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Factors Affecting Undergraduates' Academic Performance during COVID-19: Fear, Stress and Teacher-Parents' Support

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Abstract: The emergency transition from physical to online learning during COVID-19 has affected university students in various aspects, especially their academic performance. It can be caused by many factors, such as individual, environmental and social factors. Therefore, this study aims to determine the impact of fear, stress, well-being, teacher and parents' support (independent variables) on undergraduates' academic performance (dependent variable) during the COVID-19 pandemic. A structured online questionnaire has been developed and administered to 400 undergraduates. A structural equation model that integrated all variables under investigation was built and statistically validated using AMOS. The results demonstrated that well-being, teacher emotional support and teacher academic support have the highest significant impact on the respondents' academic performance. It can be concluded that teachers' support is the most substantial influence in ensuring student learning sustainability during the COVID-19 pandemic.

Keywords: COVID-19; academic performance; university students; social support; stress; well-being; fear; structural equation model



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1. Introduction

When the COVID-19 cases escalated in 2020, many higher education institutions decided to cease face-to-face interaction and moved to online learning [1–3]. This shift has caused many challenges to the educational system. Teachers were grappling with implementing remote learning and changes in their pedagogical approach. At the same time, students were forced to adapt to this new mode of education that requires a certain degree of independent learning [4]. In a certain positive light, COVID-19 has led to the staggeringly rapid adoption of online higher education. However, it must be noted that this online learning was in response to an unprecedented scenario rather than well-scheduled online courses. Therefore, the main aim of this study is to explore the factors that affect students' academic performance by integrating fear, stress, well-being, teacher, and parent support in a framework. The findings provide invaluable insight into the minds of a young generation for whom this will be a life-defining event.

Online learning, also referred to as distance learning, remote learning, or virtual learning, is a type of learning when learners are physically distant from the instructor [5]. It requires a different delivery method mediated by technology, such as online assessment platforms, multi-person-meeting platforms, and team chat messages [6]. Its success builds upon the usefulness of technology, the intention of users, and the degree of user acceptance [7]. Referred to as sustainable development of teaching [8], students and lecturers may benefit from self-directed learning, flexibility, and an interactive environment with this learning mode.

Previous studies have examined the factors that influence academic performance in a fragmented approach, where they specified factors such as technical issues [9] or learning

environment or stress during the pandemic [5,10,11] or cultural background [12–14]. In comparison, this study applies a holistic approach by incorporating multiple yet significant factors, including fear, stress, well-being and teachers' and parents' support. Most of the previous studies that examined these significant factors were conducted in different research settings, such as different cultural backgrounds and only specific selected factors. Therefore, this current study contributed to the literature by examining the factors through a framework. Furthermore, the study is set in the Malaysian educational setting background, which has not yet been studied. In addition, structural equation modelling (SEM) was applied in this study. It is used to model the causal relationship between variables and determine the most influencing factors in the model. The findings of such a holistic approach will facilitate the planning for appropriate approaches to numerous stakeholders, such as educators, higher education institutions, and the government, to further improve the online learning landscape. It also provides evidence-based insights to inform teachers and policymakers in designing and implementing online classes.

The rest of the paper is organized as follows: Section 2 presents this study's literature review and hypotheses. Section 3 discusses the materials and methods, while Section 4 reports and interprets the results from the survey. Section 5 presents the discussion and its implications for future research.

2. Literature Review

2.1. Stress and Well-Being Due to Fear of COVID-19

The COVID-19 pandemic has changed the way people live and manage their thinking. The thoughts of becoming infected and feeling insecure due to the pandemic significantly impacted people's physiological states [15]. Such thoughts lead to fear, an undesirable feeling triggered by a threatening stimulus that increases pulse, muscle stiffness, and hyperventilation [12,15]. There are ranges of stimuli, such as the social aspect, which can be explained from the psychological or neurobiological perspectives [13].

In the educational setting, especially during the pandemic, fear is presented as a factor that significantly causes psychological distress, which may relate to fears of vagueness and uncertainty. These fears could directly impact overall learning, academic achievement and students' well-being [14]. The reasons for fears are not limited to the COVID-19-related issue but also online learning and its infrastructure, their deteriorating behavior and social interaction during the pandemic. A study that assessed the level of fear and uncertainty due to COVID-19 amongst undergraduates showed that 22.4% of students had a higher level of fear, and 36.1% had a higher level of uncertainty [14]. Aslam et al. [16] showed a negative association between COVID-19-related fear and stress. In most studies that reported high-stress levels amongst undergraduates during this pandemic, the adverse psychological effect is more profound among females than the male students [14,16,17]. Such adverse psychological outcomes subsequently may impact the students' overall well-being. This finding is supported by another study conducted among nurse anesthetist degree program students, as it found that increasing perceived stress and anxiety caused low scores on well-being [18]. Therefore, in this study, we would like to explore the impact of COVID-19-related fear on undergraduates' perceived stress and well-being.

Hypothesis 1 (H1). *There is a significant correlation between fear of COVID-19 and stress.*

Hypothesis 2 (H2). *There is a significant correlation between stress and well-being.*

Hypothesis 3 (H3). *There is a significant correlation between fear and well-being.*

2.2. Fear of COVID-19, Well-Being, and Stress towards Academic Performance

Academic performance is one of the essential measures of a student's learning. In investigating the effectiveness of learning, academic performance has been considered the critical variable of research [19–21]. Academic performance can be measured through various approaches, for instance, the average points of a student's cumulative grade, performance in continuous assessments, and satisfaction level in their study [19,22]. Studies

have shown a strong correlation between academic performance and satisfaction in online learning. A study examining the academic performance and satisfaction level during the COVID-19 pandemic showed that the students were unhappy with online learning [19]. In addition, the study also showed that the COVID-19 pandemic has negatively affected students' academic performance. A total of 1,231 undergraduate students in Afghanistan participated in the study, and most respondents were highly dissatisfied with online learning. A similar study in Lebanon presented similar findings where most of the sample were also dissatisfied with the online learning experience [23].

Another factor that may influence academic performance negatively is stress [6,17,23]. A previous study on undergraduate students found that those who reported that stress affected their study performance had lower grade point averages and low coping strategies than those who reported not being affected by stress [6]. Stress affected students' sleep quality and later impacted the ability of students to carry out daily tasks, such as learning [12]. For that instance, this study seeks to measure the effect of fear of COVID-19, well-being, and stress on students' academic performance.

Hypothesis 4 (H4). *There is a significant correlation between fear of COVID-19 and student's academic performance.*

Hypothesis 5 (H5). *There is a significant correlation between well-being and student's academic performance.*

Hypothesis 6 (H6). *There is a significant correlation between stress and student's academic performance.*

2.3. Teachers' and Parents' Support and Academic Performance

The COVID-19 pandemic has exacerbated worldwide fears of unnecessary stress among university students [24–26]. The dire emotional state and academic concerns called for increased support from the lecturers and parents. As online learning mostly happens at home, parents are among the most critical in ensuring learning takes place in a conducive environment. The role of social support, particularly teachers and parents' support, in dealing with adolescent emotional stress has been a subject in previous research [27–29]. Descals-Tomás et al. [28] studied 267 Spanish university students and found positive teacher-family support on students' motivation and engagement. They also noticed that teacher support is more substantial than parental support in motivation and engagement variables [28]. In another study by Awang et al. [30], family support is a significant factor in the new environment adaptation process. The study utilized semi-structured interviews with 16 university students and revealed the powerful influence of parents and the importance of socio-relationship on student well-being [30]. For that, this study explores the relationship between parents' and teachers' support towards a student's academic performance during this pandemic.

Hypothesis 7 (H7). *There is a significant correlation between teacher emotional support and student's academic performance.*

Hypothesis 8 (H8). *There is a significant correlation between teacher academic support and student's academic performance.*

Hypothesis 9 (H9). *There is a significant correlation between parent's support and student's academic performance.*

3. Materials and Methods

3.1. Search Method

A literature search on the online class during COVID-19 was conducted using the online database that is from web of science for publications released between 2019 and 2022. The main keyword were "online class" and COVID-19. We introduced a developed model with the SEM technique. Therefore, "online class", "academic performance", and "structural equation modelling" were the main keywords that we searched from the

beginning. In the second phase, we were looking for “parental support” and “teacher support” with “academic performance”. For the third phase, we considered “fear COVID-19”, “well-being”, and “stress” with “academic performance”.

3.2. Study Design

This study adopted a quantitative cross-sectional research design. The survey was conducted from November to December 2021. This timeline refers to the nationwide implementation of the Malaysian government’s movement control order that prohibited all education institutions (including the universities) from conducting on-campus face-to-face learning. At that time, almost all university students in Malaysia had experienced three semesters of synchronous or asynchronous online learning.

3.3. Sampling

The study’s sample is based on Hair et al.’s work [31]. The study outlined that the minimum sample size compulsory for research must be related to the number of latent variables and the number of measurement variables in the study, which is as follows:

- A minimum of 100 respondents should be used if the research framework includes 5 or less latent variables in which every latent variable includes at least 3 measurement variables.
- A minimum of 150 respondents should be used if the research framework includes 7 or less latent variables, of which every latent variable includes at least 3 measurement variables.
- A minimum of 300 respondents should be used if the research framework includes 7 or less latent variables, of which some of these latent variables have less than 3 measurement variables.
- A minimum of 500 respondents should be used if the research framework includes more than 7 latent variables, of which some of the latent variables have less than 3 measurement variables.

In this study, the research framework included five latent variables. Therefore, we expected to have at least 300 respondents for this research. In this study, the samples have been made as homogeneously as possible. Before commencing the data collection, ethical approval from the University Malaya Research Ethics Committee (UMREC) was acquired (UM.TNC2/UMREC_1574). Respondents were provided with an explanation of the research purpose, and informed consent was obtained from all respondents. A structured multiple-choice Google form questionnaire was sent to the respondents through email. Some of them were distributed through the instructor of their course in the university. We received 400 completed questionnaires from the respondents. The research methods were performed following the relevant guidelines and regulations.

3.4. Instruments

The survey used five-point Likert scale answers ranging from 1 (never) to 5 (always). It consists of the following eight sections: (1) demographic information, (2) academic performance, (3) emotional support from the teachers, (4) academic support from the teachers, (5) well-being, (6) support from the parents, (7) fear of COVID-19, and (8) stress.

Academic performance was measured using an 8-items scale developed by Vergas, et al. [9]. The scale is developed based on academic efficacy, as well as self-perceived performance. Sample items were “online classes improve my creativity” and “by taking online classes, my grades improve”. Teacher emotional support (4-items) and teacher academic support (4-items) were measured based on Johnson et al.’s [32] study. Sample items were “does your teacher really understand how you feel about things?” and “does your teacher like to see your work?”. Parents’ support was measured using 6-items based on Rodman et al.’s [33] study. Sample items were “I have parents who care about my feelings” and “I have parents who act like what I do is important”. Well-being was measured using the WHO-Five Well-being Index (WHO-5). A sample item is “I have felt active and vigorous”. Stress was measured a full version (14-items) of the Perceived Stress Scale [34] and was considered for the current study. A sample item is “in the last month, how often have you felt difficulties

were piling up so high that you could not overcome them?”. The Fear of COVID-19 Scale (FCV-19S) was measured using a 7-items scale as developed by Ahorsu et al. [24]. Sample items were “I am afraid of losing my life because of coronavirus-19” and “I cannot sleep because I am worried about getting coronavirus-19”.

3.5. Research Framework

Figure 1 shows the structure of the research framework used in this study. The research framework includes seven latent variables. Four of them are independent variables (parents' support, teacher academic support, teacher emotional support, and fear of COVID-19), two mediators (well-being and stress), and one dependent variable (academic performance).

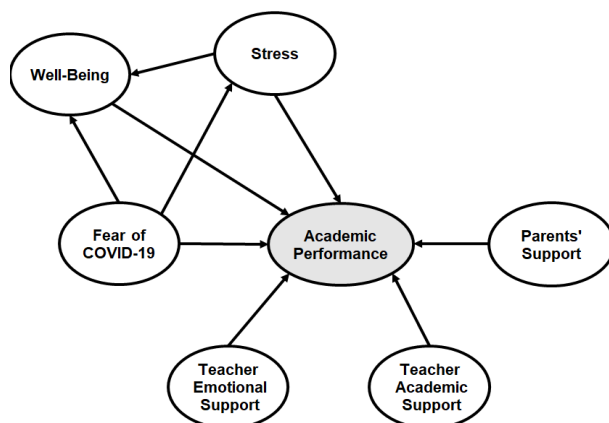


Figure 1. A proposed research framework for exploring factors affecting undergraduates' academic performance during COVID-19.

3.6. Statistical Method with Structural Equation Modeling

Structural equation modeling (SEM) is an improvement of the regression model. This approach was chosen for this research as it offers the capability of using latent variables, which are specific characteristics of SEM. These characteristics are not directly obtainable using other analysis methods. Moreover, SEM also offers the possibility to estimate and examine the direct and indirect interrelationships between the variables in the research study. Lastly, SEM can identify relationships that exist amongst dependent variables. It also offers an understanding of simultaneous estimation of more than one exogenous and endogenous variables. Moreover, in SEM, we can have two dependent variables in the same model, and there is no need to have a different model for different dependent variables (see Figure 2).

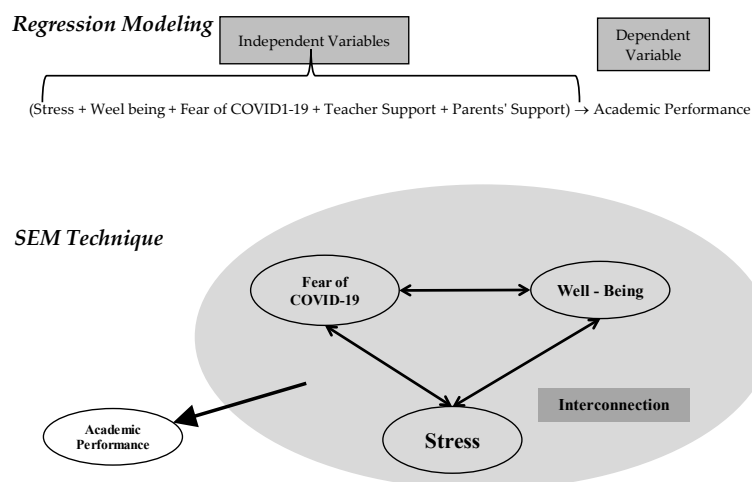


Figure 2. SEM as an adjusted form of regression modeling.

4. Results

4.1. Descriptive Statistics Analysis

The final sample comprised 400 respondents of undergraduates from public universities in Malaysia. It consists of 241 female (60.25%) students and 159 male (39.75%). Among the female students, 79.3% are between 21 and 25 years old, and 19.5% are less than 21 years old. Among the male students, 74.2% are between 21 and 25 years old, and 23.9% are less than 21 years old. During the data collection period, most of the students are in the third and final semester of their studies (See Table 1). Based on Table 2, the highest percentage of fathers and mothers is between 50 and 60 years old (60%; 52.5%). In terms of parents' education, most fathers and mothers received education up until high school or less (58.5%; 51.8%).

Table 1. Descriptive statistics of participants.

Variables		Female (Number; Percentage)	Male (Number; Percentage)
Age	Gender	241 (60.3%)	159 (39.7%)
	Less than 21 years old	47 (19.5%)	38 (23.9%)
	Between 21 and 25 years old	191 (79.3%)	118 (74.2%)
	More than 25 years old	3 (1.2%)	3 (1.9%)
Semester of the study	Second semester	57 (23.7%)	39 (24.5%)
	Third Semester	60 (24.9%)	34 (21.4%)
	More than three semesters	124 (51.5%)	86 (54.1%)

Table 2. Descriptive statistics of parents' demographic.

Variable	Mother		Father	
	(Number)	(Percentage)	(Number)	(Percentage)
Age of Parents (years)				
Less than 50 years old	152	38.0%	78	19.5%
Between 50 and 60 years old	210	52.5%	240	60.0%
More than 60 years old	24	6.0%	61	15.3%
Deceased	14	3.5%	20	5.0%
Missing	0	0%	1	0.3%
Education Level of Parents				
High school or less	207	51.8%	234	58.5%
Diploma	83	20.8%	65	16.3%
Bachelor	78	19.5%	83	20.8%
Master or PhD	32	8.0%	18	4.5%

4.2. SEM Analysis

4.2.1. Reliability and Validity Indices

There are some terms and conditions for dedicating reliability and validity based on the SEM technique introduced by Hair et al. [35]. Cronbach's alpha (should be higher than 0.7), average variance extracted (AVE) (should be higher than 0.5), and factor loadings (should be higher than 0.7) are the main indices for reliability and validity testing.

A. Cronbach's Alpha

Figure 3 shows the Cronbach's alpha among the seven latent variables. All values are larger than 0.7. The highest value is parent support (0.961), and the second highest values are well-being and fear (0.914).

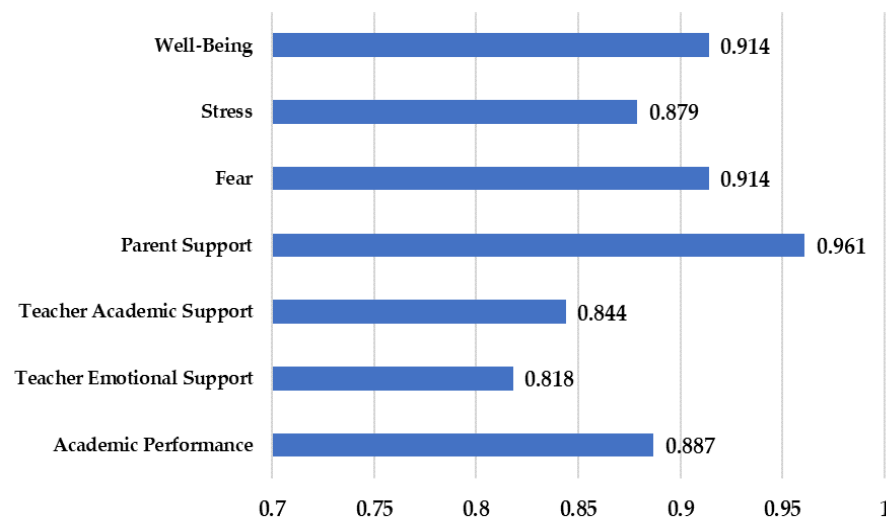


Figure 3. Cronbach's alpha for seven latent variables.

B. Factor Loading

Table 3 shows the factor loading of the measurement variables. Factor loading of every measurement variable should be greater than 0.7. Therefore, we eliminated those measurement variables with more than 0.7 factor loading from the rest of the SEM analysis.

Table 3. Factor loading.

Academic Performance		Teacher Academic Support	
Academic Performance 01	0.69	Teacher Academic Support 01	0.75
Academic Performance 02	0.62	Teacher Academic Support 02	0.72
Academic Performance 03	0.67	Teacher Academic Support 03	0.73
Academic Performance 04	0.77	Teacher Academic Support 04	0.84
Academic Performance 05	0.70	Parent support	
Academic Performance 06	0.72	Parent support 01	0.88
Academic Performance 07	0.72	Parent support 02	0.89
Academic Performance 08	0.77	Parent support 03	0.92
Fear		Parent support 04	0.92
Fear 01	0.71	Parent support 05	0.90
Fear 02	0.78	Parent support 06	0.89
Fear 03	0.79	Stress	
Fear 04	0.74	Stress 01	0.69
Fear 05	0.83	Stress 02	0.71
Fear 06	0.77	Stress 03	0.56
Fear 07	0.81	Stress 04	0.69
Well-Being		Stress 05	0.55
Well-Being 01	0.84	Stress 06	0.48
Well-Being 02	0.83	Stress 07	0.42
Well-Being 03	0.81	Stress 08	0.66
Well-Being 04	0.80	Stress 09	0.48
Well-Being 05	0.82	Stress 10	0.43
Teacher Emotional Support		Stress 11	0.71
Teacher Emotional Support 01	0.65	Stress 12	0.59
Teacher Emotional Support 02	0.76	Stress 13	0.35
Teacher Emotional Support 03	0.81		
Teacher Emotional Support 04	0.69		

C. Average Variance Extract (AVE)

Figure 4 shows the AVE of the seven latent variables. All latent variables, their AVE, are equal to or bigger than 0.5.

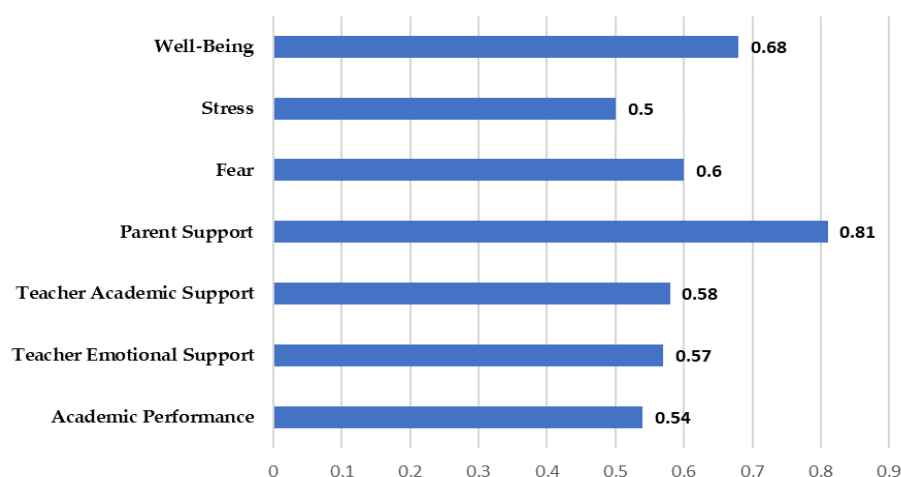


Figure 4. Average variance extract.

4.2.2. Structural Model

Table 4 and Figure 5 present the outputs of the research model. Of all nine correlations, eight of them have significant relationships. The highest significant impacts belong to “stress → well-being” (−0.402), “fear of COVID-19 → stress” (0.261), and “fear of COVID-19 → well-being” (0.252). Among the correlation between the independent variables and academic performance (dependent variable), teacher emotional support (0.168) and teacher academic support (0.157) demonstrated the highest significant regression coefficient, compared to well-being (0.215). In contrast, the effect of ‘fear of COVID-19’ on ‘academic performance’ (0.088) is insignificant.

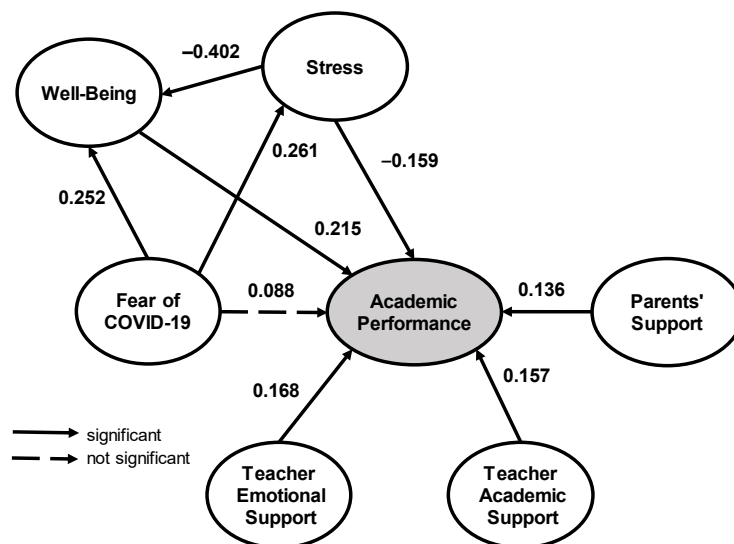


Figure 5. Research model output.

Table 4. Regression coefficient analysis.

Hypothesis				Estimate		S.E.	C.R.	p-Value	Result
				Standardized	Non-Standardized				
H1	Fear	→	Stress	0.261	0.282	0.06	4.681	<0.001	Sig.
H2	Stress	→	Well-Being	−0.402	−0.309	0.04	−7.796	<0.001	Sig.
H3	Fear	→	Well-Being	0.252	0.21	0.042	5.024	<0.001	Sig.
H4	Fear	→	Academic Performance	0.088	0.06	0.04	1.507	0.132	Not Sig.
H5	Well-Being	→	Academic Performance	0.215	0.177	0.059	2.995	0.003	Sig.
H6	Stress	→	Academic Performance	−0.159	−0.101	0.043	−2.362	0.018	Sig.
H7	Teacher Academic Support	→	Academic Performance	0.157	0.127	0.044	2.883	0.004	Sig.
H8	Teacher Emotion Support	→	Academic Performance	0.168	0.156	0.055	2.844	0.004	Sig.
H9	Parent Support	→	Academic Performance	0.136	0.085	0.038	2.204	0.028	Sig.

5. Discussion

The present study analyzed the causal relationship among several factors, including the fear of COVID-19, stress, well-being, and teacher-parent support on academic performance. The introduced framework for academic performance includes one dependent variable (academic performance), four independent variables (parents' support, teacher academic support, teacher emotional support, and fear of COVID-19) and two mediators (well-being and stress).

According to the results of the regression coefficient among the variables, there is a significant correlation between fear of COVID-19 and stress ($p = 0.261$), stress and well-being ($p = -0.402$), and fear of COVID-19 and well-being ($p = 0.252$). These results indicated that H1, H2, and H3 are supported. From that, it is found that fear of COVID-19 has a different impact on stress and well-being; an increase in fear of COVID-19 will increase the stress and state of well-being among students. These results indicate that fear of COVID-19 did not negatively affect students' well-being. This difference may be due to the experience asked in the items, in which stress level was based on students' previous experience, while the state of well-being was asked based on their current situation. It is important to note this study was conducted in the second year of the COVID-19 pandemic, which differs from previous studies. Therefore, we may also infer that student had been able to control their fear of COVID-19. The analysis of the health-related variables also found that when the level of stress increases, students' state of well-being tends to decrease. This finding is consistent with previous studies on study-related stress, general well-being, and general risk for depression [35], COVID-19-related stress and psychological well-being among Pakistan adults [16], and the relationship between stress and well-being [36].

As for H4, the analysis of the independent variables towards the dependent academic performance variable found that fear of COVID-19 did not significantly impact students' academic performance ($p = 0.088$). This result differs from stress and well-being variables, based on H5 and H6, which represent $p = -0.159$ and $p = 0.215$, respectively. This study showed that an increase in stress would decrease students' academic performance, and an increase in the state of well-being will increase students' learning efficiency. This result also confirmed earlier findings that stress adversely affects students' well-being. Thus, it is crucial for the students to learn good management of COVID-19-related stress to ensure their state of well-being is good.

Another aspect of online learning that has been studied in this research is teachers' and parents' support in learning. Descals-Tomás' [32] study on 267 Spanish university students showed that there is a positive effect between teacher-family support on students' learning environment. It is among the most substantial factors in ensuring that learning occurs positively. Based on the statistical analysis that has been conducted, there are significant positive impacts of teacher academic support ($p = 0.157$), teacher emotional support ($p = 0.168$), and parents' support ($p = 0.136$) on students' academic performance. These findings showed that H7, H8 and H9 are all supported. Teachers' support has been the most substantial influence on students' learning environment. In fact, this finding confirmed Noman et al.'s [37] study on the university and lecturer support for Malaysian university students' learning efficiency. For instance, students who reported better support systems have fewer academic concerns than those who did not [38]. It is argued that teachers are the closest persons connected to students in an online learning environment. Thus, teachers' academic and emotional support enhances students' confidence and decreases uncertainty and insecurities in learning.

In order to sustain the teachers' support in the online learning environment, numerous approaches and methods can be utilized. We recommend that it is crucial for the management of the universities to provide conducive institutional and infrastructural support to the teachers in performing effective online teaching roles. For example, this can include providing systematic online learning guidelines for better organization of online learning and assessments. Apart from that, as our findings indicate the substantial roles of teacher, it is important to increase teachers' awareness on their potential roles on students'

performance, especially during the pandemic. With this awareness, teachers will be more pro-active and engaging with the students. Consequently, these methods will enhance students' emotional well-being, which is crucial in this unprecedented event.

The findings of this research have significant implications for future research and practitioners. Firstly, it can be concluded that teachers' and parents' support influence students' perceived academic performance. Friends, university, and other related agency support are not included in this study, which should be explored in future research. These elements enhance the positive outcomes of educational and ecological support systems in ensuring that students' psychological well-being is taken care of, resulting in positive outcomes in their learning efficiency. The university management can implement an appropriate targeted approach based on this finding and the current challenging situation.

It is also important to note that the current study was limited to cross-sectional data formation, and this type of data cannot define any temporal correlations among the research variables. Thus, future research should incorporate longitudinal data that would permit confidence and more accurate data interpretation with more definitive conclusions regarding online learning efficiency modelling. Furthermore, the sample is based on public university students in Malaysia; therefore, the data need to be cautiously interpreted. On another note, as this study is limited to the Malaysian educational setting, its cultural background is different from others. For that, it is worth examining the similar significant factors in other cultural settings in the future. In addition, as this study did not include the cultural aspect in the framework, it is worth exploring this aspect in future research. Nonetheless, this study provides an insight into the current higher educational setting in a developing country, such as Malaysia. It is essential to note that the educational system in developing countries still faces hurdles in infrastructure for online learning. Another significant limitation of this study is that the distributed survey was a self-reported survey through an online platform. Therefore, a deeper understanding of how multiple factors influence academic performance may be addressed via qualitative studies in the future.

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Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The datasets generated during and/or analyzed during the current research are available from the corresponding author on reasonable request.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Ali, W. Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. *High. Educ. Stud.* **2020**, *10*, 16–25. [\[CrossRef\]](#)
2. Daniel, S.J. Education and the COVID-19 pandemic. *Prospects* **2020**, *49*, 91–96. [\[CrossRef\]](#) [\[PubMed\]](#)
3. Murphy, M.P. COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemp. Secur. Policy* **2020**, *41*, 492–505. [\[CrossRef\]](#)
4. Aristovnik, A.; Keržič, D.; Ravšelj, D.; Tomaževič, N.; Umek, L. Impacts of the COVID-19 pandemic on life of higher education students: A global perspective. *Sustainability* **2020**, *12*, 8438. [\[CrossRef\]](#)
5. Aguilera-Hermida, A.P. College students' use and acceptance of emergency online learning due to COVID-19. *Int. J. Educ. Res. Open* **2020**, *1*, 100011. [\[CrossRef\]](#)
6. Frazier, P.; Gabriel, A.; Merians, A.; Lust, K. Understanding stress as an impediment to academic performance. *J. Am. Coll. Health* **2019**, *67*, 562–570. [\[CrossRef\]](#)

7. Um, N.-H.; Jang, A. Antecedents and consequences of college students' satisfaction with online learning. *Soc. Behav. Personal. Int. J.* **2021**, *49*, 1–11. [\[CrossRef\]](#)
8. Sá, M.J.; Serpa, S. The COVID-19 pandemic as an opportunity to foster the sustainable development of teaching in higher education. *Sustainability* **2020**, *12*, 8525. [\[CrossRef\]](#)
9. Realyvásquez-Vargas, A.; Maldonado-Macías, A.A.; Arredondo-Soto, K.C.; Baez-Lopez, Y.; Carrillo-Gutiérrez, T.; Hernández-Escobedo, G. The impact of environmental factors on academic performance of university students taking online classes during the COVID-19 Pandemic in Mexico. *Sustainability* **2020**, *12*, 9194. [\[CrossRef\]](#)
10. Dai, Y.; Lin, X.; Li, L. Technology Acceptance of LMS—Do Previous Online Learning Experiences Matter? *J. Educ. Technol. Dev. Exch.* **2021**, *14*, 4. [\[CrossRef\]](#)
11. Murdhiono, W.R.; Fadlilah, S.; Vidayanti, V. The Effect of Online Learning Systems on Academic Stress during the Covid-19 Pandemic among Students in Indonesia. *Int. Med. J.* **2021**, *28*, 445–448.
12. Siddique, R.F.; Ahmed, O.; Hossain, K.N. Relationship between the fear of COVID-19 disease and sleep quality: The mediating role of stress. *Heliyon* **2021**, *7*, e07033. [\[CrossRef\]](#) [\[PubMed\]](#)
13. Adolphs, R. The biology of fear. *Curr. Biol.* **2013**, *23*, R79–R93. [\[CrossRef\]](#) [\[PubMed\]](#)
14. Elsharkawy, N.B.; Abdelaziz, E.M. Levels of fear and uncertainty regarding the spread of coronavirus disease (COVID-19) among university students. *Perspect. Psychiatr. Care* **2021**, *57*, 1356–1364. [\[CrossRef\]](#) [\[PubMed\]](#)
15. Tekir, Ö. The relationship between fear of COVID-19, psychological well-being and life satisfaction in nursing students: A cross-sectional study. *PLoS ONE* **2022**, *17*, e0264970. [\[CrossRef\]](#)
16. Aslam, N.; Shafique, K.; Ahmed, A. Exploring the impact of COVID-19-related fear, obsessions, anxiety and stress on psychological well-being among adults in Pakistan. *J. Ment. Health Train. Educ. Pract.* **2021**, *16*, 313–321. [\[CrossRef\]](#)
17. Gritsenko, V.; Skugarevsky, O.; Konstantinov, V.; Khamenka, N.; Marinova, T.; Reznik, A.; Isralowitz, R. COVID 19 fear, stress, anxiety, and substance use among Russian and Belarusian university students. *Int. J. Ment. Health Addict.* **2021**, *19*, 2362–2368. [\[CrossRef\]](#)
18. Mesisca, J. Stress, Anxiety, and Well-being in Nurse Anesthesia Doctoral Students. *AANA J.* **2021**, *89*, 396–402.
19. Hashemi, A. Effects of COVID-19 on the academic performance of Afghan students' and their level of satisfaction with online teaching. *Cogent Arts Humanit.* **2021**, *8*, 1933684. [\[CrossRef\]](#)
20. Iglesias-Pradas, S.; Hernández-García, Á.; Chaparro-Peláez, J.; Prieto, J.L. Emergency remote teaching and students' academic performance in higher education during the COVID-19 pandemic: A case study. *Comput. Hum. Behav.* **2021**, *119*, 106713. [\[CrossRef\]](#)
21. Salanova, M.; Schaufeli, W.; Martínez, I.; Bresó, E. How obstacles and facilitators predict academic performance: The mediating role of study burnout and engagement. *Anxiety Stress Coping* **2010**, *23*, 53–70. [\[CrossRef\]](#) [\[PubMed\]](#)
22. Alam, M.M.; Ahmad, N.; Naveed, Q.N.; Patel, A.; Abohashrh, M.; Khaleel, M.A. E-learning services to achieve sustainable learning and academic performance: An empirical study. *Sustainability* **2021**, *13*, 2653. [\[CrossRef\]](#)
23. Fawaz, M.; Samaha, A. E-learning: Depression, anxiety, and stress symptomatology among Lebanese university students during COVID-19 quarantine. *Nurs. Forum* **2021**, *56*, 52–57. [\[CrossRef\]](#) [\[PubMed\]](#)
24. Ahorsu, D.K.; Lin, C.Y.; Imani, V.; Saffari, M.; Griffiths, M.D.; Pakpour, A.H. The fear of COVID-19 scale: Development and initial validation. *Int. J. Ment. Health Addict.* **2020**, *20*, 1–9. [\[CrossRef\]](#) [\[PubMed\]](#)
25. Emory, J.; Kippenbrock, T.; Buron, B. A national survey of the impact of COVID-19 on personal, academic, and work environments of nursing students. *Nurs. Outlook* **2021**, *69*, 1116–1125. [\[CrossRef\]](#)
26. Lestari, W.; Yazid, N.H.; Azhar, Z.N.; Ismail, A.; Sukotjo, C. Impact of COVID-19 on Malaysian dental students' physical, mental, financial and academic concerns. *BMC Oral Health* **2022**, *22*, 1–9. [\[CrossRef\]](#)
27. Cipriano, C.; Barnes, T.N.; Pieloch, K.A.; Rivers, S.E.; Brackett, M. A multilevel approach to understanding student and teacher perceptions of classroom support during early adolescence. *Learn. Environ. Res.* **2019**, *22*, 209–228. [\[CrossRef\]](#)
28. Descals-Tomás, A.; Rocabert-Beut, E.; Abellán-Roselló, L.; Gómez-Artiga, A.; Doménech-Betoret, F. Influence of teacher and family support on university student motivation and engagement. *Int. J. Environ. Res. Public Health* **2021**, *18*, 2606. [\[CrossRef\]](#)
29. Sadoughi, M.; Hejazi, S.Y. Teacher support and academic engagement among EFL learners: The role of positive academic emotions. *Stud. Educ. Eval.* **2021**, *70*, 101060. [\[CrossRef\]](#)
30. Awang, M.M.; Kutty, F.M.; Ahmad, A.R. Perceived Social Support and Well Being: First-Year Student Experience in University. *Int. Educ. Stud.* **2014**, *7*, 261–270. [\[CrossRef\]](#)
31. Hair, J.F.; Black, W.C.; Babin, B.J.; Anderson, R.E. *Multivariate Data Analysis: Pearson New International Edition*; Pearson/ Prentice Hall: Hoboken, NJ, USA, 2014.
32. Johnson, D.W.; Johnson, R.; Anderson, D. Social interdependence and classroom climate. *J. Psychol.* **1983**, *114*, 135–142. [\[CrossRef\]](#)
33. Rodman, A.M.; Rosen, M.L.; Kasperek, S.W.; Mayes, M.; Lengua, L.; McLaughlin, K.A.; Meltzoff, A.N. Social Behavior and Youth Psychopathology during the COVID-19 Pandemic: A Longitudinal Study. 4 March 2021. Available online: <https://psyarxiv.com/y8zvq/> (accessed on 15 March 2022).
34. Cohen, S.; Kamarck, T.; Mermelstein, R. A global measure of perceived stress. *J. Health Soc. Behav.* **1983**, *24*, 385–396. [\[CrossRef\]](#) [\[PubMed\]](#)
35. Bastemeyer, C.; Kleinert, J. Mental health in sports students—a cohort study on study-related stress, general well-being, and general risk for depression. *J. Phys. Educ. Sport* **2021**, *21*, 1958–1966.

-
36. Indra, G.H.; Radyani, A.M.; Oriza, I.I.D. The Relationship Between Stress and Well-being: The Mediating Roles of Students' Psychological Flexibility and Loneliness During the Coronavirus Pandemic. *Psychol. Res. Urban Soc.* **2022**, *4*, 1. [[CrossRef](#)]
 37. Noman, M.; Kaur, A.; Nafees, N. Covid-19 fallout: Interplay between stressors and support on academic functioning of Malaysian university students. *Child. Youth Serv. Rev.* **2021**, *125*, 106001. [[CrossRef](#)]
 38. Lei, H.; Cui, Y.; Chiu, M.M. The relationship between teacher support and students' academic emotions: A meta-analysis. *Front. Psychol.* **2018**, *8*, 2288. [[CrossRef](#)]