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COVID-19 and The Impact of Online Learning on the Higher Institution Students' Health

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ABSTRACT

The COVID-19 pandemic has had an impact on higher education institutions. Online teaching and learning have become a new norm, which may lead to lifestyle changes and impacting the university students' health. This study is conducted to investigate the impact of online learning on higher learning institution students' health. A total of 384 students were recruited from a local university. All respondents were requested to complete an online survey for three months. The results indicated that majority of the respondents feel less satisfied with online learning. They reported to experienced several health issues as a result from online learning. Besides, online learning satisfaction level and health issue were found to be moderately positively correlated. This study can be a good rationale for the relevant parties to work cooperatively in improving the online learning satisfaction level as well as the students' health condition.

Contribution/Originality: This study contributes to the existing literature on the impact of online learning on the health of students. It seeks to understand the satisfaction level of online learning and its impact on students' health. Despite the importance of online learning, health needs to be taken care of.

1. Introduction

COVID-19 is classified as a pandemic by the World Health Organization (WHO) because it is an infectious disease that spreads throughout the human population globally. The COVID-19 pandemic has brought negative consequences in health, the environment and other areas, prompting a number of countries, including Malaysia, to take steps to implement the Movement Control Order (MCO). Notably, this situation has compelled the government to implement a number of measures, including the shutdown of schools and higher education institutions. As a result, the transition from traditional learning to online learning has been accelerated.

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The traditional learning method requires the educators and learners to be in the same place, as the learning process needs to be carried out face-to-face. On the contrary, online learning does not require the educators and learners to be in the same place, while the learning process can still be carried out remotely. There are various digital platforms that are available for online learning. For instance, Google Classroom, Zoom, Webex, Microsoft Teams, Facebook, YouTube, or other suitable online platforms that can be used to conduct online learning despite the Movement Control Order (MCO) being in effect. It is undeniably true to say that the use of information and communication technology has increased tremendously in every aspect of business during the MCO operation. Thus, educators have to keep abreast with the online learning process. They must be prepared and enhance their skills in using technology so that the learning can be conducted smoothly. This is to say, in order to ensure that the learning process can be implemented effectively and efficiently, the educators must equip themselves with the necessary information communication technology (ICT) knowledge and skills. Similarly, the higher institution learning institution must be prepared with the support services needed during the MCO operation. The higher institution learning is equally vital in supporting the long-term viability of this online learning. They must ensure that the learning management system (LMS) for example is working well and could support the students' development during the MCO operation. This means, the higher institution learning needs to be prepared in terms of its facilities, support services and support staff during the process of online learning. All of this assistance provided to the students could not guarantee the smooth online learning process, if the learners themselves do not have the motivation and dedication. Needless to say, the learners must be prepared physically and mentally to undergo the online learning process. It is nevertheless remains uncertain whether the online learning has actually brought positive or negative impact on students' health. Hence, this study is conducted to investigate the impact of online learning on higher learning students' wellness in Perak.

2. Literature Review

Online learning is a type of education that connects physically distant learners and facilitators of learning activities through various two-way or multi-way mediated media channels that allow interactions between or among learners, facilitators, and educational resources (Saykili, 2018). It's also an instructional strategy that makes effective use of a variety of resources and technologies to improve student learning as well as student-faculty and student-student communication (Simonson, 2016). It is difficult to make distant learning work for all students. The best tools can be put in place, but it will be difficult to replicate the in-person learning experience online unless all students have equitable access to the tools; faculty have adequate preparation time and training; and existing curricula are adapted or brand-new course syllabi are developed. As a result, various doubts about online learning have been raised, including whether it provides the same value as learning in a classroom and what impact does online learning have on university students' health.

While these are important concerns to examine, there are other important challenges that higher education institutions must consider, such as how to enable students who do not have dependable internet access or technology to participate in digital learning. The difference in access to technology and the internet is particularly pronounced among minorities. Higher education activities are frequently separated into synchronous course sessions and asynchronous activities and tasks in remote education environments. Learners in synchronous courses engage in interactive and focused experiences that

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help them gain a foundational understanding of technology-enhanced education, course design, and effective online instruction. Tests, group work assignments, group discussion, feedback, and projects are examples of asynchronous activities and tasks. Additionally, interactive video-based activities, facilitator meetings, live webinars, and keynote speakers are used to carry out synchronous activities and duties (Debeş, 2021).

Students' attitudes toward online learning differ according to the studies. In studies conducted by Mathew and Chung (2020); Avsheniuk et al. (2021) stated that students' attitudes are positive, while in different studies (Bozavli, 2021; Yurdal et al., 2021) it is clearly stated that students' attitudes are negative. There would be various reasons why students point out the negativity of online learning, whether learning environment conditions, access to a quality internet connection or adaptation to online learning during the MCO operation (Abrosimova, 2020; Balta-Salvador et al., 2021). The lockdown situation has prevented students from going to libraries or study halls and, in many cases, has forced family members to share their homes' spaces, potentially worsening student workplace conditions by increasing noise and distractions (Driessen et al., 2020; Taşkaya, 2021). Several studies found that university students reported that their home was a distracting environment and that they were more likely to be interrupted by roommates or family members. Furthermore, environmental factors such as noise, temperature, and lighting had a significant impact on university students' academic performance during online classes in the context of a pandemic (Gelles et al., 2020; Kyne & Thompson, 2020).

Furthermore, several studies have found that students who participate in online learning experience health issues such as stress. This could be due to the inability to concentrate caused by harmful radiation emitted by the device during the online learning class. They reported headaches as a result of their prolonged use of mobile phones for online classes. Furthermore, the back-to-back online classes have exacerbated students' pre-existing health issues. The continuous classes have exacerbated their previously existing migraines and backaches (Muthuprasad et al., 2021). In fact, some students have expressed concern about the transition to online learning. Because it is difficult to maintain attention on a computer, online learning reduces concentration (Bakhov et al., 2021). This evidence shows that online learning leads to a variety of physical and mental health problems.

University students reported negative effects on their mental health and emotions in studies conducted during the COVID-19 lockdown. During the COVID-19 pandemic, students' stress, anxiety, and depression levels increased (Aslan et al., 2020). Furthermore, they reported that some negative emotions, such as fear, worry, or boredom, had become more intense (Aristovnik et al., 2020). According to some studies, contact with the academic community can act as a protector and reduce the negative impact of lockdown on students' mental health (Elmer et al., 2020; Magson et al., 2021). Others have discovered that a lack of relationships and connections with other students and teachers is linked to an increase in academic stress.

3. Methodology

3.1. Research design

In this study, a quantitative approach is employed to investigate the impact of online learning on students' wellness. A cross-sectional survey that consists of closed-ended

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questions has been used to collect relevant data from the respondents. There are three sections in this survey, which are comprised of Section A, B and C. In the section A, seven (7) questions been asked related to the demographic background. In section B, 10 questions been asked related to online learning and in the section C, 10 questions been asked related to students' health.

3.2. Population and Sample

The cluster sampling method is employed in the data collection process. Cluster sampling is selected as the researchers would like to get an equal number of students from each faculty in the university. The student population will be divided into nine faculties as a cluster group. Referring to the Krejcie and Morgan Table (1970) to determine respondents' sample sizes, the population needs to be defined. Hence, there are 22100 students in Universiti Pendidikan Sultan Idris. Thus, the researchers need to select a minimum of 378 samples as the respondents for this research study. Finally, the researchers have drawn a sample of 384 students for this study.

3.3. Procedures

The researchers have attached the survey with a consent form. The consent form is important to obtain the students' consent before participating in this survey. The questionnaire was posted on online platforms such as WhatsApp and social media. Approximately 42 students from nine faculties at the university participated in the study. It takes approximately five to seven minutes to complete the survey.

4. Result

4.1. Demographic Background

Referring to Table 1, majority of the respondents were female (N= 235, 61.3%) with Malay (N=178, 46.2%) dominated the races distribution. For the next question is asking about the religion, majority of the respondents are Islam with (N=179, 46.5%) followed by Hindu (N=119, 30.9%), Buddha (N=44, 11.4%), Christian (N=41, 10.6%) and others (N=1, 0.5%). Then, the family income question. Students have to report the gross income that their family earn per month. It is shown that majority of the students reported that their family earned RM 1001 to RM 3000 per month (N=147, 38.2%). After that the researchers also asked the respondents on the housing type that they reside. More than half of the respondents living at a residential area (N=326, 84.9%). There are also respondents who live at village area (N=51, 13.2%) and quarters area (N=7, 1.8%). Then for education level, it is reported that majority of the respondents is studying for Degree programme (N=300, 78.2%), followed by Diploma programme (N=78, 20.3%) and Postgraduate programme (N=6, 1.6%).

Table 1: Demographic background of respondents

Variables	Total (N)	Percent
Gender		
Male	149	38.7
Female	235	61.3
Age		
Less than 19	25	6.5

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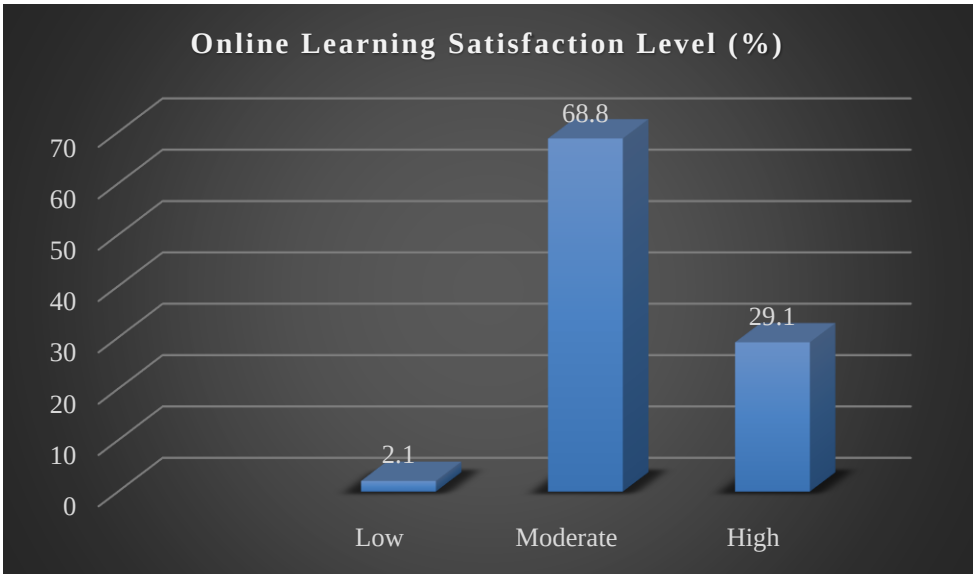
20 - 23 years old	268	69.6
24 - 27 years old	88	22.9
More than 27	3	1
Race		
Malay	178	46.2
Indian	137	35.6
Chinese	60	15.6
Others	8	2.6
Religion		
Islam	179	46.5
Hindu	119	30.9
Buddha	44	11.4
Christian	41	10.6
Others	1	0.5
Family Income		
RM 1001 - RM 3000	147	38.2
RM 3001 - RM 5000	140	36.4
RM 5001 and above	65	16.9
Below RM 1000	21	5.5
No Income	11	3.1
Housing type		
Residential Area	326	84.9
Village	51	13.2
Quarters	7	1.8
Programme		
Degree	300	78.2
Diploma	78	20.3
Postgraduate	6	1.6

4.2. Online Learning Satisfaction Level

The next section as depicted in the Figure 1 discusses the online learning satisfaction level.

Figure 1: Online Learning Satisfaction Level



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It can be reported that the students have a moderate satisfaction level with online learning (68.8%), followed by a high satisfaction level (29.1%) and a low satisfaction level (2.1%). This has shown that the majority of the respondents feel less satisfied with online learning. Meanwhile, those who reported a high satisfaction level are nearly one third of the total number of respondents.

4.3. Reported Health Issues

Referring to Table 2, when the students were asked about their health issues, majority of them reported to have high issues with their health (N=233, 60.5%), followed by moderate health issue (N=145, 37.7%) and low health issue (N=7,1.8%). Majority of them reported to have headache, back pain, eye problems and other health issues concerning online learning.

Table 2: Frequency of reported health issues among students

Health issue	Frequency	Percentage (%)
Low	7	1.8
Moderate	145	37.7
High	233	60.5

4.4. Impact of Online Learning on Students' Health

The researchers would also want to study the impact of online learning on the students' health. Based on the Table 3, it is reported that online learning satisfaction level and health issue were found to be moderately positively correlated, r (382) = 0.34, p = < 0.001). Thus, there is a correlation between online learning satisfaction level with health issues as reported by the students.

Table 3**:** Impact of Online Learning on Students' Health

Online Learning Satisfaction Level			Health Issue
Online Learning Satisfaction Level	Pearson Correlation	1	.348**
	Sig. (2-tailed)		<.001
	N	384	384
Health Issue	Pearson Correlation	.348**	1
	Sig. (2-tailed)	<.001	
	N	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

5. Discussion

This study seeks to investigate the impact of online learning on higher learning institution students' wellness. Based on the findings presented, it can be discussed that majority of the students feel less satisfied with the online learning. This can be seen from the result in Table 1 that only one third of the students have high satisfaction levels, while majority of them have moderate satisfaction with online learning. The plausible reasons of why respondent answered in such ways could be due to (i) demographic background and (ii) support system.

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The first plausible reasons could be attributed to their demographic background. Majority of the respondents' family income is below than RM3000, in which this can be considered as Bottom 40 (B40) family income. B40 family income refers to the Bottom 40 income classification in Malaysia. This can be explained that Malaysians are categorised into three different income groups which are Top 20% (T20), Middle 40% (M40), and Bottom 40% (B40). Having said that, those who earn below RM4,865 can be considered as B40 (Department of Statistics' (DOSM) Household Income and Basic Amenities (HIS/BA) survey of 2019. According to studies on child poverty, less fortunate children are deprived in basic necessities such as healthy food, inadequate bedrooms, good healthcare, higher rates of school dropouts, a lack of electronic gadgets and restricted Internet access (Norhaslinda, 2021). This might hinder these students to get adequate facilities to continue the online learning at home.

Besides that, these students were not received enough support for their online learning. They are not only deprived from the basic necessities, but their home environment was also not encouraged and supported them for their study. This should be taken into consideration since the support students receive from their family and instructors, as well as the role models they are exposed to, have a significant impact on their attitudes and dispositions. Different types of family and teacher support, such as parental emotional support and teacher enthusiasm, have been found to be important for the development of positive learning attitudes. This can ensure that students acquire the attitudes and dispositions that will allow them to maximise their ability to take advantage of online learning opportunities. However, due to a lack of time, limited digital skills, or a lack of curricular requirements, some families and instructors may find it difficult to give such support, particularly during the COVID-19 crisis (Schleicher, 2020).

Then, this study is also interested to understand the impact of online learning on the students' health. The researchers have asked questions related to physical health issues such as tiredness, overweight and obesity, painful/watery eyes, back pain, sleepiness, disordered and unhealthy eating habits, lack of appetite, lack of time for physical activities and numbness. It has been reported that majority of the respondents reported to have multiple health issues, although majority of them reported it as mild issues. In terms of finances, students were concerned about their ability to meet their educational financial obligations as a result of family income loss and lost opportunities to work and hence they need to self-finance their studies (Sundarasen et al., 2020). Hence it is reported that students experienced mild or moderate physical health issues as a result from the online learning.

6. Conclusion

In conclusion, this study seeks to investigate the impact of online learning on higher learning institutions students' health. The empirical evidence from this study indicates that majority of the students reported to have several health issues when they undergo online learning at home. This can be a strong justification on the supports from all parties whether from parents, educators, higher education institutions and the ministries and related agencies as a whole. Higher education institutions can play a fundamental role in assisting students with the health problems and financial constraints. It is crucial to be constantly in touch with the students. Then, the ministries and related agencies need to set up smooth and efficient communication system and platform with students during this post pandemic. Communicating correct and timely

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information through the right channels is also vital in maintaining good students' health as well as to make online learning as a viable learning platform in the future.

Consent to Participate

Informed consent was obtained from all participants beforehand. Participants have to give consent to participate in this study. Participants can withdraw from the study at any point of time.

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Conflict of Interests

The authors declare no conflict of Interest.

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