

Online Learning—Two Side Arguments Related to Mental Health

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Nguyen Thuy Van^{1(✉)}, Dr. Sobia Irum², Alhamzah F. Abbas³, Huma Sikandar³,
Nohman Khan⁴

¹School of Education, Faculty of Social Sciences and Humanities, Universiti Teknologi Malaysia (UTM), Johor, Malaysia

²College of Business Administration, Department of Management and Marketing, University of Bahrain, Zallaq, Bahrain

³Azman Hashim International Business School (AHIBS), Universiti Teknologi Malaysia (UTM), Johor, Malaysia

⁴UniKL Business School, Universiti Kuala Lumpur, Kuala Lumpur, Malaysia
thuyvanguyen@utm.my

Abstract—Distress and mental health issues among students during the Covid19 pandemic are emerging in reviews. Surprisingly, while some studies argued that online learning was one of the causes that harm student mental health, like stress, anxiety, or depression, others indicated that a digital platform is one effective invention to design and develop an online program for improving learners' mental health care. This study aims to the discussion of two sides the application of online learning involved in learner mental health issues, explaining the causes of reasons and giving a recommendation for stakeholders in further discussion and implication. The literature was accessed from Scopus and web of science databases covering research published between 2019 and 2022, and 20 items were analyzed to reach the objectives. The bibliometric analysis identifies the cluster themes based on texting frequency. The vital steps of data classification follow thoughtfully and carefully in the platform of concept, findings, author's reputation, and years published. In the last conclusions of the study, reports explain the past literature and recent outbreak. The results cover two main themes: The effects of online learning on students' mental health issues and online learning solutions to assist mental health care learners. These findings are expected to benefit stakeholders involved in online learning and mental health care for learners and the community.

Keywords—stress, anxiety, depression, online learning, COVID-19, mental health

1 Introduction

The coronavirus 2019 (COVID-19) has deeply affected the global economy and society, especially significantly impacting the enormous number of students in the education sector. Most educational institutions swiftly converted to totally online

learning to keep students learning for success and safeguard students from illness outbreaks throughout the world [1,2]. The pandemic has also raised concerns among global students about physical and mental health because all these changes were unprecedented and intensive too quickly. In general, studying from home using a digital platform is not simple for everyone initially; feeling lonely and powerless while studying, problems with the internet line, learning environment, online tests, and creating psychological anguish among students [1–4]. With undergraduate students, students usually raise familiar questions of whether online learning performance adapts with career skills requirement? How do you manage time for graduate in time when the finance issues context? How to succeed in hunting jobs in the high competition labour market with an online degree? In many studies, these students' concerns in difficult contexts were the cause of student anxiety levels increase during the Covid19 pandemic [5,6].

On the other hand, the pandemic has lasted more than two years, with many challenges, such as fears of an increase in the number of cases when the number of people killed by Covid-19 did not decrease in the first year; vaccine factories and national public health systems in a rush to help people strengthen their immune systems globally. However, many new types of Covid-19 have emerged, such as omicron, posing new challenges when attacked even by vaccinated and co-vaccinated people [7]. The government's bailout efforts do not assuage people's and young people's concerns. Several studies have been found to study and indicate a high frequency of mental health concerns among students at all educational levels around the world [8]. Some countries conducted national surveys to assess students' mental health during the COVID-19 pandemic. Mental health issues are usually measured through stress, anxiety, and depression.

The review indicated that student anxiety is a significant student mental disorder. Symptoms of anxiety disorders are commonly misunderstood as everyday stress or dismissed due to someone being overly anxious. Depending on how your body reacts to excessive concentrations of specific chemicals, panic attacks could be misunderstood as a medical ailment, such as a stress headache or heart attack [9]. Students drop into depression when they may experience sadness, hopelessness, powerlessness, and overwhelm due to life conditions and obstacles. Completing tasks, paying attention, and reading difficulties are also linked to depression among students. It can be difficult to detect these concerns in others since students often downplay or refuse to disclose matters that disturb them. Depression is a common chronic medical condition that affects one's thoughts, mood, and physical well-being. Low mood, loss of energy, depression, sleeplessness, and an inability to enjoy life are symptoms. As a result, during Covid 19, the review covers that mental disease is prevalent and is one of the most common mental illnesses among students. Dangerously, depression is a cause of suicide if not a diagnosis, treatment, and assistance promptly [10]. Therefore, student mental health studies were critical in giving trustworthy information about students' mental health state so that prompt support measures to care for and help students can be taken. The primary purpose is to assist the youth in actively being involved in the development and make significant contributions to future growth.

Although reviews show online learning as one factor that impacts student mental health issues, E-mental healthcare with online learning course designing emerged during the Covid19 pandemic as an invention method to support the community and students in mental health care [11]. However, there were also certain limitations to e-mental health therapy reports, especially concerning ethical considerations about confidentiality and risk management. Communication via such interventions may be seen by others without the awareness of users or care providers, resulting in confidentiality and security issues. How can employ professional knowledge of psychology in online learning effectively? Nonverbal cues, for example, are essential psychological cues that could help psychological care providers [12].

This study aims to review two sides of online learning related to mental healthcare to provide a critical discussion and further application and rethinking the strengths and weaknesses of online learning for effective practice.

2 Methodology

The systematic literature review (S.L.R.) is a framework of meta-analysis and reviews [11]. The PRISMA template clarifies the general research procedure to include and exclude articles in the review. This S.L.R. is restricted to published literature in the BL research area. Two databases were included in this review, Scopus (1603 articles) and WoS (289 articles). The following is the research PRISMA framework.

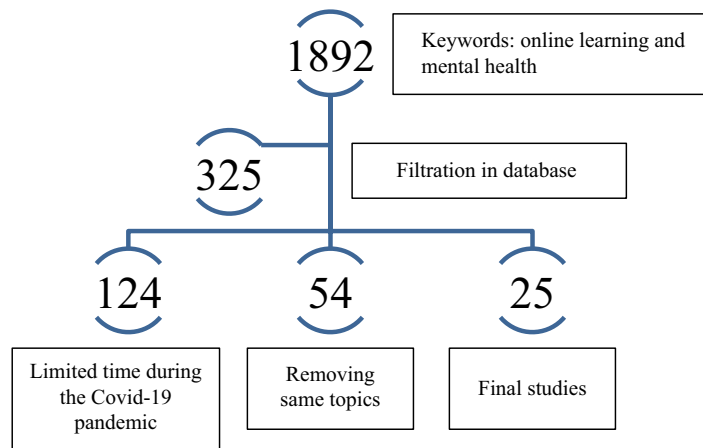


Fig. 1. PRISMA framework

In this review, the subjects selected are Computer science, Environmental Sciences, Engineering, and Social Sciences. Findings were narrowed down to 325 articles. Further, only published articles were included, English language and published during Covid19 pandemic time (2020–2022) were chosen in the database. Results have been narrowed to 124, with a limited number of published years and citations. After removing irrelevant literature and duplication, 24 studies were included in the review. Figure 1 demonstrates the detailed process of data selection.

3 Results

3.1 Descriptive analysis

The study focused on online learning and mental health with reviews accessed in a digital database.

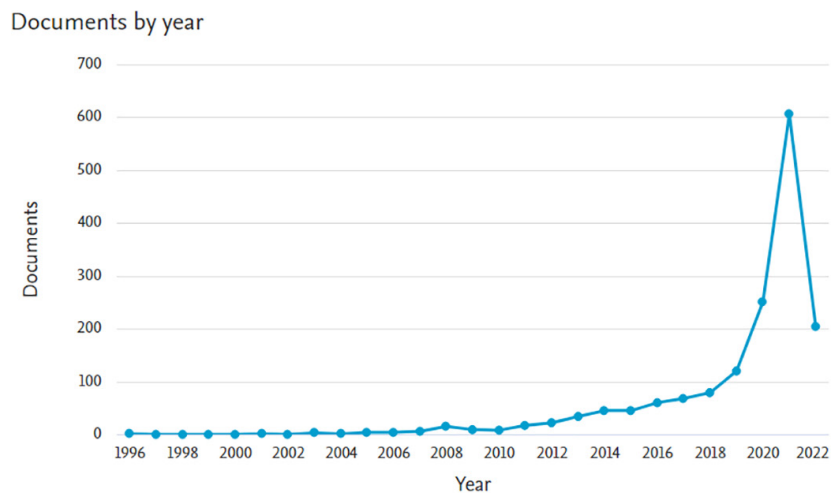


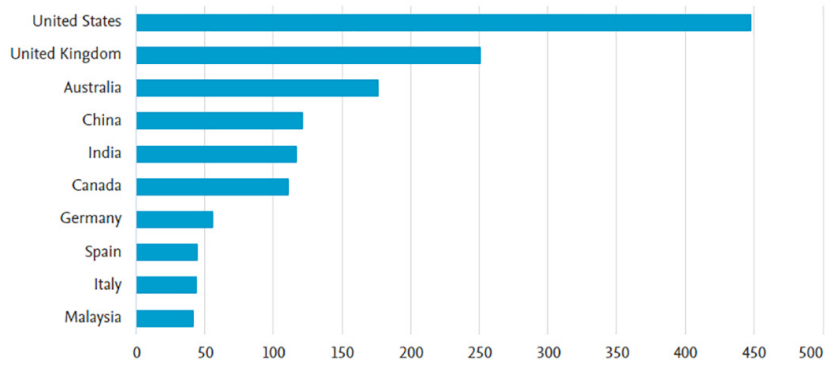
Fig. 2. Number of studies regarding from each year

Source: scopus.com, access in april 2022.

Figure 2 shows the significantly growing number of papers from 2020 to 2022 in Scopus databases. In 2019 there were 120 published papers; this number was double, increasing in 2020 with the number of 251 papers; this result continues to increase significantly in 2021 with 607 papers and is predicted to rise remarkably in 2022.

Documents by country or territory

Compare the document counts for up to 15 countries/territories.



Documents by subject area

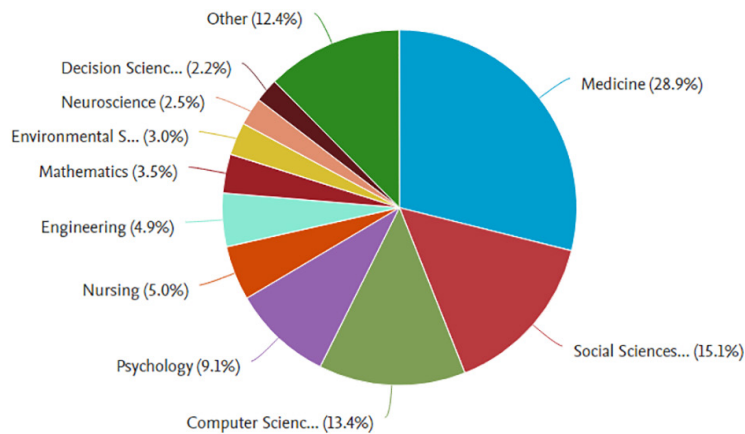


Fig. 3. Country and research field base publication

Figure 3 shows the countries and fields base publications. The literature includes three groups of countries with the highest number of published papers. The highest group comprises the United States, United Kingdom, and Australia (448, 251, 176, respectively); the second following group were China, India, and Canada with the result of (121, 117, 111, respectively); Germany, Spain, and Italy was the third group with the number of published papers of 56, 45, 44, respectively).

Concerning the research fields, medical sciences show the most significant per cent ratio of published papers, the Social sciences field is the second following place, and computer sciences achieved the third place with the result of (28.9%, 15.1%, and 13.4%). The psychology research field received 9.1%.

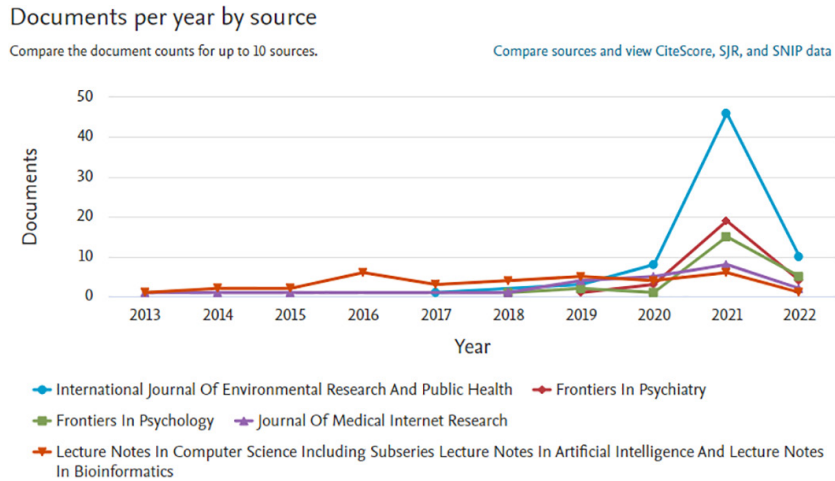


Fig. 4. Journals base publication per year

Furthermore, the journal base publication analysis is conducted for the current study and finds a high number of citations; the list of 05 Journals selected in this study is the International Journal of Environmental Research and Public Health; the Frontiers in Psychiatry, the Frontiers in Psychology; Journal of Medical Internet Research, and the Lecture Notes.

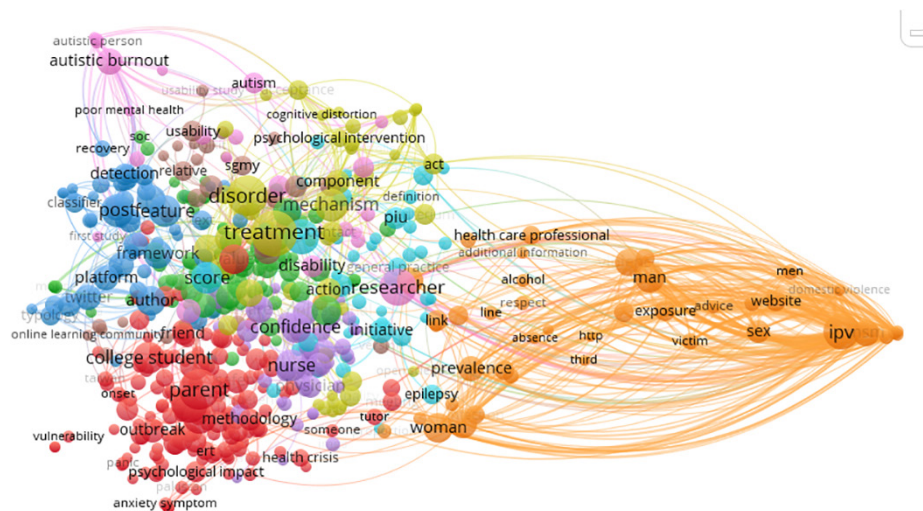


Fig. 5. Bibliometric analysis with keywords “online learning and mental health” with 289 articles in web of sciences accessed in apr 2022

[13] conducted a cross-sectional study of 367 students living in Saudi Arabia in 2020, during the early stages of online learning, to quantify stress levels among students in virtual classes. The majority of participants were female (74.7%) and secondary school students (79.8%). Moreover, half of the participants (55%) reported moderate stress, while 30.2% reported extreme stress. Another excellent work by [14] conducted a quantitative analysis with a sample of 1074 parents of children aged 6 to 12 years old who engaged in an ad-hoc online survey in Italy. 40.3% of them came from high-risk locations in the north; children in the north had considerably higher scores for anxiety, mood, and cognitive abnormalities, indicating a “ripple effect” pattern. The risk of the Covid19 pandemic requested online learning employed in the urgent case considered the leading cause of mental health issues in community and students in several studies [15].

In 2021, [16] conducted a mixed-method study on 180 undergraduate students to assess the impact of online learning on mental health. The results show that the prevalence of no psychological distress (16.67%), mild (40%), moderate (30.56%), and severe psychological distress (12.78%); [17] discovered that practically all students were plagued by symptoms of sadness, anxiety, tension, and apathy (31.2%). Similarly, [18] stated that the impact of online learning policies on Indonesian students’ mental health during the COVID-19 pandemic with high stressful conditions, lack of interaction, and the potential to become introverted; Learned helplessness and mental health issues related to distance learning due to COVID-19 and suffer from overall poorer mental health [19]; During COVID-19, cross-sectional research on anxiety, stress, perception, and mental health of school children in India was conducted. According to [20], when children study online, they spend much time watching screens, affecting school children’s attitudes, sleeping patterns, and parents’ mental health.

Recently, [21] discovered that Malaysian students are still concerned about their mental and financial health, implying that it is critical to detect dental stresses and reduce the influence of COVID-19 on dental students. The impact of the COVID-19 pandemic on the lifestyle and behaviours, mental health, and education of students studying healthcare-related courses at a British university [22]. This study found that 84.2% (n=196) reported worrying too much about various things; 61.9% (n=144) could not stop or control worrying, and 71.2% (n=166) had trouble relaxing for several days or more. 72.1% (n=168) felt unable to cope with things they had to accomplish at least occasionally; 8.5% (n=20) never or nearly never felt confident about handling things they had to do due to personal problems.

To summarize, during the Covid19 pandemic, students’ mental health was negatively damaged, their stress levels were high, they worried about a lack of control over the quality of their studies, and they lacked confidence in dealing with personal issues. The main factor was students’ urgent migration to online learning and studying over two years.

Students in this situation find it difficult to employ a technical method for studying due to a lack of emotion or engagement. Students’ capability and confidence levels are low in online study readiness, self-direction is lacking, and personal attention is lacking. Students are distracted, frustrated, anxious, and confused due to poor time management.

3.3 Online learning solution to assist mental health care learners

As digital technology advances, people are increasingly turning to social media, particularly online forums, to discuss and seek help for mental health issues [23]. The main aspects of mental health difficulties were discussed in an online platform to improve understanding of cognitive dynamics, mood swings, mutual interests, and engagement to improve mental health care and well-being.

[24] discovered that e-mental health has attempted to aid the healthcare community with various digital interventions during the Covid19 pandemic. Consider the following scenario: e-Package provides an evidence-based e-learning package on psychological well-being; Mobile apps for coaching and managing mental health; Social media application for communication, sharing, and coping with the worry and stress brought on by the COVID-19 pandemic and remedy; Psychological interventions, such as online courses on mental health and psychological disorders, a psychological support hotline team offering needed care, an online screening inventory, and group activities to relieve stress, are all available through online resources and hotlines. Aside from that, videos and online games are considered one of the most beneficial ways to assist people in mental health care [25].

This study reviews some research findings regards to online learning courses.

Online mental health information is a valuable resource for people dealing with mental health concerns, as [26] developed machine learning for forecasting the suitability of online mental health information for effective self-care for people dealing with mental health concerns. Bayesian machine learning classifiers were developed as data-based decision aids for assessing the actionability of credible mental health information for people with mental health difficulties and diseases.

With the outline strategies undertaken, in the context of a novel undergraduate mental health program, to address emergent mental health issues during Covid-19 student isolation by e-mental healthcare tool, calls of Padlet [27]. This study delivery of an undergraduate mental health program includes some of the following: Talks, question and answer sessions, one-on-one informal reviews with a mental health expert, and anonymous Padlet invitations to express concerns. Note surveys, anonymous questionnaires, the creation of podcasts or films, information sheets, online blackboard posts, panel discussions, and other activities are all required of students. Self-reporting to reduce shame and stigma concerns; hiding stories in the classroom between lectures and students causes them stress; how successful solutions will be addressed for students to replicate tactics, implement, and fulfil will all be covered.

The lecturer's experience, familiarity with students, and knowledge of the student's academic and learning environment realities for assisting students are essential factors in the e-mental health program. This e-mental health care software was well-received and was used well in the Covid19 pandemic to reduce stress and anxiety levels and a sense of isolation among students.

Another study runs another online continuing education program for nurses to address mental health issues among farmers [28]. Articulate Storyline 3 (Articulate 360) was used to create an interactive, e-learning, and virtual training module to raise nurses' awareness and knowledge of occupationally associated mental health issues among farmers. A total of 113 nurses finished the course. Eighty-two nurses (72.5%)

completed the course evaluation. 69 (84.1%) of those surveyed said the course fulfilled their expectations. All course objectives were met, including the ability to recognize stress manifestations in farmers (86.4%, n=81), understand farmers' mental health status (86.3%, n=80), and identify mental health nursing practices (87.3%, n=79). This online instructional initiative has the potential to help farmers and their families with mental health issues [28].

Similarly, a model of e-mental health and the effectiveness and application of an online leadership intervention model was designed and applied to promote mental health and reduce depression-related stigma in organizations [29]. [30] made an online discussion forum involving mental health service users in the education of mental health nursing students. A study developed equipment for analysing negative emotion detection on online mental-health-related patient texts using deep learning [31–33].

In summary, online programs for improving mental health issues have increasingly been designed and practised effectively in educational institutions and communities, especially during the Covid19 pandemic. Professional experts in mental health care are designing an increasing number of modern equipment and gadgets to assist people, particularly vulnerable groups, in receiving more effective support and improvement from advanced knowledge and copy strategies. There are numerous development functions and applications for e-mental health care.

4 Discussion and conclusion

According to the review, online learning has an impact on student's mental health issues, with an increasing number of students experiencing anxiety, difficulty concentrating in class, dissatisfaction or worry about their learning achievements; less sleep from staring at a screen for long periods; tiredness from feeling isolated; and less engagement or motivation than face-to-face classes during the Covid19 pandemic. Professional mental health professionals, for example, are leveraging online learning platforms to create and develop online courses or digital tools to improve mental health concerns in educational environments and communities at the same time.

Two sides of online learning appear to be at odds, yet this is not the case in real life, as evidenced by reviews. Explaining this issue, [1–34] stated that online learning has strengths and weaknesses and that it is dependent on the instructor's use of it in his or her unique context to determine if it has positive or harmful effects. Several studies suggest that digital education has advanced in catering to a broad audience with location flexibility, extensive availability of courses and information, instant feedback, and time flexibility. While online learning's flaws may be technical and unaccepted, this may cause students to experience mental health concerns such as distraction, irritation, worry, or bewilderment. Students who lack self-control or self-directed study receive less personal attention. Students in online learning must also manage their time. Therefore the open course will assist students in enrolling online or restudying offline if they cannot access online time.

Another important thing is that various factors influence learners' mental health issues, not just online learning, as some people believe. Pierpaolo Limone and Giusi Antonia Toto (2022) state that risk factors, literary elements, social aspects, psychological risk

factors, lifestyle issues, and physiobiological factors influence students' mental health. The Covid-19 pandemic is a risk factor for mental health issues in the community; however, when discussing the impact of online learning on learners' mental health, it is necessary to consider the strengths and weaknesses of online learning to advance digital education, limiting negative consequences.

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6 Authors

Nguyen Thuy Van, School of Education, Faculty of Social Sciences and Humanities, Universiti Teknologi Malaysia (UTM), 81310 Skudai, Johor, Malaysia.

Dr. Sobia Irum, College of Business Administration, Department of Management and Marketing, Zallaq, University of Bahrain.

Alhamzah F. Abbas, Azman Hashim International Business School (AHIBS), Universiti Teknologi Malaysia (UTM), Johor, Malaysia. E-mail: alhamza.fadil@gmail.com

Huma Sikandar, Azman Hashim International Business School (AHIBS), Universiti Teknologi Malaysia (UTM), Johor, Malaysia. E-mail: huma.sikandar@gmail.com

Nohman Khan, UniKL Business School, Universiti Kuala Lumpur, Kuala Lumpur, Malaysia. E-mail: nohman.khan@s.unikl.edu.my

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