Pak. j. life soc. Sci. (2024), 22(2):16062-16080 E-ISSN: 2221-7630;P-ISSN: 1727-4915

Pakistan Journal of Life and Social Sciences
www.pjlss.edu.pk

https://doi.org/10.57239/PJLSS-2024-22.2.001163

RESEARCH ARTICLE

Exploring the Factors Affecting Mental Health and Digital Cultural Dependency among University Students

Ting Tin Tin[1], Winnie Chin[2], Lim Le Xin[3], Yuen Siu Mei[4], Chaw Jun Kit[5], Wan Nor Al-Ashekin Wan Husin[6], Ali Aitizaz[7], Lee Kuok Tiung[8*], Ayodeji Olalekan Salau[9a,9b], Umar Farooq Khattak[10], Yasin Ahmed Siddiqui[11]

[1,6,9]Faculty of Data Science and Information Technology, INTI International University, Nilai 71800, Malaysia
[2-4]Faculty of Computing and Information Technology, Tunku Abdul Rahman University of Management and Technology, Kuala Lumpur, Malaysia
[5]Institute of Visual Informatics, Universiti Kebangsaan Malaysia, Bangi 43600, Malaysia
[7]School of technology, Asia Pacific University, Malaysia
[8]Faculty of Social Science and Humanities, 88400 Kota Kinabalu, Universiti Malaysia Sabah, Malaysia
[9a]Department of Electrical/Electronics and Computer Engineering, Afe Babalola University, Ado-Ekiti, Nigeria
[9b]Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences, Chennai, Tamil Nadu, India
[10]School of IT, Unitar International University, Malaysia
[11]School of Business, Asia Pacific University, Malaysia

ARTICLE INFO

Received: Sep 2, 2024

Accepted: Oct 16, 2024

Keywords

Mental health

Dependency on digital culture

Family socioeconomics

Education

***Corresponding Author:**

tintin.ting@newinti.edu.my

lee@ums.edu.my

ABSTRACT

Mental health problems have become a big problem among university students. However, university students will easily neglect the severity of mental health problems and why they cause mental health problems. Therefore, we are going to investigate how factors such as family socioeconomic and family parenting style affect students' mental health. Besides that, in this digital technology era, university students can easily have digital cultural dependency. Therefore, we also investigate whether mental health problems among university students cause digital cultural dependency. We collect data for this study from TARUMT students, which is done by distributing questionnaires on various social media sites, including Facebook, Instagram, and XiaoHongShu. A total of 165 respondents participated in the questionnaire. The data was cleaned and statistically analyzed using SPSS. According to the result of this research, there is no significant relationship between family socioeconomic and academic stress, financial stress, general stress, anxiety, depression, and digital culture dependency. Moreover, there are also no significant relationships between family parenting style and academic stress, financial stress, general stress and digital cultural dependency. In addition to this, the family parenting style has a significant impact on depression and anxiety. Then, the result of this research found that academic stress, financial stress, general stress, anxiety, and depression have a significant impact on digital culture. This research presents new perspectives for undergraduates on their mental health and digital cultural dependency. This is useful as a guide for policy makers in the future to improve mental health problems.

INTRODUCTION

In recent years, there has been an increasing amount of attention given to the critical issue of university students' mental health and digital cultural dependency. Furthermore, one of the most prevalent mental health problems in the world is depression (World Health Organization, 2024). The way students engage with the world about themselves and with another person has changed seriously as a result of the rapid development of digital technologies, frequently hiding the differences between the Internet and real-world life. In higher education, there are increased concerns about students' mental health (Hamza et al., 2021). Digital cultural dependency is a problem that has been connected to a number of negative effects, such as higher levels of stress and anxiety, as well as a lack of social skills in TARUMT students. Students might discover that they have more and more digital platforms for communication with others, excitement and even importance as they engage them regularly.

The negative effects of digital cultural dependency can have a lasting influence on student relationships, academic performance, and potential job prospects. It can also cause avoidance of academic tasks, sleep disturbance, difficulty completing tasks, changes in mood and appetite, and social withdrawal (Crosswell & Lockwood, 2020). Mental health is a crucial component of total well-being. In addition, there is already a lot of anxiety about the frequency of mental health problems among college students, as many of them find it difficult to meet the expectations of university education. Recent studies have revealed that while under great academic stress, most Malaysian undergraduate students are not capable of managing their stress or feeling independent. Therefore, developing successful treatments and support networks requires an awareness of the factors that lead to digital cultural dependency and its consequences on mental health. In addition, as young people are both the most avid adopters of digital technologies and the most susceptible to any negative impacts they might experience, it is critical to investigate the complex consequences of these technologies on mental health as they continue to advance and penetrate every part of everyday life.

The reactive methods used to address this problem today, such as mental health awareness campaigns and counseling services, are common. Although these interventions are certainly important in helping those in need find resources and help, they sometimes neglect to take care of the primary causes of digital cultural dependency or provide proactive ways to mitigate its harmful impacts. The main objectives of counseling services are usually to treat the symptoms of mental health diseases and provide therapeutic support to those in psychological distress. Similarly, mental health awareness initiatives encourage students to seek treatment when they need it and work to reduce stigma. These initiatives are essential in de-stigmatizing mental illness and increasing public knowledge of the resources for help that are available. By measuring the factors that affect digital cultural dependency and its effects on mental health among TAR UMT university students, this investigation aims to fill this gap. The current investigation looks at the complex relationships that exist between social relationships, the use of digital technology, and mental health outcomes to better understand the problem and guide the creation of more useful solutions.

What is new in this article is the focus on TARUMT, which provides a unique context for exploring factors affecting mental health and digital cultural dependency among university students. The study will employ a mixed-method approach, combining quantitative and qualitative data to provide a more comprehensive understanding of the problem. The findings of this study will contribute to the existing body of knowledge on digital cultural dependency and its impact on mental health and will inform the development of targeted interventions and support systems for university students in TARUMT.

The focus on TAR UMT, which provides a unique framework for assessing the variables that influence mental health and digital cultural dependency among college students, is new in this work. To provide a more detailed understanding of the problem, the study will use a combination of methods,

including both quantitative and qualitative data. In addition to contributing to the body of research already available on digital cultural dependence and its effects on mental health, the results of this study will guide the creation of focused treatments and support networks for university students participating in TAR UMT.

1.1 Problem statements

The way university students interact with each other and their surroundings has changed significantly as a result of the rapid growth of digital technology. Digital cultural dependence is a phenomenon that has been associated with a number of negative effects, such as higher levels of stress and anxiety, as well as a decline in social skills in college students. Although these issues are becoming more widely recognized, there is still a great deal we are unaware about the ways in which individual mental health indicators interact with a variety of family socioeconomic status (SES) and parenting styles to influence their dependency on digital culture. Moreover, loneliness, isolation, and a sense of being cut off from other people can be made worse by the need to maintain one's digital presence and follow the most recent trends. While university students' concerns about their mental health are becoming more common, little is known about the consequences of digital cultural dependency and how it affects mental health. There is still a lack of research on the relationships between TAR UMT university students' family socioeconomic position, parenting style, depression, anxiety, general stress, academic stress, financial stress, and digital cultural reliance.

2.0 LITERATURE REVIEW

2.1 Family socioeconomic impacts on student mental health

Many studies have shown that mental health problems including stress, anxiety, and depression disproportionately affect students from lower socioeconomic backgrounds. The severity of mental health problems among Malaysian university students was found to be considerable. Evidence suggests that financial factors rank quite high as mental health factors for college students (Richardson et al., 2017). While the age group and parents' income were strongly correlated with depression, the student's living area, location of living, academic year, and parental income were strongly associated with anxiety (Islam et al., 2024). Furthermore, research has also examined the impact of different variables on thoughts about suicide and mental health among undergraduates, including personality traits, academic stress, and socioeconomic position (Sheldon et al., 2021). High levels of psychological distress are associated with the student due to family economic instability, financial pressure, and restricted access to resources. The results of their studies showed that adults who belong to low social status reported higher levels of depression (Freeman et al. 2016). These results highlight the urgent need for focused interventions designed to lessen the negative consequences of socioeconomic disparities on mental health outcomes in Malaysian university settings (Irfan et al., 2021). Through the study of family socioeconomic status, the level of education of parents and the learning aids provided by parents for children are the most influential factors on the learning ability (Şengönül, 2022). Meanwhile, the degree of correlation between family wealth and learning achievement depends on parents' support of children's learning and it could be inferred that different family socioeconomic status will have different effects on student learning engagement (Qiu & Ye, 2023). Therefore, family socioeconomic problems can cause mental and emotional deficiencies that affect student focus, efficiency in the classroom, and academic achievement, ultimately putting their educational goals.

2.2 Digital cultural dependency and mental health

Additionally, digital cultural dependency has become a significant issue that influences mental health among university students, alongside the socioeconomic position of the family (Kolhar et al., 2021). Students in Malaysia now spend a large part of their daily lives accessing digital technology, including social media such as Instagram, Facebook or TikTok (Herath, 2020; Anwar et al., 2020). However,

negative effects on mental health, including higher levels of anxiety, depression, and academic stress, have been linked to the excessive use of social media (Nizam et al., 2021). Furthermore, students from lower-income backgrounds can be more subjected to the negative impacts of digital cultural dependency. This addiction or reliance on social networks causes them to have more general stress, such as fatigue or exhaustion, causing them to delay or have difficulty completing tasks. Parental support plays an important role in the connection between academic success and family economic status in the context of academic stress and mental health experienced by students. Cheng et al. (2017) concluded that the role of family is an important factor in managing the mental health of students. The increasing impact of Internet use on modern society and concerns about the potential negative consequences of mental health show that the results reveal a significant association between digital cultural dependency and mental health problems among university students (Lebni et al., 2020, Jam et al., 2018). However, mental health issues and incorrect coping methods can be elevated in situations where parenting is authoritarian or insufficient.

2.3 Family parenting style and mental health

The relationship between family parenting style and mental health has been extensively studied (Altuna et al., 2020). Based on previous research, depression symptoms among students were influenced by the family parenting style. These findings show that the family parenting style has a significant relationship with depression (Qiu & Ye. 2023). There are four types of parenting styles identified which are authoritative parenting, authoritarian parenting, permissive parenting and neglectful parenting (). Furthermore, the negative parenting style is reflected by negative interactions and will be associated with higher reported depressive symptoms among adolescents (Loechner et al., 2019). These findings highlight that negative parenting was positively correlated with depression symptoms compared to positive parenting (Qiu & Ye, 2023; Romi, 2024). Research suggests a strong association between parenting styles and student mental health. Students raised by authoritative parents tend to report lower levels of depression, anxiety, and stress (Hamon et al., 2012, cited in Zhang & Li, 2019).

According to research, students who grow up in homes with authoritative parenting, which strikes a balance between warmth, discipline, and unambiguous expectations, are more likely to display resilience and flexible coping strategies when faced with challenges. Students raised in this manner are more secure and capable of handling life's obstacles with self-assurance and effectiveness. In addition to offering direction and support, authoritative parents value their children's uniqueness and autonomy, which fosters positive emotional growth and self-worth (Desk, 2024). The authoritarian approach may inhibit the growth of constructive coping mechanisms and social skills because it places a higher value on obedience and compliance than on autonomy and self-expression (Ilyas & Khan, 2023). Furthermore, permissive parenting, which is marked by indulgence and laxity, can lead to problems with impulse control and self-regulation, which may put people at risk for psychological conditions including depression. Intentionally encouraging entitlement and irresponsibility, permissive parents can place more importance on maintaining a positive relationship with children than establishing limits and enforcing regulations (Desk, 2024).

Research Gap

Limited research has been conducted on the interplay between family socioeconomic status, parenting styles, mental health outcomes, and digital cultural dependency, revealing significant gaps in literature. Few studies that have comprehensively examined the collective influence of the socioeconomic status of the family and parenting styles on mental health outcomes, particularly within diverse cultural and socioeconomic contexts, and longitudinal investigations into these relationships are lacking. On the other hand, there is a notable absence of research exploring how family parenting styles contribute to the development of digital cultural dependency in individuals, highlighting the need for studies investigating the influence of different parenting styles on

susceptibility to digital cultural dependency. Furthermore, research exploring the two-way relationship between mental health and digital cultural addiction remains limited, with few longitudinal studies tracking individuals' mental health and digital cultural addiction over time to establish temporal relationships and causality, despite the growing recognition of the detrimental effects of digital cultural addiction on mental health. These research gaps underscore the need for more empirical studies to advance understanding in these critical areas of inquiry.

Conceptual Framework and hypotheses

The following hypotheses are constructed based on the conceptual framework in Figure 1.

H1: There is a relationship between the socioeconomic dependency of family and digital culture dependency.

H2: There is a relationship between family socioeconomics and depression.

H3: There is a relationship between family socioeconomic and anxiety.

H4: There is a relationship between family socioeconomic stress and general stress.

H5: There is a relationship between family socioeconomic and academic stress.

H6: There is a relationship between family socioeconomic and financial stress.

H7: There is a relationship between the style of family parenting and depression.

H8: There is a relationship between the style of family parenting and anxiety.

H9: There is a relationship between the style of family parenting and general stress.

H10: There is a relationship between the style of family parenting and academic stress.

H11: There is a relationship between family parenting style and financial stress.

H12: There is a relationship between depression and dependency on digital culture.

H13: There is a relationship between anxiety and dependency on digital culture.

H14: There is a relationship between general stress and the dependency on digital culture.

H15: There is a relationship between academic stress and the dependency on digital culture.

H16: There is a relationship between financial stress and the dependency on digital culture.

H17: There is a relationship between the style of family parenting and digital culture dependency.

H18: There is a mediating effect of depression in the negative relationship between the dependency on family socioeconomic and digital culture.

H19: There is a mediating effect of anxiety in the relationship between family socioeconomic and digital culture.

H20: There is a mediating effect of general stress on the socioeconomic dependency of the relationship between the family and digital culture dependency.

H21: There is a mediating effect of academic stress on the relationship between the family socioeconomic dependency and digital culture.

H22: There is a mediating effect of financial stress in the relationship between family socioeconomic and digital culture.

H23: There is a mediating effect of depression in the relationship between family parenting style and digital culture.

H24: There is a mediating effect of anxiety in the relationship between family parenting style and digital culture.

H25: There is a mediating effect of general stress in the relationship between family parenting style and digital culture dependency.

H26: There is a mediating effect of academic stress in the relationship between family parenting style and digital culture dependency.

H27: There is a mediating effect of financial stress on the relationship between the family parenting style and the dependency on digital culture.

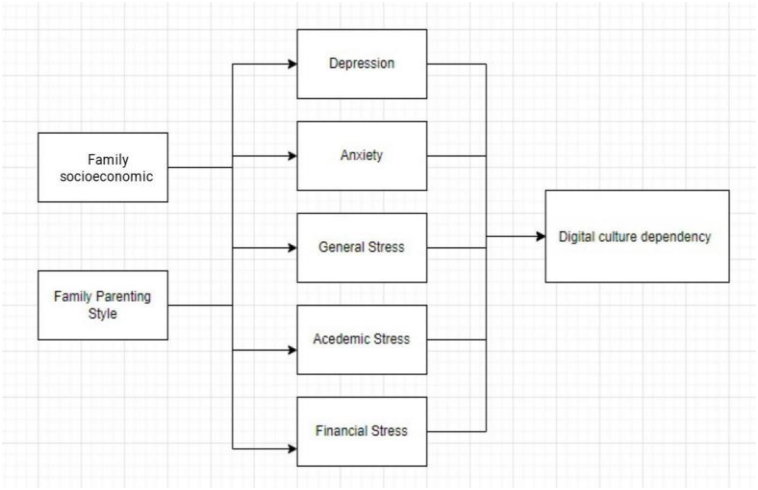

Figure 1. The conceptual framework of this research study based on the review of the literature.

3.0 RESEARCH METHODOLOGY

The questionnaire is designed and structured using Google form. It is an online questionnaire that is used to collect data related to the factors that influence mental health and digital cultural dependency among university students in Malaysia. The population of factors affecting mental health and digital cultural dependency comprise university students who are still studying in any courses that are still studying at TARUMT. The study is carried out in a sample of around 165 respondents who are still in search of their study in TARUMT. This questionnaire was distributed through multiple social media platforms such as Instagram, WeChat, Email, WhatsApp, XiaoHongShu and Facebook. Accurate assessments that assess mental health and digital cultural dependency will be included in the questionnaire along with demographic questions. The questionnaire is divided into 8 sections as shown in Table 4. Section 1 evaluates demographic information with 5 questions. In addition, Sections 2 to 8 evaluate factors influencing mental health and digital cultural dependency among university students from the features of academic stress, financial stress, family, stress, depression, anxiety, and digital culture dependency with 78 questions referring to Table 1. Each of these categories has a maximum of 18 questions and a minimum of 9 questions in section 2 to 8. All the questions are designed with five-point linear scale which range from strongly disagree to strongly agree in Section 2 to section 7 except for section 4. Section 4 is designed with multiple choice, and Section 8 is designed with multiple choice grid to gather responses to multiple related questions using the same set of response options. Therefore, analysts can find relationships, trends, and structures in the data by simply quantifying and statistically assessing the responses. It may increase response rates and decrease respondent fatigue because the scale is simple to comprehend and complete (Alemu et al., 2023).

Table 1: Questionnaire items

Question	References
Section 1: Demographic Information Q1 : What is your gender? Q2 : What is your age? Q3 : What is your race? Q4 : What is your year of study? Q5 : What is your current GPA	Bhat, 2023
Section 2: Academic Stress Scale Q1 : I am confident that I will be a successful student. Q2 : I am confident that I will be successful in my future career. Q3 : I can easily make academic decisions. Q4 : The time allocated to classes and academic work is enough. Q5 : I have enough time to relax after work. Q6 : My teachers are critical of my academic performance. Q7 : I fear failing courses this year. Q8 : I think my worry about examinations is a weakness of character. Q9 : The teachers have unrealistic expectations of me. Q10 : The size of the curriculum (workload) is excessive. Q11 : I think the amount of work assignments is too much. Q12 : I am unable to catch up if I am behind the work. Q13 : The unrealistic expectations of my parents stress me out. Q14 : The competition with my peers for grades is quite intense. Q15 : The examination questions are usually difficult. Q16 : The examination time is short to complete the answers. Q17 : Examination times are very stressful for me. Q18 : Even if I pass my exams, I am worried about getting a job .	Bedewy & Gabriel, 2015
Q1 : Worried about having enough money for regular expenses? Q2 : Worried about paying for college. Q3 : Leaving a balance on a credit card. Q4 : Choose not to participate in an activity due to lack of money. Q5 : Choose not to purchase required academic materials (books, course packs, supplies) due to their cost. Q6 : Investigated transferring to a less expensive college. Q7 : Investigated withdrawing from college due to costs. Q8 : Investigated working more hours to pay for costs Q9 : Investigate increasing your borrowing to pay for costs.	Hicks, 2021
Q1 : How many people currently living in your house? Q2 : What is your parents' current marital status? Q3 : What is your mother's current occupation? Q4 : What is your mother's highest educational level? Q5 : What is your father's current occupation? Q6 : What is your father's highest education level? Q7 : How much is your parents' monthly total income (household income)? Q8 : What types of parenting styles do you think your parents gave you?	Asif et al., 2020
Q1 : I am always concerned when faced with situations beyond my control. Q2 : I am always afraid of my future. Q3 : I fear that I may not reach my goals. Q4 : I am always unconfident of my ability to handle personal problems. Q5 : I am not willing to eat or lose my appetite when I have problems. Q6 : I have trouble relaxing.	Cohen et al., 2009

Q1 : I couldn't seem to experience any positive feeling at all. Q2 : I found it difficult to develop the initiative to do things Q3 : I felt like I had nothing to. look forward to Q4 : I felt downhearted and blue Q5 : I was unable to become enthusiastic about anything. Q6 : I felt like I was not worth much as a person. Q7 : I felt that life was meaningless	Lovibond & Lovibond, 1995
Q1 : I never feel quite sure of myself when I am speaking in class. Q2 : I don't worry about making mistakes in the class Q3 : I tremble when I know that I am going to be called on in the class Q4 : It scares me when I don't understand what the lecturer is saying in the class. Q5 : It wouldn't bother me at all to take the class Q6 : During the class, I find myself thinking about things that have nothing to do with the course. Q7 : I keep thinking that the other students are better than I am Q8 : I am usually at ease during the tests in the class. Q9 : I start to panic when I have to do the presentation without preparation. Q10 : In language class, I can get very nervous if I forget things I know Q11 : It embarrasssse me to give voluntary responses in the class. Q12 : I get upset when I don't understand what the lecturer is correcting. Q13 : Even if I am well prepared for the language class, I feel anxious about it. Q14 : I often feel like I don't go to my class. Q15 : I am afraid that my lecturer is ready to correct every mistake I make. Q16 : I feel confident speaking in my class.	Akhdan and Aminatun, 2022
Q1 : I often find life boring without: Q2 : I often neglect my schoolwork because of my use of: Q3 : I find it difficult to sleep after using: Q4 : I will be upset if I have to reduce the amount of time I spend using: Q5 : My school grades have deteriorated/decreased because of my usage of: Q6 : I often cancel meetings with my friends because I am busy: Q7 : I cannot pass my days without: Q8 : I think about _____ all the time. Q9 : I use _____ to change my mood. Q10 : I feel like I have to use _____ more & more to obtain same satisfaction as before. Q11 : I have decided to use _____ less but have not been able to do so. Q12 : I feel bad if (for some reason) I have to stop using: Q13 : My maximum daily maximum hours I spend on:	Ting et al., 2023.

There are eight sections designed to adopt the questionnaires items from previous research (Appendix A): section 1 demographic information ; section 2 academic stress scale (Bedewy & Gabriel, 2015); section 3 financial stress (Hicks, 2021); section 4 family (Asif et al., 2020); section 5 stress (Cohen et al., 2009); section 6 depression (Lovibond and Lovibond, 1995); section 7 anxiety (Akhdan & Aminatun, 2022) and section 8 digital culture dependency (Ting et al., 2023). Data were statistically analyzed using IBM SPSS statistics 29.0 for Pearson's correlation and macro PROCESS 4.2 for mediation analysis. The Pearson correlation between chosen independent variables and dependent variables is analyzed using the bivariate function in SPSS statistics software. Next, for mediation analysis, the macro PROCESS by Andrew F.Hayes is used with model number 4, 5000

bootstrap samples, 95% confidence intervals and standardized effects to examine direct effect and indirect effect in the mediation models (Ting et al., 2024; Yi et al., 2022).

4.0 RESULT AND DISCUSSION

4.1 Reliability analysis

In our current research, we use a questionnaire to evaluate the relationship between family parenting style, family socioeconomic and academic stress, financial stress, general stress, anxiety, depression, and digital culture dependency, consisting of a total 56 questions which rated on a 5-point Likert Scale ranging from 1 (strongly disagree) to 5 (strongly agree). To evaluate the reliability of the questionnaire, we calculated Cronbach's Alpha coefficients, resulting in values of 0.812 for the academic stress section, 0.879 for the financial stress section, 0.826 for the general stress section, 0.944 for the depression section, and 0.867 for the anxiety section. These reliability statistics are detailed in Table 2.

Table 2: Reliability level of questionnaire items

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
Academic Stress	0.812	0.810	18
Financial Stress	0.879	0.877	9
General Stress	0.826	0.831	6
Depression	0.944	0.944	7
Anxiety	0.867	0.867	16

4.2 Demographics

The demographic profile of research participants in Table 3 offers important information on the traits of the sample group. Among the 165 people who participated in the study, 69.1% identified as women and the remaining 30.9% as men. The responses vary in age from 20 to 22 years old, with the highest percentage falling in that age range at 38.8% and 24.2%, respectively. Furthermore, a wide range of racial backgrounds are represented in the sample; Chinese respondents make up the vast majority at 95.2%, followed by Malay and Indian respondents at 2.4%. The respondents are dispersed throughout several academic years, with Year 2 having the highest representation at 40% and Year 3 coming in second at 38.2% , respectively. Additionally, the distribution of the current GPA reveals a wide range of academic achievements, with notable percentages falling into the 3.51 to 4.0 GPA at 30.9% and 2.75 to 3.50 GPA at 36.4%.

Table 3: Demographic data of the participants

Characteristic	**No. of Respondents**	**Percentage (%)**
Gender		
Female	114	69.1
Male	51	30.9
Age		
18 years old	1	0.6
19 years old	5	3.0
20 years old	15	9.1
21 years old	40	24.2
22 years old	64	38.8
23 years old	22	13.3
24 years old	8	4.8
25 years old and above	10	6.1

Race		
Malay	4	2.4
Chinese	157	95.2
Indian	4	2.4
Year of study		
Year 1	16	9.7
Year 2	66	40.0
Year 3	63	38.2
Year 4	20	12.1
Current GPA		
3.75 - 4.00	51	30.9
3.51 - 3.74	51	30.9
2.75 - 3.50	60	36.4
2.51 - 2.74	2	1.2
2.00 - 2.50	2	1.2

4.3 Hypothesis

Table 4 shows the Pearson's correlation results between variables with insignificant correlations that are omitted to highlight the significant correlations. Based on Table 4, H1, H2, H3, H4, H5, H6, H9, H10, H11 and H17 are rejected due to sig value >0.05. Therefore, there is no significant relationship between family socioeconomic and academic stress, financial stress, general stress, anxiety, depression, and digital culture dependency. The findings in Table 4 show the relationship between family parenting style and academic stress, financial stress, general stress and digital cultural dependency do not relate to each other due to sig value >0.05. However, H7, H8, H12, H13, H14, H15 and H16 are accepted with significant Pearson correlation value as shown in Table 4. Therefore, family parenting style has a significant impact on depression and anxiety. Academic stress, financial stress, general stress, anxiety, and depression has a significant impact on digital culture dependency.

Table 4: Pearson correlations between variables.

	FaS	**FPS**	**AS**	**FS**	**GS**	**A**	**D**	**Standard Deviation**
FaS	-	-	-	-	-	-	-	0.6685
FPS	-	-	-	-	-	-0.189*	0.265**	0.8660
AS	-	-	-	-	-	-	-	0.5439
FS	-	-	-	-	-	-	-	0.9530
GS	-	-	-	-	-	-	-	0.8616
A	-	-	-	-	-	-	-	0.6693
D	-	-	-	-	-	-	-	1.1125
DCD	-	-	0.382**	0.426**	0.238**	0.344**	0.326**	

Notes: FaS= Family Socioeconomic, FPS=Family Parenting Style, AS = Academic stress, FS = Financial stress, GS = General stress, A = Anxiety, D = Depression, DCD = Digital Culture Dependency. **The correlation is significant at the 0.01 level (2-tailed). *The correlation is significant at the 0.05 level (2-tailed).

Table 5 revealed that the depression mediates the relationship between family socioeconomic dependency dependence and digital culture dependence with an indirect effect of -0.0193 and a 95% confidence interval value of [-0.0695, 0.0288]. This shows that H18 is rejected because the p-value is not less than 0.05. Anxiety is indicated to mediate the relationship between the independent variable of family socioeconomics and the the dependent variable of the dependency of digital culture with indirect effect of -0.0189 and the 95% confidence interval value of [-0.0670,0.0292]. This proves that

H19 is rejected because the p-value is not less than 0.05. Not only that, general stress mediates the relationship between family socioeconomic and digital culture dependency with an indirect effect of 0.0043 and a 95% confidence interval value of [-0.0295, 0.0474]. This indicates that H20 is rejected because the p-value is not less than 0.05. Academic stress mediates the relationship between family socioeconomic and digital culture dependency with an indirect effect of 0.0145 and a 95% confidence interval value of [-0.0511,0.0857]. Therefore, H21 is rejected because the p value is not less than 0.05. The result of Table 5 also shows that financial stress mediates the relationship between the independent variable of family socioeconomic dependency and dependent variable of digital culture with an indirect effect of -0.0319 and a 95% confidence interval value of [-0.1038, 0.0341]. This proves that H22 is rejected because the p value is not less than 0.05. The study results also disclosed that depression mediates the relationship between family parenting style and dependency on digital culture dependency with an indirect effect of -0.0880 and a 95% confidence interval value of [-0.1566, -0.0308]. This shows that H23 is rejected because the p-value is not less than 0.05. **Table 5** also shows that anxiety mediates the relationship between the independent variable of the family parenting style and the the dependent variable of the dependency of digital culture dependency with an indirect effect of -0.0648 and a 95% confidence interval value of [-0.1318,-0.0143]. This indicates that H24 is rejected because the p-value is not less than 0.05. General stress partially mediates the relationship between family parenting style and digital culture with an indirect effect of -0.0276 and a 95% confidence interval value of [-0.0766, 0.0067]. This shows that H25 is rejected because the p-value is not less than 0.05. The result of the study shows that financial stress mediates the relationship between family parenting style and digital culture dependency with an indirect effect of -0.0375 and a confidence interval value of 95% [-0.1042, 0.0211]. This indicates that H26 is rejected because the p-value is not less than 0.05. Lastly, academic stress mediates the relationship between the independent variable of family parenting style and dependent variable of digital culture dependency with an indirect effect of -0.0108 and the 95% confidence interval value of [-0.0715, 0.0412]. This proves that H27 is rejected because the p-value is not less than 0.05.

Table 5: Direct and Indirect Effects with Bootstrap 95% Confidence Interval for Mediation Analysis

Predictor	Mediator	DV	Direct Effect	Indirect effect	BootLLCI	BootULCI
FSocio	AS	DCD	-0.1288	0.0145	-0.0511	0.0857
FSocio	FS	DCD	-0.0852	-0.0319	-0.1038	0.0341
FSocio	GS	DCD	-0.1192	0.0043	-0.0295	0.0474
FSocio	A	DCD	-0.0974	-0.0189	-0.0670	0.0292
FSocio	D	DCD	-0.0970	-0.0193	-0.0695	0.0288
FPS	AS	DCD	-0.0396	-0.0108	-0.0715	0.0412
FPS	FS	DCD	-0.0202	-0.0375	-0.1042	0.0211
FPS	GS	DCD	-0.0274	-0.0276	-0.0766	0.0067
FPS	A	DCD	-0.0005	-0.0648	-0.1318	-0.0143
FPS	D	DCD	0.0163	-0.0880	-0.1566	-0.0308

Notes: FSocio = Family socioeconomic; FPS = Family Parenting Style; AS=Academic Stress, FS=Financial Stress, GS=General Stress, A=Anxiety, D=Depression, DCD=Digital Culture Dependency; CI- bias corrected 95% confidence interval for indirect effects.

DISCUSSION

The result from H7 and H8 is consistent with the previous study by Qiu & Ye (2023). In their study, they have shown that there is a significant relationship between parenting style and depression, and also parenting style and anxiety (Qiu & Ye, 2023). The result of H1 is inconsistent with current study by He. The current study found that the lower family socioeconomic dependency increases, then digital culture dependency increases (He et al., 2020). The result from H2 is inconsistent with the previous research done by Barreto et al. (2020). Based on previous research, depressive disorders are among the most common mental illnesses, regardless of family socioeconomic level (Barreto et

al., 2020; Mac-Ginty et al., 2024). Based on previous findings, the result of H3 is inconsistent with the previous research by Mac-Ginty et al. (2024) indicating that the socioeconomic family socioeconomic has positive association with anxiety symptoms. The result of H4 is inconsistent with the previous study by Bae. In their study, Bae et al. (2020) indicated that the higher family socioeconomic status of the family, the lower the stress among adolescents. Based on the previous findings, the result of H5 is inconsistent with Adom et al.(2020). In their research, academic stress will be associated with family socioeconomic status (Adom et al.,2020). The result of H6 is inconsistent with previous research by Peltz et al. (2020). In their research, the higher financial stress and lower family socioeconomic status among students (Peltz et al., 2020). The result of H9 is inconsistent with current study by Wu et al. (2020). In their study, the family parenting style has a significant impact on stress symptoms among students (Wu et al., 2020). The result of H10 is consistent with previous findings by Dwi Utari & Hamid (2021). In their findings, they have proven that there is a negative correlation between family parenting style and academic stress (Dwi Utari & Hamid, 2021). The result of H11 is inconsistent with the previous study by Ndou (2024). In their findings, they found that the family parenting style has a significant relationship with financial stress (Ponnet et al., 2013). The result of H17 is inconsistent with the current study by Chen et al. (2020). In their study, the family parenting style will be influenced by the dependency of digital culture (Chen et al., 2020).

The result of H12 is consistent with the current research by Gómez-Galán et al. (2020). In their research, they found that university students addicted to digital technology can suffer from depression (Gómez-Galán et al., 2020). The result from H13 shows that it is consistent with the previous research done by Bermingham et al. (2021). In their research, they indicated that anxiety symptoms have been significantly positively correlated with digital dependency (Bermingham et al., 2021). The result of H14 indicates that it is consistent from the previous study by Maftei and Pătrăușanu (2023). In their study, they proved that digital culture dependency is related to stress symptoms (Maftei & Pătrăușanu, 2023). The result from H15 shows that it is consistent with the current study by Zhang et al. (2022). In their study, they found that academic stress has been positively associated with the dependency on digital culture (Zhang et al., 2022). The result of H16 is consistent with the previous findings by Chu et al. (2021a, 2021b). In their findings, they showed that financial stress is positively associated with digital dependency (Chu et al., 2021a; Chu et al., 2021b).

Based on Table 5, H18 is depression mediated, the relationship between family dependency and digital culture dependency was negatively correlated because it has a negative indirect effect. It shows that low family socioeconomic status leads to higher dependency on digital culture and, which is partially caused by high levels of depression. This result is inconsistent with Mu et al. (2021), in which in this study they have shown that individuals coming from low socioeconomic status have a lower level of depression where they have high level of dependency on digital culture (Mu et al., 2021). The result H19 shows that anxiety mediating the relationship between the socioeconomic dependency of family socioeconomic and digital culture was a negative correlated rate. It shows that low family socioeconomic status leads to higher dependency on digital culture and is partially influenced by high levels of anxiety. This result of H19 is consistent with the previous research by Dixit et al. (2022). In their research, they found that the dependency on family socioeconomic and digital culture is no correlation regardless of anxiety symptoms (Dixit et al., 2022). The result H20 indicates that general stress mediating the relationship between family socioeconomic dependency and digital culture was positively correlated because it has a positive indirect effect. It shows that high family socioeconomic status leads to a lower dependency on digital culture and is partially caused by low levels of general stress. The result is inconsistent based on the current study by Feng et al. (2019). In their study, they showed that the general stress The result of H21 in **Table 5** shows that academic stress that mediates the relationship between family socioeconomic and the digital culture dependency was positively correlated because it has a positive indirect effect. It found that high family socioeconomic status leads to lower dependency on digital culture, partially caused by

low levels of academic stress. The result of H22 shows that financial stress mediating the relationship between family socioeconomic and digital culture dependency was negatively correlated. It shows that low socioeconomic status leads to higher dependency on digital culture and is partially influenced by high levels of financial stress. On the H23 other hand, the result shows that depression mediating the relationship between family parenting style and dependency on dependency on digital culture was negatively correlated with negative indirect effects. It proves that the negative family parenting style leads to higher dependency on digital culture is partially caused by high levels of depression. The result is inconsistent with Gan et al. (2021), where in this study they have proven that there is a mediating effect of depression in the significant relationship between family parenting style and dependency on digital culture dependency (Gan et al., 2021). The result H24 indicates that the anxiety that mediates the relationship between family parenting style and digital culture dependency was at a negative correlated rate. It indicates that negative family parenting style leads to higher dependency on digital culture is partially caused by high levels of anxiety. The result of H24 is inconsistent with Keya et al. (2020). In their study, they have proven that people coming from a negative family parenting style have a higher level of anxiety where they have a high level of dependency on digital culture (Keya et al., 2020). The H25 result in Table 5 shows that general stress that mediates the relationship between family parenting style and digital culture dependency was negatively correlated as it has a negative indirect effect. It shows that the a the negative family parenting style leads to a a high dependency on the the digital culture and is influenced by general stress. The result H26 shows that academic stress mediating the relationship between family parenting style and digital culture dependency was negatively correlated rate. It shows that negative family parenting style leads to high dependency on digital culture and is influenced by academic stress. Lastly, the result H27 shows that financial stress mediating the relationship between family parenting style and digital culture dependency was negatively correlated rate. It shows that negative family parenting style leads to high dependency on digital culture and is influenced by financial stress.

5.0 CONCLUSION

This research is focused on the relationship of family socioeconomic and family parenting style with mental health which includes depression, anxiety, general stress,, financial stress, and the academic stress and relationship between mental health and digital cultural dependency. The research result shows that family socioeconomic problems will not cause mental health problems. The results also show that the family parenting style has a significant impact on depression and anxiety symptoms. Unfortunately, all hypotheses about the mediating effect are rejected. There is no significant mediating relationship between family socioeconomic and digital culture dependency and also family parenting style and digital culture dependency.

There are many limitations in this research. The total number of responses are 164 which only can have consideration of a small sample size of valuable insights. Furthermore, some participants might not be entirely familiar with the questionnaire, which may cause a potential source of response bias. Further research can explore more about other aspects of mental health and different types of mental health. Longitudinal studies can provide information on the sustainability of any evolving trend, including the long-term effects of mental health. In addition to that, future studies can consider qualitative research to gain deeper insights into student experiences and recommendations. Lastly, it can investigate other roles, such as parents and lecturers can have more different perspectives and can have a further understanding of the dynamics at play.

6.0 REFERENCES

Adom, D., Chukwuere, J., & Osei, M. (2020). Academic stress among faculty and students in higher institutions. *Pertanika Journal of Social Sciences & Humanities*, *28*(2), 1055-1064.

Akhdan, M. A., & Aminatun, D. (2022). The correlation between anxiety and student GPA & EPT score during Covid 19 pandemic. *Journal of English Language Teaching and Learning*, *3*(2), 45-51. https://doi.org/10.33365/jeltl.v3i2.2254

Alemu, B. S., Feisso, S., Mohammed, E. A., & Salau, A. O. (2023). Magnetic resonance imaging-based brain tumor image classification performance enhancement. *Scientific African*, *22*, e01963. https://doi.org/10.1016/j.sciaf.2023.e01963

Altuna, J., Martínez-de-Morentin, J. I., & Lareki, A. (2020). The impact of becoming a parent about the perception of Internet risk behaviors. *Children and Youth Services Review*, *110*, 104803. https://doi.org/10.1016/j.childyouth.2020.104803

Anwar, R. K., Khadijah, U. L. S., Sjoraida, D. F., & Rahman, M. T. (2020). The impact of using instagram social media on student consumptive behavior. *Record and Library Journal*, *6*(1), 80-88. https://e-journal.unair.ac.id/RLJ/article/viewFile/14637/10120

Asif, S., Mudassar, A., Shahzad, T. Z., Raouf, M., & Pervaiz, T. (2020). Frequency of depression, anxiety and stress among university students. *Pakistan journal of medical sciences*, *36*(5), 971. https://doi.org/10.12669/pjms.36.5.1873

Barreto, T. M., Bento, M. N., Barreto, T. M., Jagersbacher, J. G., Jones, N. S., Lucena, R., & Bandeira, I. D. (2020). Prevalence of depression, anxiety, and substance-related disorders in parents of children with cerebral palsy: a systematic review. *Developmental Medicine & Child Neurology*, *62*(2), 163-168. https://doi.org/10.1111/dmcn.14321

Bedewy, D., & Gabriel, A. (2015). Examining perceptions of academic stress and its sources among university students: The Perception of Academic Stress Scale. *Health psychology open*, *2*(2), 2055102915596714. https://doi.org/10.1177/2055102915596714

Bermingham, L., Meehan, K. B., Wong, P., & Trub, L. (2021). Attachment anxiety and solitude in the age of smartphones. *Psychoanalytic Psychology, 38*(4), 311–318. https://doi.org/10.1037/pap0000372

Bhat, A. (2023). *Top 15 demographic survey questions for questionnaire*. QuestionPro.https://www.questionpro.com/blog/demographic-survey-questions/

Chen, I., Lee, Z., Dong, X., Gamble, J. H., & Feng, H. (2020). The Influence of Parenting Style and Time Management Tendency on Internet Gaming Disorder among Adolescents. International Journal of Environmental *Journal of Environmental Research and Public Health, 17*(23), 9120. https://doi.org/10.3390/ijerph17239120

Cheng, Y., Zhang, L., Wang, F., Zhang, P., Ye, B., & Liang, Y. (2017). The effects of family structure and function on mental health during China's transition: a cross-sectional analysis. *BMC family practice*, *18*, 1-8. https://doi.org/10.1186/s12875-017-0630-4

Chu, H., Yang, Y., Zhou, J., Wang, W., Qiu, X., Yang, X., Qiao, Z., Song, X., & Zhao, E. (2021a). Social support and suicide risk among Chinese university students: a mental health perspective. *Frontiers in Public Health*, *9*. https://doi.org/10.3389/fpubh.2021.566993

Chu, X., Ji, S., Wang, X., Yu, J., Chen, Y., & Lei, L. (2021b). Peer phubbing and social networking site addiction: the mediating role of social anxiety and the moderating role of family financial difficulty. *Frontiers in Psychology, 12*. https://doi.org/10.3389/fpsyg.2021.670065

Coyne, S. M., Rogers, A. A., Zurcher, J. D., Stockdale, L., & Booth, M. (2020). Does time spent using social media impact mental health? An eight year longitudinal study. *Computers in Human Behavior*, *104*, 106160. https://doi.org/10.1016/j.chb.2019.106160

Crosswell, A. D., & Lockwood, K. G. (2020). Best practices for stress measurement: How to measure psychological stress in health research. *Health psychology open*, *7*(2), 2055102920933072. https://doi.org/10.1177/2055102920933072

Desk, T. L. (2024). The impact of parenting styles on adolescent mental health. *The Times of India*. https://timesofindia.indiatimes.com/life-style/parenting/moments/the-impact-of-parenting-styles-on-adolescent-mental-health/articleshow/109043830.cms

Dixit, S., Bhatia, S., & Houshou, S. (2022). Internet addiction and anxiety amid COVID-19 in India: Role of socioeconomic status and locus of control. *International Journal of Research in Social Science*, *12*(4), 91-102. https://doi.org/10.5281/zenodo.6409086

Dwi Utari, I. N., & Hamid, A. Y. S. (2021). Academic stress in adolescent students of an islamic-based school: The correlation with parenting style and spirituality. *Journal of public health research*, *10*(1_suppl), jphr-2021. https://doi.org/10.4081/jphr.2021.2330

Freeman, A., Tyrovolas, S., Koyanagi, A., Chatterji, S., Leonardi, M., Ayuso-Mateos, J. L., ... & Haro, J. M. (2016). The role of socio-economic status in depression: results from the COURAGE (aging survey in Europe). *BMC public health*, *16*, 1-8. https://doi.org/10.1186/s12889-016-3638-0

Gan, X., Li, H., Li, M., Yu, C., Jin, X., Zhu, C., & Liu, Y. (2021). Parenting styles, depressive symptoms, and problematic online game use in Adolescents: A Developmental cascades model. *Frontiers in Public Health*, *9*. https://doi.org/10.3389/fpubh.2021.710667

Hamza, C. A., Ewing, L., Heath, N. L., & Goldstein, A. L. (2021). When social isolation is nothing new: A longitudinal study on psychological distress during COVID-19 among university students with and without preexisting mental health concerns. *Canadian Psychology/Psychologie canadienne*, *62*(1), 20. https://psycnet.apa.org/doi/10.1037/cap0000255

He, Z., Ming-De, L., Ma, X., & Liu, C. (2020). Family Socioeconomic Status and social media addiction in female college students: The mediating role of impulsiveness and inhibitory control. *Journal of Genetic Psychology/the Journal of Genetic Psychology*, *182*(1), 60–74. https://doi.org/10.1080/00221325.2020.1853027

Herath, H. M. W. M. (2020). Impact of TikTok on university students' academic achievements–a case study of UvaWellasa University of Sri Lanka. *The American Journal of Humanities and Social Sciences Research*, *3*(6), 141-146. https://www.theajhssr.com/V-3_6/THEAJHSSR_T03601410146.pdf

Hicks, S. (2021). *Financial Stress in Undergraduate Students* (Doctoral dissertation, Walden University).

Ilyas, U., & Khan, S. D. (2023). Role of Parenting and Psychosocial Correlates Contributing to Social Anxiety in Asian Adolescents: A Systematic Review. *Innovations in Clinical Neuroscience*, *20*(7-9), 30.

Irfan, M., Shahudin, F., Hooper, V. J., Akram, W., & Abdul Ghani, R. B. (2021). The psychological impact of coronavirus on university students and its socio-economic determinants in Malaysia. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, *58*, 00469580211056217. https://doi.org/10.1177/00469580211056217

Islam, M. I. U., Lone, U. M., Bhat, I. A., Aamir, S., & Salau, A. O. (2024). Open Network for Digital Commerce in India: Past, Present, and Future. *Open Information Science*, *8*(1), 20240005. https://doi.org/10.1515/opis-2024-0005

Keya, F. D., Rahman, M., Nur, M., & Pasa, K. (2020). Parenting and child's (five years to eighteen years) digital game addiction: A qualitative study in North-Western part of Bangladesh. *Computers in Human Behavior Reports*, *2*, 100031. https://doi.org/10.1016/j.chbr.2020.100031

Kolhar, M., Kazi, R. N., & Alameen, A. (2021). Effect of social media use on learning, social interactions, and sleep duration among university students. *Al-Mi'galaẗ Al-sa'udiyaẗ Lī-ulum Al-ḥayaẗ*, *28*(4), 2216–2222. https://doi.org/10.1016/j.sjbs.2021.01.010

Lebni, J. Y., Toghroli, R., Abbas, J., NeJhaddadgar, N., Salahshoor, M. R., Mansourian, M., ... & Ziapour, A. (2020). A study of internet addiction and its effects on mental health: A study based on Iranian University Students. *Journal of Education and Health Promotion*, *9*(1), 205. https://doi.org/10.4103/jehp.jehp_148_20

Loechner, J., Sfärlea, A., Starman, K., Oort, F., Thomsen, L. A., Schulte-Koerne, G., & Platt, B. (2020). Risk of depression in the offspring of parents with depression: The role of emotion regulation, cognitive style, parenting and life events. *Child Psychiatry & Human Development*, *51*, 294-309. https://doi.org/10.1007/s10578-019-00930-4

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour research and therapy*, *33*(3), 335-343. https://doi.org/10.1016/0005-7967(94)00075-U

Mac-Ginty, S., Lira, D., Lillo, I., Moraga, E., Caceres, C., Araya, R., & Prina, M. (2024). Association Between Socioeconomic Position and Depression, Anxiety and Eating Disorders in University Students: A Systematic Review. *Adolescent Research Review*, 1-17. https://doi.org/10.1007/s40894-023-00230-y

Maftei, A., & Pătrăușanu, A. (2023). Digital reflections: narcissism, stress, social media addiction, and nomophobia. *Journal of Psychology, 158*(2), 147–160. https://doi.org/10.1080/00223980.2023.2256453

Nizam, N. N. R. A., Azaman, N. F. M., & Ibrahim, M. S. (2021). The relationship between the impact of social media and students' academic performance. *The Asian Journal of Professional & Business Studies*, *2*(2). https://doi.org/10.61688/ajpbs.v2i2.57

Peltz, J. S., Bodenlos, J. S., Kingery, J. N., & Rogge, R. D. (2020). The role of financial strain in college students' work hours, sleep, and mental health. *Journal of American College Health, 69*(6), 577–584. https://doi.org/10.1080/07448481.2019.1705306

Ponnet, K., Wouters, E., Goedemé, T., & Mortelmans, D. (2013). Family financial stress, parenting and problem behavior in adolescents. *Journal of Family Issues, 37*(4), 574–597. https://doi.org/10.1177/0192513x13514

Qiu, Y., & Ye, P. (2023). The influence of family socio-economic status on learning engagement of college students majoring in preschool education: The mediating role of parental autonomy support and the moderating effect of psychological capital. *Frontiers in psychology*, *13*, 1081608. https://doi.org/10.3389/fpsyg.2022.1081608

Richardson, T., Elliott, P., Roberts, R., & Jansen, M. (2017). A longitudinal study of financial difficulties and mental health in a national sample of British undergraduate students. *Community Mental Health Journal*, *53*(3), 344–352. https://doi.org/10.1007/s10597-016-0052-0

Şengönül, T. (2022). A review of the relationship between parental involvement and children's academic achievement and the role of family socioeconomic status in this relationship. *Pegem Journal of Education and Instruction*, *12*(2), 32-57. https://doi.org/10.47750/pegegog.12.02.04

Sheldon, E., Simmonds-Buckley, M., Bone, C., Mascarenhas, T. S., Chan, N., WiNcott, M., Gleeson, H., Sow, K., Hind, D., & Barkham, M. (2021). Prevalence and risk factors for mental health problems in university undergraduate students: A systematic review with meta-analysis. *Journal of Affective Disorders*, *287*, 282–292. https://doi.org/10.1016/j.jad.2021.03.054

Ting, T. T., Lee, S. C., Wee, M. C., & Chaw, J. K. (2024). Romantic relationship patterns, detailed covariates, and impacts on education: A study on young adults in the US using ICPSR dataset. *Global Social Welfare, 11*(2), 151-163. https://doi.org/10.1007/s40609-022-00254-7

World Health Organization. (2024). Mental health of adolescents. https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health

Yi, A. C. Y., Ying, T. K., Yee, S. J., Chin, W. M., & Tin, T. T. (2022). InPath Forum: A Real-Time Learning Analytics and Performance Ranking Forum System. *IEEE Access, 10*, 128536-128542. https://doi.org/10.1109/ACCESS.2022.3227430

Zhang, X., Gao, F., Kang, Z., Zhou, H., Zhang, J., Li, J., ... & Liu, B. (2022). Perceived academic stress and depression: the mediation role of mobile phone addiction and sleep quality. *Frontiers in Public Health*, *10*, 760387. https://doi.org/10.3389/fpubh.2022.760387

Zhang, Y., & Li, H. (2019). The relationship between parenting styles and mental health of college students: the mediating role of resilience. *International Journal of Frontiers in Medicine*, *1*(1), 47-54. https://doi.org/10.25236/IJFM.2019.010109

Jam, F. A., Singh, S. K. G., Ng, B., & Aziz, N. (2018). The interactive effect of uncertainty avoidance cultural values and leadership styles on open service innovation: A look at malaysian healthcare sector. *International Journal of Business and Administrative Studies*, *4*(5), 208-223.

Romi, I. M. (2024). Digital Skills Measures for Digitalization-An Aggregative Analysis. *Pakistan Journal of Life and Social Sciences (PJLSS)*, *22*(1), 960-971.

7.0 APPENDIX A: QUESTIONNAIRE DETAILS

Table A1

Section	Questionnaire item	Options
Demographic	Gender	Male/Female
	Age	18;19;20;21;22;23;24;>=25
	Race	Malay;Chinese;Indian
	Year Of Study	Year 1; Year 2; Year 3; Year 4;
	CGPA	2.00-2.50;2.51-2.74;2.75-3.50;3.51-3.74; 3.75-4.00;
Academic Stress Scale		
Am confident that I will be a successful student.		Strongly disagree
Am confident that I will be successful in my future career.		1
I can make academic decisions easily.		2
The time allocated to classes and academic work is enough.		3
I have enough time to relax after work.		4
My teachers are critical of my academic performance.		5
I fear failing courses this year.		Strongly agree
I think that my worry about examinations is a weakness of character.		
Teachers have unrealistic expectations of me.		
The size of the curriculum (workload) is excessive.		
I believe that the amount of work assignments is too much.		
Am unable to catch up if getting behind the work.		
The unrealistic expectations of my parents stresses me out.		
Competition with my peers for grades is quite intense.		
The examination questions are usually difficult.		
Examination time is short to complete the answers.		
Examination times are very stressful for me.		
Even if I pass my exams, I am worried about getting a job.		
Financial Stress		
Worried about having enough money for regular expenses.		Strongly disagree
Worried about paying for college.		1
Carried a balance on a credit card.		2
Choose not to participate in an activity due to lack of money.		3
Choose not to purchase required academic materials (books, course packs,		4
supplies) due to their cost.		5
Investigated transferring to a less expensive college.		Strongly agree
Investigated withdrawing from college due to costs.		
Investigated working more hours to pay for costs		
Investigated increasing your borrowing to pay for costs.		
Family		
How many people are currently living in your house?		1;2;3;4;5;6 or more
What is your parents' current marital status?		Married;Divorced;Separated;Widowed
What is your mother's current occupation?		Full-time employment;Part-time employment;Unemployed;Self-employed; Home-maker;Retired;Housewife
What is your mother's highest education level?		Lower than SPM; SPM; Foundation; Diploma;Bachelor's degree; Master's degree; Higher than Master's degree

What is your father's current occupation?	Full-time employment;Part-time employment;Unemployed; Self-employed; Home-maker;Retired
What is your father's highest education level?	Lower than SPM; SPM; Foundation; Diploma;Bachelor's degree;Master's degree;Higher than Master's degree;
How much is your parents' monthly total income (household income)?	<RM10,000;RM8,000-RM9,999; RM6,000-RM7,999;RM4,000-RM5,999 ; RM2,000-RM3,999;>RM2,000
What types of parenting styles do you think your parents gave you?	Authoritative Parenting; Permissive Parenting; Neglectful Parenting; Authoritarian Parenting
General Stress	
I am always worried when faced with situations beyond my control.	Strongly disagree
I am always afraid of my future.	1
I fear I may not attain my goals.	2
I am always unconfident about my ability to handle personal problems.	3
I am not willing to eat or loss my appetite when I face problems.	4
I have trouble relaxing.	5
	Strongly agree
Depression	
I couldn't seem to experience any positive feeling at all	Strongly disagree
I found it difficult to work up the initiative to do things	1
I felt that I had nothing to look forward to	2
I felt down-hearted and blue	3
I was unable to become enthusiastic about anything	4
I felt I wasn't worth much as a person	5
I felt that life was meaningless	Strongly agree
Anxiety	
I never feel quite sure of myself when I am speaking in the class	Strongly disagree
I don't worry about making mistakes in the class	1
I tremble when I know that I'm going to be called on in the class	2
It frightens me when I don't understand what the lecturer is saying in the class	3
It wouldn't bother me at all to take the class	4
During the class, I find myself thinking about things that have nothing to do	5
with the course.	Strongly agree
I keep thinking that the other students' are better than I am	
I am usually at ease during tests in the class	
I start to panic when I have to do the presentation without preparation	
In language class, I can get so nervous If forget things I know	
I get upset when I don't understand what the lecturer is correcting.	
Even if I am well prepared for language class, I feel anxious about it	
I often feel like not going to my class	
I am afraid that my lecturer is ready to correct every mistake I make.	
I feel confident when I speak in my class.	
Digital culture dependency	
I often neglect my schoolwork because of my usage of:	Social Media: SA; A; N; D; SD
I often find life to be boring without:	Smartphone: SA; A; N; D; SD
I find it difficult to sleep after using:	Online shopping: SA; A; N; D; SD

I will be upset if I have to cut down the amount of time I spend using:	Online game: SA; A; N; D; SD
My school grades have deteriorated/decreased because of my usage of:	
I often cancel meeting my friends because I am occupied with:	
I cannot pass my days without:	
I think about _____ all the time	
I use _____ in order to change my mood.	
I feel that I have to use _____ more & more to obtain same satisfaction as before.	
I have decided to use _____ less but have not been able to do so.	
I feel bad if (for some reason) I have to stop from using:	
My daily maximum hours I spend on:	<1hr;1-2hrs;3-4hrs;4-5hrs;>5hrs