

## The Factors Influencing Academic Burnout among Vietnamese Students: A Case Study at FPT University

Hong Minh Ngoc Tran<sup>1</sup>, Tran Quang Khue Doan<sup>2</sup>, Do Hoang Lam Nguyen<sup>3</sup>, Truong Thuy Khanh Le<sup>4</sup>, Mai Linh Lu<sup>5</sup>, Duc Thanh Mai<sup>6</sup>

### Abstract

*Currently, Burnout is considered one of the most prevalent psychological disorder symptoms in the era of Industry 4.0. Burnout encompasses both emotional and mental exhaustion, significantly impacting daily life and work performance. Academic Burnout, particularly among university students, is a common condition that can contribute to decreased academic efficacy. Despite previous research on this issue, the study population of university students has been relatively limited. The purpose of this study is to explore the factors that may cause Burnout in Vietnamese students and the effects experienced by Vietnamese students when facing academic burnout. The primary data was collected from 140 students studying from the first to fourth year at FPT University - a prominent university in Vietnam with campuses in all three regions of the country. The findings of this study indicate that the factors influencing academic Burnout in students include Stress-Anxiety and Learning online duration. Based on the obtained research results, universities and student counseling units can implement supportive measures to help Vietnamese students effectively overcome academic burnout.*

**Keywords:** Academic burnout, Student, Vietnam, FPT university.

### 1. INTRODUCTION

Burnout is a well-known concept in both theory and practice that has garnered attention from researchers for approximately 40 years. Freudenberger (1975) and Maslach (1976) were the pioneering researchers in this field, positing that burnout arises from the interaction between service providers and recipients in professions that involve service provision and care (Maslach et al., 2001). Given that studying exhibits certain characteristics of a profession and students encounter pressures in fulfilling academic obligations, the concept has also been extended to undergraduate and graduate students (Schaufeli et al., 2002). Burnout is a chronic psychological stress reaction experienced by workers due to emotional exhaustion, feelings of cynicism, and a sense of detachment from work (Maslach & Leiter, 2001). In another study, burnout is more likely to occur when there is a significant mismatch between the nature of the job and the characteristics of the individual performing the job; factors such as work overload, lack of control, lack of motivation, lack of community, value conflicts, and lack of fairness are key causes of burnout (Maslach & Leiter, 1997). Maslach and Jackson (1981) also investigated that

---

<sup>1</sup> Faculty of Business Administration, FPT University, Can Tho Campus, Vietnam, Email: Ngocthm@fe.edu.vn

<sup>2</sup> Faculty of Business Administration, FPT University, Can Tho Campus, Vietnam. Email: Khuedtqcs150370@fpt.edu.vn

<sup>3</sup> Faculty of Business Administration, FPT University, Can Tho Campus, Vietnam. Email: Lamndhcs150276@fpt.edu.vn

<sup>4</sup> Faculty of Business Administration, FPT University, Can Tho Campus, Vietnam. Email: Khanhlttcs150360@fpt.edu.vn

<sup>5</sup> Faculty of Business Administration, FPT University, Can Tho Campus, Vietnam. Email: Linhlmcs150652@fpt.edu.vn

<sup>6</sup> Faculty of Business Administration, FPT University, Can Tho Campus, Vietnam. Email: Thanhmdcs150184@fpt.edu.vn

"burnout syndrome consists of emotional exhaustion, depersonalization, and reduced personal accomplishment." When symptoms of burnout are present, individuals themselves may exhibit increased emotional expressions. According to Tracy Bowder (2022), burnout is a global issue. The World Health Organization (2019) stated that burnout has been included in the 11th Revision of the International Classification of Diseases (ICD-11) as an occupational phenomenon and is not classified as a medical condition. Burnout is also prevalent in the learning environment, particularly among university students (Meier & Schmeck, 1985). Burnout can be caused by various factors, and there are multiple methods for prevention and treatment.

In general, academic burnout is defined as the feeling of exhaustion resulting from study-related pressures (exhaustion), pessimism towards academic assignments (cynicism), and a perceived lack of competence as a student (academic efficacy) (Dyrbye et al., 2014). Academic burnout significantly contributes to long-term psychological distress among college students, yet this phenomenon remains somewhat elusive to students, thus limiting their understanding and available treatment options. In this study, the authors aim to consolidate theoretical foundations on burnout and explore the factors influencing academic burnout to provide valuable empirical evidence that aids students, educational institutions, and relevant organizations in gaining a better understanding of academic burnout and implementing timely support measures for students.

## 2. THEORETICAL BACKGROUND

### 2.1. Burnout

Maslach and Jackson (1981) identified three dimensions of human service workers' burnout: emotional exhaustion, depersonalization and reduced personal accomplishment. The Maslach Burnout Inventory-Human Services Survey (MBI-HSS; Maslach and Jackson, 1996) was thus developed and validated to measure these dimensions in human service workers. Later, burnout was revealed not to be specific to human service workers and was refined to be applied to the other workers. Because of this change in scope, symptoms' definitions evolved, as well as their assessment, through a new version of the Maslach Burnout Inventory (MBI). This scale, the MBI-General Survey (MBI-GS, Schaufeli et al., 1996), assesses the three dimensions of workers' burnout: exhaustion, cynicism and a lack of professional efficacy. Exhaustion is not only defined by emotional exhaustion as it was the case for human services workers but takes also into account physical exhaustion (Maslach et al., 2001). Cynicism represents a cold and detached attitude toward work as a whole, not toward recipients as it was the case for the corresponding depersonalization dimension of the MBI-HSS. A lack of professional efficacy is defined by feelings of being less effective in one's work, not in one's work with recipients as it was the case for the corresponding personal accomplishment dimension of the MBI-HSS.

In this study, the research team adopted the MBI-GS measurement scale from the study conducted by Schaufeli et al. (1996). Accordingly, academic burnout among Vietnamese students was assessed through three dimensions, namely Academic Efficacy, Cynicism, and Exhaustion.

### 2.2. Factors affecting Burnout

#### 2.2.1. Internal factors

##### Stress

Stress is a psychological conflict resulting from external risks surpassing an individual's capacity to cope or posing a consistent threat to available resources (Jang, 2020). Work contributes to both satisfaction and socio-economic status, but it also significantly contributes to stress. Managing job-related stress is particularly challenging due to limited

opportunities to modify the work environment (Iacovides et al., 2003). Loneliness and burnout in learning negatively impact students' academic experience and stress perception (Stoliker et al., 2015). Interestingly, sources of distressful stress are stronger predictors of well-being than stress sources that induce positive eustress states (Chris Gibbons, 2010). Understanding these dynamics enables researchers to explore the intricate relationship between work, stress, and well-being, and develop strategies to mitigate the negative effects of job-related stress.

#### Anxiety

Anxiety is a significant factor associated with burnout (Sun et al., 2012). It is a common psychological condition characterized by apprehension, dread, and autonomic symptoms in response to stress (Cole, 2014). While anxiety can be a normal and protective reaction, persistent and severe anxiety may indicate an anxiety disorder. In educational settings, anxiety is often present, particularly in situations such as test anxiety (Fernandez-Castillo and Caurcel, 2019; Brodersen, 2017; Von der Embse et al., 2018). Students experiencing anxiety tend to have higher levels of stress and burnout as anxiety amplifies worries across different situations (Andriyani, 2017). Burnout is consistently found to be high among mental health service professionals, indicating a link between burnout and negative conditions, including anxiety (unknown author, 2017). Although the exact relationship between anxiety and burnout is not fully understood, there is a strong correlation between emotional exhaustion, a dimension of burnout, and the presence of anxiety.

#### Self-efficacy

Burnout and self-efficacy are rarely considered in understanding implementation efforts and barriers (Autumn Jillson, 2020). Low self-efficacy beliefs are associated with higher burnout levels in students (Filiz Bilge et al., 2014). Self-efficacy acts as a moderator of burnout, with high self-efficacy scores reducing the likelihood of developing the syndrome. However, there is some controversy surrounding this relationship, as some results suggest a weak connection between the two variables (Smeds et al., 2019). The significance of self-efficacy in students' learning process is undeniable. It enhances their comfort levels during examinations and influences their well-being, including burnout and engagement (Edgar Bresó, Wilmar B. Schaufeli & Marisa Salanova, 2010). Lack of efficacy appears to play a role in the burnout process as an antecedent rather than being an integral element of the syndrome (Chemiss, 1993; Salanova et al., 2003). Students exercise human agency through intentionality, self-regulation, and self-motivation, relying on self-efficacy to determine their capabilities, functioning, and life choices (Bandura, 2001).

#### 2.2.2. External factors

##### Learning online duration

The duration of online learning is a significant factor contributing to academic burnout. Prolonged periods of online learning can impact students' concentration, participation, and ability to learn effectively, leading to burnout (Mu & Guo, 2022; Walter et al., 2022). Regulations and extended online study time can result in physical and mental fatigue, further exacerbating academic burnout (Bui et al., 2022). Challenges such as limited interaction, high task demands, and difficulty understanding online materials also contribute to negative psychological effects, including burnout (Febriani et al., 2021). However, the relationship between online learning duration and burnout is influenced by individual circumstances and other factors (Toubasi et al., 2023). It is crucial to consider these factors to understand the impact of online learning duration on academic burnout.

### Work environment

The work environment encompasses various factors that can influence daily productivity (Herrity, 2023). This includes the conditions of when, where, and how individuals work, as well as their relationships with lecturers, classmates, and others that can affect their psychological well-being. Interpersonal interactions within the organization or work environment have been linked to the development of burnout (Maslach and Leiter, 1998). Research suggests that individuals working in a more relaxed environment are less likely to experience burnout (Nantsupawat et al., 2017). Conversely, a supportive work environment has been found to reduce burnout and enhance academic efficiency (Schlak et al., 2021). It has been demonstrated that stress in the work environment can make it uncomfortable, thus increasing the likelihood of academic burnout (Lorenz et al., 2010). Based on these studies, it can be inferred that the work environment has a negative impact on academic burnout.

### Social support

Social support, consisting of family, friends, neighbours, and community members, provides psychological, physical, and financial help in times of need (NCI Dictionary of Cancer Terms, n.d.). In this study, we adopt Zimet et al.'s (1988) definition of perceived social support, emphasising the emotional experience students gain through understanding and support from various sources. Previous research indicates that social support predicts student burnout (Hui-Jen Yang and Cheng Kiang Farn, 2005). Different sources of social support function uniquely in reducing academic burnout (Eileen Berlin Ray and Katherine I. Miller, 1994). Implementing social support programs for students can improve endurance and reduce academic burnout (Hae-Ok Kim and Insook Lee, 2022; Boram Kim et al., 2018). Furthermore, it has been observed that received social support is not associated with academic burnout, whereas perceived social support consistently shows a negative correlation (Changqin Huang et al., 2023). This suggests that the impact of social support on student burnout varies depending on the conceptualization of social support and other related factors.

### 2.3 Hypothesis and conceptual framework

Building upon the inherited findings from previous empirical studies, the research team proposes the following research hypotheses:

#### The impact of Internal factors on Academic burnout

- H1.1: Stress has a positive impact on Cynicism
- H1.2: Anxiety has a positive impact on Cynicism
- H1.3: Self-efficacy has a negative impact on Cynicism
- H1.4: Stress has a positive impact on Exhaustion
- H1.5: Anxiety has a positive impact on Exhaustion
- H1.6: Self-efficacy has a negative impact on Exhaustion
- H1.7: Stress has a negative impact on Academic Efficacy
- H1.8: Anxiety has a negative impact on Academic Efficacy
- H1.9: Self-efficacy has a positive impact on Academic Efficacy

#### The impact of External factors on Academic burnout

- H2.1: Learning online duration has a positive impact on Cynicism
- H2.2: Work environment has a negative impact on Cynicism
- H2.3: Social support has a negative impact on Cynicism

H2.4: Learning online duration has a positive impact on Exhaustion

H2.5: Work environment has a negative impact on Exhaustion

H2.6: Social support has a negative impact on Exhaustion

H2.7: Learning online duration has a negative impact on Academic Efficacy

H2.8: Work environment has a positive impact on Academic Efficacy

H2.9: Social support has a positive impact on Academic Efficacy

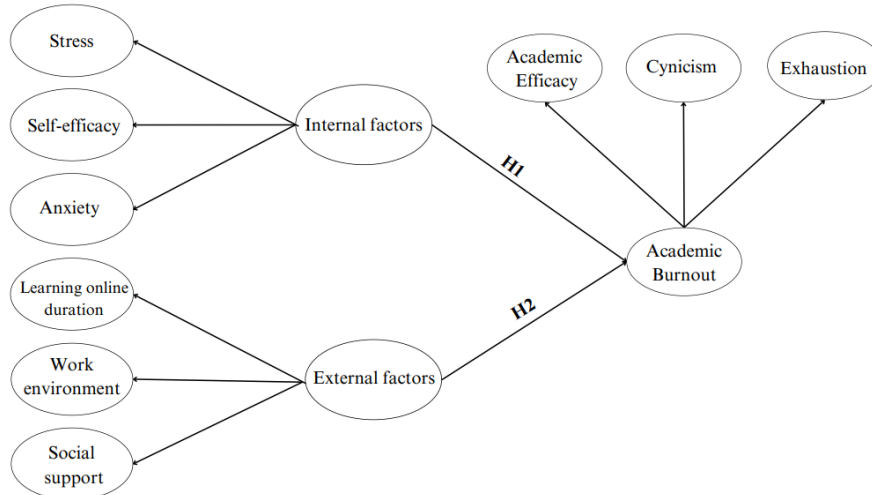


Figure 1: Conceptual Framework

### 3. METHODOLOGY

The MBI (Maslach Burnout Inventory) developed in 1981 by Maslach and Jackson measures burnout through three dimensions: emotional exhaustion, depersonalization, and personal accomplishment. The MBI has undergone adaptations, including the MBI-GS version for colleagues and university students, which was slightly modified for this study. Measuring instruments are commonly used by researchers and practitioners to assess and evaluate participants, collecting data on various characteristics.

In this study, the items were measured using a five-point Likert scale. Data collection was conducted through Google Forms, and participants accessed the online questionnaire through invitations sent to their FPT University student email addresses in May 2023.

Out of 167 survey participants, 140 valid survey results were included in the analysis after excluding surveys that did not meet the criteria. As burnout is a relatively new concept in the field of education, most participants had little or no experience with it. To enhance understanding, the authors provided concise summaries of the survey. The participants consisted of students ranging from freshmen to seniors and from various majors at FPT University. The flexibility of this data collection method allowed participants to answer the questions at their convenience without time constraints or pressure for immediate responses. This ensured that the responses were not influenced by the need for quick answers or social desirability bias (Conrad et al., 2017).

The descriptive statistics method was used to make statistics and describe the structure of the research sample. The Cronbach's alpha test was used to evaluate the reliability of the components in the research model, including Stress, Anxiety, Self-efficacy, Learning online Duration, Work environment, Social support, Cynicism, Exhaustion, Academic Efficacy. Exploratory Factor Analysis (EFA) was used to aggregate observed variables

into a new, more significant set of variables. Multiple linear regression model was used to analyze and explore the relationships between variables in the research model.

#### 4. RESEARCH RESULTS

Table 1. Demographic characteristics of students

Characteristic	Students	Percentage (%)
Sex		
Male	49	35.0
Female	91	65.0
Course		
Freshman	3	2.1
2 <sup>nd</sup> year student	56	4.0
3 <sup>rd</sup> year student	16	11.4
4 <sup>th</sup> year student	45	32.1
Final year student	20	14.3
Major		
Economy	102	72.9
Information Technology	27	19.3
Languages	11	7.8
Total	140	100.0

Based on Table 1, in terms of gender structure, the survey results show that the number of female students participating in the survey is more than the number of male students with 91 people, equivalent to 65%. Meanwhile, the number of male students participating in the survey was 49 people, equivalent to 35%. Out of the 140 participating students from FPT University, the largest group was 2nd year students, with the ratio of 40%; followed by 4th year students, accounting for 32.1%. Final year and 3rd year students had 20 and 16 participants, respectively, accounting for 14.3% and 11.4%. The smallest group was Freshman, with only 3 participants (2.1%), likely due to most of them having already graduated. Besides, among the 140 participants, the highest percentage belonged to students studying Economics with 102 students, accounting for 72.9%; followed by 27 information technology students, with the ratio 19.3%. The Language major had the fewest participants, with only 11 students (7.8%).

##### Test the Reliability of the Scale

The results of the reliability test in Table 2 show that the Cronbach's alpha coefficients of the factors are all greater than 0.6, and the inter-item correlation coefficients are all greater than 0.3. Therefore, the observed variables meet the necessary conditions to be included in the subsequent factor analysis.

Table 2. Results of Testing the Reliability

Factor	Cronbach's alpha	Corrected Item - Total Correlation
Internal factors		
Stress	0.677	0.407 – 0.504
Anxiety	0.695	0.410 – 0.573
Self-efficacy	0.806	0.614 – 0.691
External factors		
Learning online duration	0.684	0.427 – 0.543
Work environment	0.693	0.465 – 0.575
Social support	0.631	0.388 – 0.491
Academic Burnout		
Cynicism	0.821	0.580 – 0.696
Exhaustion	0.839	0.684 – 0.720
Academic efficacy	0.815	0.650 – 0.709

##### Exploratory Factor Analysis (EFA)

The results of the scale reliability test showed that all observed variables met the requirements and were included in the exploratory factor analysis. In this step, the Principal Components Analysis method and the Varimax rotation method were used for factor analysis.

The results of the factor analysis for Internal factors showed a KMO value of 0.781 (within the acceptable range of 0.5 to 1.0) and a significant p-value of 0.000, indicating that the factor analysis is suitable for the actual data. The total extracted variance of 57.775% indicates that 57.775% of the variability in the observed variables is explained by the factors. Additionally, the results also revealed a restructuring of factor grouping, where the six observed variables belonging to the Anxiety and Stress groups were combined into a single factor, named Stress-Anxiety. The Self-efficacy factor remained unchanged with its three constituent observed variables. Therefore, the Internal factors will include two factors: Stress-Anxiety and Self-efficacy.

Furthermore, the results of the factor analysis for External factors also indicated that the analysis was suitable for the actual data, with a KMO value of 0.762 and a significant p-value of 0.000. The total extracted variance of 53.720% indicates that 53.720% of the variability in the observed variables is explained by the factors. Additionally, the results revealed a restructuring of factor grouping, where the observed variables belonging to the Work environment and Social support groups were combined into a single factor, renamed as Support from the surrounding environment. The three observed variables of the Learning online duration factor remained unchanged. Therefore, after conducting exploratory factor analysis with survey data from FPT students, the results showed that External factors include two factors: Support from the surrounding environment and Learning online duration.

Lastly, the results of the exploratory factor analysis for the academic burnout factor revealed a KMO value of 0.908 and a significant p-value of 0.000, indicating that the analysis met the requirements. The total extracted variance of 57.679% indicates that the factor grouping can explain 57.679% of the data's variability. Additionally, the results showed that the three factors Cynicism, Exhaustion, and Academic Efficacy, which were initially theorized to be separate, were combined into a single factor. This suggests that Vietnamese students do not have a clear distinction between these three aspects of academic burnout. This finding is consistent with the limited knowledge and understanding of Vietnamese students, as they may not be able to differentiate and separate these three dimensions clearly. Therefore, academic burnout is formed as a single factor in this context.

After conducting exploratory factor analysis, the research hypotheses and model have been adjusted as follows:

H1: Stress-Anxiety has a positive impact on Academic Burnout.

H2: Self-efficacy has a negative impact on Academic Burnout.

H3: Learning online duration has a positive impact on Academic Burnout.

H4: Support from the surrounding environment has a negative impact on Academic Burnout.



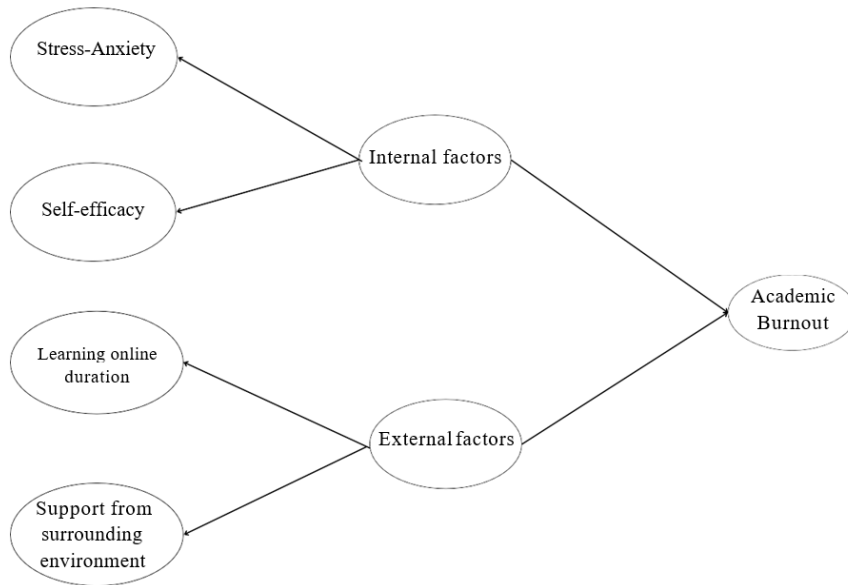


Figure 2. Adjusted conceptual framework

Multiple linear regression analysis

After obtaining new factors from exploratory factor analysis (EFA), the authors analyzed the correlation between internal and external factors to Academic Burnout by Multiple Linear Regression, the results are shown in Table 3.

Table 3. The results of the linear regression analysis

Factor	Hypothesis	Beta	P-value	VIF	Result
Stress-Anxiety	H1	0.399	0.000	1.361	Accepted
Self-efficacy	H2	0.136	0.102	1.355	Rejected
Learning online duration	H3	0.258	0.003	1.416	Accepted
Support from the surrounding environment	H4	-0.027	0.735	1.300	Rejected
Adjusted R <sup>2</sup>	0.302				
Durbin - Watson	1.996				
P-value	0.000				

H1: Stress-Anxiety has a positive impact on Academic Burnout

This hypothesis has been accepted (results in Table 3) because stress is a statistically significant variable (P value = 0.000) and has a positive correlation with the manifestations of Burnout (Beta = 0.399). Stress has a significant impact on Academic Burnout (Shu-Hui Lin et al., 2014). In the learning process, students often face many pressures and challenges. High levels of stress can appear when they feel pressured from completing academic tasks, facing tight deadlines, or scoring well in exams. When students experience uncontrolled levels of stress, feelings of stress and pressure can lead to mental and physical fatigue (Ingrid Kurz, 2003). Stress not only affects the health of students, but also has a negative impact on the learning process. When stress persists, students can become unmotivated, tired, and uninterested in learning. They may have difficulty concentrating, remembering information, and absorbing new knowledge. This leads to a chain of ineffective attempts and a sense of failure to meet learning requirements. This result is consistent with the study of Eunhee Hwang and Jeonghyun Kim (2022).

H2: Self-efficacy has a negative impact on Academic Burnout

This hypothesis has been rejected (results in Table 3). This is considered a new finding in our study. Often, the view that self-efficacy is negatively correlated with burnout is based on the hypothesis that when a person has a high degree of confidence in their abilities,



they are better able to cope with work pressure and stress. Confidence in one's abilities helps people feel in control and able to overcome challenges. This reduces the risk of burnout, a condition of mental fatigue and depression caused by feeling unable to cope with work and pressure. However, there is another statement that refutes this view and argues that self-efficacy is positively correlated with burnout. According to this view, when a person has a high level of confidence in their abilities, they tend to be overworked and under higher work pressure. They can impose goals that are too harsh and unattainable, leading to feelings of failure and burnout. High self-efficacy can also prevent people from knowing their limits and not getting enough rest (Rosemarie Kobau et al., 2003).

H3: Learning online duration has a positive impact on Academic Burnout.

This hypothesis has been accepted (results in Table 3) because e-learning duration is a statistically significant variable (P value = 0,003) and has a positive relationship with the symptoms of Burnout (Beta = 0,258). In view of this, as time spent studying online increases, so does the likelihood of burnout (Quyen Thi Thuc Bui et al., 2022). The main reason is the constant demands and pressure of learning in the online environment. A student or students may face a variety of stressors such as stressful academic schedules, pressure to complete assignments and projects, and feelings of loneliness and isolation due to lack of face-to-face communication with teachers and friends. Long hours of online learning can lead to mental fatigue, feelings of boredom and loss of interest in the learning process. Burnout can negatively affect academic performance, psychological well-being, and quality of life for students and faculty.

H4: Support from the surrounding environment has a negative impact on Academic Burnout

This hypothesis has been rejected (results in Table 3). The initial view is that, as ambient support decreases, the risk of burnout increases. Surrounding support includes help from family, friends, co-workers, and other sources of social support. However, this claim is also rejected and there is another view that support from the surrounding environment is positively correlated with burnout. According to this view, when there is too much support from the surrounding environment, the individual may feel too much pressure and responsibility. Excessive support can push people into overwork, a lack of work-life balance, and a feeling of not being able to meet the expectations of others. This is true with the research results of Quyen Thi Thuc Bui et al., (2022); contrary to the research results of Michael P. Leiter and Christina Maslach (1998); Sofia Salgado and Manuel Au-Yong-Oliveira (2021).

## **5. CONCLUSION**

Through quantitative research methods, this study has identified important internal and external factors that influence Academic Burnout among Vietnamese students. Based on the findings of this study, universities and psychological support organizations in Vietnam can develop measures and strategies to help students increase awareness of academic burnout and effectively overcome it, creating a conducive learning environment that promotes student well-being and academic success. Stress management programs and resources should be implemented to assist students in coping with the significant impact of stress on their academic development. Workshops, counseling services, and a nurturing learning environment can provide necessary support. Additionally, creating opportunities for students to develop and showcase their abilities, mentoring programs, and promoting a growth mindset can help alleviate burnout. With the increasing reliance on online education, it is important to recognize the potential negative impact of online learning duration on students' development. A balanced approach that ensures access to resources, technical support, and interactive learning experiences is crucial. Furthermore,

establishing a supportive community that encourages collaboration, peer support, and positive relationships among students can reduce feelings of isolation and enhance overall development. However, it is worth noting that academic burnout may differ among different groups of students based on their majors, learning environments, and living situations. Therefore, each institution and region, with their unique socio-cultural characteristics, should conduct in-depth research on academic burnout tailored to specific student groups.

## References

- Bandura, A. (2001). Social Cognitive Theory: An Agentic Perspective. *Annual Review Psychology*, 52, 1-26.
- Bilge, F., Tuzgöl Dost, M., & Çetin, B. (2014). Factors Affecting Burnout and School Engagement among High School Students: Study Habits, Self- Efficacy Beliefs, and Academic Success. *Educational Sciences: Theory & Practice*. <https://doi.org/10.12738/estp.2014.5.1727>
- Bresó, E., Schaufeli, W. B., & Salanova, M. (2010). Can a self-efficacy-based intervention decrease burnout, increase engagement, and enhance performance? A quasi-experimental study. *Higher Education*, 61(4), 339–355. <https://doi.org/10.1007/s10734-010-9334-6>
- Conrad, F. G., Couper, M. P., Tourangeau, R., & Zhang, C. (2017). Reducing speeding in web surveys by providing immediate feedback. *Survey Research Methods*, 11(1), 45–61. <https://doi.org/10.18148/srm/2017.v11i1.6304>
- Dyrbye, L.N., et al. (2014) Burnout among US Medical Students, Residents, and Early Career Physicians Relative to the General US Population. *Academic Medicine*, 89, 443-451.
- Dyrbye LN, West CP, Satele D, Boone S, Tan L, Sloan J, Shanafelt TD. Burnout among U.S. medical students, residents, and early career physicians relative to the general U.S. population. *Acad Med*. 2014 Mar;89(3):443-51. doi:10.1097/ACM.0000000000000134. PMID: 24448053.
- Fernández-Castillo, A., & Caurcel, M. J. (2015). State test-anxiety, selective attention and concentration in university students. *International journal of psychology : Journal international de psychologie*, 50(4), 265–271. <https://doi.org/10.1002/ijop.12092>
- Freudenberger, H. J. (1975). The staff burn-out syndrome in alternative institutions. *Psychotherapy: Theory, Research & Practice*, 12(1), 73–82. <https://doi.org/10.1037/h0086411>
- Gibbons, C., Dempster, M., & Moutray, M. (2010). Stress, coping and satisfaction in nursing students. *Journal of advanced nursing*, 67(3), 621–632. <https://doi.org/10.1111/j.1365-2648.2010.05495.x>
- Huang, C., Tu, Y., He, T., Han, Z., & Wu, X. (2023). Longitudinal exploration of online learning burnout: the role of social support and cognitive engagement. <https://doi.org/10.1007/s10212-023-00693-6>
- Iacovides, A., Fountoulakis, K. N., Kaprinis, S., & Kaprinis, G. (2003). The relationship between job stress, burnout and clinical depression. *Journal of affective disorders*, 75(3), 209–221. [https://doi.org/10.1016/s0165-0327\(02\)00101-5](https://doi.org/10.1016/s0165-0327(02)00101-5)
- Jang, Y., You, M., Lee, H. et al. Burnout and peritraumatic distress of healthcare workers in the COVID-19 pandemic. *BMC Public Health* 21, 2075 (2021).
- Janko, M. R., & Smeds, M. R. (2019). Burnout, depression, perceived stress, and self-efficacy in vascular surgery trainees. *Journal of Vascular Surgery*, 69(4), 1233–1242. <https://doi.org/10.1016/j.jvs.2018.07.034>
- Jillson, A. (2020). How Does Burnout and Self-Efficacy Affect Teacher’s Perspectives and Implementation Status of Evidence Based Behavior Management Practices? *ScholarWorks@UMass Amherst*. [https://scholarworks.umass.edu/dissertations\\_2/2033/](https://scholarworks.umass.edu/dissertations_2/2033/)
- Kim, B., Jee, S., Lee, J., An, S., & Lee, S. M. (2018). Relationships between social support and student burnout: A meta-analytic approach. *Stress and health : journal of the International Society for the Investigation of Stress*, 34(1), 127–134. <https://doi.org/10.1002/smi.2771>

- Kim, H., & Lee, I. (2022). The mediating effects of social support on the influencing relationship between grit and academic burnout of the nursing students. *Nursing Open*, 9(5). <https://doi.org/10.1002/nop2.1241>
- Kobau, R., & DiIorio, C. (2003). Epilepsy self-management: a comparison of self-efficacy and outcome expectancy for medication adherence and lifestyle behaviors among people with epilepsy. *Epilepsy & Behavior*, 4(3), 217–225. [https://doi.org/10.1016/s1525-5050\(03\)00057-x](https://doi.org/10.1016/s1525-5050(03)00057-x)
- Lin, S. H., & Huang, Y. (2013). Life stress and academic burnout. *Active Learning in Higher Education*, 15(1), 77–90. <https://doi.org/10.1177/1469787413514651>
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Maslach, C., & Leiter, M. P. (1997). *The Truth about Burnout How Organizations Cause Personal Stress and What to do about It*. San Francisco, CA Jossey-Bass. - References - Scientific Research Publishing. (n.d.). [www.scirp.org](http://www.scirp.org). Retrieved December 7, 2022, from [https://www.scirp.org/\(S\(i43dyn45teexjx455qlt3d2q\)\)/reference/ReferencesPapers.aspx?ReferenceID=1275978](https://www.scirp.org/(S(i43dyn45teexjx455qlt3d2q))/reference/ReferencesPapers.aspx?ReferenceID=1275978)
- Maslach, C., & Jackson, S.E. (1981) The Measurement of Experienced Burnout. *Journal of Organizational Behavior*, 2, 99-113.
- Meier, S. T., & Schmeck, R. R. (1985). The burned-out college student: A descriptive profile. *Journal of College Student Personnel*, 26(1), 63–69.
- Nantsupawat, A., Kunaviktikul, W., Nantsupawat, R., Wichaikhum, O. A., Thienthong, H., & Poghosyan, L. (2017). Effects of nurse work environment on job dissatisfaction, burnout, intention to leave. *International nursing review*, 64(1), 91–98. <https://doi.org/10.1111/inr.12342>
- Rahmati, Z. (2015). The Study of Academic Burnout in Students with High and Low Level of Self-efficacy. *Procedia - Social and Behavioral Sciences*, 171, 49–55. <https://doi.org/10.1016/j.sbspro.2015.01.087>
- Ray, E. B., & Miller, K. I. (1994). Social Support, Home/Work Stress, and Burnout: Who can Help? *The Journal of Applied Behavioral Science*, 30(3), 357–373. <https://doi.org/10.1177/0021886394303007>
- Schaufeli, W., Leiter, M., Maslach, C. and Jackson, S. (1996) Maslach Burnout Inventory-General Survey. In: Maslach, C., Jackson, S.E. and Leiter, M.P., Eds., *The Maslach Burnout Inventory Test Manual*, Consulting Psychologists Press, Palo Alto, CA.
- Schaufeli, W. B., Martínez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and Engagement in University Students: A Cross-National Study. *Journal of Cross-Cultural Psychology*, 33(5), 464–481. <https://doi.org/10.1177/0022022102033005003>
- Schlak, A. E., Aiken, L. H., Chittams, J., Poghosyan, L., & McHugh, M. (2021). Leveraging the Work Environment to Minimize the Negative Impact of Nurse Burnout on Patient Outcomes. *International Journal of Environmental Research and Public Health*, 18(2), 610. <https://doi.org/10.3390/ijerph18020610>
- Sun, W., Fu, J., Chang, Y., & Wang, L. (2012). Epidemiological study on risk factors for anxiety disorder among Chinese doctors. *Journal of occupational health*, 54(1), 1–8. <https://doi.org/10.1539/joh.11-0169-oa>
- Toubasi, A. A., Hasuneh, M. M., Al Karmi, J. S., Haddad, TA., & Kalbouneh, H. M. (2023). Burnout among university students during distance learning period due to the COVID-19 pandemic: A cross-sectional study at the University of Jordan. *The International Journal of Psychiatry in Medicine*, 58(3), 263–283. <https://doi.org/10.1177/00912174221107780>
- Von der Embse, N., Jester, D., Roy, D., & Post, J. (2018). Test anxiety effects, predictors, and correlates: A 30-year meta-analytic review. *Journal of affective disorders*, 227, 483–493. <https://doi.org/10.1016/j.jad.2017.11.048>
- Yang, H.-J., & Farn, C. K. (2005). An investigation the factors affecting MIS student burnout in technical-vocational college. *Computers in Human Behavior*, 21(6), 917–932. <https://doi.org/10.1016/j.chb.2004.03.001>