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# Determinants of Perceived Stress among University Students

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Abstract

The everyday incidence of stress is common. It may have an impact on someone's psychological health. However, if it is not adequately handled, it could be hazardous. Stress is more common among university students. Stress is an international concern. Students today tend to be more agitated and anxious than students in past generations. Whether dispositional optimism, perceived academic control, self-esteem, and cognitive intervention will have an impact on felt stress was the subject of this study. This survey included a total of 367 students from public universities in Malaysia's northern region. The study had a six-month time frame. Pearson correlation and regression analysis were used to analyze the data. The findings indicated that among university students, cognitive intervention and self-esteem have the greatest influence on perceived stress.

Introduction

The everyday incidence of stress is common. It may have an impact on someone's psychological health. However, if it is not adequately handled, it could be hazardous [1]. Stress is more common among college students. According to Lecic-Tosevski et al. [2] stress is a person's reaction to both internal and external dangers. Stress, according to Sarafino and Smith [3], is a state in which a person notices a discrepancy between a situation's physical or psychological requirements and the capabilities of that situation's biological, psychological, or social systems. University students today tend to be more agitated and anxious than students in past generations. University students experience stress because they are going through a life transition, which involves being away from home, a change in their social group, and the worry that they will not be able to handle their academics. An individual's impression of a stressor as dangerous or non-threatening, as well as their capacity to handle it, are both considered aspects of perceived stress [4]. Perceived stress differs from actual stress in that it occurs when a person experiences emotions or feelings related to how much stress they feel over time. For example, undergraduate students in Malaysia reported higher prevalence rates of perceived stress, ranging from 12.9% to 21.6% [5]. Additionally, because of the epidemic, students experience increased stress when required to participate in online learning. Optimism, self-esteem, and a sense of control are important personal resources for coping with stressful situations, according to Taylor & Broffman [6].

Although there is a huge of information on how stressful it is for medical and dentistry students, there are very few studies on undergraduates pursuing other courses [7-10]. Several studies have identified the role of psychological resources as a support system for managing stress [6]. But in Malaysia, relatively little study has been conducted [11]. There has not yet been any research on cognitive intervention as a psychosocial resource for students to use to manage stress. The goal of this study is to comprehend how psychosocial resources (such as dispositional optimism, perceived academic control, self-esteem, and cognitive intervention) are used by students to manage perceived stress. This study focuses on how students cope with stress by employing psychological resources. People employ psychosocial resources, such as dispositional optimism, perceived academic control, self-esteem, and cognitive intervention, to adjust to dangers and get through challenging circumstances [11]. This study is being conducted since lack of studies on university students, particularly those undergraduate students in Malaysia's northern region who experience stress, have been done using psychological resources. To close these gaps, this study must examine the significance of psychosocial resources. Therefore, the main goal of this study is to examine how university students deal with perceived stress by using psychosocial resources such dispositional optimism, perceived academic control, self-esteem, and cognitive intervention.

Literature Review

Perceived stress

An individual's impression of a stressor as dangerous or non-threatening, as well as their capacity to handle it, are both considered aspects of perceived stress [4]. Perceived stress differs from actual stress in that it occurs when a person experiences emotions or feelings related to how much stress they feel over time. There has been a lot of study on perceived stress among medical and dentistry students [8], but less has been done on the psychosocial supports that can assist students deal with it [11]. Among students, optimism is a highly significant predictor of stress reduction.

Dispositional optimism

A dispositional optimist is more likely to believe that important aspects of their lives will turn out well over time. Optimism is the cognitive, coping, and contextual skill that will promote improved mental health [12]. Dispositional optimism is crucial since it refers to a person's hopeful expectations for the future in relation to their own motivational processes [12]. People can gauge their stress more accurately when they are optimistic. As a result, optimism strongly predicts students' ability to reduce stress.

Perceived academic control

Students' perceptions of whether they possess particular qualities, such as intellectual and physical aptitudes and educational background, which can affect their academic performance, are known as perceived academic control. Previous investigations supported the link between stress and perceived academic control [11,13]. Numerous studies have demonstrated the connection between students' perceptions of academic control [11,14]. Because they are less stressed,

students with strong academic control perform better and have productive academic careers [14].

### Self esteem

Self-esteem is a person’s opinion of themselves and their worth [15]. According to earlier research, one psychological tool that can help people manage stress and their reactions to stress is self-esteem [6]. Stress and self-esteem are strongly correlated, according to prior research [16]. As a result, kids who feel confident in themselves appear to be less anxious.

### Cognitive intervention

Any intervention that addresses cognition or one of the specific cognitive domains listed under “mental function”—knowledge, orientation, intellectual function, attention, memory, perception, and functioning thought—is referred to as a cognitive intervention. Students who took part in the cognitive intervention improved their healthy behavior, such as their relationships, spiritual development, and physical activity. Previous research has demonstrated that cognitive intervention reduces workplace stress, aids in the treatment of stress in university students, and helps people cope with stress-related addiction [17,18]. Therefore, cognitive intervention has been deemed the most effective when compared to other stress management techniques.

### Research Framework

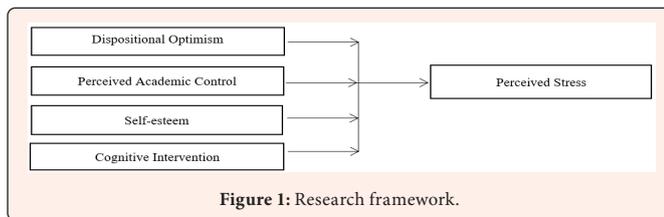


Figure 1: Research framework.

### Hypotheses

- H<sub>1</sub>: Dispositional optimism has a relationship with perceived stress.
- H<sub>2</sub>: Perceived academic control has a relationship with perceived stress.
- H<sub>3</sub>: Self-esteem has a relationship with perceived stress.
- H<sub>4</sub>: Cognitive intervention has a relationship with perceived stress.

### Research Methodology

Students attending Malaysian universities were selected as respondents for this study, with an emphasis on Malaysia’s northern region. Undergraduate students from various fields of study made up the responses. According to Krejcie and Morgan [19], the sample size was 367 undergraduate students, with a total population of 7,869 people. With a descriptive survey design, this study used a quantitative, cross-sectional method. Eight (8) demographic questions made up Section A of the survey, which also included 10 questions on dispositional optimism [12], Eight (8) questions on perceived academic control [13], ten (10) questions on self-esteem [15], twenty-one (21) questions on cognitive intervention [20], and eleven (11) questions on perceived stress [21]. A total of fifty-eight (58) items were measured using Likert-type responses, ranging from strongly disagree at “1” to strongly agree at “5.” The six-month study was based on a self-administered questionnaire. The Statistical Package for Social Science was used to analyze the data using the Stratified Random Sampling Approach (SPSS).

### Results

A total of 247 (67%) of the 367 sample respondents were usable. Of this, 70 of these respondents (29.8%) were men, and 165 (70.2%) were women. The test results did not reveal any gender disparities. In order to interpret the data in (Table 1), Pearson correlation coefficients were used (r). In this study, the three (3) components were correlated with the dependent variable, perceived stress, to establish criterion-related validity. (Table 1) demonstrates substantial positive connections between perceived stress and three (3) out of the four (4) components, including perceived academic control (r=-0.33\*\*), self-esteem (r=-0.60\*\*), and cognitive intervention (r=0.63\*\*). In relation to the dependent variable, dispositional optimism (r=0.05) was not significant with perceived stress.

Table 1: Pearson correlation coefficients.

Variables	DO	PAC	SE	CI	PS
Dispositional Optimism (DO)	1				
Perceived Academic Control (PAC)	0.04	1			
Self-Esteem (SE)	-0.15*	0.44**	1		
Cognitive Intervention (CI)	-0.12	-0.43**	-0.54**	1	
Perceived Stress (PS)	0.05	-0.33**	-0.60**	0.63**	1

Note: N= 247, \*p<0.05, \*\*p<0.01.

Other names for linear regression include multiple regression, multivariate regression, regression, and Ordinary Least Squares (OLS). The total impact of dispositional optimism, perceived academic control, self-esteem, and cognitive intervention on perceived stress was examined in this study using multiple regression analysis. In other words, it is done to find out how the four (4) components affect how perceived stress feel. Table 2 presents the findings of the analyses on the correlations between the independent variables (dispositional optimism, perceived academic control, self-esteem, and cognitive intervention) and the dependent variable as a result of linear regression (perceived stress). Table 2 demonstrates a significant association between two independent variables (cognitive intervention and self-esteem) and the dependent variable. The relationship between perceived stress and two (2) independent variables—dispositional optimism and perceived academic control—is, however, negligible and favorably skewed. The R and R<sup>2</sup> values are provided in this table. The simple correlation is represented by the R value, which is 0.70 and denotes a high degree of correlation. How much of the dependent variable’s overall fluctuation is indicated by the R<sup>2</sup> value. The variance of the dependent variable was shown to be explained by the variance of the independent variables. In this instance, 48% of the diversity in perceived stress can be explained, a significant amount that supports the notion that dispositional optimism, perceived academic control, self-esteem, and cognitive intervention all vary. There is another 52% unexplained variance by the independent variables which can be explored for future study. As shown by Table 2, cognitive intervention is found to be the most dominant factor influencing perceived stress with highest Beta value (β =0.44\*\*) among all the independent variables follows by self-esteem (β=-0.36\*\*), dispositional optimism (β=0.05) and perceived academic control (β=0.02). Therefore, cognitive intervention and self-esteem are considered as the important predictors with perceived stress in this study. In other words, independent variables are significantly related to dependent variable when the p value is less than 0.01.

Table 2: Regression analysis.

Dependent Variable: Perceived Stress		
Independent variables	β	Sig.
Dispositional Optimism (DO)	0.045	0.36
Perceived Academic Control (PAC)	0.018	0.74
Self-Esteem (SE)	-0.36	0.00**
Cognitive Intervention (CI)	0.44	0.00**
R	0.7	
R square	0.49	
Adjusted R square	0.48	

Note: N=247, \*p<0.05, \*\*p< 0.01.

### Discussion

According to the research shown above, the relationship between dispositional optimism and perceived stress (β=-0.05) is not statistically significant. As a result, hypothesis 1 is rejected. This is the opposite of what Yeo & Yap found (2020) [11]. According to the findings, dispositional optimism is not significant in this case since negative future expectations are more closely tied to an individual’s internal motivating processes [12]). Additionally, there is no correlation between perceived academic control and perceived stress. As a result, hypothesis 2 is rejected. Previous research does not support this conclusion [14,22]. Due to stress, university with poor academic control perform better and have less successful academic careers. There was a significant negative relationship between self-esteem (β=-0.36\*\*) and perceived stress. Therefore, hypothesis 3 is accepted. This relationship is supported by Yildirim et al. [16]



who found moderate negative relationship between self-esteem and perceived stress. In addition, the final verdict of hypothesis 4 was supported was cognitive intervention ( $\beta=0.44^{**}$ ) with perceived stress. Existing literature and findings supported the findings on the highly significant relationship between cognitive intervention and perceived stress [18,23]. There is a moderate positive correlation between cognitive intervention and perceived stress.

### Future Research Recommendation

This study focuses on the factors that may influence how variables and students' reported stress levels relate to one another. The best way to lessen perceived stress should be suggested by the students themselves. To aid students in managing their perceived stress, university administration should concentrate on enhancing their psychosocial resources. Next, a supportive environment for learning should be established using effective teaching and learning techniques. Counseling services should also be made available to aid students in managing stress. With courses that are created to help their learning, students should have adequate resources for their studies. As a result, more extensive research can be done to examine the variations in individual characteristics, personalities, and religion [24-27].

### Conclusion

The purpose of this study was to identify the variables that influence students' stress levels at public universities in northern Malaysia. Cognitive intervention, perceived academic control, self-esteem, and dispositional optimism are some of the factors that affect how much stress is felt. According to this study, there is a strong correlation between cognitive intervention and self-esteem with perceived stress. It was found that the other variables, such as dispositional optimism and perceived academic control, had no significant association to how behavior was seen since they were limited in terms of academic control, having a less successful academic career, different features, and human nature. Motivation, academic health care, and religion are therefore essential instruments for controlling perceived stress among university students.

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