

Emotional Stability as Predictor of General Coping among Engineering Students

Maria Cristina M. Firmante
De La Salle University Philippines

DOI: <https://dx.doi.org/10.47772/IJRISS.2023.7688>

Received: 16 May 2023; Revised: 08 June 2023; Accepted: 10 June 2023; Published: 10 July 2023

ABSTRACT

Emotional stability is defined as the ability of an individual to keep one's emotional balance under pressure. At the same time, coping allows an individual to grow and move forward when dealing with stress. With the academic demand of engineering courses, it is essential to understand emotional stability and general coping, as education can also be stressful. Thus, the main goal of the present study was to investigate if emotional stability predicts the general coping skills among engineering students using simple linear regression. A total of 445 students, ages 18-20, participated in the study. Out of 445 students, 217 were male, and 228 were female. Results revealed that students were emotionally stable, with a mean score of 6.66 which can be interpreted as a high average. It means that participants in the current study are at ease in handling problems, can quickly recover from an emotional upset, and are generally satisfied with life. Likewise, the score in general coping also shows a high average with a mean score of 60.40 which means that engineering students have good coping skills that help them tolerate, minimize, and deal with stressful life situations. Moreover, the simple linear regression results show that emotional stability is not a strong predictor for general coping skills. For engineering students in the present study, aside from emotional stability, other factors contribute to their coping skills. Moreover, it is still good to note that emotional stability has a direct relationship with general coping as indicated by the regression model.

Keywords: coping skills, engineering students, emotional stability

BACKGROUND

Literature shows that many researchers address the phenomenon of studying the emotional stability of individuals. Most focused on the search for emotional stability in various personal characteristics (Truckmanova, 2004; Carlo et al., 2012), such as emotional stability as a dimension of happiness (Hills & Arggyle, 2001), emotional stability as a predictor of stress management (Gagani et al., 2021), emotional stability and ways of coping is a predictor of aggressive tendencies among adolescents. (Moudgil, 2022). There is an emerging trend in literature of positive association between adaptive personality traits and active coping and maladaptive personality traits associated with avoidant coping strategies (Afshar et al., 2015; Connor-Smith & Flschsbart, 2007). Thus, a coping strategy carried out by an individual in stressful situations can be interpreted as positive or negative and active or reactive (Shields, 2001). Coping skills play a major role in adaptation to stressful life events (Coyne & Racioppo, 2000). It is an effort, both psychological and behavioral that a person employs to master, tolerate, reduce, or minimize during stressful events (Watson et al., 2008). With the emerging trend in literature on the association of personality traits and coping, little is known about whether emotional stability can predict coping skills. To the best of the researcher's knowledge, emotional stability and coping skills have not been examined empirically. Within this context, it is in this light that the present study would like to explore whether emotional stability predicts general coping. As students move to the new normal, in-person and online learning are implemented, and one of the fundamentals that should be taken into account is the well-being of students. This research may add to the existing literature by examining emotional stability as a predictor of general

coping, specifically among engineering students. With the academic demand of engineering courses, the researcher, who is also a practicing counselor, believes that having a better understanding of emotional stability and coping skills are noteworthy to explore. The outcome of the present study is to significantly contribute to developing programs for understanding and building emotional stability and coping skills that would be helpful for engineering students.

Emotional Stability

Researchers have suggested that neuroticism should be reversed and coined as “emotional stability,” regarded as a positive aspect of personality (Hill & Argyle, 2001; Vittersø, 2001). Emotional stability is an individual’s ability to maintain emotional balance under pressure. It was defined by the American Psychological Association (APA, 2022) dictionary describes emotional stability as referring to predictability and consistency in emotional reactions and the absence of rapid mood changes. Consistency and situational sensitivity are ensured by the capacity to control emotional responses. It is the capacity to balance emotions under pressure and should be considered (Kumar & Bhukar, 2013). Emotional stability enables a person to develop an integrated and balanced way of perceiving life’s problems. Hampson (2019) emphasized that emotional stability is vital to having superior mental health. If a student has poor emotional control, this could result in unfavorable psychological reactions. Moreover, emotional stability has been recognized and examined as personality representation of human mind (Cattell & Schuerger, 2003).

Coping Skills

Coping skill is defined as an action or thought used to meet a stressful or unpleasant situation or modify one’s reaction to such a situation (APA, 2022). Coping skills or strategies are essential in managing psychological stress related to harmful, threatening, or challenging situations (Lazarus as cited in Stanisławski, 2019). According to Pajares (2002), coping skills are factors that determine how a person responds to tasks and how well they succeed. An appropriate and effective coping may prevent the effect of stressful circumstances on the physical and mental health of an individual (Park & Adler, 2003). At the same time, other theorists would argue that coping strategies as adaptive are associated with positive emotional responses and maladaptive ones characterized by negative emotional responses (Stanisławski, 2019).

Research Problem

The aim of the present study was to investigate if emotional stability predicts the general coping skills. Specifically, it seeks to answer one main question, does emotional stability predicts the coping skills among engineering students?

METHODOLOGY

Research Participants

Participants of the present study comprised of 445 first-year engineering students across different programs aged 18-20 years old. Six engineering programs represent them: chemical engineering, civil engineering, electronics, and computer engineering, industrial and systems engineering, manufacturing engineering and management, and mechanical engineering. They were enrolled in a non-academic course that promotes mental health awareness and career development. One of the requirements under the course is taking a personality test together with online modules completion and group interview. The personality test is the Adolescent Personality Questionnaire (APQ) administered by a counsellor and/or examiner from the psychological testing provider. Through purposive sampling, participants were given informed consent to determine their willingness to participate in the present study. It was emphasized that no identifiable data would be used in this research, and clearance from the research review board using a secondary data needed

in this study were secured.

Research Instruments

The instrument used in the present study is the Adolescent Personality Questionnaire (16PF® IPAT, 2001, 2012). The 16PF® Adolescent Personality Questionnaire (APQ) is a self-report personality inventory developed and normed for adolescents. It elicits valuable information regarding the youth's personal style, problem-solving abilities, preferred work activities, and areas where the youth is having problems, making the APQ appropriate for screening and introducing sensitive topics in counselling. Specifically, the present study utilized the result for the primary factor- emotional stability factor and the coping scale.

Emotional Stability – has endorsed items that report ease in handling problems, quick recovery from emotional upset, general satisfaction with life, etc.

Coping Scale- four questions are designed to represent four well-known coping styles or methods. The following are coping by problem-solving, utilizing one's social network, coping by reasons of strong values, and coping by attitude change.

Data Gathering Procedure

The researcher secured approval from the participating university's research review board using the secondary data as a source for the present study. Upon approval, purposive sampling was conducted for participants. Informed consent was acquired. Their consent in the utilization of data was obtained via Google Forms. Those who signed up and expressed their intention to participate through informed consent were included in the present study. Participants were informed that no identifiable information would be shared if the data gathered were used for research presentation or publication.

Data Analysis

Descriptive analyses were first performed to check the normality of the data. The primary analysis was performed using simple linear regression. In simple linear regression, one independent variable is used to predict the outcome of the dependent variable, which is the primary purpose of the present study.

Ethical Considerations

The rights of the participants were stated and enumerated in the study. The following precautions were taken to protect the participant's rights: 1) in accordance with the policy set by the Ethics Review Board; 2) the purpose of the research was communicated to the participants in writing via email together with the informed consent; 3) participants anonymity was protected using pseudonyms and lastly; 4) strict confidentiality is and was maintained on all personal information shared.

RESULTS AND DISCUSSION

The present study intended to find out if emotional stability predicts the general coping among engineering students. Table 1 shows the mean score of emotional stability and general coping and the result of the standard deviation.

Table 1. Mean Score of Emotional Stability and Coping Skills

Variable	Mean	Minimum	Maximum	SD
Emotional Stability	6.65	0.00	16.00	4.65
General Coping	60.40	1.00	99.00	34.48

As shown in table 1, engineering students obtained a result of a high average of emotional stability with a totality mean rating ($M= 6.65$; $SD= 4.65$). They are generally calm and composed and would be resilient enough. According to Hills & Argyle (2001) an emotionally stable person is those expected to complain little about their worries and anxieties, expected to be calm and composed. It correlated more strongly with overall happiness, satisfaction with life and self-esteem.

On the other hand, the result obtained on general coping also shows a high average with a totality mean rating ($M= 60.40$; $SD= 34.48$), which can describe them as those who tend to see themselves as equipped and capable of addressing their concerns, accomplishing their tasks, and having a good relationship with others. As Freire et al., 2020 posited, students daily academic life is exposed to a wide range of potentially stressful events that could negatively affect their academic achievement and health. Coping strategies can help undergraduate students to enhance their academic performance (Kadhiravan & Kumar, 2012). Moreover, coping skills improve class attendance, participation, and persistence even when faced with setbacks or failure in general and arm them with stronger more resilient selves who can lead to a much more positive learning experience (Aun et al., 2011).

Table 2 Summary Statistics of the General Coping

	Multiple R	Multiple R ²	Adjusted R ²	Std. Err. of Estimate
Value	0.37	0.14	0.14	31.99

N= 445

The above table shows the model summary of one predictor of the model, in which the correlation between emotional stability and general coping was found to be $R= 0.378$ and $R\text{ square}= 0.14$, indicating the actual contribution of emotional stability on general coping. Moreover, the real covariance magnitude of the predictor variable to the criterion variable reached 14 percent.

Table 3 Regression Summary for Dependent Variable: General Coping

	b*	Std. Err. of b*	b	Std. Err. of b	t	p-value
Emotional Stability	0.38	0.04	2.78	0.33	8.53	0.00

N= 445

Results from the linear regression coefficient (?) of 0.38 indicates that 38% of the variance of the dependent variable (coping skills) being studied is explained by the variance of the independent variable (emotional stability). It means that emotional stability is not a strong predictor of general coping skills. Although it is also noteworthy to see that emotional stability has a direct relationship with general coping, as indicated by the regression model with a p-value less than 0.05. For engineering students in the present study, it may conclude that aside from emotional stability, other factors contribute to their coping skills.

The finding from the present study is in consonance with some studies indicating the need to explore and create programs to develop further students coping skills. Higher education literature shows that the coping methods of students are diverse and generally report using proactive behavioral methods such as managing their time, solving specific problems, and or seeking information and help (Misra & McKean, 2000; Lopez et al., 2001). Connor-Smith & Compas (2007) reviewed 165 studies and most of them relied on students. The meta-analysis of the relationship between personality traits and coping revealed that the relationship between personality and coping might be influenced by the situation in which the stressor occurs and that the relationship is stronger in samples that face physically or mentally challenging for some period of time (DeLongis & Holtzman, 2005; Connor-Smith & Flachsbart, 2007).

CONCLUSIONS

The results show that emotional stability is not a strong predictor of general coping among engineering students in the present study. Although it is still good to note that emotional stability has a direct relationship with available coping as indicated by the regression model. It shows from the group that being emotionally stable does not mean having a better coping skill and vice versa. Aside from emotional stability, other factors contribute to coping skills. In this regard, it is an opportunity to develop further mental health activities and programs that promote positive coping among students. Hence, exploring internal and external factors contributing to coping skills in quantitative or qualitative research is recommended. Moreover, it would also be necessary to check students from various courses in general.

REFERENCES

1. Afshar, H., Roohafza, H. R., Keshteli, A. H., Mazaheri, M., Feizi, A., & Adibi, P. (2015). The association of personality traits and coping styles according to stress level. *Journal of Research in Medical Sciences: The Official Journal of Isfahan University of Medical Sciences*, 20(4), 353.
2. Aun, W., Kimura, L., Hern, C., & Ahmad, S. (2011). Psychological Factors in Academic Performance among College Students. *Proceeding of ITCTL*.
3. Bolger, N. (1990). Coping as a personality process: a prospective study. *Journal of Personality and Social Psychology*, 59(3), 525.
4. Bolger, N., & Zuckerman, A. (1995). A framework for studying personality in the stress process. *Journal of Personality and Social Psychology*, 69(5), 890.
5. Carlo, G., Mestre, M. V., McGinley, M. M., Samper, P., Tur, A., & Sandman, D. (2012). The interplay of emotional instability, empathy, and coping on prosocial and aggressive behaviors. *Personality and Individual Differences*, 53(5), 675-680.
6. Cattell, H. E., & Schuerger, J. M. (2003). *Essentials of 16PF assessment (Vol. 40)*. John Wiley & Sons.
7. Connor-Smith, J. K., & Flachsbart, C. (2007). Relations between personality and coping: a meta-analysis. *Journal of Personality and Social Psychology*, 93(6), 1080.
8. Coyne, J. C., & Racioppo, M. W. (2000). Never the Twain shall meet? Closing the gap between coping research and clinical intervention research. *American Psychologist*, 55(6), 655.
9. De Longis, A., & Holtzman, S. (2005). Coping in context: The role of stress, social support, and personality in coping. *Journal of Personality*, 73(6), 1633-1656.
10. Freire, C., Ferradás, M. D. M., Regueiro, B., Rodríguez, S., Valle, A., & Núñez, J. C. (2020). Coping strategies and self-efficacy in university students: A person-centered approach. *Frontiers in Psychology*, 11, 841.
11. Gagani, F., Carredo, B., Daan, E. A., Enriquez, J., Fernan, M. J., Manlunas, I., & Tayurang, E. J. (2021). Investigating students' emotional stability as a predictor of stress management while engaging in flexible online learning during COVID-19. *International Journal Papier Public Review*, 2(2), 52-61.
12. Hampson, S. E. (2019). *The construction of personality: An introduction*. Routledge.
13. Hills, P., & Argyle, M. (2001). Emotional stability as a major dimension of happiness. *Personality and Individual Differences*, 31(8), 1357-1364.
14. Kadiravan, S., & Kumar, K. (2012). Enhancing stress coping skills among college students. *Researchers World*, 3(4), 49.
15. Kumar, S., & Bhukar, J. P. (2013). Stress level and coping strategies of college students. *Journal of Physical Education and Sports Management*, 4(1), 5-11.
16. Lopez, F. G., Mauricio, A. M., Gormley, B., Simko, T., & Berger, E. (2001). Adult attachment orientations and college student distress: The mediating role of problem coping styles. *Journal of Counseling & Development*, 79(4), 459-464.

17. Misra, R., & McKean, M. (2000). College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Studies*, 16(1), 41.
18. Moudgil, N. (2022). Role of Ways of Coping and Emotional Stability in Aggression among Adolescents. *IAHRW International Journal of Social Sciences Review*, 10(2), 184-188.
19. Newman, B. M., & Newman, P. R. (2017). *Development through life: A psychosocial approach*. Cengage Learning.
20. Pajares, F. (2002). Self-efficacy beliefs in academic contexts: An outline.
21. Park, C. L., & Adler, N. E. (2003). Coping style as a predictor of health and well-being across the first year of medical school. *Health Psychology*, 22(6), 627.
22. Stanisławski K. (2019) The coping circumplex model: an integrative model of the structure of coping with stress. *Front. Psychol.* 10:694. doi: 10.3389/fpsyg.2019.00694.
23. Trukhmanova, E. N. (2004). Personal characteristics of orphan teenagers and teenagers with no parental custody as a factor of their deadaptation (Doctoral dissertation, PhD Thesis. Nizhny Novgorod).
24. Vittersø, J. (2001). Personality traits and subjective well-being: Emotional stability, not extraversion, is probably the important predictor. *Personality and Individual Differences*, 31(6), 903-914.
25. Watson, J. M., Logan, H. L., & Tomar, S. L. (2008). The influence of active coping and perceived stress on health disparities in a multi-ethnic low-income sample. *BMC Public Health*, 8(1), 1-9.