

Psychological impact of COVID-19 among a cohort of Sri Lankan medical students: Preliminary results

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Abstract

Previous studies report that the COVID-19 pandemic has a negative effect on the psychological wellbeing of medical students. We aimed to determine the psychological impact of COVID-19 and its associated factors among a cohort of Sri Lankan medical students, using online versions of a demographic questionnaire and the validated Sinhala and Tamil versions of the DASS-21. Of the 418 students, majority were females,

aged between 20-25 years. In the study group, 40 (9.6%), 105 (25.1%) and 7 (1.6%) of participants scored above the cut-offs for the depression, anxiety and stress subscales of the DASS-21 respectively. The COVID-19 pandemic appears to be associated with a negative impact as measured by the DASS-21 scale among this group of medical students.

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Introduction

Being a medical undergraduate is reported to be one of the most demanding of all professional programs, in terms of academic demand, as well as the emotional impact on students (1). Reports also indicate that one in three medical students have anxiety, which is higher than that reported for the general population (2). In addition, levels of depression, suicidal ideation, suicide rates, substance abuse and other mental health disorders are also found to be higher among medical students (3-5).

In a recent study conducted during the COVID-19 outbreak in Sri Lanka, approximately half of the health care workers had elevated symptoms of depression and anxiety, and more than half of participating medical students reported psychological symptoms (6-7). Despite medical students having better access to mental health care, they are known to be less likely to seek help for mental health issues, compared to the general population, mainly due to the stigma surrounding mental health disorders (8). This may lead to untoward and harmful coping methods, such as excess alcohol consumption and substance abuse (8).

Furthermore, medical students are now facing challenges such as changes in their training routines, teaching and assessment carried via online methods, and decreased patient contact and interactions with peers. Some of the changes in teaching learning activities may result in increased screen time, and increased risk of contracting the infection, especially for students during their clinical

rotations. All these factors may exert a negative effect on the mental and emotional well-being of the medical students. Only limited information is available on the impact of the pandemic on the mental health of medical students, and none of these studies have been conducted in Sri Lanka (7). International work has explored the impact of COVID-19 pandemic on medical students, assessing aspects such as attitude, awareness, knowledge, precautionary measures, concerns, risk perceptions, impact on education and confidence, and fear of COVID-19 (1 - 3). The main aim of this study was to assess the psychological impact of COVID-19 and its associated factors among a cohort of medical students in a state university in Sri Lanka.

Methods

Data collected using the validated Sinhala and Tamil versions of the Depression, Stress and Anxiety Scale (DASS-21) and a questionnaire (in English) to elicit demographic details. Both the DASS-21 and the demographic questionnaire were designed as a google form and the link for both was sent via email to all the participants. Both the Sinhala and the Tamil versions of the DASS-21 were emailed to the students, as the investigators were not aware of the students' language preference. The google form contained an information sheet and a brief consent form, where the participant had to tick a box if he/she agreed to participate. Once they ticked that box they were directed to the questionnaires in the google format. The participants were given clear instructions in the participant



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information sheet to fill the DASS-21 in their preferred language, and also on how to submit the forms after completion.

Data was recorded in an electronic database and analyzed using the Statistical Package for Social Sciences (SPSS) version 22. Descriptive parameters were established for the variables examined using the questionnaire outcomes and chi-square test was used to assess the distribution of categorical variables.

Ethical clearance for the study was obtained from the Ethics Review Committee of the Faculty of Medicine, University of Kelaniya. (P/04/01/2021). The participant information sheet explicitly explained that the participation in the study was voluntary, and that no personal information such as their name, student identification numbers, telephone numbers or email addresses were collected for the study. In addition, as some of the investigators were academic staff members, it was clearly

explained that that non- participation would not affect their teaching learning activities or examinations in any way.

Results

Of the 418 students, 281 (67.2%) were females and 280 (67.0%) were aged 20-25 years (Table 1). Most were final year students (Table 1). In the study group, 40 (9.6%), 105 (25.1%) and 7 (1.6%) of participants scored above the cut offs for the depression, anxiety, and stress subscales respectively, of the DASS-21 (Table 2). A total of 29 (10.3%) female students were found to have depression as per the DASS-21, compared to 11 (8.0%) males. Of the participants 73 (25.9%) female students and 32 (23.4%) males were found to have anxiety according to the DASS-21. Furthermore, five (1.9%) and the 2 (1.4%) females and males respectively, were found to have stress as per the DASS-21.

	Number (Percentage %)
Gender	
Female	281 (67.2%)
Male	137 (32.8%)
Age (Years)	
< 20	01 (0.2%)
20-25	280 (67%)
>25	137 (32.8%)
Academic year of study	
First year	78 (18.7%)
Second year	30 (7.2%)
Third year	111 (26.6%)
Fourth year	59 (14.1%)
Final year	140 (33.5%)

Psychological morbidity	Number and percentage (%) who screened positive (According to DASS-21)	Associated factors
Depression	40 (9.6%)	Presence of economic difficulties Previous contact with psychiatric services Presence of medical / surgical impairment
Anxiety	105 (25.1%)	Previous contact with psychiatric services
Stress	7 (1.6%)	Perceived lack of support from university administration and difficulty accessing internet facilities Previous contact with psychiatric services Presence of medical / surgical impairment

Female students were significantly more likely to score positive for depression ($p < 0.05$) and anxiety ($p < 0.05$). There was a significant association between the presence of economic difficulties and depression ($p < 0.05$). Previous contact with psychiatric services had significant associations with depression ($p < .01$), anxiety ($p < .001$) and stress ($p < .001$), and the presence of medical/surgical impairments were significantly associated with depression ($p < .01$) and stress ($p < .001$). Perceived lack of support from university administration and difficulty accessing internet facilities were significantly associated with stress ($p < 0.05$).

Discussion

Undergraduate medical students in Sri Lanka are usually aged within their late teens to mid-twenties, and hence they would have experienced the current COVID-19 and its associated stressors as they stepped into adulthood. Although preliminary in nature, the findings of this study suggest that a considerable number of medical students have symptoms of depression, anxiety and stress and that female gender, socio-economic difficulties and a past history of psychiatric illness is associated with increased risk of psychological morbidity.

University authorities should actively offer screening for mental illness among university students at various points in their career, and establish and publicize helplines and other support strategies, for the student population. Larger island wide studies should be carried out among university students to further explore psychological impacts of the pandemic.

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Statement of contributions

AH and MC developed the concept. IP and TAH collected the data. AH, IP, AH and DE analyzed the data. All authors contributed to the writing of the manuscript and all approved the final version of the manuscript.

Conflicts of interest

None declared.

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