

Well-being and Online Learning during COVID-19 Lockdown: A Survey of the Perception of Undergraduate Occupational Therapy Students from Colleges of Maharashtra

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Abstract: ***Background:** The current lockdown has shut down schools, universities and thus has largely affected the wellbeing of students. In view of COVID-19 lockdown in India, many colleges started online classes. This study aimed to evaluate the wellbeing of occupational therapy student and their perception towards online classes during lockdown. **Methods:** We designed an online questionnaire with close ended questions to assess students' wellbeing and online learning experience. It was pilot tested for content and structure. Link to the questionnaire was shared with the occupational therapy students who have attended at least one online class during the COVID-19 lockdown period. **Result:** 75% of the students found to have negative impact whereas 25% students found to have a positive impact on their routine. 68% students rated clinical skills to be affected severely, whereas 19% found it to be moderately affected due to online learning. **Conclusion:** Students on survey reported moderate level of emotional distress due to uncertainty about the pandemic, whereas maximum students are more worried about lack of exposure for clinical assignments and patient handling due to online classes. Internet connectivity was major cause of dissatisfaction towards the online learning.*

Keywords: Covid-19 lockdown, survey design, occupational therapy student, online learning, wellbeing

1. Introduction

Corona virus disease (COVID-19) is a newly discovered infectious disease caused by a virus named "Corona virus." This disease is highly infectious in nature. (World Health Organization, 2020). Considering the global threat, the WHO has declared COVID-19 as A Public Health Emergency of International Concern (PHEIC) on March 11, 2020 and declared it as a pandemic. In many countries on account to contain the spread of COVID-19, lockdown measures were taken. Within India, the state of Maharashtra was the worst hit state followed by Andhra Pradesh and Tamil Nadu. The Government of India declared a nationwide lockdown on 25th March 2020, as a measure to mitigate the spread of infection^[1] The current lockdown conditions have shut down schools, universities and thus has largely affected the wellbeing of students as they no more get to interact with their colleagues and teachers, hence social gathering, face to face teaching and learning sessions has suspended, this has affected physiological phases of life. Hence, various studies on the impact of COVID-19 and lockdown, on college students have been done in many countries across the world. Dr. Toni Noble et al., (2008) in their study defined 'student wellbeing is a sustainable state, characterized by predominantly positive feelings and attitude, positive relationships at school, resilience, self-optimization and a high level of satisfaction with learning experiences. Also, it stated that student wellbeing is strongly linked to learning and also academic performance^[2] In these challenging times, improving student mental well-being has become a greater priority in order to reduce the known consequences of ongoing psychological distress and minimize any negative

effects of the pandemic on mental health. Hence, during such uncertain circumstances, in the current survey we tried to assess the occupational therapy undergraduate students' well-being, and their perception about the online learning by using newly formulated and pilot tested questionnaire. Thus, this study will help in improving lifestyle and make online learning more accessible and interesting.

Aims and Objectives

To investigate the impact of covid-19 on well-being of undergraduate occupational therapy students and evaluate their perception towards online learning classes.

2. Method

We conducted a cross-sectional survey using google forms. A semi structured questionnaire comprising 15 questions was pilot-tested for the content and structure. Undergraduate occupational therapy students who attended at least one online class were included in the study. Respondents were 280 participants from five occupational therapy colleges from the states of Maharashtra in India.

Questionnaire

The questionnaire was formulated by conducting semi-structured telephonic interviews of five students from each academic year to identify problem areas. Also, current issues related to the pandemic process were considered and the literature was reviewed. Then it was validated by four occupational therapy experts. The final questionnaire comprised of two sections- the first section included socio-demographic details (age, gender, academic year, type of

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family, and mode of travel). The second section included four questions on student’s concern related to COVID -19, five questions on psychosocial impact and six questions to assess students’ perception for online classes. The students were asked to rate their experiences of wellbeing and online classes using the likert scale from 1 to 4 (1 = not at all, 4 = Very extremely) The score one indicates there is no impact whereas, score four indicates maximum impact on the well-being of students. It took approximately 10 minutes to complete the entire questionnaire.

The questionnaire was self-administered in English. A link to the questionnaire was provided to the students via WhatsApp groups of students among occupational therapy colleges in the state of Maharashtra. All the participants were informed about the aim, benefits and implication of the study and consent was obtained before starting the survey. A restriction on the number of responses from a single email-address was enforced to prevent duplicate responses from the participant. Students involved in pilot study were excluded from final analysis. The raw data which was obtained through the survey was analyzed and the results were calculated.

3. Results & Data Analysis

The characteristics of the students are shown in Table 1. During the study period, a total of 260 students participated in the study. Out of the entire study population, 234 were females and 26 were males. The maximum respondents were from the age group of 18-21(82.14%), 22- 25 years (15.87%) followed by individuals belonging to >25 years (1.98%). The students were from different academic year, Ist year (19.8%), IInd year (42.9%), IIIrd year (26.2%), and IVth year (11.1%). From the data collected, maximum students (69.4%) were localite, whereas (31.67%) were hostelite. 77.4% students were from joint family and 22.6 % from nuclear family.

Table 1: Characteristics of study population

		Percentage (%)
Gender	Male	10%
	Female	90%
Age group	18-21	82.14%
	22-25	15.87%
	>25	1.98%
Year of study	1 st BOTH	19.80%
	2 nd BOTH	42.90%
	3 rd BOTH	26.20%
	4 th BOTH	11.10%
Residence	Localite	69.40%
	Hostelite	31.60%
Type of family	Nuclear	22.60%
	Joint	77.40%

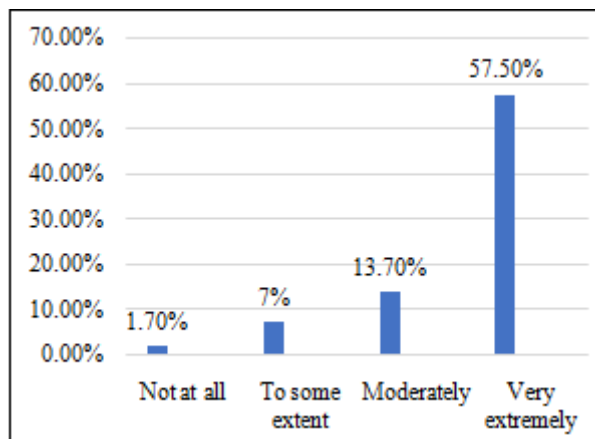


Figure 1: How much have you been concerned about your personal and family's safety and security?

57.5% of the students are extremely concerned about personal and family’s safety and security, whereas 41.8% are concerned moderately and to some extent.

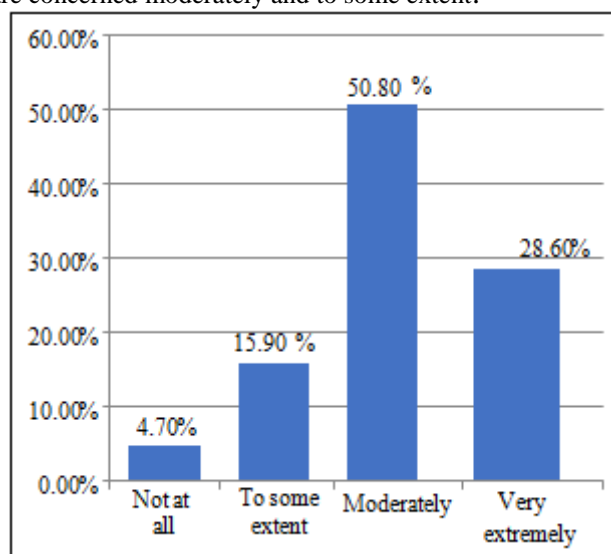


Figure 2: How much have you been concerned about the longevity of the pandemic?

More than half of the students were concerned about the longevity of pandemic moderately to some extent, 29% were extremely and 4.70% were not at all concerned about longevity of pandemic.

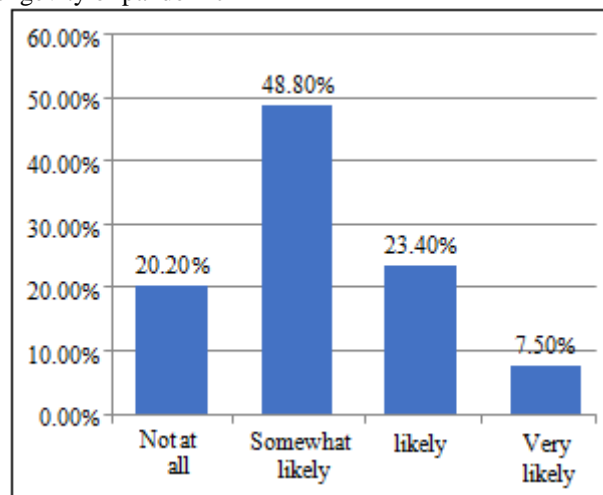


Figure 3: How likely do you think it is that you will develop COVID-19?

From the study population maximum students reported very likely, likely, or somewhat likely that they will develop COVID-19 whereas 20% reported that they will not at all develop COVID-19.

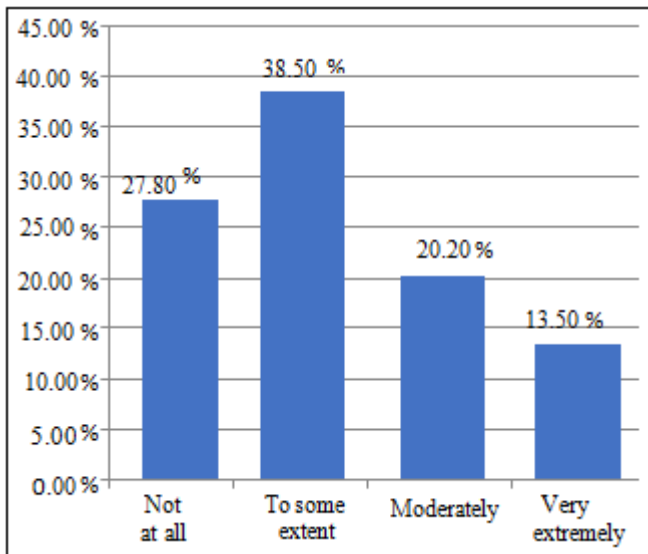


Figure 4: Did you experience a financial crisis due to loss of job of any of your family member?

More than half of the students experienced financial crisis to some extent, moderately, while 14% students faced this problem very extremely.

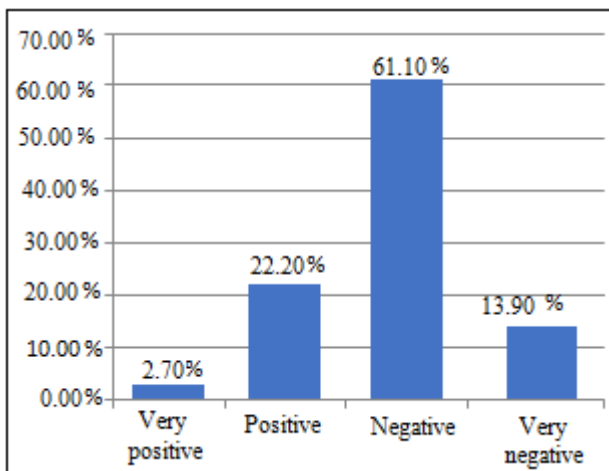


Figure 5: How much this pandemic had a positive or negative impact on your regular routine?

Maximum students reported negative impact on their regular routine whereas very few 23% students found it to have a positive impact on their routine.

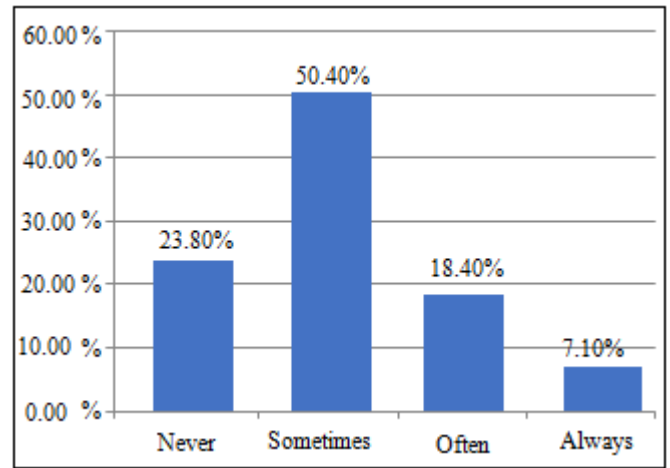


Figure 6: How many times the thought of COVID-19 has troubled you falling asleep/disturbed your sleeping patterns?

50% of the students experienced sleep disturbances sometimes only, whereas 26% experienced it often to always and 24% students never experienced it.

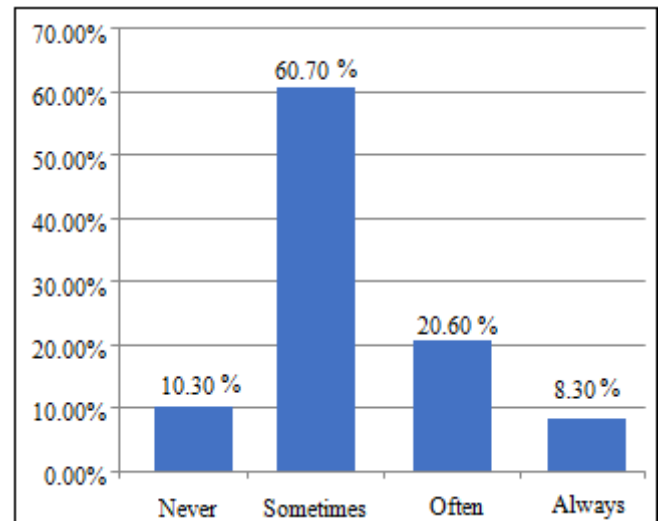


Figure 7: To what extent have you been following recommendations for hygiene and social distancing?

More than 50% of students are following hygiene and social distancing very closely and somewhat closely, whereas very few are not following it.

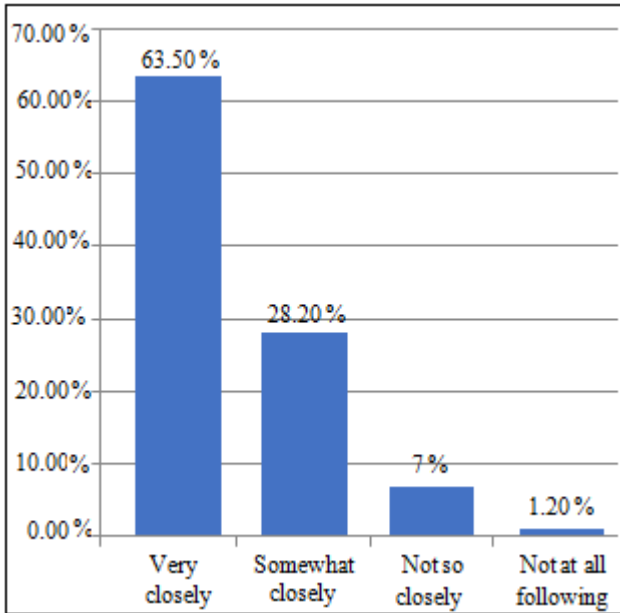


Figure 8: How often you felt nervous and stressed due to thought of COVID-19?

60% Students felt nervous and stressed sometimes, whereas 29% Students felt it often to always.

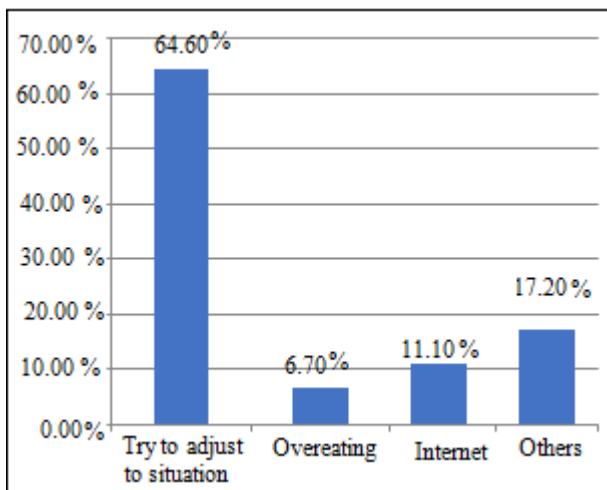


Figure 9: Which of the following coping mechanism have you used very often to deal with stress /anxiety during this pandemic?

65% Students tried to adjust to the situation, whereas 11% Played internet games to cope up, while only 7% Students found overeating as their coping mechanism. Also 17% Students adopted some other coping mechanisms like exercises, yoga, meditation, pursued hobbies/read/draw, videos/web-series, socialize online, play/listen music, sleep.

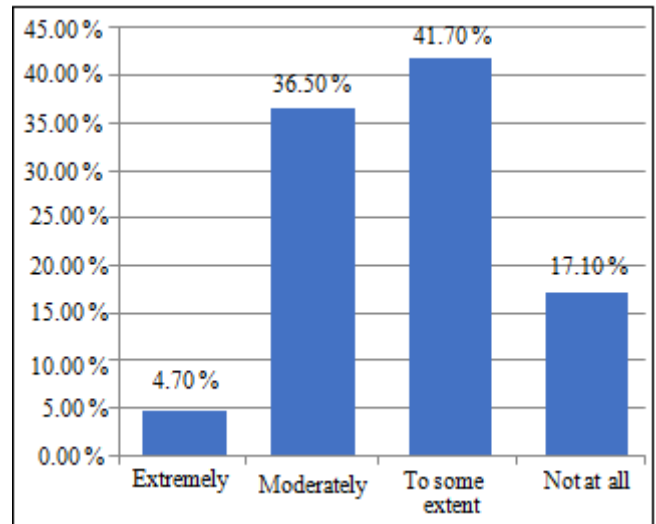


Figure 10: How do you find that online teaching makes learning interesting?

Overall, 78% students found online learning to be interesting.

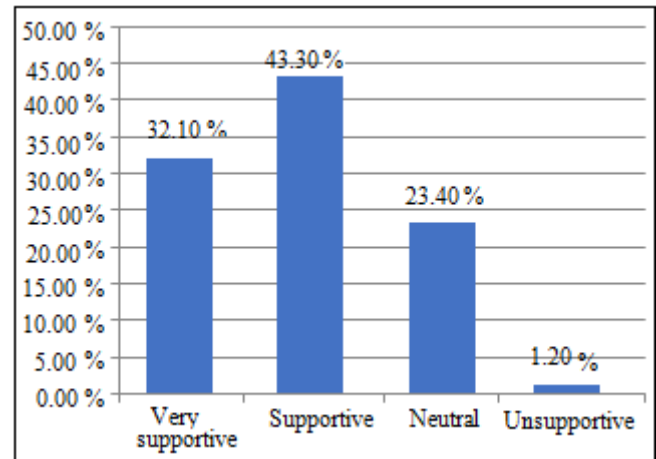


Figure 11: How supportive have been your professors and administration for online teaching program?

75% of students found them to be very supportive to supportive, whereas 23% found them to be neutral.

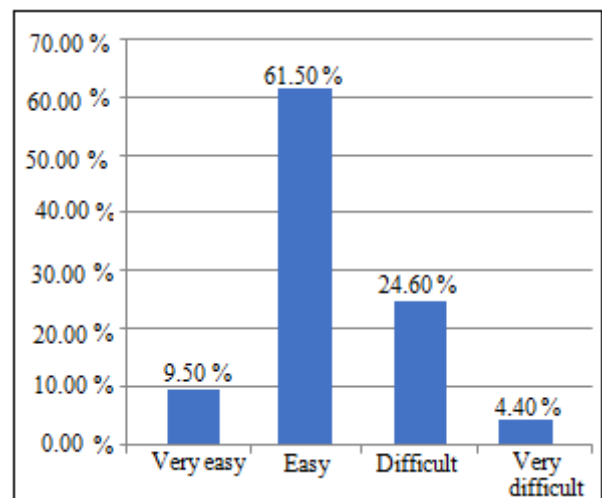


Figure 12: How easy/difficult is time management with regard to attending online lectures?

More than 60% students could manage their time easily to management. very easily, whereas 30% found it difficult in time

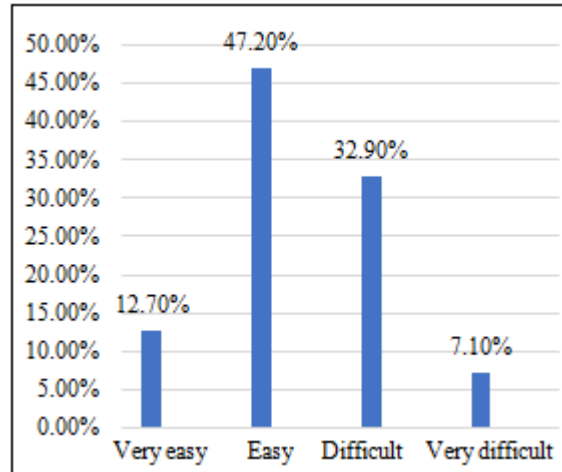


Figure 13: How easy/difficult is it to access internet to attend online lectures?

Internet access was found to be easy to very easy for 60% student whereas, 40% found it to be very difficult.

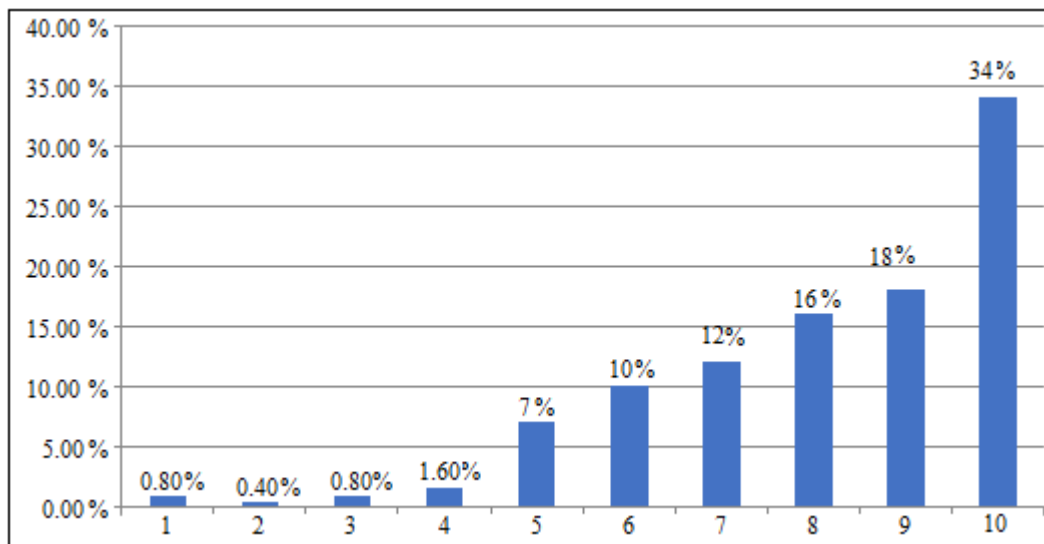


Figure 14: Rate on the following scale how much do you think your clinical skills will be affected by not attending your usual clinical postings?

68% students found clinical skills will be affected severely, whereas 19% found it will be moderately affected.

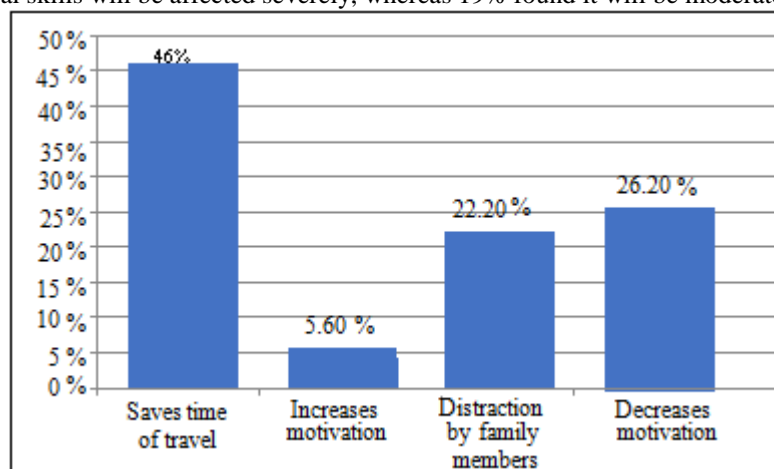


Figure 15: What do you think about advantage/disadvantage of online learning?

46% Students reported it to be advantageous as it saves time because of distraction of family members while attending of travel whereas 48% found it to be disadvantageous online classes.

4. Discussion

In this survey, we evaluated occupational therapy students' perception of online learning and well being during the COVID-19 pandemic.

Results of this study have shown that students are extremely concerned about safety and security of self and family members (fig 1, 2), as well as highly concerned about longevity and susceptibility of this pandemic. This could be due to, being an allied health student, the professional knowledge of the causes, transmission route, treatment of infectious disease may cause extreme worry about self and family.

To support this finding, a study conducted by L. Xie et al. (2020) reported that medical students showed impact of COVID-19 to be more serious than non-medical students.^[3] Also, Khasawneh et al., (2020) concluded in their study that overall medical students in Jordan showed expected levels of knowledge and attitude regarding COVID-19 and reported good precautionary measures, more than half of those students always closely monitor the physical health of people around them. But the uncertainty of pandemic may threaten the future prospects of many medical students.^[4]

As per (fig.3), 80% of the participants had fear of developing infection at different level which thus suggestive of psychological distress and affecting mental well-being. This is supported by Li et al. (2020), found fear of infection to be significantly associated with anxiety and depression.^[5]

In these challenging times, improving student mental well-being has become a greater priority in order to reduce the known consequences of ongoing psychological distress. The lockdown in India has led the uncertainty to economic concerns, due to which 60% of students in this study population reported financial crisis to some extent, whereas, 14% have reported severe problems (fig.4). This could be due to India's unemployment rate skyrocketed to a staggering 27.1%, since the beginning of lockdown especially in metropolitan cities.^[6] Also, maximum students in this study population are living in urban areas with parents, having a steady family income so did not experience high financial crises, as concluded by W. Cao et al., (2020) in their study on medical students in China.^[7]

Inevitably, an elevated level of stress has impacted negatively on students' lives by disturbing sleep and routine to some extent (fig.5 & 6). This could be due to sudden challenges faced in terms of academics, decreased physical activities, altered sleep-wake schedule, fears around self-isolating and uncertainty about returning to normal.^[8] Also higher demands of medical curriculum could lead to disturbed sleep, which in turn affects mental well-being.^[1] Kanchan S. et al., (2020) in their study indicated marked decrease in sleep quality during the pandemic as compared to before the pandemic.^[9] The similar findings are reported by Cristina Romero-Blanco et al., (2020) that observed worst sleep quality during the lockdown.^[10]

The current study assessed the knowledge and attitudes of students regarding the recommendations for hygiene and social distancing. Participants were found to have good levels of knowledge regarding COVID-19 as well as good precautionary measures were also detected among participants. More than 50 percent of students report very closely following recommended hygiene practices and physical distancing. This is in accordance with a similar study conducted by Khasawneh et al. (2020), reported that, precautionary measures such as hand washing, staying at home and wearing a face mask often were adopted by 98% of medical students.^[4]

This survey indicated that 90% of students were afflicted with experienced anxiety and nervousness because of the COVID-19 outbreak. Of these, 60% student experienced anxiety sometime, and 20% very often (fig.8 & 9). This could be due to the increasing number of suspected cases and the significant shortage of masks and disinfectants has increased anxiety and fear. A study conducted by W. Cao et al., (2020), concluded that living in urban areas with parents, having a steady family income, better sanitary conditions in cities than in towns and villages, were protective factors for college students against experienced anxiety during the COVID-19 outbreak.^[7]

On assessment of coping mechanism adopted by students in this study, it has observed that, more than 50% of the students have tried to adjust to the situation and very few students have adopted maladaptive coping strategies like excessive eating, internet gaming (fig.9). Similar study conducted by B. Savitsky in (2020), observed that mental disengagement due to boredom and frustration related to the lockdown may have resulted in excessive eating, found to be significantly associated with moderate to severe anxiety.^[11]

Online Learning Experience:

The results of the current study highlighted that 80% student appreciated online classes and also satisfied with teachers and administration as there was proper utilization of pandemic time and their travel time has also saved. (fig.10, 11, 12). This could be due to flexibility of time, interactive sessions conducted by teachers, two-way feedback, learning at leisure, videos used to explain some clinical topics, which would have made the online learning more interesting for students. Whereas very few students showed unfavorable attitude towards online classes. The reason could be, participants involved in this study are living in joint family, therefore the environment may not always be conducive for online learning.

Many surveys are conducted to assess the advantages and limitations of online learning during COVID-19 pandemic. It stated that poor communication, lack of clear directions from educators, limited attention span, increased cognitive load, administrative issues, social interaction, academic skills, technical skills, ineffective design and arrangement of multimedia materials, learner motivation, time and support for studies, technical problems, cost and access to internet are the factors which create barriers for online learning.^{[12],[13],[14]}

L. Pie and H. Wu (2019), concluded in their study that to guarantee the effectiveness of online learning, the design principles of digital learning, materials, learning goals and student preferences and characteristics should be rigorously evaluated.^[15] A study conducted by Ali et al., (2016) on nursing students showed that 95% of them found e-learning more useful.^[16] Another study conducted by Singh et al., (2016) on efficacy of conducting digital lectures on gross anatomy showed acceptance of students towards digital learning.^[17]

Computers and internet speed are the basic requirement for online learning, which is easily available in urban areas. This corresponds to our findings that 69% of our students belong to urban areas and thus 60% (fig.13) responded easy accessibility for internet. Availability of trial access/free version of various online streaming/conferencing tools and free/less costly internet data packages from telecom companies including, e-books, e-journals during this pandemic period. Also, all these databases can be easily accessed even from mobile.^[18]

Study also explored that 31% students gone back to their village had poor internet connectivity and less availability of computers at their home place, which leads to unfavorable attitude towards online classes. In under developed areas where they still don't have proper internet access with computers, which leading difficulty in attending online classes properly. Other factors for poor connectivity may be as mentioned by Alok Atreya that 'Internet use has increased during lockdown with all the members of the family are at leisure and at home sharing the same internet access which might blurred /pixelate the video thereby compromising it's quality'.^[19]

As reported by Kumar et al., (2019), in addition to studying various clinical subjects, medical students are expected to complete compulsory clinical postings with moderated number of hours in each clinical subject. They are subjected to continue clinical and paper-based evaluation/assessment, need to fulfill elective postings as a course curriculum.^[20] As per our findings more than 50% students reported their clinical skills being severely affected. (fig.14) It could be due to not being exposed to clinical work, patient handling, clinical postings in wards, interactive communication with patients and with teachers during case presentation sessions, which helped to enhance communication and clinical skills.^[21]

At the same time, 52% of the students (fig-15) found online learning to be advantageous. The reason could be, availability of online platforms, such as websites and blogs, educational software can provide basic information and also opportunities to host videos for demonstrating essential skills, such as procedural clinical skills and communication. This finding can be supported by Craddock et al., (2018) observed that pediatrics residents who used an online module for learning atopic dermatitis showed statistically significant improvement in disease specific knowledge when compared to control.^[22]

Another study conducted by John Demuyakor (2020) clearly stated that, students are satisfied with the online teaching

and learning instituted by various educational institutions of higher learning, despite the few challenges identified.^[20] This study was limited to the undergraduate occupational therapy students only. Whereas, survey should have been conducted between non-medical and medical students. In addition, undergraduate students were selected through convenient sampling technique that may lead selection bias. Furthermore, all information provided by participants was self-reported. Thirdly, students were not screened for pre-existing mental health issues. A longitudinal study can be recommended, so that students will be re-surveyed over the coming months to gain a long-term perspective of the COVID-19 impact.

5. Conclusion

In conclusion, this study has provided insights of the impact of COVID-19 on occupational therapy students' well-being and provided an opportunity to address their concerns. We hope that results help the administrators or teachers by raising awareness of how the pandemic impacts on well-being, thus enabling the provision of appropriate support. Ongoing research to monitor student well-being over time as the effects of the pandemic endure will be important to minimize its negative impacts.

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