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Determinants of Academic Stress of Elementary School Students in Digital Learning and the Role of Counseling

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Abstract
This research seeks to identify the key determinants of academic stress experienced by elementary students within the framework of digital-based education. At the elementary school level, especially for higher grade students, digital learning often poses new challenges that are not only technical, but also emotional. Intensive use of digital media can lead to overload learning and device dependence, which in turn increases academic stress. A quantitative method with a confirmatory framework was employed in this research to validate a conceptual model that includes overload learning, nomophobia, and academic self-efficacy as key variables. Data were obtained from 290 elementary school students in West Sumatra Province through an online questionnaire developed from previously valid instruments. The analysis was conducted using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique. Findings indicated that both overload learning and nomophobia were positively and significantly associated with academic stress. On the other hand, academic self-efficacy contributed to lowering stress and served as a moderating factor in the relationships among the variables. The findings suggest that elementary school students need adequate psychosocial support, and guidance and counseling services in elementary schools are crucial in helping them manage academic stress in today's digital era.

Keywords: *academic stress, elementary school, digital learning, nomophobia, self-efficacy*

Introduction

Elementary school is a crucial phase in children's development, cognitively, emotionally and socially. Ideally, elementary school students experience learning with curiosity, a spirit of exploration and warm support from their surroundings (Herwin & Nurhayati, 2021; Singh & Manjaly, 2022). They should have learning experiences that are fun, challenging and age-appropriate, and free from excessive pressure (Gómez-Baya et al., 2021; Parker et al., 2022; Wu et al., 2021). In this context, the primary education process should form the foundations of character and critical thinking skills, not be a source of stress or mental burden that is not commensurate with their developmental capacity (Fajari & Chumdari, 2021). Children at this level need a balance between

academic demands and emotional support to grow as psychologically healthy individuals (Kaspar & Massey, 2023; Zhou et al., 2021).

However, the reality is not always that ideal. The phenomenon in the field shows that elementary school students, especially those in the high grades (grades 4 to 6), begin to show signs of academic pressure (Chyu & Chen, 2022). This pressure can arise from demands for high learning outcomes, number-based assessments, tiered exams, and expectations of parents and teachers that often exceed the limits of children's cognitive and emotional abilities (Sood et al., 2024). This situation makes some students experience symptoms of academic stress such as easy fatigue, anxiety, difficulty concentrating, decreased interest in learning, and even physical complaints without clear medical causes (Putra et al., 2022; Putra & Ahmad, 2020; Putra & Ardi, 2024). Several studies have shown that academic stress has begun to be experienced by children in elementary school, not just by adolescents or university students as is commonly assumed (af Ursin et al., 2021; Goodman et al., 2012; Radwan et al., 2021; Sood et al., 2024).

This pressure becomes more complex with the integration of digital media in the learning process (Si & Lee, 2023). The use of digital devices such as laptops, tablets and smartphones, which were originally intended to support learning, has become a double-edged sword. On the one hand, technology does open up wide and flexible access to learning. But on the other hand, children become more easily distracted, exposed to content that is not age-appropriate, and experience digital fatigue. This condition has led to the birth of new phenomena in children's education, such as nomophobia (no-mobile-phone-phobia) and overload learning, where children feel anxious when not connected to digital devices or feel overwhelmed by too many online tasks (Çevik-Durmaz et al., 2021; Nurhidayah Nurhidayah, 2024).

Research conducted by Sohn et al. (2025) revealed that elementary school-aged children showed increased anxiety and stress when interacting with online tasks for long periods of time. This is exacerbated by the lack of digital literacy in teachers and parents in managing the use of these devices. Another study by Kazem et al. (2021) found that nomophobia is not only a phenomenon of adolescents, but has also begun to infect children, especially when digital-based learning processes are intensively carried out since the COVID-19 pandemic. Meanwhile, overload learning is a new issue that has not been widely explored, even though it can cause significant cognitive fatigue in children (Górna et al., 2022).

In this context, elementary school students' academic stress is thought to be influenced by several important factors, including overload learning, nomophobia, and academic self-efficacy. Overload learning refers to a condition in which students receive a learning load that exceeds their mental and time capacity, both in terms of the amount of material, screen duration, and task difficulty (Dawie et al., 2022; Kleinkorres et al., 2023). While nomophobia refers to excessive anxiety when unable to use digital devices, which in the context of online learning can exacerbate academic stress (Humood et al., 2021; Tuco et al., 2023; Vagka et al., 2023). On the other hand, academic self-efficacy, which is a student's belief in their ability to complete academic tasks, is thought to play an important role as a protective factor (Falma & Putra, 2025; Honicke & Broadbent, 2016; Yendi et al., 2025). Children with high self-efficacy tend to be more confident, better able to manage tasks, and less prone to panic when facing learning difficulties.

Interestingly, academic self-efficacy is also thought to not only play a direct role on academic stress, but also moderate the relationship between overload learning and nomophobia on academic stress (Albikawi & Abuadas, 2025; Balkis, 2011). In other words, students with high self-efficacy may remain capable of managing stress even if they receive a heavy learning load or experience digital anxiety. In contrast, students with low self-efficacy may experience more severe stress despite relatively similar pressure conditions. This conjecture prompts the need for further research that looks at not only the direct effect, but also the interactive relationship between these variables.

Based on the background and theoretical studies that have been described, a conceptual model of the relationship between variables in this study can be described as listed in Figure 1 below.

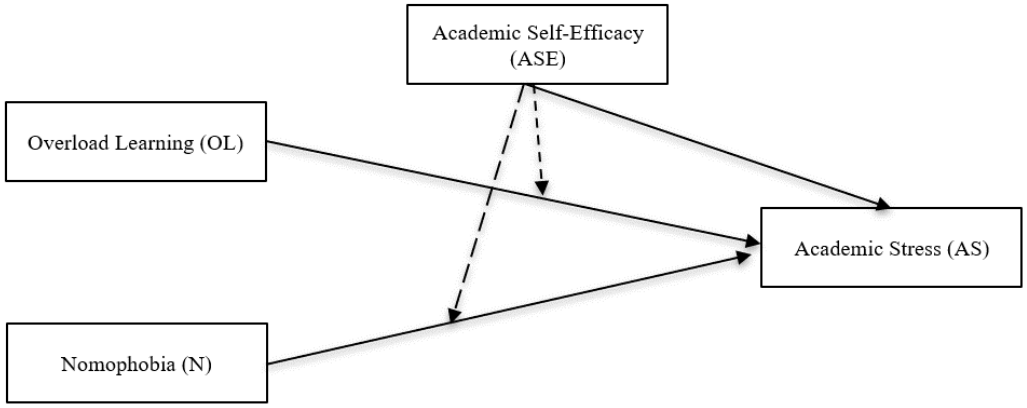

Figure 1 Conceptual Model

Based on the model, the hypotheses proposed in this study are as follows:

H1: Overload learning is positively and significantly correlated with academic stress.
H2: Nomophobia is positively and significantly correlated with academic stress.
H3: Academic self-efficacy is negatively and significantly correlated with academic stress.
H4: Academic self-efficacy significantly moderates the correlation between overload learning and academic stress.
H5: Academic self-efficacy significantly moderates the correlation between nomophobia and academic stress.

In facing these challenges, the role of counseling services in elementary schools becomes very important. Counseling is not only an intervention when students are in trouble, but also an integral part of a healthy education system. School counselors can help students recognize and manage emotions, develop healthy coping skills, and build academic confidence. In this digital era, counseling services must also transform, not only relying on conventional approaches, but also utilizing digital media adaptively. Moreover, with the implementation of the deep learning approach in Indonesia, students are required to be more independent, think critically, and be active. Without adequate assistance, these demands can actually exacerbate students' academic pressure. Therefore, collaboration between teachers, parents, and counselors is necessary to create a healthy and supportive learning ecosystem for children.

Research Methods

Design

This study employs a quantitative approach with a confirmatory design, intended to evaluate a previously developed conceptual model grounded in theoretical frameworks and earlier research findings. This design was chosen because this study does not focus on exploring new relationships, but rather wants to confirm whether the relationship between variables such as overload learning, nomophobia, and academic self-efficacy to academic stress actually occurs in the context of elementary school students who use digital media in their learning. The conceptual model tested was the result of synthesizing the literature review and developing logical hypotheses.

Participants

This study involved participants from among elementary school students in West Sumatra Province. A total of 290 students participated, consisting of grade IV to grade VI students from various districts and cities. The decision to focus on students in grades IV to VI was based on their developmental readiness and increased academic

exposure. Compared to lower-grade students, learners in upper elementary levels are more likely to engage with structured digital learning platforms, complete assignments independently, and face higher academic demands such as standardized assessments and more complex cognitive tasks. These characteristics align with the assumptions discussed in the introduction, where academic stress, digital overload, and nomophobia were reported to be more prevalent among older primary students (Darma et al., 2024). Moreover, this age group is developmentally more capable of understanding and responding to Likert-scale items, ensuring more valid and reliable self-reported data.

The selection of participants was carried out using purposive sampling technique, which is a sampling method based on consideration of certain characteristics that are relevant to the research focus (Etikan, Musa, & Alkassim, 2016). In this case, the criteria used include students who are actively undergoing digital media-based learning at school, and have experience using digital devices regularly in their daily learning activities. To get a more comprehensive picture of the participants' characteristics, a number of relevant demographic data were also collected. Table 1 presents the demographic distribution of the respondents.

Table 1 Demographics of Research Respondents

Demographics	Number (N)	Percentage (%)
Gender		
Male	141	48,6%
Female	149	51,4%
School Type		
Public	203	70,0%
Private	87	30,0%
Grades		
Class IV	89	30,7%
Class V	106	36,6%
Class VI	95	32,7%
Region of Residence		
Urban	175	60,3%
Rural	115	39,7%
Internet Access at Home		
Available	247	85,2%
None	43	14,8%
Daily Screen Time		
≤ 2 hours	72	24,8%
3-5 hours	156	53,8%
> 5 hours	62	21,4%
Primary Device for Learning		
Smartphone	167	57,6%
Laptop/Computer	79	27,2%
Tablet	44	15,2%

Demographics	Number (N)	Percentage (%)
Home Learning Companion		
Parents	123	42,4%
Older siblings/relatives	69	23,8%
Self-study	98	33,8%

The table above provides an overview of the characteristics of the participants in this study. The composition of respondents was fairly balanced in terms of gender and grade level, with the majority coming from public schools and living in urban areas. Most students have internet access at home and spend between three and five hours of screen time per day on learning activities. Smartphones are the most commonly used device, and patterns of learning assistance at home also vary, ranging from being accompanied by parents to independent learning. This information provides important context for understanding primary school students' digital learning experiences, which can be directly related to their levels of academic stress.

Research Instruments

The instruments in this study were developed by adapting a number of measurement tools that have been tested in various international studies, then adapted to the context of elementary school students in Indonesia. Each variable is measured based on indicators that have been standardized in the literature, then translated into statements that can be understood by children aged 9-12 years. The instrument utilizes a 5-point Likert scale with response options: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, and 5 = Always. Prior to use, all items went through a content validation process by education and psychology experts, as well as a readability test on a small number of elementary school students. The following table presents an outline of the instruments used in this study:

Table 2 Research Instrument Framework

Variable	Indicator	Number of Items	Instrument Development Reference
Academic Stress	Physical symptoms (AS1)	1	Ang & Huan (2006)
	Emotional symptoms (AS2)	1	
	Cognitive symptoms (AS3)	1	
Academic Self-Efficacy	Perceived academic ability (ASE1)	1	Bandura (2006)
	Ability to complete tasks (ASE2)	1	
	Confidence in facing difficulties (ASE3)	1	

Variable	Indicator	Number of Items	Instrument Development Reference
Nomophobia	Anxiety when without cell phone (N1)	1	Yildirim & Correia (2015)
	Digital dependence (N2)	1	
	Emotional disturbance due to not being online (N3)	1	
	Distracted mind without connection (N4)	1	
Overload Learning	Too many tasks (OL1)	1	Kember (2004)
	Excessive study time (OL2)	1	
	Difficulty organizing many materials at once (OL3)	1	

Although each indicator is only represented by one item, the preparation of the statement is done carefully so that it is still able to represent the psychological aspects being measured. The selection of references for each variable refers to credible scientific sources that have been widely used in research in the field of educational psychology and learning technology. The response scale was made simple and familiar to elementary students so that they are able to choose answers reflectively according to their own experiences during digital media-based learning.

Data Collection

The data in this research were gathered through an online procedure, using Google Forms as the primary tool for distributing the questionnaire. This process was carried out from November to December 2024, taking into account the academic calendar of elementary schools as well as the technical readiness of schools and parents. Because the research subjects are elementary school-aged children, the approach used in data collection is collaborative and full of assistance.

The researcher collaborated with a number of class and subject teachers in several primary schools in West Sumatra Province. They acted as the main liaisons who helped convey information to parents or guardians about the purpose and objectives of this research. Before the instruments were distributed, the school sent a notification letter to parents to ask for permission while introducing the content and benefits of the research. At the beginning of the Google Form section, there was also an informed consent section that had to be read and approved by parents or guardians before students filled out the instrument.

During the completion process, primary school students were directly accompanied by teachers, parents or guardians to ensure that they understood each

statement in the questionnaire and did not experience any confusion in choosing answers. This assistance was not directed to influence students' answers, but merely to help them understand the meaning of words and technical instructions. This approach is important given the limited age and varying reading ability of primary school students.

After students completed the completion, the data was automatically recorded in the Google Form system and exported to spreadsheet format for further analysis. The researcher ensured that all data collected was kept confidential and only used for academic purposes according to the principles of research ethics.

Data Analysis

The collected data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with the help of SmartPLS software. This technique was chosen because it is able to handle complex models with a moderate number of samples and latent variables that are reflective in nature. In accordance with the guidelines from Hair et al. (2020), PLS-SEM analysis is carried out through two main stages, namely outer model and inner model analysis.

The outer model assessment focuses on evaluating the validity and reliability of the constructs by examining indicators such as loading factors, Average Variance Extracted (AVE), Composite Reliability, and Cronbach's Alpha. In contrast, the inner model analysis examines the structural relationships among latent variables, including the evaluation of path coefficients, t-statistics, p-values, and the R-square of endogenous variables. The following table presents the results of the model feasibility test based on the model fit criteria.

Table 3 Model Fit

	Saturated model	**Estimated model**
SRMR	0.055	0.100
d_ULS	0.278	0.909
d_G	2.431	n/a
Chi-square	2407.612	2272.562
NFI	0.738	0.752

Based on the SRMR value which is below 0.10 and the NFI value which is close to 0.80, the model used can be said to meet the model feasibility criteria (Sarstedt et al., 2021). Thus, the conceptual model is suitable for further analysis at the outer and inner model evaluation stages.

Results and Discussion

Outer Model Evaluation

The first stage of data analysis involves assessing the measurement or outer model to confirm that each indicator accurately and consistently represents the intended construct. This analysis is very important because the quality of the outer model will determine the validity of the evaluation results of the overall structural model.

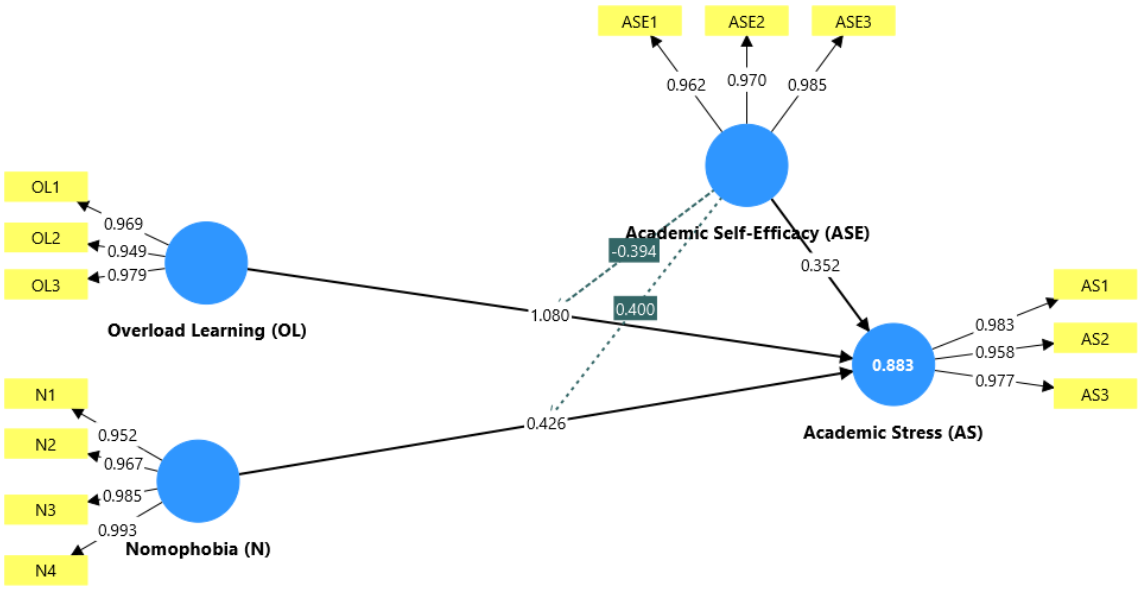

Figure 2 Conceptual Model Evaluation

Figure 2 shows the visualization of the conceptual model structure that has been tested using the PLS-SEM approach. It can be seen that each construct - namely academic stress, academic self-efficacy, nomophobia, and overload learning - has indicators that are statistically strongly interrelated, as indicated by the very high loading factor values. This figure provides an overview that the contribution of each item to the construct is very strong and worthy of further testing.

To confirm this, the loading factor values of each indicator are presented numerically in the following table.

Table 4 Convergent Validity Test Results (Loading Factor Value)

	Academic Self-Efficacy (ASE)	Academic Stress (AS)	Nomophobia (N)	Overload Learning (OL)
AS1		0.983		
AS2		0.958		
AS3		0.977		
ASE1	0.962			
ASE2	0.970			

	Academic Self-Efficacy (ASE)	Academic Stress (AS)	Nomophobia (N)	Overload Learning (OL)
ASE3	0.985			
N1			0.952	
N2			0.967	
N3			0.985	
N4			0.993	
OL1				0.969
OL2				0.949
OL3				0.979

The convergent validity test results show that all indicators have a loading factor value above 0.90, far exceeding the recommended minimum threshold of 0.70 (Hair et al., 2019). This shows that each item is consistently and significantly able to explain the construct it represents. Thus, no indicators should be eliminated, and the measurement model is declared to have very strong convergent validity. This provides a solid basis for proceeding to the structural analysis.

To ensure that different constructs do not overlap or measure the same concept, a discriminant validity test was conducted using the Fornell-Larcker approach.

Table 5 Discriminant Validity Test Results (Fornell-Lacker Criteria)

	Academic Self-Efficacy (ASE)	Academic Stress (AS)	Nomophobia (N)	Overload Learning (OL)
Academic Self-Efficacy (ASE)	0.972			
Academic Stress (AS)	-0.838	0.973		
Nomophobia (N)	-0.899	0.770	0.975	
Overload Learning (OL)	-0.721	0.875	0.626	0.966

The bolded diagonal value in the table above is the square root of the AVE value, and must be higher than the correlation between other constructs to meet the discriminant validity criteria (Hair et al., 2019). The results show that each construct has a value greater than the correlation with other constructs, which means that each construct does stand as a unique conceptual entity. For example, the AVE value of academic self-efficacy (0.972) is greater than its correlation with academic stress (-0.838), nomophobia (-0.899), and overload learning (-0.721). This proves that the constructs in the model do not overlap conceptually and meet the discriminant requirements.

To ensure internal consistency in each construct, reliability testing is carried out through Cronbach's Alpha, composite reliability, and AVE.

Table 6 Reliability Test Results

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Academic Self-Efficacy (ASE)	0.971	0.971	0.981	0.946
Academic Stress (AS)	0.971	0.973	0.981	0.946
Nomophobia (N)	0.982	0.988	0.987	0.950
Overload Learning (OL)	0.964	0.973	0.977	0.933

The Cronbach's Alpha and composite reliability values of all constructs are well above the recommended minimum limit of 0.70 (Sarstedt et al., 2021). This indicates that the indicators in each construct have very high internal consistency. In addition, the AVE value above 0.90 also indicates that more than 90% of the indicator variance can be explained by the construct. Overall, these results show that the instruments in this study are not only valid but also highly reliable.

Inner Model Evaluation

After the measurement model (outer model) is declared valid and reliable, the next step is to evaluate the inner model to test the strength and direction of the relationship between latent variables in the model. This test also determines whether the proposed hypothesis is statistically acceptable.

Table 7 Hypothesis Test Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
Overload Learning (OL) -> Academic Stress (AS)	1.080	1.074	0.054	20.017	0.000	H1 Accepted
Nomophobia (N) -> Academic Stress (AS)	0.426	0.426	0.048	8.843	0.000	H2 Accepted
Academic Self-Efficacy (ASE) -> Academic Stress (AS)	0.352	0.350	0.065	5.370	0.000	H3 Accepted
Academic Self-Efficacy (ASE) x Overload Learning (OL) -> Academic Stress (AS)	-0.394	-0.390	0.053	7.468	0.000	H4 Accepted

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
Academic Self-Efficacy (ASE) x Nomophobia (N) -> Academic Stress (AS)	0.400	0.398	0.059	6.795	0.000	H5 Accepted

The results of hypothesis testing show that all relationships between variables in the model are statistically significant, with p-values below 0.05 and t-statistics above 1.96 (Sarstedt et al., 2021). Overload learning, nomophobia, and academic self-efficacy have a significant effect on academic stress. In addition, academic self-efficacy is also proven to moderate the relationship between overload learning and nomophobia on academic stress. All hypotheses (H1 to H5) were accepted.

The end of the inner model evaluation is characterized by seeing how much the model can explain the variance of the endogenous constructs through the R-square value.

Table 8 R-Square Value

	R-square	R-square adjusted
Academic Stress (AS)	0.883	0.880

The R-square value of 0.883 indicates that 88.3% of the variability in academic stress can be explained by the three predictor variables: overload learning, nomophobia, and academic self-efficacy. This is a very high value according to the classification of Sarstedt et al. (2021), which states that an R-square ≥ 0.75 is considered strong. Thus, this structural model has a very high predictive power and is reliable in explaining the academic stress of elementary school students who use digital media.

The first hypothesis (H1) stated that overload learning is positively and significantly correlated with academic stress. This finding proved to be true. Elementary school students who experience overload learning tend to show high levels of stress (Hussain et al., 2021; Koudela-Hamila et al., 2022). This can be understood because at primary school age, children's time management abilities, independent learning skills, and cognitive endurance are still in the developmental stage. When children are faced with many tasks in a small amount of time, especially through digital media, they become overwhelmed. This finding reinforces Kember's (2004) study which states that

academic overload without control can have a detrimental impact on students' learning wellbeing. This condition is even more vulnerable when learning is done digitally, which often makes the boundaries between study time and break time blurred.

The second hypothesis (H2) states that nomophobia has a positive and significant relationship with academic stress. The results of this study support this hypothesis. Elementary school students who feel anxious when they cannot access digital devices are more prone to learning stress (Kubrusly et al., 2021). Nomophobia, which was originally known as a phenomenon in adolescents and adults, is now starting to be seen in children, especially those who learn through online media (Kamil et al., 2024). This anxiety is not only because they lose access to entertainment, but also because they feel they cannot complete school assignments without devices. Kuscu's et al. (2021) research shows that nomophobia affects children's emotional and behavioral aspects, and in the context of digital learning, this has a direct impact on the academic pressure they feel.

The third hypothesis (H3) states that academic self-efficacy has a negative and significant relationship with academic stress (Putra & Ahmad, 2020). The results of this study indicate that students with high academic self-efficacy tend to have lower stress levels. This is very logical. When children believe in their own ability to understand material, complete tasks, and face learning challenges, the pressure they feel becomes lighter. This belief acts as a psychological shield in the face of external pressures. This finding is in line with Bandura's theory of the role of self-efficacy in dealing with situational pressure, and is reinforced by Putra and Ardi research (2024) which shows that children's self-efficacy plays an important role in reducing academic anxiety levels.

The fourth hypothesis (H4) states that academic self-efficacy moderates the relationship between overload learning and academic stress. The results of the analysis support this hypothesis. This means that the effect of overload learning on academic stress will be different depending on the students' high and low self-efficacy. Students with high self-efficacy can still manage heavy learning loads without experiencing excessive psychological pressure (Kristensen et al., 2023). In contrast, students with low self-efficacy will be more prone to stress even though the task load is not much different. This suggests that self-efficacy not only plays a direct role, but also strengthens children's resilience in dealing with stressful situations.

The fifth hypothesis (H5) states that academic self-efficacy also moderates the relationship between nomophobia and academic stress. The results of this study

confirmed this. However, interestingly, the moderation that occurs here does not reduce, but actually strengthens the influence of nomophobia on academic stress. In other words, students with high self-efficacy can actually feel more stressed when access to digital media is disrupted (Abdul Rahman et al., 2025; Kamil et al., 2024; Safaria et al., 2025). This could be because they are used to relying on digital devices to learn independently, and when that access is lost, their confidence turns into higher anxiety. These findings suggest that self-efficacy is not always protective, but rather contextualized, depending on the type of pressure students face.

Given all these findings, it is clear that academic stress in primary school students is not a trivial issue. Learning load, digital anxiety and self-efficacy beliefs are interrelated and form a complex learning experience for children. In this situation, the role of guidance and counseling services in primary schools becomes very important. In many primary schools in Indonesia, guidance and counseling has not been optimally facilitated. In fact, children need space to get to know themselves, manage stress, and learn how to deal with pressure in a healthy way.

School counselors, where available, have a central role in helping students understand their learning load, develop self-regulation skills and form healthy self-efficacy. But in many elementary schools, this role is often taken over by the class teacher. Thus, basic counseling training for primary school teachers is urgently needed. In addition, collaboration with parents is also important, especially in accompanying children to study at home, limiting screen time, and helping children develop independent ways of learning without pressure.

Conclusion

This study is not without limitations. The cross-sectional design restricts causal interpretation, and the use of online questionnaires may have introduced response biases due to varying levels of adult assistance. Additionally, each sub-construct was measured using single-item indicators, which may limit measurement depth and reliability. Future research could address these issues through longitudinal or mixed-method approaches, including qualitative investigations into the nomophobia moderation effect and experimental studies evaluating the effectiveness of school-based counseling interventions for digital learning-related stress.

Reference

Abdul Rahman, S., Pathania, B., & Govind Shirodker, A. (2025). Preliminary Exploration of Parental Perspectives on Navigating Nomophobia and Screentime for Young Children. *International Journal of Innovative Science and Research Technology*, *10*(6), 788–798. https://doi.org/10.38124/ijisrt/25jun658

af Ursin, P., Järvinen, T., & Pihlaja, P. (2021). The Role of Academic Buoyancy and Social Support in Mediating Associations Between Academic Stress and School Engagement in Finnish Primary School Children. *Scandinavian Journal of Educational Research*, *65*(4), 661–675. https://doi.org/10.1080/00313831.2020.1739135

Albikawi, Z. F., & Abuadas, M. (2025). Unveiling the Influence of Nomophobia, Emotional Regulation, Self-Efficacy and Loneliness on Anxiety Among Nursing Students: A Structural Equation Modeling Approach. *Psychiatry International*, *6*(2), 39. https://doi.org/10.3390/psychiatryint6020039

Balkis, M. (2011). Academic efficacy as a mediator and moderator variable in the relationship between academic procrastination and academic achievement. *Egitim Arastirmalari Eurasian Journal of Educational Research*, *45*, 1–16. http://www.scopus.com/inward/record.url?eid=2-s2.0-84866135407&partnerID=40&md5=face22e212a107462a37801b21ef93bd

Çevik-Durmaz, Y., Yalçinkaya-Önder, E., & Timur, S. (2021). Preservice teachers' nomophobia levels, sense of loneliness and adjustment to college life. *Perspectives in Psychiatric Care*, *57*(3), 1052–1072. https://doi.org/10.1111/ppc.12657

Chyu, E. P. Y., & Chen, J. K. (2022). Associations Between Academic Stress, Mental Distress, Academic Self-Disclosure to Parents and School Engagement in Hong Kong. *Frontiers in Psychiatry*, *13*, 911530. https://doi.org/10.3389/fpsyt.2022.911530

Darma, A., Sumitro, K. R., & Sudarmo, S. M. (2024). *Relationship between Lifestyle during the Coronavirus Disease 2019 Pandemic and Functional Constipation in Elementary School Children*.

Dawie, F. J., Masrek, M. N., & Baharuddin, M. F. (2022). Systematic Literature Review: Information overload of online distance learners. *Environment-Behaviour Proceedings Journal*, *7*(SI10), 153–159. https://doi.org/10.21834/ebpj.v7isi10.4107

Fajari, S. L. E. W., & Chumdari. (2021). Critical Thinking Skills And Their Impacts On Elementary School Students. *Malaysian Journal of Learning and Instruction*, *18*(2), 161–187. https://doi.org/10.32890/mjli2021.18.2.6

Falma, F. O., & Putra, A. H. (2025). Correlation between academic self-efficacy and digital competence: an empirical study on first year students. *Journal of Counseling, Education and Society*, *6*(1), 1. https://doi.org/10.29210/08jces540300

Gómez-Baya, D., García-Moro, F. J., Muñoz-Silva, A., & Martín-Romero, N. (2021). School satisfaction and happiness in 10-year-old children from seven european countries. *Children*, *8*(5), 370. https://doi.org/10.3390/children8050370

Goodman, R. D., Miller, M. D., & West-Olatunji, C. A. (2012). Traumatic stress, socioeconomic status, and academic achievement among primary school

students. *Psychological Trauma: Theory, Research, Practice, and Policy*, *4*(3), 252–259. https://doi.org/10.1037/a0024912

Górna, S., Pazdro-Zastawny, K., Basiak-Rasala, A., Krajewska, J., Kolator, M., Lesiuk-Krajewska, A., Kozlowska-Panek, K., Cichy, I., Rokita, A., & Zatoński, T. (2022). Assessment of the elementary school students' schoolbag weight in the urban environment in Poland: A cross-sectional study carried out as a part of the "Lightweight Schoolbag" and "Let's Get the Kids Moving" projects. *Work*, *73*(1), 121–129. https://doi.org/10.3233/WOR-210788

Hair, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, *109*, 101–110. https://doi.org/10.1016/j.jbusres.2019.11.069

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Herwin, & Nurhayati, R. (2021). Measuring students' curiosity character using confirmatory factor analysis. *European Journal of Educational Research*, *10*(2), 773–783. https://doi.org/10.12973/EU-JER.10.2.773

Honicke, T., & Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematic review. *Educational Research Review*, *17*, 63–84. https://doi.org/10.1016/j.edurev.2015.11.002

Humood, A., Altooq, N., Altamimi, A., Almoosawi, H., Alzafiri, M., Bragazzi, N. L., Husni, M., & Jahrami, H. (2021). The Prevalence of Nomophobia by Population and by Research Tool: A Systematic Review, Meta-Analysis, and Meta-Regression. *Psych*, *3*(2), 249–258. https://doi.org/10.3390/psych3020019

Hussain, W., Nadeem, M. T., Kaynat, H., Shahzad, A., & Urooj, N. (2021). Correlation between Organizational Stress and Workload Stress Effect the Academic Performance of Elementary School Teachers. *Ilkogretim Online*, *20*(2), 1165–1170.

Kamil, N., Narjis, K., & Wahyuni, S. (2024). Nomophobia syndrome and its impact on morale and behavior change in early childhood. *Gender Equality: International Journal of Child and Gender Studies*, *10*(2), 235. https://doi.org/10.22373/equality.v10i2.23665

Kaspar, K. L., & Massey, S. L. (2023). Implementing Social-Emotional Learning in the Elementary Classroom. *Early Childhood Education Journal*, *51*(4), 641–650. https://doi.org/10.1007/s10643-022-01324-3

Kazem, A. M., Emam, M. M., Alrajhi, M. N., Aldhafri, S. S., AlBarashdi, H. S., & Al-Rashdi, B. A. (2021). Nomophobia in Late Childhood and Early Adolescence: the Development and Validation of a New Interactive Electronic Nomophobia Test. *Trends in Psychology*, *29*(3), 543–562. https://doi.org/10.1007/s43076-021-00068-0

Kember, D. (2004). Interpreting student workload and the factors which shape students' perceptions of their workload. *Studies in Higher Education*, *29*(2), 165–184. https://doi.org/10.1080/0307507042000190778

Kleinkorres, R., Stang-Rabrig, J., & McElvany, N. (2023). Comparing parental and school

pressure in terms of their relations with students' well-being. *Learning and Individual Differences*, *104*, 102288. https://doi.org/10.1016/j.lindif.2023.102288

Koudela-Hamila, S., Santangelo, P. S., Ebner-Priemer, U. W., & Schlotz, W. (2022). Under Which Circumstances Does Academic Workload Lead to Stress?: Explaining Intraindividual Differences by Using the Cortisol-Awakening Response as a Moderator. *Journal of Psychophysiology*, *36*(3), 188–197. https://doi.org/10.1027/0269-8803/a000293

Kristensen, S. M., Larsen, T. M. B., Urke, H. B., & Danielsen, A. G. (2023). Academic Stress, Academic Self-efficacy, and Psychological Distress: A Moderated Mediation of Within-person Effects. *Journal of Youth and Adolescence*, *52*(7), 1512–1529. https://doi.org/10.1007/s10964-023-01770-1

Kubrusly, M., Silva, P. G. de B., Vasconcelos, G. V. de, Leite, E. D. L. G., Santos, P. de A., & Rocha, H. A. L. (2021). Nomophobia among medical students and its association with depression, anxiety, stress and academic performance. *Revista Brasileira de Educação Médica*, *45*(3), e162–e162. https://doi.org/10.1590/1981-5271v45.3-20200493.ing

Kuscu, T. D., Gumustas, F., Rodopman Arman, A., & Goksu, M. (2021). The relationship between nomophobia and psychiatric symptoms in adolescents. *International Journal of Psychiatry in Clinical Practice*, *25*(1), 56–61. https://doi.org/10.1080/13651501.2020.1819334

Nurhidayah Nurhidayah. (2024). Kinetic Sand Games To Overcome The Dependence Of Gadget Dependence On Children In Elementary School Age. *Proceeding of The International Conference of Inovation, Science, Technology, Education, Children, and Health*, *4*(2), 111–117. https://doi.org/10.62951/icistech.v4i2.91

Parker, R., Thomsen, B. S., & Berry, A. (2022). Learning Through Play at School – A Framework for Policy and Practice. *Frontiers in Education*, *7*, 751801. https://doi.org/10.3389/feduc.2022.751801

Putra, A. H., & Ahmad, R. (2020). Improving Academic Self Efficacy in Reducing First Year Student Academic Stress. *Jurnal Neo Konseling*, *2*(2). https://doi.org/10.24036/00282kons2020

Putra, A. H., & Ardi, Z. (2024). Determinant Factors of Academic Stress: A Study of First-Year University Students in Indonesia. *Jurnal Kajian Bimbingan Dan Konseling*, *9*(1), 55–67. https://doi.org/10.17977/um001v9i12024p55-67

Putra, A. H., Netrawati, N., & Karneli, Y. (2022). Konseling Kelompok Rational Emotive Behavior Therapy: Sebuah Alternatif dalam Mengatasi Stres Akademik pada Mahasiswa. *SCHOULID: Indonesian Journal of School Counseling*, *7*(1), 1. https://doi.org/10.23916/081205011

Radwan, E., Radwan, A., Radwan, W., & Pandey, D. (2021). Prevalence of depression, anxiety and stress during the COVID-19 pandemic: a cross-sectional study among Palestinian students (10–18 years). *BMC Psychology*, *9*(1), 1–12. https://doi.org/10.1186/s40359-021-00688-2

Safaria, T., Arini, D. P., Saputra, N. E., & Suyono, H. (2025). Pathways from Parent–Child Relationships to Adolescent Sleep Problems: Examining Problematic Smartphone Use and Nomophobia as Mediators. *Journal of Technology in*

Behavioral Science, 1–11. https://doi.org/10.1007/s41347-025-00510-5

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial Least Squares Structural Equation Modeling. In *Handbook of Market Research*. Springer Nature. https://doi.org/10.1007/978-3-319-57413-4_15

Si, E., & Lee, G. (2023). Moderating Effects of Digital Citizenship on Problematic Digital Media Use and Children's Happiness: A Cross-Sectional Study. *Journal of School Health*, *93*(6), 485–493. https://doi.org/10.1111/josh.13275

Singh, A., & Manjaly, J. A. (2022). Using Curiosity to Improve Learning Outcomes in Schools. *SAGE Open*, *12*(1), 21582440211069390–21582440211069390. https://doi.org/10.1177/21582440211069392

Sohn, S., Jeong, J., & Park, H. (2025). Service Providers' Perceptions of Psychological, Emotional, and Behavioral Issues Among Children and Adolescents During COVID-19 in South Korea. *Asian Social Work and Policy Review*, *19*(1), e70001–e70001. https://doi.org/10.1111/aswp.70001

Sood, A., Sharma, D., Sharma, M., & Dey, R. (2024). Prevalence and repercussions of stress and mental health issues on primary and middle school students: a bibliometric analysis. *Frontiers in Psychiatry*, *15*, 1369605. https://doi.org/10.3389/fpsyt.2024.1369605

Tuco, K. G., Castro-Diaz, S. D., Soriano-Moreno, D. R., & Benites-Zapata, V. A. (2023). Prevalence of Nomophobia in University Students: A Systematic Review and Meta-Analysis. *Healthcare Informatics Research*, *29*(1), 40–53. https://doi.org/10.4258/hir.2023.29.1.40

Vagka, E., Gnardellis, C., Lagiou, A., & Notara, V. (2023). Prevalence and Factors Related to Nomophobia: Arising Issues among Young Adults. *European Journal of Investigation in Health, Psychology and Education*, *13*(8), 1467–1476. https://doi.org/10.3390/ejihpe13080107

Wu, R., Huebner, E. S., Zhou, J., & Tian, L. (2021). Relations among positivity, positive affect in school, and learning flow in elementary school students: A longitudinal mediation model. *British Journal of Educational Psychology*, *91*(4), 1310–1332. https://doi.org/10.1111/bjep.12418

Yendi, F. M., Firman, F., Syukur Ifdil Ifdil, Y., & Putra, A. H. (2025). Academic Self-Efficacy and Aspiration Goals Among Muslim High School Students: The Role of Problem-Solving and Self-Awareness. *Islamic Guidance and Counseling Journal*, *8*(2). https://doi.org/10.25217/0020258593400

Zhou, J., Huebner, E. S., & Tian, L. (2021). Co-developmental trajectories of psychological need satisfactions at school: Relations to mental health and academic functioning in Chinese elementary school students. *Learning and Instruction*, *74*, 101465. https://doi.org/10.1016/j.learninstruc.2021.101465