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# The Impact of Online and Distance Learning (ODL) During Pandemic Covid-19 on the Level of Stress, Anxiety, and Depression of Lecturers in UiTM Puncak Alam, Selangor

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## ABSTRACT

**Background:** Most industries around the globe have been severely impacted by the current COVID-19 outbreak, including educational institutions. It has changed the norms from physical communication emerging to fully online communication platform technologies as the main contact. Open and distance learning (ODL) was the alternative solution. However, the limitations during ODL can affect the psychology of the educators, as it is a new norm for them to fully adapt. **Objectives**: This study intends to assess the degree of depression, stress, and anxiety among academicians concerning ODL at UiTM Puncak Alam during the COVID-19 pandemic. **Methods:** The data were collected using a cross-sectional design and convenience sampling involving 88 lecturers from the Faculty of Health Sciences. The data for the study was collected and analyzed from the online questionnaire. The main instruments used in this study were the 21-question Depression, Anxiety, and Stress Scale (DASS-21). **Results:** The response rate was 78% (n = 88). The results showed that the majority of the participants had normal levels of depression (90.0%), anxiety (86.4%), and stress (95.5%), respectively. A minority of participants showed mild, moderate, and severe degrees of anxiety, stress, and depression during ODL. Depression; Mild (4.5%), Moderate (4.5%) Anxiety; Mild (3.4%), Moderate (9.1%), Severe (1.1%) Stress; Mild (1.1%), Moderate (3.4%). **Conclusion:** The study concluded that undergoing ODL during the COVID-19 pandemic can slightly affect the level of mental health among participants.

***Keywords: Anxiety; COVID-19; Depression; Lecturers; Open Distance Learning (ODL); Stress***

## INTRODUCTION

The new coronavirus (COVID-19) global pandemic has spread aggressively throughout the world and disrupted people's daily lives, especially in Malaysia. Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-C0V-2), which was initially identified in Wuhan, China, is the virus responsible for the recently identified viral disease COVID-19. The disease can be spread from one person to another through droplets. The WHO (2020) defines a pandemic as the spread of a certain disease worldwide or across international borders, infecting a huge number of individuals. The World Health Organization designated COVID-19 a global pandemic during the second week of March 2020. The Center for Disease Control (CDC) argues that it is crucial to distinguish between the sickness itself and stress symptoms brought on by lockdowns. This was because the symptoms can be asymptomatic and cannot be revealed by the naked eye.

Concerned about the current issues, a Movement Control Order (MCO) was announced by the Malaysian Government for the whole country on March 18, 2020, to prevent and control the pandemic. The government enforced MCO mandated the shutdown of all educational institutions, public and private, affecting all physical learning sessions as they must be shifted to online distance learning (ODL). Due to government-imposed Movement Control Orders during the COVID-19 pandemic, online teaching became a vital alternative for universities in Malaysia (Nawi *et al*., 2023). The ODL is a way of learning remotely without being in regular face-to-face contact with instructors, lecturers, and other students. According to Clemente *et al*. (2021), personal restrictions, mass confinement, and mandatory house isolation due to the pandemic may worsen psychological

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disorders. Additionally, because the transition from traditional classroom settings to online learning had to be made quickly, many social work instructors needed more technological proficiency and self-assurance to deliver online instruction. The most common issue among Malaysians during MCO is mental health in the society that has been affected during the lockdown; therefore, stress is one of the main factors that lead to these issues. According to Kamarul *et al*. (2021), many educators need more technical expertise and self-assurance to undertake online instruction since it must be fully ODL-adapted quickly. Even though online learning is not a new thing since it has been practiced in the university's setting, shifting some of the most physical learning, such as clinical and lab sessions, has impacted the educators' preparations and implementation. This has created some stress, anxiety, and depression among many educators due to these unanticipated changes (Kamarul *et al*., 2021; Lizana *et al*., 2022; Ozamiz *et al*., 2021).

Due to these unexpected developments, there was tension among instructors. Misca, & Thornton, (2021) stated that during movement restriction, people tried several strategies to cope with psychological distress, but they showed non-adaptive unhealthy behaviors due to the long-term consequences of stress. Proper management and providing better working conditions in the organization were the best forms of stress prevention (Aiswarya &Velmurugan, 2021). Their mental health and quality of life declined after the pandemic outbreak (Al Dhaheri, 2021). Therefore, the study aimed to identify the level of stress, anxiety, and depression during open and distance learning (ODL) among educators at UiTM Puncak Alam.

## METHODOLOGY

The total sample of participants involved in this cross-sectional study was 88 participants from the Faculty of Health Sciences and the majority were lecturers from the same faculty. The following formula was used to determine the sample size: n = Z2p x qN / e2 (N - 1) + Z2p x q; (n = sample size, N = population size, Z = confidence level, *p* = probability of success, q = probability of failure, e = sampling error) (Sagat *et al*., 2020). The margin of error, confidence interval, and success probability were all set as 95%, 5%, and 0.50 respectively. The computation revealed that 88 participants should make up the suggested sample size. The selected convenient participants in this cross-sectional study were instructed to fill out the questionnaire in order to identify the level of stress, anxiety, and depression that were present during the open and distance learning (ODL) due to the COVID-19 pandemic among UiTM Puncak Alam lecturers. When conducting this study, certain criteria were considered in selecting the participants from the population. The inclusion criteria were that full-time lecturers from the Faculty of Health Sciences must undergo ODL for at least one semester. Those lecturers who were on leave and lecturers who were diagnosed with a mental disorder or a family history of related disorders were excluded from the study. This information was obtained during the demographic data collection. Participants who were diagnosed with a mental disorder were excluded from the study.

The Dass-21 questionnaire was used to identify the level of depression, anxiety and stress among participants. This questionnaire consists of two sections. Section A was about demographic data of the participants such as email, age, gender, races, presence of diagnosed mental health illness, or family history with mental health problems.

While section B consists of 21 questions that had been designed to assess the level of depression, anxiety, and stress of the participants. Each segment of depression, anxiety, and stress contains seven questions with Likert Scale answer options (0 - Did not apply to me at all, 1 - Applied to me to some degree, or some of the time, 2 - Applied to me to a considerable degree or a good part of the time, 3 -Applied to me very much or most of the time). The data collected have been scored according to the scoring system created by the questionnaire owner. Score on the DASS-21 was multiplied by 2 to calculate the final scores. Then the severity of each element categorized as mild, moderate and severe. The Cronbach's Alpha for the DASS 21 questionnaire has been conducted, and the value was more than 0.75 and which indicates the questionnaire is valid and reliable to use. Musa *et al*., Musa (2011) stated that based on the previous publication, it was proven that BM DASS-21 had good psychometric properties among the clinical and non-clinical populations. Besides, it has a good Cronbach's alpha value. According to the previous study, alpha values were classified as good for depression (0.84 & 0.75), anxiety (0.74 & 0.74) and depression (0.79 & 0.79). Besides, DASS-21 also proves to be culturally free as it did not involve or mention any aspects of cultural or religious issues Musa *et al*., .

### Data Collection Procedure

The inclusion and exclusion criteria were used to select the respondents for this study. The university's

internal email system and WhatsApp messenger were used to send invitations and a link to the lecturers for an online survey, asking them to engage in the study. The study's objective, the planned inclusion criteria, and the fact that participation is optional are all explained in a participant information sheet that is made available. The online survey's completion was taken to imply consent. The questionnaires were provided with consent, as the participants agreed they could proceed to the next section, and they had two weeks to complete the questionnaire. Even though the duration to complete was two weeks, it is suggested to complete the 21 questions of DASS 21 within 5–10 minutes only. The participants' participation in the study was voluntary, and they were free to leave at any point during the study.

The DASS 21 questionnaire was used to explore the level of stress, anxiety, and depression among lecturers while conducting ODL during this pandemic (Lovibond, 1995). The DASS 21 questionnaire used in phase one was obtained from Musa *et al*., . Permission to use the questionnaire was obtained from the author by email before conducting the study. This questionnaire consists of two sections, A and B. Section A was about the demographic data of the participants, while Section B consists of 21 items to identify the level of depression, anxiety, and stress of the participants.

The collected data were analyzed to examine the status of the lecturer's mental health. A reminder will be sent to the respondents within two weeks of the data collection. After that, the researcher checked for the completeness of the questionnaire. Then, the data was analyzed using descriptive analysis by IBM SPSS Statistics 26.0 through mean, standard deviation (SD), and frequency.

### Ethical Considerations

The study was approved by the Research Ethics Committee of Universiti Teknologi MARA(UiTM), Malaysia on 14th February 2022 with reference number REC/12/2021 (UG/MR/1144).

## RESULTS

The data were collected by distributing an online questionnaire for DASS-21 through email to the lecturers' Faculty of Health Sciences. Then, after participants *(n = 88)* completed the questionnaire, the data were analyzed using SPPS 26.0. The descriptive analysis was conducted to determine the level of depression, anxiety, and stress among participants. The scores were totaled according to the elements of depression, anxiety, and stress and multiplied by 2 to get the level of depression, anxiety, and stress, and eventually categories based on the cut-off point by the DASS 21's author scoring.

Table 1 shows the participants' characteristics for the study. The total number of participants who responded to this study was 88.

***Table 1: Demographic Characteristics of Participants (n=88)***

| Characteristics (n=88) | Frequency (n) | Percentage (%) |
|---|---|---|
| **Gender** | | |
| Male | 31 | 35.2 |
| Female | 57 | 64.8 |
| **Age (years)** | | |
| 27-34 | 14 | 15.9 |
| 35-42 | 40 | 45.5 |
| 43-50 | 20 | 22.7 |
| 51-60 | 14 | 15.9 |
| **Duration of Conducting ODL (Semester)** | | |
| 1-2 | 26 | 29.5 |
| 3-4 | 39 | 44.3 |
| 5-6 | 23 | 26.1 |

The findings on objective one was based on Table 2, showing that most of the participants were having a normal level of depression, anxiety, and stress with 90.9%, 86.4%, and 95.5% respectively. Only a minority of the participants showed a mild and moderate level of depression, anxiety, and stress which was 9% for depression, 12.5% for anxiety, and 4.4% for stress.

*Table 2: Level of Depression, Anxiety, and Stress among Participants (n=88)*

| Psychological Symptom | Normal | Mild | Moderate | Severe |
|---|---|---|---|---|
| **Depression** | 80 (90.9%) | 4(4.5%) | 4(4.5%) | 0(0%) |
| **Anxiety** | 76(86.4%) | 3(3.4%) | 8(9.1%) | 1(1.1%) |
| **Stress** | 84(95.5%) | 1(1.1%) | 3(3.4%) | 0(0%) |

Based on age, gender, and ODL length, Table 3 shows the severity of depression, anxiety, and stress. The results suggest that while most participants fit into the typical category of depression, anxiety, and stress, those experiencing mild and moderate depression, anxiety, and stress were between the ages of 35 and 42 years old. The result also reveals that both males and females equally experience depression, anxiety, and stress during the first 1 hour of the lecture time. The finding reported that most of the female participants tend to have a higher level of anxiety compared to men. However, there were some of the male respondents showed a moderate level of depression and anxiety.

*Table 3: The Level of Depression, Anxiety, and Stress According to Age, Gender, and Duration of ODL*

| Characteristic | Gender n (%) | | | Age, (years) n (%) | | | | Duration of ODL, (semester) n(%) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Total** | **Male** | **Female** | 27-34 | 35-42 | 43-50 | 51-60 | 1-2 hrs | 3-4 hrs | 5-6 hrs |
| **Depression, n (%)** | | | | | | | | | | |
| Normal | 80(90.9) | 26(29.5) | 54(61.4) | 11(12.5) | 35(39.8) | 20(22.7) | 14(51.9) | 24(27.3) | 37(42) | 19(21.6) |
| Mild | 4(4.5) | 3(3.4) | 1(1.1) | 1(1.1) | 3(3.4) | 0(0) | 0(0) | 0(0) | 2(2.3) | 2(2.3) |
| Moderate | 4(4.5) | 2(2.3) | 2(2.3) | 2(2.3) | 2(2.3) | 0(0) | 0(0) | 2(2.3) | 0(0) | 2(2.3) |
| Severe | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) |
| Extremely severe | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) |
| **Anxiety, n (%)** | | | | | | | | | | |
| Normal | 76(86.4) | 26(29.5) | 50(56.8) | 10(11.4) | 32(36.4) | 20(22.7) | 14(15.9) | 21(23.9) | 36(40.9) | 19(21.6) |
| Mild | 3(3.4) | 1(1.1) | 2(2.3) | 1(1.1) | 2(2.3) | 0(0) | 0(0) | 0(0) | 2(2.23) | 1(1.1) |
| Moderate | 8(9.1) | 4(4.5) | 4(4.5) | 2(2.3) | 6(6.8) | 0(0) | 0(0) | 4(4.5) | 1(1.1) | 3(3.4) |
| Severe | 1(1.1) | 0(0) | 1(1.1) | 1(1.1) | 0(0) | 0(0) | 0(0) | 1(1.1) | 0(0) | 0(0) |
| Extremely severe | 0(0) | 0(0) | 0(0) | 0(00 | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) |
| **Stress, n (%)** | | | | | | | | | | |
| Normal | 84(95.5) | 29(33) | 55(62.5) | 12(13.6) | 38(43.2) | 20(22.7) | 14(15.9) | 24(27.3) | 39(44.3) | 21(23.9) |
| Mild | 1(1.1) | 1(1.1) | 0(0) | 1(1.1) | 0(0) | 0(0) | 0(0) | 1(1.1) | 0(0) | 0(0) |
| Moderate | 3(3.4) | 1(1.1) | 2(2.3) | 1(1.1) | 2.(2.3) | 0(0) | 0(0) | 1(1.1) | 0(0) | 2(2.3) |
| Severe | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) |
| Extremely severe | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) |

## DISCUSSION

This study sought to gauge the degree of depression, anxiety, and stress of lecturers while conducting the ODL session during the COVID-19 pandemic. Most of the participants have a normal range of depression, anxiety, and stress and there were only 8 participants who experienced moderate to severe anxiety, depression, and stress. Even though these findings are contrary to the previous studies, the external factors including when and where the survey was completed by the participants could be the reason why there was a discrepancy in the findings. This study aimed to examine perception towards online-learning quality dimensions, satisfaction with online-learning behavioural intentions, with attribute rating like "Empathy," "Assurance," "Responsiveness," and "Reliability" positively in teachers, indicating that educators put significant effort into ensuring student comfort with online-learning during the COVID-19 pandemic. (Kunjukunju, Yusof & Ahmad, 2020). Labott *et al.* (2013) & Labott *et al.* (2016) also agreed that the emotional state of participants while completing the survey may affect the results and findings rather than demographic data. On top of that, the reason why these findings are different from the previous studies on the same topic is that the data collection was conducted during the endemic phase the participants were not able to fully recall their experiences and feeling during the ODL sessions.

However, this study will discuss the minority group of participants who have been classified as moderate and severe categories. Although the majority of participants in this research reported having normal mental health, depression, anxiety, and stress was nevertheless common. In addition, even though the findings found that most of the female participants tend to have a higher level of stress, anxiety, and depression, some of the male respondents showed a severe level of depression which is yet to be discussed.

Multiple experiments have been executed during the outbreak to assess the symptoms of psychological disturbances such as stress, anxiety, and depression among educators. However, the studies that have been carried out suggest that educators are experiencing psychological symptoms, which emphasises the significance of reopening schools and universities and returning to regular practices. An examination of the anxiety among teachers during the pandemic in three Chinese cities revealed a prevalence of 13.67%, with women reporting higher levels of worry than males and older individuals reporting more pronounced symptoms (Li *et al*., 2020). Teachers in a study done in Spain at the start of the epidemic also mentioned heavy workloads, psychological issues, and tiredness (Prado-Gascó *et al*., 2020). This crisis has made educators more susceptible to issues like anxiety, depression, marital violence, and divorce, all of which have interfered with their capacity to teach effectively as suggested by recent Arab research (Al Lily *et al*., 2020). Another Chinese study revealed that 9.1% of educators had stress symptoms and that providing them with psychological support was crucial (Zhou & Yao, 2020). An investigation of the extent of psychological problems among educators in Spain yielded data that showed a significant proportion of educators had symptoms of stress, anxiety, and depression. (Ozamiz *et al* 2020). So, the Universities utilized "fusion teaching methods," combining online and simulation-based approaches, to effectively deliver clinical teaching to nursing students who were unable to participate in direct clinical encounters during the COVID-19 pandemic (Sen *et al*., 2023). Additionally, prior research has revealed that working from home utilising information and communication technologies (ICT) might result in emotions of anxiety, stress, fatigue, and lower job satisfaction due to a lack of planning and abilities (Cuervo *et al*., 2018), and these were the only resources accessible to educators during a pandemic.

The most prominent results among the psychological symptoms examined here are those that pertain to anxiety. According to several research, teachers' anxiety levels were already high before the outbreak began (Wakui *et al.*, 2021; Pressley *et al.,* 2021; Lizana,2022 and Robinson *et al.,* 2023). WHO estimates that the COVID 19 pandemic causes a 25% global rise in the prevalence of anxiety and sadness. Unprecedented stress brought on by the pandemic's social isolation is a key factor in the rise of cases (Wakui *et al.*, 2021; Pressley *et al.*, 2021 and WHO 2022). This was related to the critical factors of increasing teacher anxiety, which also included stress and communication within the school, with instructors of virtual education experiencing the most significant rise in worry. These result from a lack of knowledge and expertise in using IT tools (Wakui *et al.*, 2021; Pressley *et al.*, 2021; Lizana, 2022 and Robinson *et al.*, 2023). They also encountered anxieties connected to their personal and professional jobs, worries for students' well-being that went beyond academics, and annoyances with administration and other institutional entities over COVID safety measures, as suggested by a qualitative investigation done by Robinson (Robinson *et al.,* 2023).

Additionally, this study discovered that female individuals experienced higher psychological problems than male participants. This result complements earlier research where female individuals exhibited these psychological symptoms more frequently. There are several explanations for why females are more prone than

males to experience anxiety-related problems. Compared to males, who tend to keep their problems to themselves, women may be more willing to report their symptoms. Men could, for instance, have a stronger sense of situational control, which is a factor that protects against anxiety disorders. It's also conceivable that social variables like gender roles will come into play. Men may feel greater societal pressure than women to face their anxieties (even though this is one of the best ways to deal with them) (Leili & Khazali 2013). Life situations for women differ from those for males. For instance, women are substantially more likely than males to experience sexual assault as children or adults (Tolin & Foa, 2006). have demonstrated greater biological response to stress than men (Verma *et al.*, 2011), all of which are probably due to psychological and cultural forces. Hassan *et al.* (2021) expressed that to emphasize the need for educators to be creative, innovative, and scientifically minded in coping with these problems, they should also have strong problem-solving and communication skills, a working knowledge of their subject area, and be open to technological advancements.

Most of the educators stated that at first, they felt mixed feelings and had a difficult period to adapt with the new norms of ODL but along the way, they started to readapt to this new system and got used to it since now the country had been in an endemic phase. When the educators reflected again on their difficulties during the pandemic, they found that the ODL brought good advantages to them despite having a bad impact. One of the benefits was in terms of communication and a good way of learning, both the lecturers and students could continue the learning session through online class without the effect of being face-to-face. This can boost students' motivation to learn during the learning process (Ratna *et al*., 2022).

## CONCLUSION

This study reveals that only a minority of the participants showed mild and moderate levels of depression, anxiety, and stress between the ages of 35 and 42 years old. The result also reveals that both males and females equally experience depression, anxiety, and stress during the first 1 hour of the lecture time. The results portray that the female participants were having a high prevalence of anxiety compared to men. However, there were some of the male respondents experienced a moderate level of depression and anxiety. Participants with varying degrees of stress, anxiety, and depression had unpleasant feelings of ODL because it was difficult for them to apply at first due to technical problems such as poor internet problems before they were adapted to it. Next, their degrees of stress, anxiety, and depression is also related to the challenges faced during the implementation of ODL. The study above shows the significance and relevance of this work, that people were starting to adapt to COVID-19 and practicing new norms. Therefore, the researcher must consider other factors such as sociodemographic factors when conducting related research in the future. There were both beneficial and bad effects on educators. In order to increase both the standard of instruction and the mental health of students, the author argues that instructors' must be trained well with proper learning methods to facilitate better learning process.

### Conflict of Interest

The authors declare that they have no competing interests.

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