

The Impact of Online Learning on Mental Illness Among Physical and Health Education Students at Malaysian Public University

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Abstract: The recent pandemic has had an impact towards students' mental health, especially during online learning. The students have endured several types of mental illnesses such as depression, anxiety, and stress. A descriptive research design was employed to explore the variables towards participants' mental health. A questionnaire was used to discover (1) the impact of online learning on mental illness among physical and health education (PHE) students, (2) the impact of online learning on mental illness between genders, and (3) the impact of online learning on mental illness in a different residential area of physical and health education students. About 180 students of Physical and Health Education in a local Malaysian university (n= 98, 82) comprised of males and females respectively participated in this study. The researcher used the Depression Anxiety and Stress Scale-21 (DASS-21) to identify and determine the mental health levels of the participants. Descriptive analysis (e.g., average, standard deviation, and percentages), T-Test and ANOVA were used to answer each of the research questions. This study found that only 13% of participants reported severe depression levels. Nonetheless, 32% of participants suggest that they experience a sense of extreme anxiety when learning content online. In essence, prolonged online learning contributed to the participants' tiredness, feeling intimidated, and frustration. These issues were caused by higher screen time, reduced engagement between educators and peers as well and a lack of meaningful feedback. Additionally, stress levels and depression were not influenced by the participant's place of residence, either urban, suburban, or rural areas.

Keywords: COVID-19, engagement, mental health, online learning, physical education

1. Introduction

The most frequent factor contributing to subpar academic achievement is mental health issues. A student's motivation, attentiveness, and social interactions, all of which are crucial for academic success, can be affected by mental illness (Unger, 2007). The recent COVID-19 have created the term "new norm" in Malaysia, people were not allowed to handshake, move across the district, state or country learn or work from home during the pandemic. Malls, shops and sports centres deemed non-essential were instructed to postpone operations to control people's movement and reduce the spreading of the virus (Tang, 2020). Young people, particularly those enrolled in higher education institutions, are also impacted by this wave of psycho-social change and must contend with many difficulties and pressures to adjust to the new standards (Nordin & Nordin, 2020). To get ready for a good career in the future, they must simultaneously ensure that schooling is successful. This group is more likely to encounter stress,

which may have an impact on the state of physical, mental, and emotional health (Samsudin & Tan, 2016).

Numerous studies have indicated that issues with pupils' mental health and spiritual intelligence are getting worse every year in Malaysia (Samsudin & Tan, 2016). Students with mental health issues may experience unfounded fear or worry, and irritability, are frequently startled, have trouble falling asleep, lose interest in food, and lose focus in class (Akat & Karatas, 2020). Additionally, they are more vulnerable to bodily illnesses like cancer and heart attacks due to lower metabolism and deprived body self-defence mechanisms (Hamzah et al., 2019). A study on online learning and mental health among medical students in Kazakhstan found that online learning increases the likelihood of burnout, reduce communication and interpersonal relationship, as well as decreases academic performance, especially for the student who lives alone during that period (Bolatov et al., 2021). Another study with medical students in Saudi Arabia also found that female students aged >25 with excellent grades experience higher stress and anxiety levels than their counterparts (Aljhani et al., 2021). Similarly in India, the sudden increase in screen time when learning online during the COVID-19 scenario also causes anxiety issues and mental health concerns both among the students and parents (Harjule et al., 2021).

The newer generation nowadays is accustomed to growing up with technology around them to complete many tasks in academics as well as their daily activities. All thoughts, perceptions and approaches were different compared to the previous generation (Nordin & Nordin, 2020). Their study on the impact of COVID-19 on the education system during movement control order (MCO) in Malaysia suggests that acceptance, usability, satisfaction, and technical skills play critical roles in determining students' acceptance and adoption of learning content with technology. Online learning opens up an avenue of potential for synchronous and asynchronous communication and learning between educators and peers. Besides that, learners would have more opportunities to practice content, personalise their teaching and learning process and access the learning materials before, during, and after the class sessions (Harasim, 2000). Specifically, online learning increases engagement in the forms of (1) material interaction (cognitive presence), (2) educator interaction (teaching presence), and (3) peer interaction (social presence) (Hiltz, 1994). They continue to highlight the importance of staff, resources, energy, and practice time in helping effective transition for students from physical to online learning (Nordin & Nordin, 2020). Proper planning, integration of technology in delivering content, and modifications made to learning activities ensure the shift to be meaningful and sustainable rather than just mere changes due to the circumstances.

The Transactional Stress and Coping Model provided us with a clearer picture of the relationship between individual's perceptions and their capabilities to cope with stress (Lazarus & Folkman, 1984). The usage of this model spans various academic fields including psychology, health psychology, and education. Specifically, the model suggests that individuals handle stress through a series of processes including primary appraisal, secondary appraisal, coping strategies, outcome and feedback loop (Lazarus & Folkman, 1984; Avcioglu et al., 2019). The primary appraisal involves the individual evaluating the significance of the stressor; some students might perceive the stress of learning online as irrelevant, benign, or stressful. Meanwhile, the second appraisal involves the individual reflecting on their capabilities to address or overcome the stressors. Their abilities could come from their available resources such as skills, experience, and social support. Next, the coping strategies can be targeted to problem-focused (i.e., focus on the stressor) or emotional-focuses (i.e., control emotional response from the stressor) or addressed both based on the individual's capabilities to cope with the stress (Lazarus & Folkman, 1984). Importantly, the model highlighted the feedback loop process as both appraisal and coping processes tend to be continuous processes rather than linear. The initial coping strategies will influence subsequent appraisal and coping efforts and shape their perception and behaviour towards online learning (Lazarus & Folkman, 1984; Avcioglu et al., 2019).

Therefore, the main aim of this study was to determine the effect of online education on mental illness among students studying physical and health education at a local Malaysian university due to recent COVID-19. Specifically, the objective of this research includes:

- (1) Determine the impact of online learning on mental health among physical and health education students (PHE).
- (2) Determine the impact of online learning on mental health between genders.

- (3) Determine the impact of online learning on mental health based on where participants currently reside.

2. Methods

This study employed a descriptive research design because it was appropriate to explain how online learning and COVID-19 have affected students' mental health concerning physical and health education. Nassaji and Hossein (2015) state that one of the objectives of the descriptive research approach is to describe trends, situation, population and their defining characteristics. Consequently, this study on the mental health of physical education and health students during a pandemic is based on online learning. This study does not control or manipulate any variables, instead, all the variables were only identified, observed, and measured. Additionally, the descriptive research design was used to better understand the questions and provided the basis for further research in this area (Piaw, 2016).

The data was collected using a Google Form [Google Inc.]; the Depression Anxiety and Stress Scale-21 (DASS-21) questionnaire is a set of three self-report scales designed to measure the emotional states of depression, anxiety, and stress (Lovibond & Lovibond, 1995). The questionnaire's original version has been validated, deemed reliable and translated into many languages and settings including Malaysia (Lovibond & Lovibond, 1995; Shamsuddin et al., 2013). The questionnaire was distributed into three sections with seven items which assessed elements such as valuation of life, lack of interest, situational anxiety, nervousness, and impatient (Lovibond & Lovibond, 1995). Example items include "I found it hard to calm down", "I felt that I had nothing to look forward to when learning online", and "I felt scared without any specific reason" were asked on a scale 0 – 3 (i.e., 0 refer to "did not apply to me at all" and 3 refers to "applied to me very much or most of the time"). The questionnaire was distributed to the respondents via email, WhatsApp, and Telegram platforms upon receiving their written consent. Electronic platforms offer seamless, convenient, and more sustainable solutions for administering questionnaires (Piaw, 2016). Therefore, the main researcher used Google Forms to produce a series of surveys that were distributed to all respondents comprised of students enrolled in Physical and Health Education at the local university from semesters 4 through 8 via their batch representative (Krejcie & Morgan, 1970). A link to the Google forms was provided to distribute questionnaires to each respondent and gather data for subsequent analysis.

The Statistical Package for The Social Science (SPSS) version 26.0 [IBM Inc.] was used to examine the data that have been gathered. According to Sharma (2017), this approach is particularly effective since quantitative data is standardised, simple to interpret, systematic, and quick to process. Research questions serve as the foundation for this study's direction and data analysis purposes. The researcher uses descriptive analysis to interpret the proportion and frequency of the data when analysing demographic data. While the first study question's frequency and percent were translated using descriptive analysis. An Independent sample t-test was used to determine whether there were any gender differences in depression, anxiety, and stress for the second study question. The final research question compares the means for three residential areas using a one-way ANOVA.

3. Results and Discussion

The goal of this study was to determine the effect of online education on mental illness among PHE students at a local Malaysian university as a result of COVID-19. There were 180 responders from PHE students throughout the fourth and eighth semesters who took part in the study. There are 82 female students and 98 male students aged between 19-28 participated in this study. This study also examines the relationship between various living areas, including urban, suburban, and rural settings and mental illness due to recent COVID-19.

Concerning the first study's question, descriptive analysis was performed to determine the prevalence and percentage of mental illness among students enrolled in physical and health education. In terms of depression, the participant reported normal condition has the largest frequency (n=76, 42.2%), while mild and highly severe depression has the lowest frequency (n=23, 12.8%), for both depression levels. Similarly, a study by Rahman et al. (2021) found that most children reported moderate depression while 12.4% and 4.3% reported depression and severe depression respectively. Qualitative

data findings were consistent with many of their participants' feelings that their mental health was not normal (Rahman et al., 2021).

The participants also demonstrate signs of despair throughout online distance learning. Worryingly this study's results showed the majority of participants experience extreme anxiety with (n=58, 32.2%), whereas mild anxiety affects lesser students with (n=17, 9.4%). This data indicates that the majority of respondents experience chronic anxiety. These findings may be due to the sudden transition of the teaching and learning process from physical to online-based learning. The online assessments also played a role in heightening participants' anxiety levels when studying online (Chung et al., 2020). These findings contrast with that of Sundarasan et al. (2020), who reported that, according to their findings, 20.4%, 6.6%, and 2.8% of students had minimal, moderate, and severe anxiety levels respectively. Additionally, when it comes to stress, 86 participants (47.8%) reported experiencing high levels of stress while only 8 participants (4.4%) experienced the lowest. Nonetheless, more than half of the participants (55%) in this study experienced moderate levels of stress throughout online distance learning. The Transactional Stress and Coping Model earlier suggested that each individual perceives the same stressors differently; some students might have no issues in shifting to online learning while many students were struggling with the sudden change of learning approach due to limited experience, skills, and resources available to them.

These challenges were supported by Al-Ateeq et al. (2020) who suggest that some disadvantages of online distance learning such as the absence of rich communication between educators and students as well as the lack in the authenticity of learning environment cause chronic stress. Most individuals were capable of coping for a short while but less so when the issues (i.e., lack of communication and learning environment) persisted and became uncontrollable the individual (Khalid & Quick 2016; Agung et al., 2020). Besides that, Wong et al. (2021) also point out to financial aspect as a contributing factor towards mental illness. Participants prone to financial insecurities were more likely to report depressive symptoms compared to participants with better financial security (Wong et al., 2021). Similarly, the stress coping model suggested that when dealing with stressors, the primary appraisal plays an important role in influencing secondary appraisal which leads to the outcomes of coping efforts (Lazarus & Folkman, 1984; Avcioglu et al., 2019).

To determine whether there is a statistically significant difference in mental illness across genders, an independent sample t-test was performed. The findings indicate that there is no observable gender difference in test scores. In other words, the levels of stress, anxiety, and depression among male and female students are comparable. The results differ from those of Sundarasan et al. (2020), who found that female students were more likely than male students to develop mental health concerns. This demonstrates that both men and women can suffer from mental diseases. Although both men and women might have different causes leading to mental issues, the social isolation factor is consistent between both genders which leads to depression and stress (Adedoyin & Soykan, 2020). The prolonged online distance learning was tiring, intimidating, and frustrating for many PHE students due to longer screen time, reduced engagement between educators and peers as well as lack of meaningful feedback. These issues cause boredom, stress, and anxiety for many students as they are still expected to complete many assignments and excel in their final tests despite all the challenges.

To determine whether there is a statistically significant difference between three residential areas from urban, suburban, and rural areas, the main researcher utilised one-way ANOVA for the third study question. According to the findings, there were no notable differences in depression, anxiety, or stress levels between urban, suburban, and rural areas. The researchers discovered that the prevalence of the mental disease is similar across all geographic areas. In contrast, Gruebner et al. (2017) found that cities have a higher risk of serious mental illness than rural places do. Studies on anxiety disorders, such as posttraumatic stress disorder, anguish, hostility, and paranoia, have revealed greater incidence in urban than rural locations in many Latin American and Asian nations (Prina et. al, 2011).

Their results were different from this study's results. One factor that may contribute to these differences was that the previous study was conducted before the pandemic started whereas this study was conducted post-pandemic. According to Badri et al. (2021), lockdown during the COVID-19 pandemic appeared to have a substantial impact on university students' negative emotional symptoms, happiness, and work-life balance. Therefore, the Covid-19 pandemic affected the majority of people's mental health, regardless of where they were.

4. Conclusion

This study has laid out the information based on the results, discussion and comparison with other similar studies. This study found that both genders were equally capable of experiencing some degree of mental illnesses (e.g., stress, anxiety) due to higher dependence on technology and lack of social communication. Similarly, this study did not find a significant relationship between where participants reside and mental illnesses. Future studies should vary the population focus, include additional instruments to assess variables, and increase the size of the population to solidify findings in this area of study. The researchers discovered that COVID-19 did have an effect on mental health among participants studying physical and health education.

Everyone should be conscious of their surroundings. Getting to know the symptoms of mental issues (e.g., constant mood changes, lethargy, withdrawal from regular activities) allow us to offer other people moral support to improve their life or take early actions to mitigate mental illnesses. The university's counselling centre is available to offer advice to anyone suffering from mental illness (Irawan et al., 2020). Every individual should also pursue their passions or hobbies to improve and maintain whole body functions and reduce the likelihood of developing mental health issues. Additionally, the university should also place more emphasis on mental health education to raise awareness of mental well-being. With knowledge and skills, individuals can help themselves navigate through obstacles and challenges throughout their lives.

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