THE RELATIONSHIP BETWEEN THE PSYCHOLOGICAL RESILIENCE AND SCHOOL ENGAGEMENT OF THE STUDENTS: A PROPOSED INTERVENTION PROGRAM

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Abstract

This study was conducted to outline the state of psychological resilience and its relationship to group cohesion within education settings among college students.

Quantitative Method research is used in this study in the form of surveys composed of the Connor-Davidson Psychological Resilience Scale (CD-RISC-25)and Nelson Laird's school engagement scale. Semi-structured interview questionnaires were also used. This study surveyed over 400 Ho Chi Minh City students from various universities, including Hoa Sen University; Social Science and Humanities; Ho Chi Minh City Medicine and Pharmacy University; Pham Ngọc Thach University; Vang Lang University; HUTECH University; FPT Professional College, Economics and Law; and Ho Chi Minh City University of Finance and Marketing in Vietnam.

Research results show that among those surveyed, student resilience is at a high level, and there is a positive correlation between psychological resilience in students and school engagement. The interview results have shown that life challenges affect students' psychological resilience. New findings in this research serve as the foundation for the development of intervention programs to improve students' psychological resilience, thereby improving the learning environment.

Keywords: psychological resilience, student engagement, student

Background

Luthans et al. (2007) define resilience as an individual's ability to overcome difficult situations and recover quickly to an even higher initial mental state to achieve success. In the workplace environment, psychological resilience is a state of positive psychological recovery, overcoming difficulties, doubts, conflicts, failures, or even positive changes and increasing responsibility. Psychological resilience represents a strong belief in growth, an awareness of life in a meaningful way, and the development of flexibility to adapt to important changes (Luthans & Youssef, 2004). Another definition of psychological resilience is: "the individual's ability to bounce back from negative experiences and adapt to change and stress from life" (Tugade & Fredrickson, 2004). People with psychological resilience are those who have the ability to succeed and learn through experience in the face of difficulties (Masten, 2001). As an individual trait, psychological resilience is understood as "the ability to escape adversity, disappointment, and unhappiness" (Ledesma, 2014), which is a protective, compensating, or preventive factor available to individuals when they are dealing with trauma or negativity.

In job performance, psychological resilience is seen as a trajectory of growth evidenced by demonstrated competence in the face of adversity in the workplace, professional growth, and accumulated experience recruiting after those adversities (Caza & Milton, 2012). Luthans et al. (2015) assert that professional resilience combines both flexibility and adaptability, self-initiated, proactive development, continuous learning, and practical, flexible optimism. It provides great value for employees to build career resilience based on more objective judgment (Luthans, Youssef-Morgan, & Avolio, 2015).

The COVID pandemic that broke out in 2019 and spread around the world changed the lives of millions (Wang et al., 2020). This health crisis and resulting social isolation led to socio-economic, humanitarian, psycho-emotional, and educational impacts. On education and the emotional social impacts of social distancing, the United Nations Educational, Scientific and Cultural Organization (UNESCO) warns of a "global learning crisis in all levels of the education system", which includes universities (UNESCO, 2020). This learning crisis includes both a reduction in academic content and student development and an impact on mental and emotional well-being depending on students' and/or teachers' ability to cope with the challenges posed by the pandemic (Li et al., 2020).

Psychological resilience is considered an important aspect of mental health in education and helps students recover from life events and challenges (Howe, Smajdor, & Stöckl, 2012; Smith et al., 2008).

When dealing with school assignments, students rely on personal resources, such as academic resilience, which tend to drive all efforts to achieve their goals, improve their quality and level of dedication in daily activities, and heighten their level of participation over that of their peers (Romano, Angelini, Consiglio, & Fiorilli, 2021; Salmela-Aro & Upadyaya, 2014). Therefore, it is possible to see the meaning as well as the relationship between psychological resilience and school cohesion. However, current challenges such as academic stress, problems with friends and family, and mental health partly affect these two factors.

A large number of previous studies show that health education in the classroom can effectively promote resilience (Fenwick-Smith A. et al, 2018; Dray J., 2017; Feiss R., et al, 2019). The classroom and the school are the optimal environments to support resilience; students' school engagement is most effective when it fulfills the student's need for relatedness, competency, and autonomy (Niemiec & Ryan, 2009). High engagement predicts success in students' academic achievement (Vasalampi, Salmela-Aro, and Nurmi; 2009).

All the above-mentioned issues made us decide to conduct the project: "Research on the relationship between psychological resilience and school engagement in university students and building an intervention program" to answer the following questions:

1) To what extent is the psychological resilience of university students affected by gender, major field of study and place or residence?
2) What relationship exists between psychological resilience and school engagement?
4) How psychologically resilient are university students?
3) What challenges are affecting the psychological resilience of students?

2. Methods

2.1. Sample size

The first aim of this study is to investigate the level of resilience among students. Thus, we used an estimate of the university's student population to calculate a mean sample size using the formula:

$$n \geq \left(\frac{Z_{1-\alpha/2}\, \sigma}{d} \right)^2$$

α=0.05; σ=10.5. d=1. Choosing estimation error equally to 1.
This is the standard deviation cited from the research of Peng et al (2012) conducted on 2069 students in China (Peng et al., 2012).

Thus, the number of participants should be at least 424 people. Currently, this research proposed a target estimate of 438 subjects.

The study was conducted on 438 Ho Chi Minh City university students whose characteristics are described in detail in

Table 1 as follows:

Table 1: Participants' Characteristics (n=438)

Characteristics		Frequency	Percentage
Gender	Male	175	40
	Female	263	60
Major	Economics/Finance (1)	85	19.4
	Social sciences (2)	193	44.1
	Natural sciences (3)	83	18.7
	Medical (4)	78	17.8
Place/ Residence	Living with parents (1)	147	33.6
	Rental house (2)	50	11.4
	Dormitory (3)	37	8.4
	Room share (4)	173	39.5
	Other (5)	31	7.1

2.3. Data Collection

Data were collected in Ho Chi Minh City from June to July 2022 when Ho Chi Minh City returned to normal life, the beginning of a new semester that face-to-face classes were held after the 4th outbreak from 22 April to 24 July 2021, which is considered the most serious period during the pandemic. "For the first time in history, Vietnam thoroughly implemented all models of isolation: compulsory centralized isolation, home isolation, isolation in place, and even nationwide social isolation." (Tuyet-Anh T. L., et al, 2021)

Data were collected through a survey using a paper questionnaire, which took 10 to 20 minutes to answer. Data were then entered into a computer using Excel software and processed with SPSS 20.0 software.

2.4. Measurement Instruments

This study uses a scale that is rated as one of the most popular and widely cited psychological resilience tools: the Connor-Davidson Resilience Scale (CD-RISC-25). The theory of psychological resilience provides a conceptual foundation for studying and in a trait approach, resilience as an internal force factor (Howard, Dryden, & Johnson, 1999). The Connor-Davidson Psychological Resilience Scale (CD-RISC-25) consists of 25 items answered on a 5-point Likert scale from 0 to 4, with higher scores indicating a greater degree of resilience (?) (Connor & Davidson, 2003). CD-RISC-25 has proven to be of high value and reliability for different population groups. In this study, we use the Vietnamese version.

The study uses a scale of author Nelson Laird including 12 questions in the form of a 4-level Likert to assess the level of school engagement (Elson, Assistant, & Korkmaz, 2010).

2.5. Data analysis

Descriptive statistics (frequency, percentage, mean score, standard deviation) were used to describe the psychological resilience of students. T-test, one-way ANOVA, and the post-hoc Tukey test were used to analyze the similarities and differences in psychological resilience among students according to different criteria. The significance level of 0.05 is applied in the conclusions of the statistical test.

The Pearson or Spearman correlation was used to assess the association between psychological resilience and school engagement.

Semi-structured qualitative interviews were used to clarify how school challenges affect students' psychological resilience.

3. Results

Participants' Characteristics

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The survey was conducted on 438 Ho Chi Minh City university students from 4 main majors, including economics /finance (85 students, 19.4%); social sciences (193 students, 44.1%); natural sciences (83 students;18.7%) and medical (78 students; 17.8%). As to the students' living conditions, half of the participants were living apart from their root families. More specifically, 173 students (39.5%) are living in shared rooms and 50 students (11.4%) live in rental houses.

Table 2. Resilience score of students

	n	Minimum	Maximum	Mean	Std. Deviation
Resilience score	438	35	100	64.62	15.06

The resilience index was measured with the Conor-Davison Scale ranging from 0 to 100 score. A higher score mark means higher resilience. Table 2 shows that Ho Chi Minh City university students have high resilience levels with a mean score of 64.62.

Table 3. Differences in resilience between groups

	Resilience score	p value
Gender		
Male	68.03 ± 15.88	**p = .009**
Female	62.35 ± 14.07	
Major		
Economy/Finance (1)	65.39 ± 14.56	**p_{2-3}=.003**
Social sciences (2)	61.24 ± 15.56	**p_{2-4}=.001**
Natural sciences (3)	68.02 ± 11.47	
Medicine (4)	68.55 ± 16.04	
Place of residence		
Living with parents (1)	67.10 ± 16.37	**p_{1-2}=.0001**
Rental house (2)	54.78 ± 12.24	**p_{2-4}=.0001**
Dormitory (3)	62.03 ± 11.62	**p_{2-5}=.0001**
Room share (4)	64.61 ± 14.66	
Other/Living with spouse/ Own house	71.90 ± 10.32	

On the basis of the participants' characteristic listed in Table 1, the study participants' variables, including their gender, major of study and place of residence were associated with their resilience.

Students of natural sciences and medicine had high levels of resilience (Table 3), ranging from 68.02 ± 11.47 and 68.55 ± 16.04 and with higher resilience compared to social sciences students.

Male students are found to have higher resilience compared to their female peers (resilience mean scores are 68.03 and 62.35 respectively).

Those currently living with parents are statistically significant with higher resilience compared to those living in a rental house. Room sharing was found associated with higher resilience compared to living in a rental house. This result proves a trend that living with others including parents, friends, and partners would help students improve their resilience. The finding could be explained by the collectivist culture of the Vietnamese.

Table 4. The correlation between resilience and school engagement

	Resilience score
School engagement score	r=0.438 **p<.0001**

As shown in Table 4, the study participants' resilience was thus positively related to their school engagement (Pearson coefficient = 0.433).

Table 5. The relationship between resilience and life challenge

Model	Unstandardized Coefficients		Standardized Coefficients	T	P
	B	Std. Error	Beta		
(Constant)	**76.596**	1.466		52.235	.000
1. Bad physical health	**2.758**	1.105	.134	2.496	.103
2. Feeling empty and suicidal thoughts	**-2.260**	.862	-.135	-2.621	**.009**
3. Peer relationship difficulties	**-7.012**	1.013	-.410	-6.920	**.000**
4. Failure experiences	**-.404**	.858	-.023	-.471	.638
5. Financial struggling	**.036**	.715	.002	.051	.959
6. Academic/ work stress	**-.946**	.759	-.058	-1.246	.213
.Being bullied/ feeling Unfair	**3.253**	.884	.196	3.680	**.000**
8. Feeling empty/depressed	**-3.284**	.862	-.224	-3.809	**.000**
9. Other	**-1.296**	.975	-.068	-1.329	.184

To predict students' resilience, a regression analysis was conducted. The summary of the results is reported in Table 4. Overall, life challenges including physical health, feeling empty and having suicidal thoughts, peer relationships, failed experiences, financial struggle, academic pressure, being bullied and treated unfairly, and feeling depressed explain the 33.1% level of students' resilience.

In the simple unadjusted mediation model shown in Tab 5, "feeling empty" and "suicidal thought" was thus negatively associated with resilience (β = -2.260; p = 0.009), and resilience was also negatively related to peer relationship (β = −7.012; p < 0.001). Among life, challenges we also found that Being bullied/ unfair was positively associated with resilience (β = 3.253; p < 0.001).

4. Discussion

The students at Ho Chi Minh City have high resilience levels

The results show that the resilience scores range from 0 to 100 with a higher score indicating better resilience. The average score is 64.62 ± 15.06 indicating a high level of resilience. The origin of resilience is from the human adaptation system, a positive adaptation in a situation of adversity (Synder & Lopez, 2007), which is not a state but a process (Panter- Brick & Leckman, 2013; Windle, 2011; Zautra, Hall, & Murray, 2010), and personality trait (Block & Block, 1980). This supports the fact that students have positive thoughts, feelings, and behaviors and the ability to adapt positively in life (Noble & McGrath, 2013). The results of this study reconfirm the report of the Vietnam Ministry of Health on the 7th of July 2021, which states that students cooperated with different groups to help the Vietnamese overcome the Covid-19 pandemic in creative ways. Cooperation from students was visible in different places in the whole country such as Quang Ninh (Nguyen Dung & Pham Hoc, 2021) and Ho Chi Minh city (Hai Dang, 2021). Vietnamese in general, and Vietnamese students in particular, have a high ability to overcome challenges and difficulties (Phan Anh & Dat Nguyen, 2020), which can be attributed to the national common sense, "Cái khó ló cái khôn (In the difficulties are incurred the solutions)"

The difference between men and women in terms of resilience

This study shows that there is a difference between men and women in terms of resilience. Several studies about gender differences have reported that the COVID-19 pandemic has a greater impact on the mental health of women than men (Hawes, M.T, et al., 2021; Ran, L.; Wang, 2020); however, another study found no significant differences according to gender during COVID-19 (Olaseni, A.O, et.al, 2020). Other studies have shown that women had greater negative effects on their mental health than men (González-Sanguino, 2021). A study by Pidgeon, A.M. (2014) shows that the students with high levels of resilience had lower levels of psychological problems than those with low levels of resilience. A study by Peñafiel-León et. al. (2021) certified that male students have higher levels of resilience than female students. This is different from the results of previous research in Vietnam (Tran Tuan Anh et al. 2016) on climate resilience which states that the female group had higher resilience than the male group of participants. One interpretation of these results suggests that there are some changes in Vietnamese society regarding the perception of the role of males in Vietnam.

These results may also reflect the traditional mindset of the Vietnamese about the role of the male always trying to be strong when major challenges happen since the man is the "cột trụ (pillar)" of the family may have affected people's experience of the Covid-19 pandemic. Or, men's understanding of their role may have changed to a creative experience of their role and meaningful responsibility to overcome the difficult situation.

Social Science majors have lower resilience scores than natural sciences and medicine major.

The result of this study reflects the study that shows the level of resilience of the students with majors in social science and the students with natural sciences and medicine that states that the personal traits (Block, H. & Block, J., 1980) of the group of the participants affect the level of resilience.

There could be deeper reasons for this fact but in the context of Covid 19, most of the medical students tried their best to help the nation in a tough situation in different capacities. The participants of this study might have played various roles during the pandemic wherein the whole country was on lockdown for months, and the medicine and natural sciences students took part in different roles and situations to save people. Less able to participate with the community in a helpful way, social science majors may have found it more difficult to be resilient. This study shows that proximity to parents significantly predict the resilience of the students (Ozel Egitim D., 2022). The group living with parents had higher resilience scores than the group living in a rental house alone, and the group living in the dormitory also had higher resilience than the group living alone. These findings can modify the finding of the study of Gizir, C. A. (2004) that family and friend relationships have important power in explaining the resilience of the students. The finding of previous studies also mentioned that friendships are predictors of resilience (Gizir, 2004 and Gökden-Kaya, 2007).

3.2. Relationship between psychological resilience and school engagement

This study shows that school engagement is the most important factor correlated with resilience. It means that the more students get involved and engage with the school, the more they have strong resilience. The study of Iqbal, N. (2021) shows that students' resilience, school engagement, and well-being were found to have positive associations with each other. School engagement reflects the students' thoughts, feelings, and behaviors about their experience in school and its environment (Wang & Holcombe, 2010). The findings of this study encourage the school to build strong support systems for students in terms of relationships with faculty and staff, class environment, teaching methodology, and other activities that could help build up student resilience. When students acquire knowledge and skills they must be actively engaged in school. (Wang, Willet & Eccles, 2011). Resilience refers to positive adaptation in the context of significant adversity (Luthar, 2006). The factors have always emerged as protective for students to adversity, including relationships with supportive adults and effective schools (Luthar et al. 2000). The classroom and the school may be the optimal environments in which to support resilience among students (Morrison and Allen 2007). Classrooms and schools can provide opportunities for youth to develop other skills which enhance resilience (Gilligan, 2000).

3.3. Life challenges affect psychological resilience

A great number of studies show that the Covid-19 pandemic caused negative effects on public health, anxiety, and depression, and that resilience is a predictor and mediating variable of fear of COVID-19 (David J. Javier-A., et al., 2021). This study uses linear regression model to predict positive and negative effect of life challenges on students' resilience. Nine factors explain the 33.1% resilience score of participants.

Resilience is an ability to change the difficulties and flexibly adapt to the changing environment and the purpose in life, happiness, personal growth, positive affect and satisfaction with life (Diener, 2000). The results show that the negative effect on resilience includes "feeling empty" and having "suicidal thought", "being bullied/" and being treated "unfairly". A good friendship or relationships with peers in school is one of the factors that could help a student increase their resilience (Bond et al. 2007). Besides the personal challenges in the life of the students causing low resilience, the stories of the participants of the study of Russell, Laura D.(2022) show the challenges of the family as a significant factor that affects the students' resilience (Tugade and Fredrickson, 2004)

Implication:

The findings of this study provide an important implication for personal development and for educational institutions to build up a high level of resilience among students which is an essential element for developing the society and the nation.

Based on the results of the study, the proposed program is designed to be implemented in groups. This program will be implemented in 2 phases. The first phase is for coaches, including the leaders, administrators, and teachers from the school, and the second phase is for groups of students.

Implementation Program to improve students' resilience in school:

Content: Comprehensive development plan (3 areas, 4 implementation goals in 4 phases)
Deployment form: Group Coaching
Evaluation method: Evidence-based

Program to improve students' resilience in school

Based on the results of this study, gender is a factor that affects the levels of resilience. To increase the resilience of the students in school, they should know about themselves first and then their role in the school. The first stage is to help the students to be aware of themselves, their roles in groups and in school, and how can they have fruitful engagements. This process will be done in groups. That is the reason for the following activities.
Stage 1: Developing Self-awareness- Discovering and evaluating yourself- "Who am I"
Determine personality type (strengths, weaknesses, tendencies)

- Looking back at the engine
- Assessment of maturity (age psychology)
- Evaluation of happiness index (human value)
- Difficulties/challenges: Psychological (stress, psychological disturbances, gender, forms of addiction...); Physical (Status, blood)

Based on the findings, university students have a high level of psychological resilience, which explains the positive thinking "Cái khó ló cái khôn (In the difficulties are incurred the solutions)" when students met the difficulties during the pandemic. Resultingly, creative solutions appeared when they worked together to overcome the urgent situation. That is the reason why this stage is included in this program as a significant factor to help students enhance their resilience.

Stage 2: Develop positive awareness

- Exploring cognitive ability (evaluate 5 IQ areas)
- Ways of thinking - Perception
- Types of automatic thoughts
- Identify rational & irrational believes
- Identifying fallacies in life (Critical thinking)

The findings show that the negative emotions the students have when they face the challenges in life caused their low level of resilience. Students should have positive emotions that could help them to improve their level of resilience in school and in their personal life.
Stage 3: Develop positive emotions

- Assessment of emotional capacity
- Types of emotions, the process of forming emotions
- Positive and effective emotions
- How to express and manage emotions

The purpose of this study is mainly to find a way to create a healthy atmosphere in school to increase the level of school resilience. To achieve this, the psychological resilience of students should be high enough when they join different groups' activities. The relationship between psychological resilience and school engagement in the finding of this study and its discussion certified the reason for developing positive behavior in students while they enrich their school engagement and psychological resilience. The following contents of this program reflect the mentioned reason.
Stage 4: Develop positive behavior

- Choice and individual/collective responsibility
- Meaningful, positive and vice versa behavior
- Types of rewards and punishments
- Life plan
- Life skills (communication, time management, integration, team building, self-esteem...) to be kind people - Humanity

Conclusion:

The findings of this study contribute to providing an understanding of the predictable relationship between resilience and students' school engagement.

The program suggested for implementation can be a useful tool for those who want to foster their level of resilience and for educational institutions to build up a healthy and suitable environment to help students to achieve their potential and live fruitfully.

References

Ausín, B.; González-Sanguino, C.; Castellanos, M.Á.; Muñoz, M. Gender-related differences in the psychological impact of

confinement as a consequence of COVID-19 in Spain. J. Gend. Stud. 2021, 30, 29–38.

Block, H. & Block,J (1980). in Minnesota Symposium on Child Psychology, W. A. Collins, Ed. (Hillsdal, NJ: Erlbaum, 1980), vol. 13, pp. 39–101.

Bonanno, G.A. (2004). Loss, Trauma, and Human Resilience: Have We Underestimated the Human Capacity to Thrive after Extremely Aversive Events? American Psychologist, 59, 20-28.

Caza, B., & Milton, L. (2012). Resilience at Work: Building Capability in the Face of Adversity. *The Oxford Handbook of Positive Organizational Scholarship*.

Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). *Depress Anxiety, 18*(2), 76-82.

Elson, T., Assistant, L., & Korkmaz, A. (2010). How Often is "Often" Revisited: The Meaning and Linearity of Vague Quantifiers Used on the National Survey of Student Engagement.

González-Sanguino, C., Ausín, B., Castellanos, M.A., Saiz, J., Muñoz, M., Mental health consequences of the COVID-19 outbreak in Spain. A longitudinal study of the alarm situation and return to the new normality. Prog. Neuro-Psychopharmacol. Biol. Psychiatry 2021,

Hawes, M.T.; Szenczy, A.K.; Klein, D.N.; Hajcak, G.; Nelson, B.D. Increases in Depression and Anxiety Symptoms in Adolescents

and Young Adults during the COVID-19 Pandemic. Psychol. Med. 2021, 10, 1-9.

Howard, S., Dryden, J., & Johnson, B. (1999). Childhood Resilience: Review and critique of literature. *Oxford Review of Education, 25*(3), 307-323. doi:10.1080/030549899104008

Howe, A., Smajdor, A., & Stöckl, A. (2012). Towards an understanding of resilience and its relevance to medical training. *Med Educ, 46*(4), 349-356. doi:10.1111/j.1365-2923.2011.04188.

Javier-Aliaga, David J; Quispe, Gluder; Quinteros-Zuñiga, Dámaris; Adriano-Rengifo, Cristian E; White, Michael. (2022). Hope and Resilience Related to Fear of COVID-19 in Young People International Journal of Environmental Research and Public Health; Basel 19 (9), 1-10. doi:10.3390/ijerph19095004

Li, Q., Guan, X., Wu, P., Wang, X., Zhou, L., Tong, Y., . . . Feng, Z. (2020). Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia. *N Engl J Med, 382*(13), 1199-1207. doi:10.1056/NEJMoa2001316

Luthans, F., Youssef-Morgan, C., & Avolio, B. (2015). *Psychological Capital and Beyond*.

Luthans, F., & Youssef, C. M. (2004). Human, Social, and Now Positive Psychological Capital Management: Investing in people for competitive advantage. *Organizational Dynamics, 33*(2), 143-160.

Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist, 56*(3), 227-238.

Olaseni, A.O.; Akinsola, O.S.; Agberotimi, S.F.; Oguntayo, R. Psychological distress experiences of Nigerians during COVID-19 pandemic; the gender difference. Soc. Sci. Humanit. Open 2020, 2, 100052.

Olsson, L., Jerneck, A., Thoren, H., Persson, J., O'Byrne, D. (2015), Why resilience is unappealing to social science: Theoretical and empirical investigations of the scientific use of resilience. *Science Advances*, *4* (1), 1-11.

Peng, L., Zhang, J., Li, M., Li, P., Zhang, Y., Zuo, X., . . . Xu, Y. (2012). Negative life events and mental health of Chinese medical students: the effect of resilience, personality and social support. *Psychiatry Res, 196*(1), 138-141.

Peñafiel-León, J.E.; Ramírez-Coronel, A.A.; Mesa-Cano, I.C.; Martínez-Suárez, P.C. Impacto psicológico, resiliencia y afrontamiento del personal de salud durante la pandemia por COVID-19. Arch. Venez. Farmacol. Ter. 2021, 40, 202–211.

Pieh, C.; Budimir, S.; Humer, E.; Probst, T. Comparing Mental Health during the COVID-19 Lockdown and 6 Months after the Lockdown in Austria: A Longitudinal Study. Front. Psychiatry 2021, 12, 625973.

Ran, L.; Wang, W.; Ai, M.; Kong, Y.; Chen, J.; Kuang, L. Psychological resilience, depression, anxiety, and somatization symptoms in response to COVID-19: A study of the general population in China at the peak of its epidemic. Soc. Sci. Med. 2020, 262, 113261.

Ripoll, J.; Contreras-Martos, S.; Esteva, M.; Soler, A.; Serrano-Ripoll, M.J. Mental health and psychological wellbeing during the COVID-19 lockdown: A longitudinal study in the balearic islands (Spain). J. Clin. Med. 2021, 10, 3191

Romano, L., Angelini, G., Consiglio, P., & Fiorilli, C. (2021). Academic Resilience and Engagement in High School Students: The Mediating Role of Perceived Teacher Emotional Support. *Eur J Investig Health Psychol Educ, 11*(2), 334-344. doi:10.3390/ejihpe11020025

Salmela-Aro, K., & Upadyaya, K. (2014). School burnout and engagement in the context of demands-resources model. *Br J Educ Psychol, 84*(Pt 1), 137-151. doi:10.1111/bjep.12018

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *Int J Behav Med, 15*(3), 194-200. doi:10.1080/10705500802222972

Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of personality and social psychology, 86*(2), 320-333. doi:10.1037/0022-3514.86.2.320

UNESCO. (2020). *UNESCO COVID-19 Education Response. Education Sector Issue Notes. "Supporting Teachers and Education Personnel during Times of Crisis*. Santiago, Spain.

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. *Int J Environ Res Public Health, 17*(5). doi:10.3390/ijerph17051729

Nguyen Dung & Pham Hoc (2021), *Học sinh, Sinh viên góp sức chiến thắng đại dịch* (Quang Ninh online: Sunday 09 Jan. 2022 https://baoquangninh.com.vn/hoc-sinh-sinh-vien-gop-suc-chien-thang-dai-dich-3169743.html);

Hai Dang (2021), *Sinh viên y khoa TP.HCM tình nguyện chống dịch: Có ngày làm 20 tiếng, mở mắt là 'mẫu bệnh phẩm'-* Tuoi tre online. 07 July 2021, https://tuoitre.vn/sinh-vien-y-khoa-tp-hcm-tinh-nguyen-chong-dich-co-ngay-lam-20-tieng-mo-mat-la-mau-benh-pham-20210706152446709.htm

Linh V., Hiệu D., Danh Q., Ngôn P., Kiện Y. Toàn cảnh 100 ngày chống dịch Covid-19 tại Việt Nam (Overview of the 100-Day Anti-Epidemic Covid-19 in Vietnam) [(accessed on 24 June 2020)]; Available online: https://zingnews.vn/toan-canh-100-ngay-chong-dich-covid-19-tai-viet-nam-post1078592.html [Ref list]

Pham Mai (2021), *Sinh vien ngành Y cang minh chong dich: Sống là cho đi…,* 09Jan.2022Vietnam online: https://www.vietnamplus.vn/sinh-vien-nganh-y-cang-minh-chong-dich-song-la-cho-di/767380.vnp

Vietnam Ministry of Health July 07, 2021

Phan Anh & Dat Nguyen (2020), 2020 review: 10 resilience defining stories in Vietnam, VNexpress Online, December 24, 2020.

Tran Tuan Anh, Tran Van Giai Phong, Nguyen Thi Kim Ha & Dinh Quang Cuong (2016) Gender analysis in building climate resilience in Da Nang: Challenges and solutions; JSTOR.