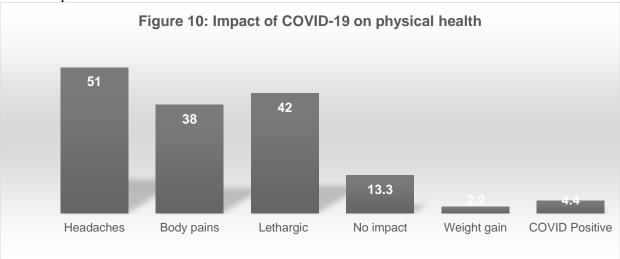
Impact of COVID-19 restrictions on Mental Health

The mental health responses only 6.6 percent students mentioned no impact at all whereas remaining 94.4 percent students mentioned impact of restrictions on their mental health such as feeling of uncertainty is highest among all such as 74 percent following the low level of concentrations 64 percent, extended boredom 62 percent, helplessness 51 percent, mood swings 44 percent and 49 percent mentioned signs of depression. These findings demonstrate burden on mental health of students due to restrictions and extended lockdowns imposed by the state government Victoria.



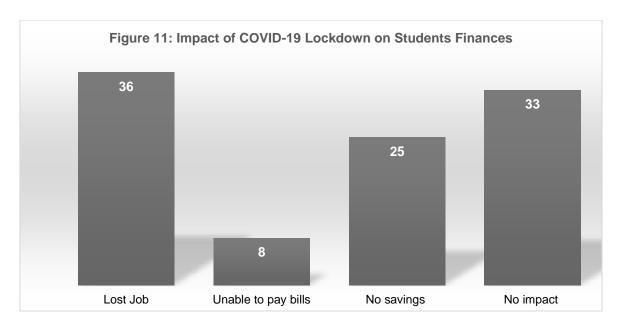
Impact of COVID-19 on Physical Health

While responding to impact on physical health around 87 percent reported one or the other impact whereas headaches are highly reported (51 percent) following the feeling of lethargy 42 percent, following the body aches 38 percent. However, 4.4 percent also mentioned getting infected with COVID-19 as well. The results show a toll on physical health of students who at the same time dealing with multiple issues.



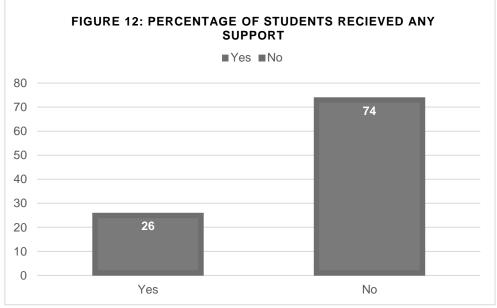
Impact of Lockdown on Respondents Finances

As data presented earlier showed that 73 percent of the students were on scholarship so financial impact assumed lesser and data also shows that 33 percent reported no impact. Still, who reported impact out of them 36 percent reported job loss (part or full time), and 25 percent mentioned they could not save money for next semester fees and 8 percent mentioned financial hardships in paying their utility bills and even buying monthly grocery.



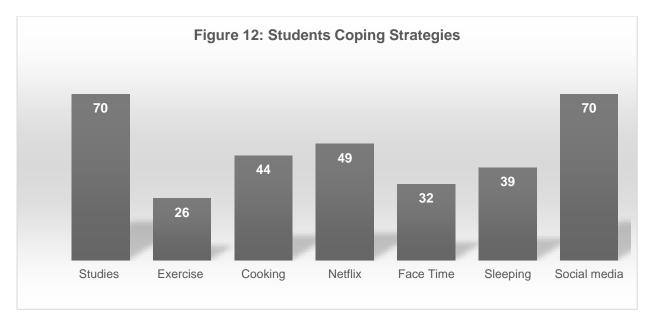
Support from Victorian Government

About Victorian government support to international student's 74 percent reported no support at all received whereas 26 percent said they received support in terms of rent relief, fee reduction, mental health support and free COVID-19 testing.



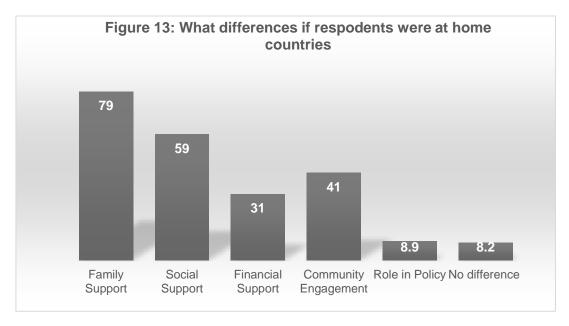
Coping strategies of Respondents Against COVID Crisis

All the respondents mentioned several strategies, which they were using simultaneously to cope with the impact of COVID-19 restrictions. The highly reported strategies were involvement in studies (70 percent) and use of social media (70 percent) following the Netflix streaming (an online entertainment screening web) (49 percent). Besides excessive sleeping as a coping strategy was also reported (39 percent), which is higher than use of physical activity such as exercise (26 percent). All these activities are indoor which verifies limited exposure of students with the outside world during the lockdown period ultimately causing a havoc on their mental, social and physical health reported above.



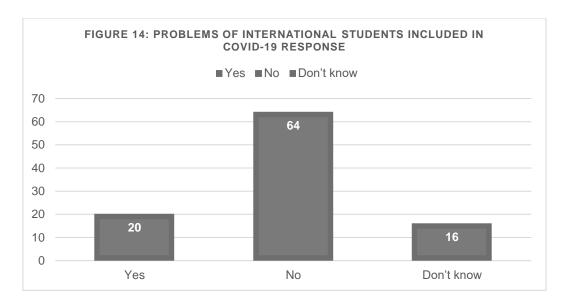
Home Countries Difference Regarding COVID-19 Impact

While responding to the question what could have been different if students were in their home countries, 92 percent responded to this question and out of them 79 percent mentioned receiving family support (absent in Melbourne), social support (59 percent), following financial support and community engagement (31 percent each). Whereas according to 8.2 percent there could have been no difference if they were at their home countries. Family and social support during crisis carries a significant value which help to lessen the impact.



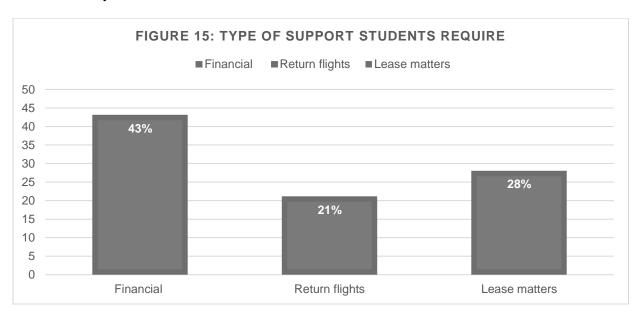
Inclusion of International Student's Problems in Government's Response to COVID

Overall 64 percent students opined that problems of international students were not included in the Victorian government's COVID-19 response following the 20 percent who had opposite opinion, and 16 percent had no knowledge.



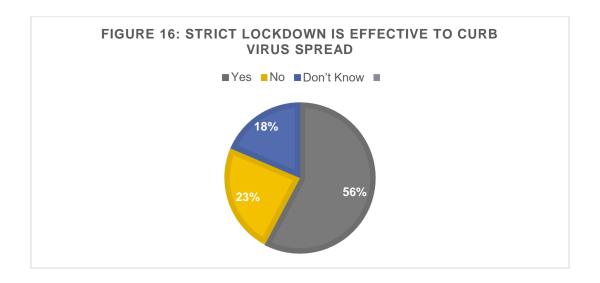
Type of Support International Students Require from Australian Government

While responding to the question what type of support they further need from the Victorian government. The 43 percent students reported that that government could provide them financial support in form of rent relief, and paying their utility bills, and 21 percent highlighted support in arranging their repatriation flights following 28 percent mentioned they need support in ending their lease matters which was a key concern for most of the students.



Strict Lockdown Policy's Effectiveness to Curb Virus Spread

The survey also asked students' opinion COVID-19 suppression strategy of Victorian government and out of total, 56 percent of the students viewed that strict lockdown policy is effective to deal with the pandemic. Whereas 23 percent were of the view that this strict suppression strategy will not be effective, and 18 percent said they do not know.



DISCUSSION

The purpose of this research was to document impact of COVID-19 related restrictions particularly extended lockdown on international students studying in Melbourne, Victoria, in the background of the assumption that they must have been hit hard by this pandemic considering their emotional and financial vulnerabilities being far from their families. As hypothesized the data shows that students reported significant impact of COVID-19 restriction on all aspects of their lives regardless of their demographic characteristics and financial status. For example, students reported a severe impact on their academic performances, social life, mental and physical health, and financial matters. Further, respondents showed dissatisfaction with the support provided by the Australian and Victorian Government, and respondents opined that Victorian government could support them more financially as well as in managing their lease agreements and in arrangement of repatriation flights. However, it is anticipated from these findings that living away from families in prolonged isolations might leave long-lasting impact on these students (particularly living alone) for rest of their lives, as they were totally ignored in the public policy related to COVID-19 response and were left on their own.

The findings of present study are consistent with many other studies which have documented impact of COVID-19 on students' lives economic, social, and academic. In recent past substantial research have been undertaken about COVID-19 impact and have found similar results for example Aucejo et al., (2020) studied impact of COVID-19 on higher education and found negative impact on many dimensions of student's educational lives due to pandemic such as loss of job (40 percent), and delayed graduation (13 percent) due to economic difficulties. Similarly, one quarter of the students reported increased study hours 4 to 5 hours following by the same proportion whose study hours decreased. Radha et al., (2020) found in their study conducted to explore impact of e-learning on students and found that though e-learning (online) classes are very popular among students but still students prefer face to face classroom interaction as it provides social and peer learning besides giving the opportunity to interact, deliberate and discuss ideas with the classmates. The same findings have been reported in study undertaken in Indonesia by Fatonia et al., (2020), which revealed that students appreciated flexibility of online learning system, but they also admitted that it reduces their concentration level as well.

Likewise, Wang et al., (2020) carried out research in China to find out COVID-19 impact on mental health of international students studying in China and found out 59.4 percent depression and 37.8 percent anxiety among the sample students. And the key factors behind this high rate of depression and anxiety prevalence was consistent uncertainty about future particularly about completion of studies (getting graduated), and sleep deficiency.

Zhai and Du, (2020) studied mental health issues of international Chinese students and highlighted that how Chinese students have faced mental health problems due to isolation, discrimination, and harassment they experienced and flagged the need to provide appropriate mental health care to international students by the universities and colleges besides provision of assistance in financial and academic matters.

The study findings highlight new dimensions for research about social and mental wellbeing of international students in the time of crisis/disaster. As being away from home and families, they are totally dependent on the host governments and their educational institutes for their safety and welfare. As Zhai and Du, (2020) highlighted that universities and educational institutes must consider planning for short- and long-term psychological support as well as services for international students in the time of any crisis (manmade or natural).

However, future researcher may explore how these universities and host governments can develop appropriate response and management plans to ensure international students' safety during any crisis period.

Considering these findings, the study recommends that respective educational institutes of Melbourne, Victoria may consider developing a comprehensive plan (to respond and manage COVID-19 crisis). In this regard, they must connect with the international student bodies to collect data about nature and intensity of student's issues and provide them necessary support accordingly to enable them better cope with these unprecedented circumstances, which are far more challenging for them compared to the domestic students.

Study Limitations

Due to COVID-19 related restrictions, face to face interviews could not be conducted and questionnaire was self-administered. Secondly, the equal ration of women and male students could not be ensured considering the tough circumstances and the participation of the respondent in the survey was purely voluntarily. Likewise, the ratio of students from different countries is disproportional due to COVID-19 restrictions, lockdowns, and subsequent mode of data collection (self-administered online questionnaire). The number of respondents from Pakistan is higher compared to the other nationalities mainly because the researcher belongs to Pakistan. However, the study findings are similar for students of each nationality. Further, sample size of the study compared to the number of students in the state is small, which excludes the study to make any generalizations. The small sample size is mainly due to COVID-19 related restrictions as well as nature of participation was purely voluntarily.

The study documented overall impact of lockdown on student's lives and did not go into details particularly for mental health issues, which is technical and distinctive domain. Some future study may record these impacts in detail in a qualitative study. However, the questionnaire was short and concise so that students who were already under a lot of pressure of online studies and loneliness do not get additional burden and provide true responses.

REFERENCES

- Aucejo, E. M., French, J., Araya, M. P. U., & Zafar, B. (2020). The impact of COVID-19 on student experiences and expectations: Evidence from a survey. *Journal of public economics*, 191, 104271.
- Australian Government Department of Education, Skills and Employment. (2019, June 16). Data on international students 2019. Retrieved from https://internationaleducation.gov.au/research/international-student-data/Pages/InternationalStudentData2019.aspx
- Australian Government Department of Education Skills and Employment. (2019). *End of Year Summary of International Student Data 2019*. Retrieved from https://internationaleducation.gov.au/research/international-student-data/Documents/MONTHLY%20SUMMARIES/2019/December%202019%20End%20of%2 Oyear%20summary.pdf
- Australian Government Department of Education, Skills and Employment. (2020). *End of Year Summary of International Student Data* 2020. Retrieved from https://internationaleducation.gov.au/research/international-student-data/Documents/MONTHLY%20SUMMARIES/2020/Full%20year%20summary.pdf
- Australian Government Department of Education, Skills and Employment. (2020). Data on international students 2020. Retrieved from https://internationaleducation.gov.au/research/international-student-data/Documents/MONTHLY%20SUMMARIES/2020/Dec%202020%20MonthlyInfographic.pdf

- Baj, J., Karakuła-Juchnowicz, H., Teresiński, G., Buszewicz, G., Ciesielka, M., Sitarz, E., Forma, A., Karakuła, K., Flieger, W., Portincasa, P., & Maciejewski, R. (2020). COVID-19: Specific and Non-Specific Clinical Manifestations and Symptoms: The Current State of Knowledge. *Journal of clinical medicine*, *9*(6), 1753. https://doi.org/10.3390/jcm9061753.
- DESE. (2020). Department of Education, Skills and Employment 2020 https://internationaleducation.gov.au/research/international-student-data/Documents/MONTHLY% 20SUMMARIES/2020/Full% 20year% 20summary.pdf
- Fatonia, N. A., Nurkhayatic, E., Nurdiawatid, E., Fidziahe, G. P., Adhag, S., Irawanh, A. P., & Azizik, E. (2020). University students online learning system during Covid-19 pandemic: Advantages, constraints, and solutions. *Systematic Reviews in Pharmacy*, *11*(7):570-576.
- Fong, S. J., Li, G., Dey, N., Crespo, R. G., & Herrera-Viedma, E. (2020). Finding an accurate early forecasting model from small dataset: a case of 2019-nCoV novel coronavirus outbreak. *Int J Interact Multimed Artif Intell*, 6(1):132. doi: 10.9781/ijimai. 2020.02.002.
- Khan, M. N. (2020). Scarred minds: There is more to the psychological impact of Covid-19 crisis than meets the eye. News18. https://www.news18.com/news/opinion/scarredminds-there-is-more-to-the-psychological-impact-of-covid-19-crisis-than-meets-the-eye-2630607.html.
- Khawaja, N., & Dempsey, J. (2008). A comparison of international and domestic tertiary students in Australia. *Journal of Psychologists and Counsellors in Schools*, 18(1):30-46.
- Marginson, S. (2009). Is Australia overdependent on international students? *International Higher Education*, (54).
- Martel, M. (2020). COVID-19 Effects on US Higher Education Campuses. From Emergency Response to Planning for Future Student Mobility. Recuperado de: https://bit. ly/2zVxewC.
- Martone, A. M., & Marzetti, E. (2020). The new challenge of geriatrics: saving frail older people from the SARS-COV-2 pandemic infection. *The journal of nutrition, health & aging*, 24(5):466-470.
- Mazzarol, T., Savery, L. K., & Kemp, S. eds. (1996). *International students who choose not to study in Australia: An examination of Taiwan and Indonesia*. AEIF Policy, Research and Analysis Section.
- MPI. (2020, May 02). *Coronavirus (COVID-19) Research & Analysis*. Retrieved from www.migrationpolicy.org, viewed on www.migration-policy-program-international-program/coronavirus.
- Osofsky, J. D., Osofsky, H. J., & Mamon, L. Y. (2020). Psychological and social impact of COVID-19. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12(5), 468.
- Paules, C. I., Marston, H. D., & Fauci, A. S. (2020). Coronavirus infections—more than just the common cold. *Jama*, 323(8):707-708.
- Radha, R., Mahalakshmi, K., Kumar, V. S., & Saravanakumar, A. R. (2020). E-Learning during lockdown of Covid-19 pandemic: A global perspective. *International journal of control and automation*, *13*(4), 1088-1099.
- Tehan, H. (2019), *International education makes significant economic contribution, media release*, Parliament House, Melbourne, viewed 20 February 2021, https://ministers.dese.gov.au/tehan/international-education-makes-significant-economic-contribution.
- Tehan, H., & Minister for Education. (2019). *International education makes significant economic contribution, media release*, Parliament House, Melbourne, viewed 20 February 2021,https://ministers.dese.gov.au/tehan/international-education-makes-significant-economic-contribution
- Walsh, F. (2020). Loss and resilience in the time of COVID-19: Meaning making, hope, ad transcendence. *Family process*, 59(3):898-911.
- Wang, X., Hujjaree, K., & Wang, F. (2020). Mental health impacts for international students during the COVID-19 pandemic in China. *Research Square*.
- Weingarten, S., Slotkin, J. R., & Alkire, M. (2020). "Building a real time COVID-19 early warning system." *Harvard Business Review*.
- WHO. (2020). Emergency. World Health Organization. Retrieved from https://www.who.int/.
- WHO. (2021). WHO Coronavirus (COVID-19) Dashboard. Retrieved from https://covid19.who.int.
- Zhai, Y., & Du, X. (2020). Mental health care for international Chinese students affected by the COVID-19 outbreak. *The Lancet. Psychiatry*, 7(4), e22.