

EFFECTS OF ONLINE TEACHING AND LEARNING ON
MENTAL HEALTH OF STUDENTS, TEACHERS AND
PARENTS: CASE STUDY IN AN INTERNATIONAL SCHOOL

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FACULTY OF ENGINEERING
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KUALA LUMPUR

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ABSTRACT

There has been a rapid disruption of the education system since the Covid Pandemic hit the world, affecting more than 200 nations. Learning institutions were closed indefinitely, leading to more than ninety-five per cent of students facing the impact. For this reason, there have been some changes in different spheres of life due to distance in movement, which came as a policy to control the spread of the virus. When re-opening the school came after a long period of staying at home, it came with many challenges because there were many standard rules. There is a feeling of dilemma, insecurity and uncertainty about learning at large. There have been different ways of learning introduced, one of them being online learning. Some factors have intervened in the experience, and many students and teachers have been affected. Prolonged lockdown and fatigue have brought mental health concerns for students, teachers, and parents.

There has been a challenge of emotions from students' connection to their fellow students and teachers. Their academic results have been greatly affected due to this drastic unexpected change. This case study examines on determining the factors that causes mental health disturbance for teachers, students and parents while online teaching and learning process is being conducted during pandemic period. This study was conducted through survey and interview session. SPSS software was used to analyse the data from the survey question. Subsequently, this study is to identify the mitigation methods that can be implemented to eliminate or to reduce the occurrence of mental health in hope that online studies will be executed in the future as there is the hope of improvement in communication between the people involved. Thus, the introduction of digital learning will have its way which will improve the internet exploration.

Keywords: Mental Health, Online Teaching and Learning, Strategies of Reducing Mental Health

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CHAPTER 1: INTRODUCTION

1.1 Background of the Study

Online learning has become part of learning methodologies since the hit of the Covid-19 Pandemic. It has been a challenge when the suspension of face-to-face learning came mostly from the studies that involve practical in their learning. The long lockdown period from the health challenging pandemic has developed some issues on mental health and emotional development of teacher, parents and student due to the online teaching and learning. Recent research shows that the online learning and teaching methods have brought some knowledge gap because of how students and their teachers have been relating (al, 2021).

Academic results and psychological studies have shown some negative impact on students' mental health from the change of study methods due to lockdown policies. There has been an increase in anxiety, stress, and depression out of worry and boredom. Covid-19 pandemic has been a trigger to the mental illness cases such as stress and depression, which comes from emotional instability, which comes when someone gets a wider range of emotion at the same time. (Aliyyah, Rachmadtullah, & Samsudin, 2020) The study comes with how the Covid pandemic, which brought lockdown policies, has impacted students and their experience with online academic studies. There has been pandemic fatigue from the prolonged crisis of the pandemic. The study of the relationship between students' emotions and online learning helps to understand the development in students judged from their performance. (Burke, 2013)

From different studies of emotions, it is clear that the pandemic has impacted the students' emotional state. The only solution is to enhance ways that will bring positive

emotions such as calmness and confidence. This study case helps us understand the variables involved in online teaching and learning, the impact of pandemic fatigue on students, teachers and parents, understand the factors that cause mental illness and the strategies to curb or mitigate the impact of mental illness (al, 2021). Besides the case study, (Kessler, 2018) the researcher analysed that there is larger magnitude impact on the interaction of student towards the teacher and also their parents.

The changes of interactions have brought impact to the student, teacher and parents, lifestyle change, anxiety, depression, and stress level. Understanding the effects on academic and emotional development is very important because that is the only way to look for methods to control them. Analysing the experience of online learning for subjects that requires practical which cannot be offered online. Since it is unclear how the online study will be in the future, thorough research needs to be done to reduce the stress of the unknown. (Atkins & Rodger, 2016) Weakness of online infrastructure, inexperienced teachers in online teaching and different environment for the students are some of the highlights that will help face the challenge.

The educational disruption induced by Covid-19 may extend longer than originally anticipated. This essay examines the mental health of university students during the pandemic and studies the learning settings required to support students in order to better grasp the current scenario. (Singh, Roy, , Sinha, Parveen, & ,Sharma, 2020) To address these gaps in the literature, we wanted to determine the incidence of depression, anxiety, and stress symptoms among students, teachers, and parents who have been touched by COVID-19. We'd also look into the factors that influenced their mental health during the COVID-19 pandemic.

1.2 Problem statement

Online delivery mode during the Covid pandemic, had enabled school to continue with their teaching and learning activities. While it provided an option to continue the teaching and learning activities, it also created many challenges to students, teachers, parents, and other stakeholders. Stress and mental related issue have been raising during the pandemic and its percentage is increasing 10.7% in yearly basis according National Health and Morbidity Survey. (M.H, 2020) Mental and stress is applicable to the stakeholders such as parents, teachers and students that has been observed. Mainly this effects the stakeholder's health and relationship to others and family members. Many parents and teacher have experienced health conditions and had curvilinear relationships with insomnia, anxiety, depression, and distress (Huiyang Dai et al., 2020).

According to the, (Loenenbach , 2019) shows that various children and their family members are affected by Covid 19, this data that can be used to associate the factors and the outcome for more reliable predicament. This shows that parents, teachers and student have more pressing mental issues and stress related issues.

Moreover, the government has initiated good initiatives to help those parents or teacher who lost their work to get back to their feet temporary and uplift their burden from time to time. (Holmes et al., 2020). Various sector has been affected by covid and people have their pay to be cut or loss of job where some of them are parents, brings their instability to be affected.

In addition, mental health is one of the prominent problems. Young students are vulnerable to the changes, this study is about the broad impacts on students as a result of schools being closed, physically distancing guidelines and isolation, online learning and other unexpected changes to their lives. Students in international school is no exemption.

According to (Zhang, 2020), this condition has caused teachers to experience symptoms prevalent in pandemic circumstances, including as anxiety, despair, marital violence, and marriage breakdown, all of which hinder their capability to teach effectively (Al Lily et al., 2020). Teachers indicated that increased workloads, psychological issues, and weariness in a study published in Spain during the start of the pandemic (Bigogo, 2020).

1.3 Research Questions

- i. What are the factors that causes mental health issues when teaching and learning are delivered through online mode?
- ii. What are the impacts on mental health for the stakeholders?
- iii. What are the strategies to reduce or eliminate occurrences of mental health and reduce its impact?

1.4 Significant of the Study

The aim of this study is to investigate the factors that causes mental health and stress issues to the students, parents and teachers while teaching and learning is being carried out by the teachers in international school via online and the mitigation measures to overcome it.

1.5 Objectives of the Study

The main objective that analysed from the effects of online teaching and learning on mental health of students, teachers and parents: case study in an international school problem statement can help to decide the the objectives of this study are:

- i. To determine factors that causes mental health issues when teaching and learning are delivered through online mode.
- ii. To identify the impact on mental health on various aspects.
- iii. To develop strategies to reduce or eliminate occurrences of mental health and reduce its impact.

1.6 Scope of the Study

The study is focused on mental health of student, teachers and parents of primary level of educations in international schools located in Klang Valley. Thus, there are 200 teachers and 150 parents were chosen to analyze in this research.

1.7 Definition of key terms

1.7.1 Pandemic fatigue

This is a response, which is expected, to the prolonged Covid Pandemic. There have been some measures implemented to curb the impacts on the lives of every person, whether they have been affected or infected.

1.7.2 Mental Health

This is a condition that regards psychological and emotional well-being. The person realizes that their abilities can no longer cope with life stresses hence cannot work or function accordingly. Some words would describe different mental illness levels, including craziness, stress, depression, madness, mental illness, lunacy, and many others.

1.7.3 Online Learning

Online learning is a method of study that takes place on and through the internet. Most people refer to it as distance learning or E-learning. The word distance shows that this learning does not occur in classroom condition but from a distance where the teachers are not completely in control of the classroom situation. Online teaching and learning methods have been implied to many educational institutions including international schools.

1.8 Report Outline

In nutshell, this study consists of 5 chapters. The first chapter is the research introduction accompanied by a literature review in chapter two, methodology in chapter three, data analysis in chapter four, and conclusion in chapter five. Moreover, the first chapter consists of background of the study, statement of the research problems, research objectives, and research questions, significant of study, scope of the study, definitions of the terms and the dissertation outline of the study. Thus, in the introduction on case study project. Holistic view of the mental health issue that arise among students, parents

and teachers due to Covid -19. The overall impact and its objectives are included in this chapter.

Chapter two, literature review explaining the variable literature collected from the previous studies. The point of view of the previous author doing related studies on the impact of the Covid pandemic on learning and how online learning has affected the mental health of teachers, students and their parents. The next review will be on factors causing mental health, the impact of mental health on different aspects of life and the strategies that can be implemented to mitigate mental health issues and their impacts.

In addition, Chapter three will be methodology. It's disclosed the research design, the sampling procedure and sample size, research instrument, target population, questionnaire, pilot test, data collection and analysis, also the hypotheses and results.

Thus, a total of 200 number teachers and 150 parents participated and what are the data is being analysed. With the data that has been obtained, will cross check with an expert for their review on the effects on mental health of student teacher and parents.

Chapter four, consist the data analysis and finding using SPSS 23 Software. Data and information were gathered from the study methods and the summary of all the findings on students' mental health and the effects it causes. Moreover, the result that has been obtained will be populated its respective information according to the information that is provided in other research papers and journals. Besides that, there will be an interview of 3 parents, teachers and the student who has been affected by covid-19 and a recommendation will be provided to improve the mental health of all these 3 participants.

Finally, chapter five contains the overview of both observations and interpretation, the conclusion of which theory is acknowledged, and more evidence for the methodological findings, which is accompanied by several suggestions relevant to this review for future studies. It also provides a broad overview of all the previous pages, from chapter one to chapter four.

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CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

After the World Health Organization declared Covid-19 a pandemic and lockdown policies were introduced, the strict implementation of no movement and distancing affected the education system. The cancelling of the in-person learning to online or remote learning brought a challenge since it has been the most popular way of learning. Subjects and courses that involve practical in the laboratory were the most affected since practices cannot take place on the digital form. This change has affected the development of students in their studies and brought some health crises which expand from emotional instabilities (Balta-Salvador et al. 2021). Some studies have not yet been introduced online for degree studies, so students have fear and anxiety.

Detailed data about the impact of online study is not yet clear, but it provides a solution; research must be done to support the people involved. The study changed the academic year and period, making the starting and ending date different. Different countries are dealing with the issue differently, and for the less developed countries, the stress is greater than that of the developed countries. This is a piece of evidence that the education system has been greatly affected. Hence, the earlier we understand online teaching and learning and control the stress that comes with it, the better for students and teachers. Different variables help us understand the impact of online learning on students due to lockdown and distance learning.

The psychology and online learning study have clearly shown some construction needed in remote education, which is a hack during this pandemic season. There is an unpleasant feeling of being locked in as quarantine, and this has brought some

psychological problems almost to every person. People believe that it is a period that means suffering, thus, there are feelings of fear and uncertainty (Baltà-Salvador et al. 2021). Students are also unsure of what the future might bring; hence there are feelings of psychological distress, depression, post-traumatic stress, confusion, anger, fear and anxiety.

When it comes to contact with the education system, there must be ways to curb the situation and reduce the negative impact, mainly on mental health. Lack of physical contact with their fellow students and teachers leads to academic stress. Most of the research done on students during the pandemic brings out negative results on the emotional state of the students. The zeal to study has gone down during the pandemic period because the physical connection between students and their fellow students and teachers plays a major role in education development. It is close that every student's emotional state is taken care of by a fellow student or a teacher.

Pandemic fatigue has exposed the entire world to a state that they can do nothing because some implementations would affect every person's life. A long period of implementing these measures causes fatigue on how people feel about the pandemic out of mental exhaustion. Since the exhaustion starts at the hope, the study environment of any student will be affected (Baltà-Salvador et al. 2021). Learning should be a supporting tool and not the main study method. When the only means of study is online learning, there might be a time when a student goes shortage of content, and that's where stress begins to the extent of teaching. There is also a lack of focus because the gadgets meant to study might be used for other purposes, such as videos on YouTube.

There is a risk of actual learning when online teaching and studying is involved. Teachers have to remain alert in collaboration with parents to prevent students from viewing unworthy content with the excuse that they are still studying; this is an added stressful task for both teachers and the parents, and the performance is likely to be inefficient. Digital learning has been associated with cognitive theory, and there is an attribute of inconsistency when communication is involved.

Hence, condonation and control those teachers have on students lack in this case; indiscipline leads causing poor performance and emotional distress. In place of assignments, there is a great problem since the students cannot be trusted since their critical thinking has already been affected by what they do when online (Roy, 2020)It is also a challenge to other students since they cannot access or afford the cost of the internet from where they come from. Some of the parents are also illiterate, and in case a student needs instant help, it becomes a challenge. In some other cases, some parents are ill, so the students have to multitask between their studies and take care of their ill parents, which becomes double stress.

2.2 Pandemic due to Covid-19

World Health Organisation (WHO) received reports of cases of pneumonia of unknown origin in Wuhan, China on December 31, 2019. It was temporarily renamed "2019-nCoV on January 7, 2020 when Chinese authorities described a novel coronavirus as the cause. On 30 January 2020, the World Health Organization declared the emergence and spread as a Public Health Emergency of International Concern, and on 11 March 2020, it was declared as pandemic as it turned out to be a deadly virus.

As of March 20, 2022, the country had over 3,900,000 confirmed COVID-19 cases, over 270,000 active cases, over 34,000 deaths, and more than 53 million tests, ranking third in Southeast Asia in terms of COVID-19 cases, except only Vietnam and Indonesia, and fourth in terms of COVID-19 deaths, leaving only Indonesia, the Philippines, and Vietnam.

On 25 January 2020, the very first cases in Malaysia were acknowledged among Chinese tourists in Johor via Singapore, and the number of imported cases remained limited till March 2020, when many local clusters arose (Sipalan, 2020). The Malaysian government, led by Prime Minister Muhyiddin Yassin, enacted a state-wide lockdown known as the Movement Control Order (MCO) on March 18, 2020, in reaction to the increase in cases.

There was 6 main restrictions imposed due to the MCO, which were prohibition of mass gatherings including religious events, social, sports and cultural activities, tourists to undergo self-quarantine of 14 days and medical health check-up upon arrival in Malaysia, restriction of entry for all tourists and foreign visitors, closure of all kind of education centre from kindergartens to universities and lastly closure of all premises except the essential services such as the electricity, grocery shops, energy, telecommunications, prison, banking, water and so on.

2.3 Online teaching and learning

Covid-19 has also rattled the education industry, and this dread is likely to spread across the world's education system. Many schools and institutions were remained closed temporarily due of the Covid-19 virus. There was concern that the current

semester, as well as future semesters, would be lost as a result of various institutions discontinuing in-person teaching. According to the experts, it is unlikely that physical teaching will resume very soon since social separation is so prevalent at this point, learning chances will suffer as a result (Dhawan, 2020).

In addition, the students, educators, communities, societies, and the country as a whole all need to be protected and saved. E-learning is attributed to a number of arguments. Some of the justifications for online pedagogy include accessibility, cost, flexibility, learning methods, life-long learning, and policy. It is said that online learning is simple to use and that it can even reach rural and isolated areas.

In terms of transportation, accommodation, and the total expense of institution-based learning, it is regarded to be a significantly less expensive way of education. Another appealing feature of online learning is the ability to arrange or plan one's time for completing courses offered online. In this fast-paced world, the government also acknowledges the growing relevance of online learning (Rieley, 2020).

2.4 Lack of Motivation in Students

It was thought that online learning would be the new interactive and immersive method to teach the new generation of students. (F, Comprehensive Psychiatry) Though, the results speak on the contrary. Endless oceans of texts, quizzes, frequent learning assignments and MCQ's have led to students losing motivation to keep revisiting the learning portal. (Singh, Roy, , Sinha, Parveen, & ,Sharma, 2020). Students complain of lacking motivation due to a lack of interpersonal touch between the students and the teacher in the online classes. The need for physical interaction between the students is

also a necessity for maintaining engagement which the online learning methodology has no answers for yet. Institutions need to deliver interactive lessons to students. (Aliyyah, Rachmadtullah, & Samsudin, 2020)

2.5 Impacts of Mental and Mental Health on Teaching and Learning Activities

2.5.1 Physical Health

Both mental health and physical health are co-related. Though we view our bodies as separate from our minds, the two are very close in how they relate. Poor mental health affects physical health, while physical health also affects mental health. Mental health is a determiner of the well-being of a person. Different studies have shown that when one is in an excellent mental state, there are few possibilities of getting heart attacks or strokes, and the psychological side is well. (Bavelier, Green, & Dye, 2020)

The COVID-19 epidemic has had a significant impact on parents and children. Since the epidemic began, more than 1 in 4 parents have reported poorer mental health, and 1 in 7 parents have reported worsening behavioural health for their children. The decline of parental mental health and the decline of children's behavioural health were often linked, with almost one in ten families reporting a decline in both. Loss of child care, delays in medical appointments, and worsening food security were all prevalent among families suffering from mental and behavioural health issues. Besides, online education puts the student at danger of excessive screen time. As a result, offline activities and self-exploratory learning have become increasingly important for pupils. (Daks, Peltz,, & Rogge, 2020) Physical exercise is decreasing, screen time and sleep is increasing, bedtimes are later, weight is increasing, and mental health is deteriorating,

according to research. The majority of these reports, however, are based on retroactive self-report and are produced from big data analytics with minimal customised demographic data.

Physical health also brings challenges that develop to mental health. Some people value their outward look so much, and when they get an infection or sickness, it affects their physical look, affecting their mentality. Some people may even get red sores on the skin, which are brought by depression and stress. Depression and stress cause some life challenges, such as stigma, leading to suicide. (Aperribai, Cortabarría, Aguirre, & and V, 2020)

2.5.2 Families

It becomes challenging for families and friends of people who have a mental illness, and study shows that most of the time, they face similar challenges. The issues are so painful and traumatic for every person involved. The emotions and the general behaviours of the family might be ignored because most of the attention is on the ill persons or their work or their studies. Most families ignore their feelings to the extent that they also get affected. (Kelechi, 2012) So, it might be expected in a family to have a person with mental illness, which they might have ignored when taking care of other loved ones. In other cases, mentally ill people become violent towards their loved ones or even distance themselves from everyone, which causes stress to the affected families. (Bigogo, 2020)

The current situation relies on relevant material from the fields of acute crises and long-term, cumulative risk to demonstrate the many ways in which children's and families' well-being may be jeopardised during COVID-19. Since children are too young

and their reasoning is quite delicate, there is difficulty understanding what's happening to their parents or why they start acting unusual. Since there is a distance from how they used to relate with the parent, there is a sense of loneliness and denial because they are not sure of their situations (The Lancet Global Health. Et.al. 2020). Furthermore COVID-19-related social disturbance is linked to child adjustment through a cascading process including caregiver well-being and family dynamics, according to the suggested conceptual framework, which is based on systemic theories of human development and family functioning (i.e., organization, communication, and beliefs). In the framework of COVID-19, an illustration of the importance of family dynamics in risk buffering as well as developing resilience via shared family values and close ties is offered. Finally, the consequences for clinical practise and research are examined.

2.5.3 Workplace

Mental wellness is essential at workplaces because it affects both employers and their employees. When an employee gets mentally challenged, they start by being absent, and finally, they will quit their jobs to hide at home. Less number workforce reduces the output of a business; thus, it will affect any other person involved in the business (Cvenkel, 2020). Occupational illness leads to lower productivity and many errors. Work stress can manoeuvre mental stress later to many errors and accidents. It starts low as a reaction to work or life pressures and other demands that comes in life. Some occupations are at the risk of extinction due to the excessive pressure on people working on them. A high level of stress leads to adverse risks in mental illness.

Job satisfaction among teachers is a significant component in affecting workplace happiness and performance (Fute.A, 2022). With all of the changes in education brought on by the pandemic, particularly those pertaining to teaching procedures, it's vital to reassess teachers' job engagement and the values they've put in their work during the epidemic. Furthermore, filling a gap during this epidemic era will be examining the influence of these two aspects on teacher work satisfaction.

The teaching system had undergone a drastic change when everything was announced to be remote learning which increased the workloads of the teachers in preparing all the teaching materials in softcopies. Furthermore, due of the lockdown, COVID-19 has caused panic, worry, and compassion fatigue among instructors. Teachers are among the professionals who labour for a greater percentage of their life. Because of the constantly shifting instructional contexts, they do not always receive adequate sleep, demanding coping techniques. Some of the issues that impact teachers' physical and psychological well-being in the job include the physical state of workplaces, the social environment (contact with colleagues and authorities), and the lack of basic skills to operate technology equipment. Given that teachers' physical and psychological well-being has been compromised, it is critical to focus emphasis on their work values at this moment.

2.5.4 Finance

Due to the increased cases of mental disorders globally, mainly in this time of the Covid pandemic, there is loss of productivity mainly caused by stress, anxiety, and depression, which has cost the government a lot of money each year. Researchers said that in

approximating the amount of money used on mental disorders, almost three to six trillion dollars are being used to treat mental illness cases. Trial to reduce the costs by demonstrating cost-effective psychological interventions has not bore fruits yet. With so many platforms and online educational resources available, users, both teachers and parents experience regular difficulties when utilising or referring to their gadgets. Accessibility, cost, convenience, learning methodology, life-long learning, and education system are some of the issues that have been cited as obstacles with remote learning (Murgatroid, 2020).

A dependable internet connection and access to digital gadgets are major challenges in many nations. While many economically disadvantaged children in developing nations cannot afford online learning gadgets. In the case of having few children at home needing to have electronic gadget, pushes parents into financial debts in getting the gadgets for their kids.

2.5.5 Job Satisfaction

Teacher job satisfaction is an important factor in determining workplace happiness and performance (Fute.A, 2022). Teachers reported that classes are not progressing at their typical pace, according to the report. Two-thirds of teachers said their students were less prepared for grade-level work this year than they were last year at this time, and 56% said they had only completed 50%, or less than half, of the overall curriculum content they planned to cover by the end of the year.

2.5.6 Teaching and learning performance

This autumn, absenteeism has been a consistent issue across all learning modalities. Teachers claimed that 91% of their students were there every day in physical classes, while only 84% of their students were present every day during remote learning. (Erdemir , 2021)

Many students excel in a structured environment with a fixed timetable. These children may be more preoccupied at home. They may fail to do assignments or show up for class, which can have a negative impact on online education. While their children are enrolled in online education, many parents work. It may be difficult for these families to give the same level of stability at home as they do at school. At the same time, many students struggle with the lack of face-to-face interaction with their instructors and peers when learning online. It is possible that teachers won't be able to tell the difference between students who are on target and those who need more help. Students that are disengaged may be unable to participate in online class discussions, and if the entire class is disengaged, the results can be disastrous (Anon, 2022).

2.6 Theories of Mental Health and Stress

Accurately diagnosing yourself for mental problems is difficult, and not impossible. Professionals in the fields of psychiatry and mental health must have a broad understanding of mental disease and its theoretical basis. Within the context of psychodynamic, behavioural, cognitive, social, humanistic, and biological theory, it gives theoretical notions and explanations of the probable origin of mental disease (Clunn, 1982). A medical examination is to be done first rule out physical ailments.

A meeting with a mental health expert generally entails an interview and subsequent examination to evaluate the most visible symptoms as well as the kind and degree of mental illness. Among the popular methods of evaluating mental health are Transactional Theory of Stress and Coping (TTSC), Perceived Stress Scale (PSS), General Anxiety Disorder (GAD-7) and Goldberg anxiety and depression scale (GADS).

2.6.1 Transactional Theory of Stress and Coping (TTSC)

The theory's major focus is on cognitive evaluation and stress management (coping). Stress, according to Hans Selye, is a defence mechanism that happens when opposition, tiredness, or danger. These theories talk about how stress contributes to a person and what are the change that can be brought by the person to the environment. Long-term stress can cause adaptation sickness and even death. This concept theories will be used in these studies to explain on the stress potion.

Stress has been described as a reaction, a stimulus, and a transaction. (Hans Selye.2020) first proposed the stress as a response model, which depicts stress as a physiological reflex and is included in his General Adaptation Syndrome (GAS) model. This model incorporates three principles that explain stress as a dependent variable; stress serves as a protective mechanism, alarm, resistance, and fatigue are the three stages of stress and if the stress is persistent or severe, it may cause adaptive disorders or even death.

The stress as a stimulus idea was first proposed in the 1960s, and it defined stress as a major life event or change that necessitates a response, adjustment, or adaptation.

The Social Readjustment Rating Scale (SRRS) was developed by Holmes and consists of 42 life events that are assessed according to the expected degree of adjustment they will need of the individual experiencing them. (Yan, Kim, Zhang, Foo, & Alvare, 2021). The transactional theory of stress and coping (TTSC) was created by Richard Lazarus. The Transactional Theory of Stress and Coping (TTSC) is a methodology for evaluating damages, risks, and difficulties that emphasises on assessments. This evaluation's outcome is a description of the procedure for dealing with stressful situations.

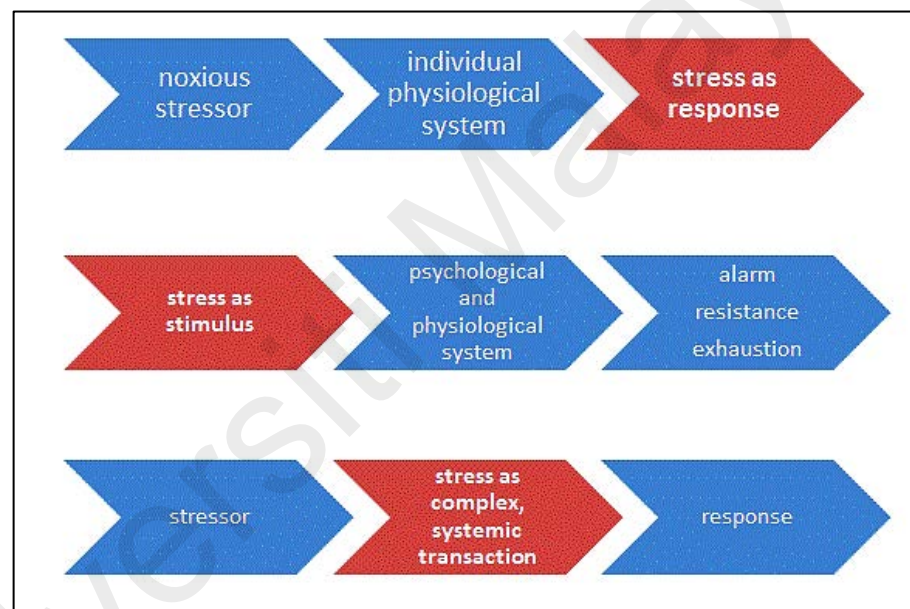


Figure 2.1 : Theories of stress as response, stimulus, and transaction.

An initial primary assessment, a subsequent test, and maybe a reassessment makes up a cognitive evaluation. Primary assessment is where a scenario is categorised as either constructive, insignificant, or possibly harmful.

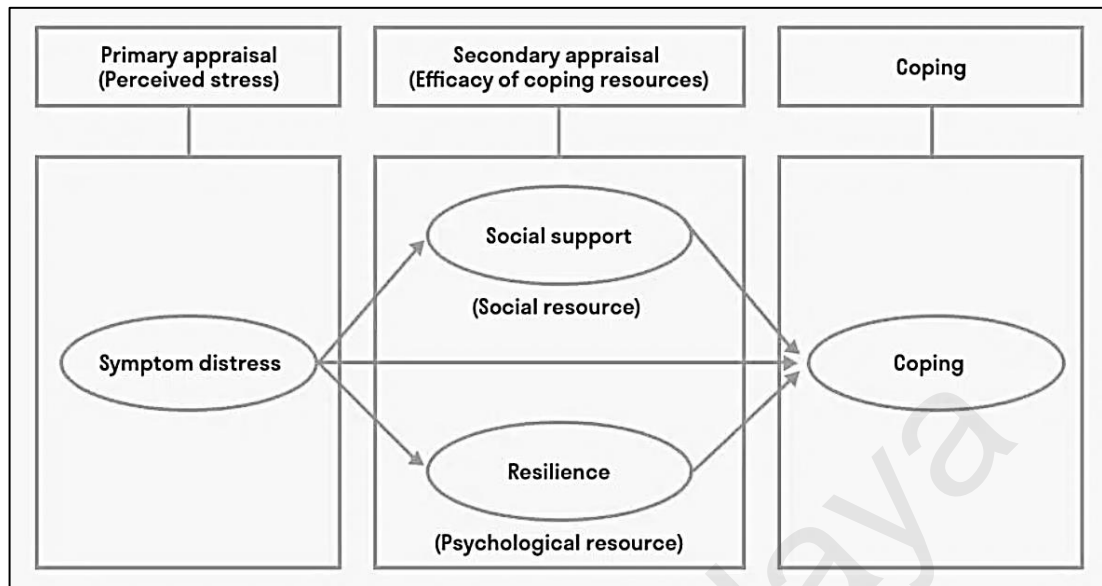


Figure 2.2: Transactional Theory of Stress and Coping Model

The secondary evaluation comprises evaluating a situation's possibilities as well as the person's capability to cope with them. The third level of evaluation measures the effectiveness of the coping method used to ensure adaption to a new condition.

2.6.2 Perceived Stress Scale (PSS)

The (PSS) is an item to measure and evaluate and individual's feeling due to too much stress or an overwhelming stress. This measurement was used to detect any feelings which are positive or negative in this study. It contains of 8 items for each of the subject and rated in the scale of 0-4.

2.6.3 Goldberg anxiety and depression scale (GADS)

The use of Goldberg Anxiety and Depression Scale (GADS), individually referred to as Goldberg Anxiety Scale (GAS) and Goldberg Depression Scale (GDS), is a 9-item to

cater for participant in a study. The GADS score is determined by whether respondents answered 'yes' or 'no' to nine depression and anxiety questions in the previous month. People with anxiety ratings of 5 or more, or depression scores of 2 or more, had a 50% risk of experiencing a clinically significant disruption. GADS is one of the recommended methods to find if a person is impacted with anxiety or depression or both of the symptoms.

2.6.4 Patient Health Questionnaire-9 (PHQ-9)

The idea focuses mostly on cognitive assessment and managing stress. According to Hans Selye, stress is a defence mechanism that occurs in the face of opposition, exhaustion, or danger. These ideas discuss how stress affects a person's health and the changes that a person may make to the surroundings. Long-term stress can lead to disease and even death as a result of adaptation. These concept ideas will be utilised to explain the stress portion in these experiments.

2.6.5 Generalized Anxiety Disorder – 7 (GAD-7)

Generalized anxiety disorder (GAD) is one of the most common mental illnesses, although there is no rapid clinical test for it. The goal of this study was to create a short self-report scale that could be used to identify possible instances of GAD and to test its validity and the reliability. The scale includes a prescriptive scoring system, as depicted below, with main points of response options and points allocated, as well as a question at the conclusion that qualitatively describes the degree of the person's anxiety during the past fortnight.

- Not at all (0 points)
- Several days (1 point)
- More than half the days (2 points)
- Nearly every day (3 points)

2.7 Summary of the Literature Review

From the literature review, researcher bale to analyse the impact of online teaching and learning on teachers' mental health, students and parents have been well discussed which based on the other author's point of view. All the parties have their share of stress from remote learning, and for that reason, it is not okay to use it as the primary method of study but a supporting source.

Also, mental illness should be taken seriously to take proper measures to curb it and its impacts. In conclusion, the literature review clearly identifies the factors causes mental issues when teaching and learning are delivered through online mode and the occurrences of mental health and or reduce its impact.

Thus, from these studies it has been clearly identified that although there have been numerous problems for educators, schools, institutes, and the government in regards to online education, the COVID-19 epidemic has created multiple chances for those who are unprepared or have long-term intentions to deploy an e-learning system.

It has strengthened the bond between instructors and parents like never before. Home-schooling necessitates parents' financial and academic support for their children's education. During this continuing situation, children with disabilities require additional and specialised assistance. For the first time ever, online platforms such as Google Classroom, Zoom, virtual learning environments, social media, and other group forums such as Telegram, Messenger, WhatsApp, and WeChat are studied and attempted for teaching and learning. This is something that can be looked into more. In summary, although there have been numerous problems for educators, schools, institutes, and the government in regards to online education, the COVID-19 epidemic has created multiple chances for those who are unprepared or have long-term intentions to deploy an e-learning system.

On a local level, teachers are actively collaborating with one another to enhance online teaching approaches. As instructors, parents, and children have similar experiences, there are unparalleled potential for collaboration, creative solutions, and openness to learn from others and try new methods. (Doucet et al., 2020). Many educational organisations are making their tools and solutions available for free in order to assist and support teaching and learning in a more interactive and engaging manner. Online learning has made it possible to teach and learn in novel ways.

CHAPTER 3: METHODOLOGY

3.1 Introduction

In this chapter, it will be analyzed the method that used in this research and how does these methods work in this study. The purpose of this study is to analyze the effects of online teaching and learning on mental health of students, teachers and parents: case study in an international school. In this chapter it was mainly discuss about the overview of research methodology used and what is appropriate for this research to investigate the mental health and stress issues while teaching and learning by the students, parents and teachers. The main key drive is to determine whether there are significant relationships between the independent variable which are physical health, families, workplace and economy whereas the dependent variable is mental health and stress issues.

Other than that, this chapter explained about the research to lead some sub-topic in this such as research design, method of data collection, sampling design, instrument that used for research and the constructed measurement details with clearly. In this study, questionnaire will be used as a survey question to get data from targeted population randomly. Furthermore, the primary data will collect and will continue with data analyses to present. Data in response to the topic of research is important and significant for this study is concerned for this chapter.

3.2 Research Plan

In this research, there are multiple method that used to collect accurate and consistence result in order to determine which is the best approve to study the relationship between mental health of teachers, parents and students. Each data that was collected will reflect on the hypothesis that was made in the earlier statements. The hypothesis statement should be test out to reveal if the mental health of teachers, parents and students has increased or reduced. Besides that, new sample data was collected based in Malaysia. In this study is using primary data collection to conduct.

3.2.1 Primary Data

Primary data means the data that would not issue anywhere and it is the original data that collected through questionnaire, interviews, observation and etc. for specific research goals. Primary data also considered as newly get data fresh from respondent and also data for the purpose that has already planned. There are several methods to conduct for the primary data such as interviews, questionnaires, focus group and observation (Hox, 2005). Direct Personal Observation is a face-to-face survey or it also can say as interview and questionnaire are the method of data. For this study questionnaire surveys were the main data collection source by distributing to teachers and interviewing parents, employed. Teachers and parents were the representative of the target population for my research. Finally, the data will transfer to SPSS for descriptive and inferential analysis.

3.3 Sampling Procedure on Subjects

3.3.1 Target Population

Population is size of people for which the survey data is used to make inferential. The aim of this research is to study the stress and mental health of Parent teacher and students. Furthermore, this study has conducted a random test on parent teacher and student to understand if the participants are able to answer the given question. A total of 50 teacher and 50 parents are chosen randomly to do this activity. In this study, there wasn't any sample that was taken from the students due to their eligibility to answer the question in an appropriate manner. Besides that, there wasn't any age limit that was given to teachers as long as they were teaching in private schools. The parents were not given any age or job requirement for this sampling test.

3.3.2 Sampling Frame and Sampling Location

Sampling frame is mean by the specific people from a population where they do live in particular place that become part of the sampling list. In this research, the sampling sizes occupied 100 sets questionnaire and the respective people are targeted. This study's target population is working parents and teachers, yet there might be some difficulties to reach the certain aimed population. The sampling frame is limited at nearby area so that the sampling size can be achieved.

3.4 Research Instrument

3.4.1 Pre-test

A 15-person pre-test was done with students from the Masters in Occupational Safety and Health programme. The goal of this technique is to ensure that the questionnaire is easy to understand for the responder in terms of the language used, as well as valid and reliable for the study's determination. The study questions were drawn Patient Health Questionnaire-9, (GADS) Evaluation and Perceived Stress Scales. Pretesting ensures that questions work as expected and that individuals who will be answering them are familiar with them (Hilton, 2017). The input gathered from the respondents during this step was reviewed to see whether any changes to the questionnaire were necessary in order to obtain reliable findings.

3.4.2 Data Analysis Procedure

In this research, questionnaire was used to do the survey to accomplish the objective of the research. According to, (Chua 2021) the descriptive analysis will be use for the data collecting from the questionnaire. It helps to summarize the data and find patterns. Statistical Package for the Social Sciences (SPSS) software will be use to analyze and tabulate the data according to descriptive analysis. Furthermore, the SPSS statistics is a statistical software package that can perform both logical batched and non-batched statistical analysis. This is one of the most popular statistical packages, capable of performing highly complex data manipulation and analysis with simple instructions.

The following are the benefits of using SPSS software to analyses data are, the researcher does not have to put in much effort to use this software. Even the time required to analyses data with SPSS is less than that of any other statistical tool. As based on the researcher, (Singh 2021), the Statistical Package for the Social Sciences (SPSS) is an abbreviation for Statistical Package for the Social Sciences. It is a collection of software programmers that are used for both batch and non- batch statistical data analysis. This software is simple to understand and can easily perform complex data manipulation. Not only that, but it has the ability to collect data from any file type and then use it to generate charts, tabulated reports, descriptive statistics, and many other things. Hence, this software play main significant role which is, researcher able to get all the statistical about the research easily and able to make conclusion, either it gives positive result or negative result.

3.4.2 Questionnaire Design

There is three different questionnaire which separated for parents and teachers. This questionnaire contains Five parts as mention above, which is demographic details, general information and questions about the variables. It contains 5 parts including demographic detail. Part A about demographic details which is gender, age, marital status, education level, employment condition, and working hours. Part B is about general questions on, (GADS) Evaluation. Part 3 which is about Perceived Stress Evaluation, Part 4 covering questions from PHQ-9 and Part 5 is about opinions and suggestion on supports, and stress management. Thus, the Likert scale method was used in the questionnaire.

3.4.3 Pilot study

A pilot study is a brief feasibility study aimed to evaluate various parts of the methodologies proposed for a bigger, more stringent, or confirmatory inquiry (Arain, Campbell, Cooper, & Lancaster, 2010). A well-designed and conducted pilot study can also aid in the estimation of sample size by identifying previously unknown possible confounding variables and evaluating the strength of correlations among critical variables.

3.5 Test analysis

Test analysis is carried out to continue the process of statistical data to evaluate the data in more detail. This process is to analyse the collected data which gather from the questionnaire and to determine whether the data is analytically reasonable. After input the data in Microsoft Excel, then proceed to SPSS to analyse and hypothesis is determined and it will represent in graphical form such as bar chat and pie chart. Moreover, few test will conducted through SPSS program which is Pearson Product Moment Correlation and Regression in order to determine the validity of data that shows the accurate results.

3.6 Data Collection Method

The internet plays an important role as a data collection tool to ensure the convenience of the survey for the respondents. A Google Form was created, which is now being used as a survey form and distributed online. Using Google Forms, a quantitative

questionnaire survey was created. The Google Form link is frequently sent to a specific individual via social media platforms such as WhatsApp, Instagram, and Facebook. This is because they are appropriate for the survey. Participants were asked to respond to all of the survey's research question which prepared by the researcher. In order to allow encourage the respondents to participate, participant claimed that their answers were confidential and only for the scholarly benefit of this research study. In this study, the primary data will be gathered from the end results of questionnaires distributed to respondents.

Questionnaires will be used to collect vital data for the study. The questionnaire was divided into section. On these questionnaires there was 5 parts of survey questionnaire which the respondents were respond.

Part 1: Demographic Details

Part 2: Generalised Anxiety Disorder -7 (GAD-7) Evaluation

Part 3: Patients Health Questionnaire-9 (PHQ-9) Evaluation

Part 4: Support and Commitments

Part 5: Suggestions

The rating scale that was used is in this study are as follows:

0 – Not at all

1 – Several days

2 – More than half the days

3 – Nearly every day

Hence, the statements were changed to fit the context of this study on effects of online teaching and learning on mental health of students, teachers and parents: case study in an international school. Questionnaire data will be captured in Microsoft Excel and

imported into SPSS software for statistical analysis. The questionnaire will be distributed manually.

3.7 Data Analysis Method

The PHQ-9 evaluation, is a 9-item personality measure that evaluates depression on a 4-point scale (from 0 to 3). Total ranging from 0 to 27, with higher scores indicating more acceptance of depression symptoms and scores below 10 suggesting that a responder may be depressed.

Table 3.1 : Severity score of patient health questionnaire-9

PHQ-9 Score	Provisional Diagnosis	Treatment Recommendation
		Patient References should be considered
0-4	None-minimal	
5-9	Minimal Symptoms*	Support, educate to call if worse, return in one month
10-14	Minor Depression ++ Dysthymia*	Support, watchful waiting Antidepressant or psychotherapy
15-19	Major Depression, Mild	Antidepressant or psychotherapy
20-27	Major depression, moderately severe	Antidepressant or psychotherapy
>20	Major depression, severe	Antidepressant or psychotherapy (especially if not improved on monotherapy)

The severity score is analysed based on the table 3.7.2. If the symptoms present more than or equals to 2 years, then probable chronic depression which warrants antidepressants or psychotherapy. However, if the symptoms present more than or equal to one month or severe functional impairment, consider active treatment. However, for GAD-7 evaluation a score of 10 or greater on the GAD-7 represents a reasonable cut

point for identifying cases of GAD. Cut points of 5, 10, and 15 might be interpreted as representing mild, moderate, and severe levels of anxiety on the GAD-7.

Table 3.2 : Severity score of GAD-7

Score	Risk Level	Suggested Intervention
0-4	No to Low risk	None
5-9	Mild	Repeat on follow-up
10-14	Moderate	Further evaluation required. Consider adjusting treatment plan.
15+	Severe	Adjust treatment plan. Higher level of care needed. Pharmacology re-evaluation.

This research was analysed further using the Statistical Package for the Social Sciences (SPSS) V26 software. This is because SPSS software widely used data processing software in this form of study.

This software has been used in previous studies. Using the SPSS Software results in a precise data analysis, which was then used to arrive at a conclusion and set of recommendations. Nevertheless, before testing, the researcher completed preliminary data processing tasks such as editing, coding, and entry.

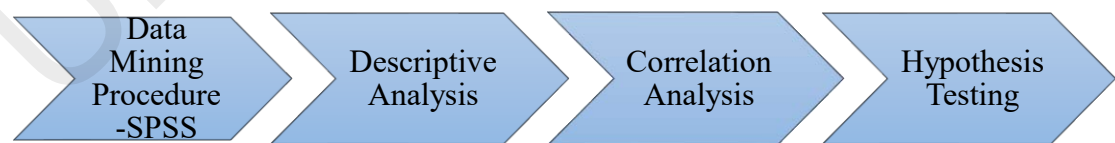


Figure 3.1: Data Analysis Process

3.8 Reliability Analysis

Lee Cronbach established Cronbach's alpha (or coefficient alpha) in 1951 to quantify dependability or internal consistency. Cronbach's alpha tests are used to determine the reliability of numerous questions Likert scale surveys. These questions assess underlying factors, or qualities that are invisible or unnoticed, such as a person's conscientiousness, neurotic, or openness. In actual life, these are extremely harder to specify.

Cronbach's alpha determines how closely a group of test items are connected. The formula below is used for Cronbach's alpha is:

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N - 1) \cdot \bar{c}}$$

Where:

- N = the number of items.
- \bar{c} = average covariance between item-pairs.
- \bar{v} = average variance.

Table 3.3: The Alpha Cronbach value

Cronbach Alpha Criteria	Classification
$a \geq 0.8$	Very reliable
$0.6 \leq a \leq 0.8$	Reliable
$0.4 \leq a \leq 0.6$	Quite reliable
$0.2 \leq a \leq 0.4$	Rather reliable
$a \leq 0.2$	Less reliable

The accepted value of Cronbach's alpha is 0.7; however, values above 0.6 are also accepted as 0.6 is quite reliable analysis (Griethuijsen et al., 2015; Taber, 2018).

3.9 Attendance and Performance Records Analysis

From the questions and the answers from the teachers, plus on the report about the students' performance, it is clear that online teaching and learning hurts the students' emotions, which has led to mental health problems (Garg, 2020). There has been a decrease in the overall performance of every student, which is mainly brought by the mental state. Stress, anxiety and loneliness are the leading factors and challenges to their studies.

3.10 Interview

There are 2 sets of questions were asked to the interviewees. The interview questions are adapted from a journal GAD-7 and PHQ-9. A qualitative investigation for parents and their children's behaviour identity and mental health experiences. A total number of 30 parents were interviewed to support the analysis of this study. The interview questions are attached in the Appendix B.

3.11 Safety Measures

To ensure the confidentiality of the participants the questionnaire do not contain the following items Name, Address, and Salary Range. The questionnaire was distributed using Google Forms and no physical questionnaires were handed out. The participants were given assurance that their information was collected solely for education/study

purpose. The data collection was then transferred to SPSS data this is to prevent any deletion or data tempering.

Universiti Malaya

CHAPTER 4: RESULT AND DISCUSSION

4.0 Introduction

This Chapter discusses the result of the data that gathered by the researcher from questionnaires, interviews and the analysis of the data we conducted from those questionnaires, the researcher was able to determine which factors are significant and which are effects of online teaching and learning on mental health of students, teachers and parents: case study in an international. Thus, the data that collected from questionnaire and the data the researcher had analyze from Statistical Product and Service Solutions (SPSS) version 23. The analysis that we had done in this chapter include descriptive analysis of data, correlation matrix and multiple regression analysis. The purpose of this study was to investigate the effects of online teaching and learning on mental health of students, teachers and parents. The aim of this research is to analyze effects of online teaching and learning on mental health of students, teachers and parents. This study contributes to the existing literature on impacts of online teaching and learning on mental health of students, teachers and parents during pandemics. The aim of this chapter mainly to present the findings and results of the data based on the research and also the hypothesis while make it easy for the readers, there are tables and charts that we used to present.

4.1 Demographic Profile

In this demographic profile part, it discusses about the particulars of the collected information from the survey that have been distributed as a questionnaire. All the demographic variables such as gender, age, education level, employment condition,

working hours are presented by using frequency analysis with support of chart and tables.

4.1.1 Demographic profile of respondents

This section describes the demographic profile and the general information about demand on from respondents. These demographic table contains gender, age, employment condition, education level and total working hours. All the mean and std, deviation is show in table 4.1.1 below:

Table 4.1 : Descriptive Analysis of Demographic Profile of teachers and parents

Demographic Variables	Categories	Teachers		Parents	
		Frequency	%	Frequency	%
Gender	Male	41	20.5	78	52.0
	Female	159	78.5	72	48.0
Age	26 - 30 years old	41	20.5	33	22.0
	31 - 35 years old	54	27.0	45	30.0
	36- 40 years old	50	25.0	36	24.0
	41 years old and above	55	27.5	36	24.0
	Full Time	99	49.5	43	28.7
Working Status	Part Time	101	50.5	47	31.3
	Unemployed	0	0.0	60	40.0
	A-Level/O-Level/SPM	5	2.5	33	22.0
Education Level	Diploma	43	21.5	35	23.3
	Degree	84	42.0	36	24.0
	Master	64	32.0	24	16.0
	Doctor of Philosophy (PhD)	4	2.0	22	14.7
	Less than 30 hours	50	25.0	45	30.0
Total working hours	31 – 40 hours	51	25.5	31	20.7
	41 – 50 hours	48	24.0	35	23.3
	Above 50 hours but lesser than 84 hours	51	25.5	39	26.0

Table 4.1 shows the summary of descriptive statistics of teachers and parents' demographic profile which includes gender, age, employment condition, education level and total working hours in a week respectively. The standard deviation (Std. Dev.) is a measurement of how often individual answers to a question differ from the mean. The demographic of respondents mean is around 1 to 4 and the standard deviation between 0 – 1 is shown in the next part of the discussion.

4.1.2 Gender and Age

Based on the **table 4.1**, 41 male teachers and 159 female teachers responds were obtained. Female contributed 79.5% while male contributed 20.5% of the sample. The respondents in the age range between 31-35 years old were contributed for the highest proportion among 200 respondents, which is 54 respondents, in term of percentage which is 27.0% followed by the age range above 40 years old, which is 55 respondents among the 200 respondents contributing to 27.5%. Thus, in this research, it clearly shows that the majority respondents among teachers are aged between 31-35 and above 40 years old.

However, among 150 respondents from parents, 78 males and 72 females responded to the surveys and interviews. Male parents contributed to 52.0% while female parents contributed to 48.0% of the sample. The highest of 30.0% respondents falls in the age range of 31-35 years old. Nevertheless, 22.0 of respondents are from the range of 26-30 years old and 24.0% of respondents are aged more than 36 years old.

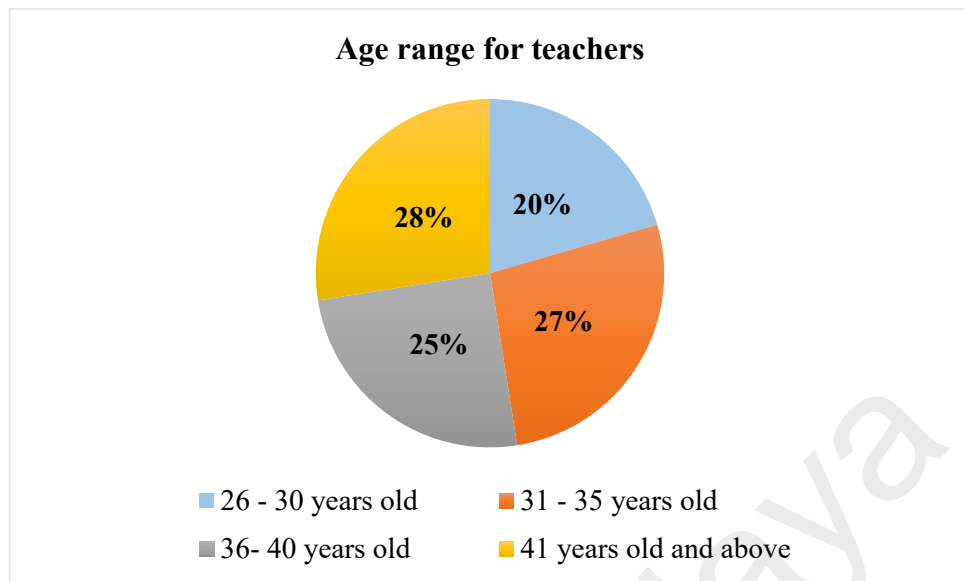


Figure 4.1: Age ranges of teachers

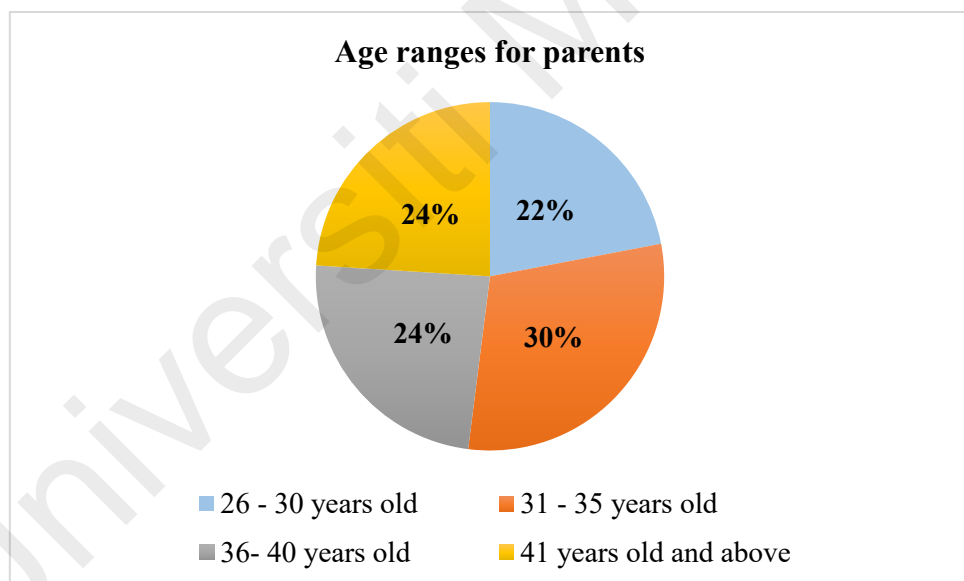


Figure 4.2: Age ranges of parents

4.1.3 Employment Status

The results obtained shows 51.0% of the teachers who responded to the questionnaire are part-timers and 49.0% of them are full-timers. However, among parents who

responded to the questionnaire 29.0% of them are full-time employees and 31.0% of them are part-timers while the remaining 40.0% of the parents are unemployed.

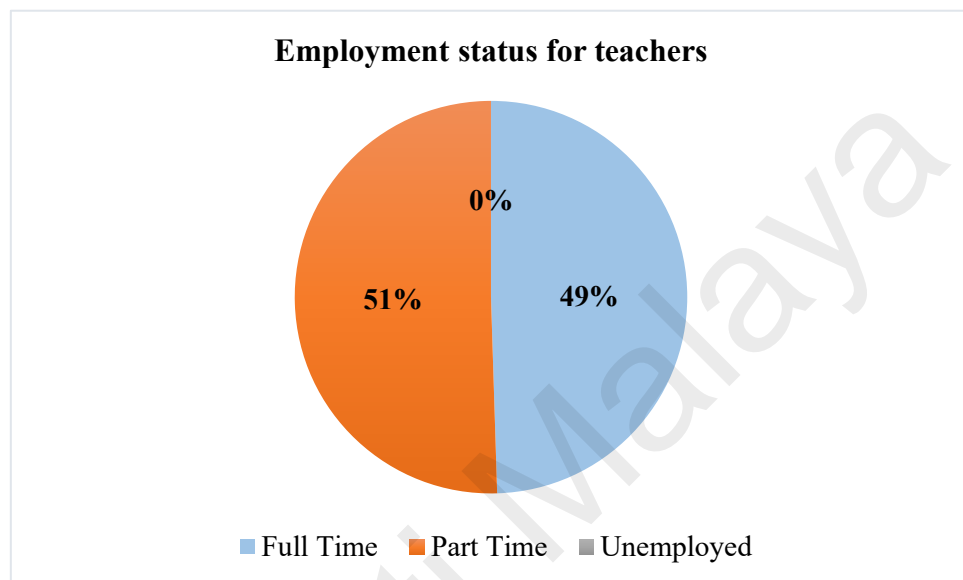


Figure 4.3: Employment status for teachers

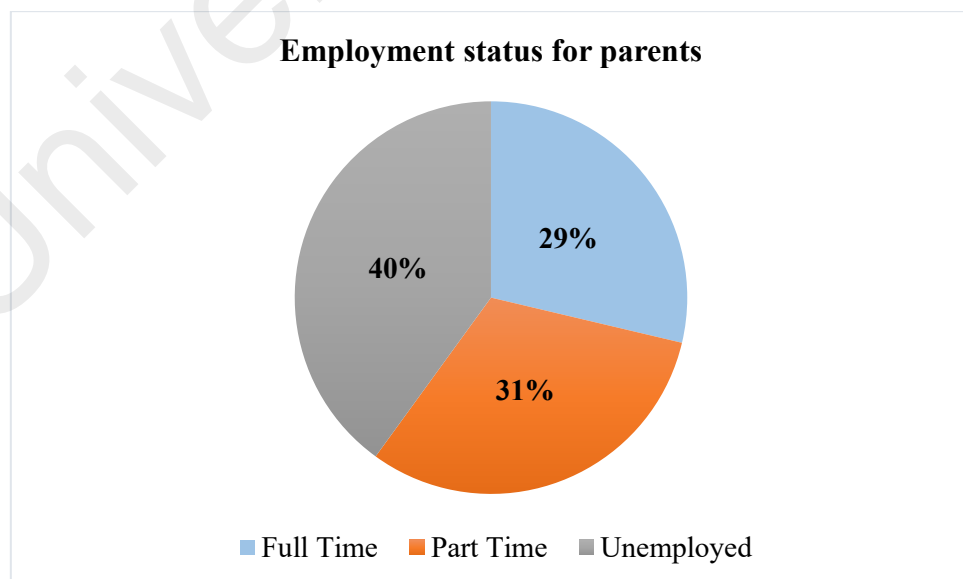


Figure 4.4: Employment status for parents

4.1.4 Education level

Both the parents and the teachers' educations data were obtained. Among the respondents, 2.5% of teachers and 22.0% of parents are holding SPM or equivalent qualifications. However, 21.5% of teachers and 23.3% of parents are holding diploma and 42.0% of teachers and 24.0% of parents are from a background or bachelors of degree. Meanwhile, 32.0% and 2.0% of teachers, 16.0% and 14.7% of parents has a qualification of masters of degree and PhD respectively.

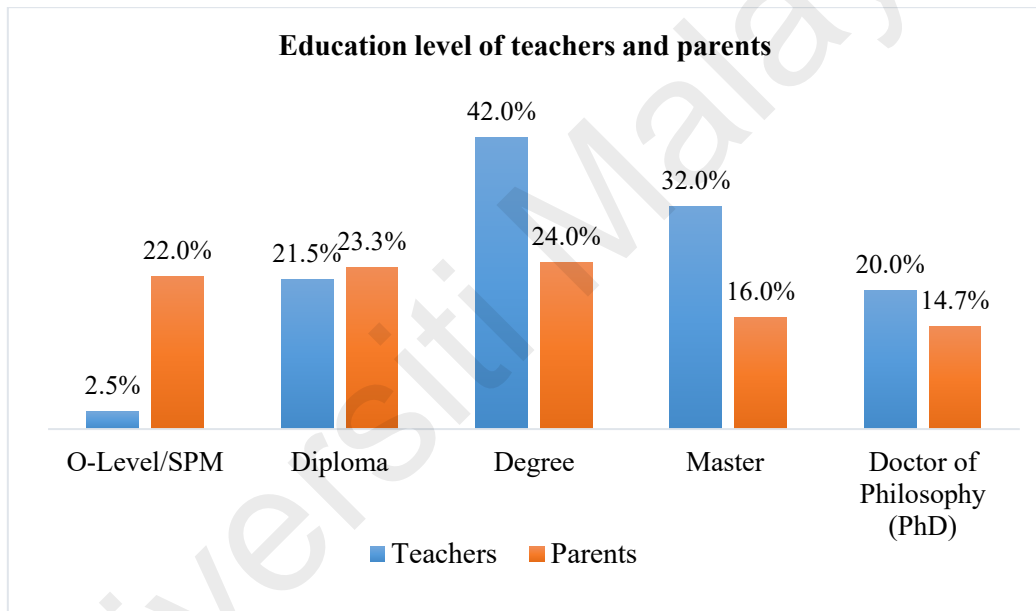


Figure 4.5: Education level of teachers and parents

4.1.5 Total working hours

A total of 38.0% of teachers are working lesser than 40 hours per week, followed by 30.0% are working 41-50 hours per week and the remaining 32.0% are working more than 50 hours per week. 12.0% of the respondents among the parents are working lesser than 30 hours per week and only 20.7% of the respondents are working in the range of

31-40 hours meanwhile the balance 32.7% of the parents are working more than 50 hours per week as illustrated in the **Figure 4.6** below.

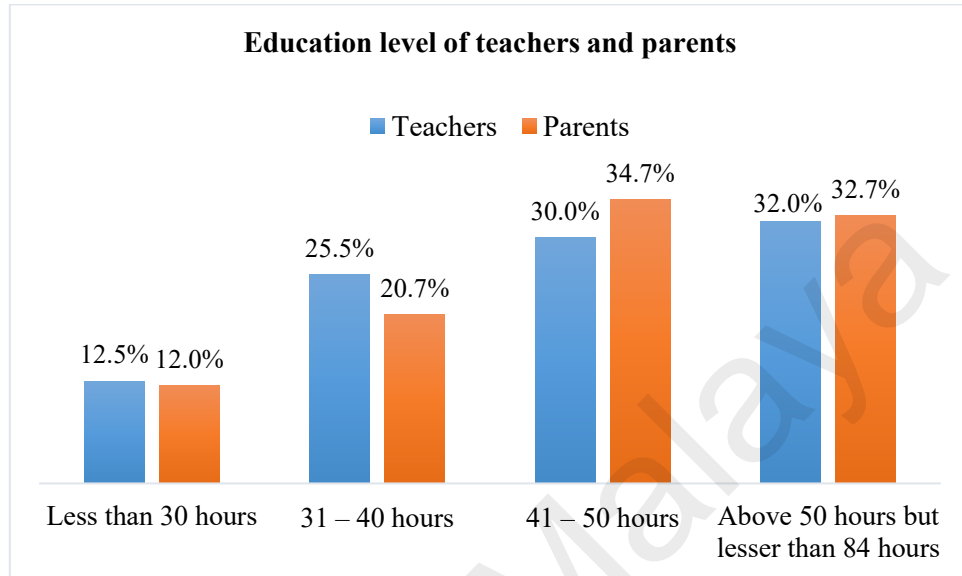


Figure 4.6: Total working hours of teachers and parents

4.2 Descriptive analysis

Descriptive analysis is useful to researchers because they serve as the foundation for future investigation and allow the reader to reproduce the study while also offering a summary of the findings. The most essential descriptive statistics are concerned with the central tendency. One of the most common ways of determining the underlying trend of quantitative analysis is to utilise the mean. The standard deviation (Std. Dev.) measures how frequently individual responses to a query deviate from the mean. The standard deviation provides information about the replies, such as whether they are grouped around the mean or widely spread.

4.2.1 Descriptive analysis of the demographic profile

As indicated in Table 4.2 below, the demographic of respondents has a mean of 1.5 to 3.1 and a standard deviation of 0.5 to 1.4.

Table 4.2: Descriptive statistic for demographic profile

Details	Teachers		Parents	
	Mean	Standard Deviation	Mean	Standard Deviation
Age	2.60	1.099	2.50	1.085
Employment Status	1.51	0.50	2.11	0.82
Education background	3.10	0.84	2.78	1.35
Total working hours	2.82	1.02	2.88	1.00

4.2.2 Descriptive analysis of Generalized Anxiety Disorder – 7 (GAD-7)

A total of 350 respondents were asked 8 questions in this section, which comprise the anxiety disorder. **Table 4.3** describes the analysis of the overall results obtained from those all 200 teachers and 150 parents studied to assess the mental health assessment of the teachers, parents and student. This study concludes that only 2.0% of parents, 8.0% of the children and no teachers are going through minimal anxiety. Followed by 36.0% of teachers, 15.3% of parents and 21.3% of children states that they had mild anxiety.

Almost more than half of the respondents stated that they had moderate anxiety. 53.0% of teachers and 39.7% of parents were going through moderate anxiety precisely. Parents also reported that 58.0% of their children's behavior shows moderate anxiety symptoms. However, 11.0% of teachers followed by 45.3% of parents and 12.7% of children are experiencing severe anxiety due to online teaching and learning.

Table 4.3: Evaluation of Generalized Anxiety Disorder (GAD-7)

GAD-7	Teachers		Parents		Children	
	Frequency	%	Frequency	%	Frequency	%
Minimal Anxiety	0	0.0	0	2.0	12	8.0
Mild Anxiety	72	36.0	23	15.3	32	21.3
Moderate Anxiety	106	53.0	59	39.3	87	58.0
Severe Anxiety	22	11.0	68	45.3	19	12.7

Table 4.4 shows that the mean score of the respondents for the level of anxiety is in the range of 2.7-3.3 and the standard deviation is within the range of 0.6- 0.8.

Table 4.4: Descriptive statistics of Generalized Anxiety Disorder (GAD-7)

GAD-7	Mean	Standard Deviation
Teachers	2.75	0.639
Parents	3.30	0.721
Students	2.75	0.776

This shows the result is positively proven. Thus, it is shows that 80% of teachers and parents were facing anxiety disorder due to the sudden lockdown that resulted in virtual learning and teaching methods.

4.2.3 Descriptive analysis of Patient Health Questionnaire-9 (PHQ-9)

A total of 9 questions were asked to the respondents. **Table 4.5** describes the analysis of the overall results obtained from all 200 teachers and 150 parents studied to assess their mental health, specifically depression among of the teachers, parents and students due to online teaching and learning process. According to **Table 4.5**, 2 % of parent and

2% of students were having minimal depression. Followed by 6.0% and 48.0% percentage of teachers were experiencing mild and moderate level of depression respectively. Meanwhile, among parents 4.7% and 26.6% were experiencing mild and moderate level of depression respectively. The survey results also states that 13.3% and 26.0% of student also experiences mild and moderate level of depression accordingly.

Almost a total of 45.5% of teacher's experiences severe depression according to the **Table 4.5**. However, a total of 66.7% of parents and a total of 58.7% of students are also experiencing moderately severe to severe level of depression. They may need to seek medical attention if the situation prolongs.

Table 4.5: Evaluation of Patient Health Questionnaire (PHQ-9)

PHQ-9	Teachers		Parents		Children	
	Frequency	%	Frequency	%	Frequency	%
Minimal	0	0.0	3	2.0	3	2.0
Mild	12	6.0	7	4.7	20	13.3
Moderate	97	48.5	40	26.6	39	26.0
Moderately Severe	66	33.0	82	54.7	74	49.3
Severe	25	12.5	18	12.0	14	9.4

Table 4.6 shows that the mean score of the respondents for the level of depression is in the range of 3.2-3.7 and the standard deviation is within the range of 0.7- 1.0.

Table 4.6: Descriptive statistics of Patient Health Questionnaire (PHQ-9)

PHQ-9	Mean	Standard Deviation
Teachers	3.25	0.789
Parents	3.70	0.817
Students	3.50	0.910

This shows the result is positively proven. Thus, it is shows that 45.5% of teachers, 66.7% of parents and 58.7% of students were facing depression disorder due to the sudden lockdown that resulted in virtual learning and teaching methods.

4.2.4 Descriptive analysis for support and commitments from families

Table 4.7 describes the descriptive analysis of each of the variables to identify the respondent's opinion on the support and commitments from family. Thus, there are five questions which in term of 4-scale type. The mean score for teachers ranges from 1.8 - 2.2 and standard deviation from 0.7-0.85. However, the mean score for parents varies from 2.0-2.2 and the standard deviation differs from 0.6-0.7. Data shows that highest number of teachers receives supports and gentle advices from families whereas parents have stated that they have enough time to unwind their stress by spending quality time with their family members.

Table 4.7: Evaluation of support and commitment from families

Item	Question	Teachers		Parents	
		Mean	Standard Deviation	Mean	Standard Deviation
a	Receiving undivided attention from your family to support the children's studies related queries	1.97	0.847	2.04	0.654
b	Receiving gentle advices	2.11	0.726	2.04	0.601
c	Have enough time to decompress from work and household management	2.08	0.715	2.18	0.635
d	Availability of good listener to all the problems that you are facing	1.93	0.756	2.14	0.656
e	You have enough time to carry out hobbies and outside interests.	1.89	0.789	2.14	0.635

4.2.5 Descriptive Analysis of Suggestions

This descriptive analysis identifies the respondent's opinion on suggestion to any program or strategies to be conducted or implemented in order to improve the mental health of the students. Most of the respondents recommended to offer students motivational talks to maintain their health stability. Thus, 65% of teachers responded to provide students colourful websites to execute their homework's and animation notes to make students interested and motivated in their studies.

Hence, 45% of the parents were responded by prompting the teachers to offer lessons that is fun-orientated and more involving for the young children. Followed by 33.0% of parents suggested in virtual rewarding for student involving in the classroom activities as the children will enjoy a tremendous sense of accomplishment and self-worth as the progress toward the goal.

4.2.6 Reliability Analysis

Cronbach's alpha coefficient is used to assess the internal accuracy of products in order to calculate durability. Cronbach's alpha has a maximum value of one, and a higher value indicates greater internal accuracy. Any value that is closer to 1 is best preferred. If the result obtained is less than 0.6, the test is considered not reliable.

Table 4.8: Analysis of support and commitment from families

Constructs	Parents		Teachers	
	Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
GAD-7	0.828	7.0	0.816	7.0
PHQ-9	0.605	9.0	0.779	9.0
Support	0.556	5.0	0.577	5.0

Since **Table 4.8** show the alpha coefficient value for GAD-7 and PHQ-9 is above 0.6, it can be concluded that the results obtained are quite reliable. Hence, this study is considered acceptable.

4.2.7 Analysis of Interview from parents

There was a several interviews conducted to parents meanwhile the other results were obtained via the questionnaire. Parents raised worry about the online product design elements, concluding that both the school and the vendor put their children's particular concerns into consideration. Parents discussed their kid's individual learning problems, as well as how the presentation of the subject, completion criteria, programme time and content demands, and other variables prohibited their child from correctly demonstrating their knowledge and abilities to teachers. One mom, for example, expressed it in terms of simple and direct accessibility to the lesson and how this hampered her son's learning. She mentioned that, “Even I, myself have to try and error to get to the right lesson on right time. The teachers or the school can make this work easier by giving the direct link to the students, where the kids can click and easily access to the lesson instead of them try their best to join the lesson and finally giving up just not to join the class”.

On the other hand, another parent described how, while they were effective with daily lessons, weekly and monthly goals created hurdles and worry for their child and the entire family when confronted with a demanding monthly deadline. She mentioned, “My kid understands the ideas, but due to his slow understanding, completing one piece of assignment takes him more than an hour. Then, of course, he ends up crying because

he is frustrated since he is unable to finish his monthly evaluations. It's simply too much for him, especially when the assessment involves more than one subject at a time”.

Similarly, a mother highlighted how the technological needs caused an additional obstacle due to her son's condition, attention deficit hyperactivity disorder (ADHD), and the need for special approaches from parents and teachers. She stated that, “My kid struggles with ADHD. One thing we're working on is getting him to sit in front of the computer half an hour since last year. Even the teacher has a difficult time getting him to participate in class as he goes missing during the online lesson”.

4.3 Strategies to reduce effect of mental health

Following are the strategies to reduce stress and depression in order to enhance mental health of students, parents and teachers.

- Ensure that fun activity is provided from school and home.
- Ensure that the parents are able to teach their child as an alternative assistance
- Reduce exams for the students and increase the assignment-based activity.
- Limit the hours of teaching and learning on online platform and create boardroom-based case with fun activity.
- Provide assistance and consoling for the students who are having difficulties at home or studies.
- Reduce independent studying hours.
- Ensure that group exercise such as Zumba, high intensity interval training (HIIT) and low-intensity steady-state (LISS) is implemented in each house. This can be rotated according to the needs.

- Anonymous questionnaire on improvement the activity in school should be given to parents and students.
- Promote buddy system communication and learning using social media platform.

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CHAPTER 5: CONCLUSION AND IMPLICATIONS

5.0 Introduction

This chapter mainly discuss will further discuss and summarized the results that collected in previous chapter. Summary of statistical analysis, discussion on major findings, implication, limitations of the study, and recommendation for future studies will be discussed in this chapter.

5.2 Implications of The Study

This research aims to investigate how online learning is transforming both teachers and the education sector in international schools, why many faculty are ambivalent to teach online, and suggests ways to overcome these problems.

Online teaching is radical rather than gradual improvements among the teachers. Teachers who are averse to change tend to struggle with the online classroom and frequently blame their dissatisfaction on the modality's inadequacies. This study also emphasized the growing importance of technical skills in the teaching profession. Historically, being technologically savvy was never required to enter the academy and prosper as a member of the education faculty. However, just as technology has become a significant element of how we socialise, work, and communicate, it is also becoming a crucial facet of how we teach and learn, and hence an important aspect of faculty's professional identity.

In terms of points, this study has added to the current body of expertise. In order to estimate the definitive agreement of effects of online teaching and learning on mental health of students, teachers and parents. Through the extension of the concept, this research gives an interpretation of the parents and teachers desire to follow.

Finally, this study revealed the significance of organizational and peer support in the process of making a successful online transition. A community's identity and the individual identities of its people are inextricably linked. Thus, in order for faculty to be willing to integrate online teaching into their professional identities, educational institutions must provide support for this modality by incorporating online education into their institutional identity. It is critical to learn from professionals who have successfully migrated online, as well as institutions that seem to have effectively merged online education with their core purpose without losing academic standards.

5.3 Limitations of The Study

This research focuses on effects of online teaching and learning on mental health of students, teachers and parents. This study uses a small element of the sample size which is 200 teachers and 150 parents were randomly selected. Despite the fact that this research has gathered substantial demographic data on the responding students, there was no strategy to overcome for many of the respondent's factors that may have impacted the results.

Besides, employing bulk e-mails to parents and teachers for online survey research has the potential to introduce response bias into the data. This makes study replication considerably more challenging. This highlights a broader constraint caused

by the ease with which survey instruments may be delivered in an electronic setting. Last but not least, this also causes many students to experience "survey fatigue," which can reduce response rates. Besides, as carrying an online survey from the Google form, only volunteers should be recommended to fill in the survey section.

5.4 Conclusion

During the coronavirus pandemic, the majority of teachers and parents of children who were conducting and attending online classes were found to be under moderate-severe stress. Several causes were identified, including an increase in working hours for teachers and an increase in required parental supervision time. Because of the mental and emotional well-being of caregivers and teachers is critical to maintaining a healthy and productive learning environment for children, early detection and intervention can help improve the long-term outcome for them.

Online teaching and learning have not only affected the teachers, parents and the student's mental health but it also took a toll on their daily activities. As for teachers, online teaching required them to spend more hours on preparing the lessons and be more tech savvy resulted them to lose their personal and family time. However, as for parents, they have to multitask in order to do their work and their children work on the same time. As a result, it is critical to conduct additional research in this area and implement large-scale intervention strategies to avoid major consequences.

A few mitigation measures have been identified to overcome the mental health issues which results in enhancing mental health of teachers, parents and students. This can be achieved by reducing limiting the teaching and learning hours in online platform

and create boardroom-based case with fun activity. This helps the teachers and parents to keep their students involved in their lessons during class hour and demands minimal supervision. In addition, some physical stretching exercises should be encouraged. Besides keeping a person physically fit, it also improves one's mental wellness.

In conclusion, overall, this research has successfully attained research objectives set earlier that examine the significant effects of online teaching and learning on mental health of students, teachers and parent. All independent variables were proven to influence the dependent variable significantly, the percentage of how often the issues of online teaching and learning on mental health impacted. Subsequently, this study is beneficial for future researchers, teachers, students and parents in different perspectives.

5.5 Recommendation for future studies

It is critical to conduct further research across the country to have a larger view on the mental health condition during the epidemic and its organization. A replication of this study in the public sector will disclose employee mental health difficulties and status.

Future researchers would do further research on current literature on mental health issues in the workplace and provide critical information. The study's practical consequences must be communicated to commercial and governmental institutions in order for them to better grasp the issue of mental health, workplace during pandemic, and how it impacts employees.

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