

# RELATIONSHIP BETWEEN STRESS AND SELF-EFFICACY AMONG UNIVERSITY STUDENTS

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**Abstract:** The purpose of this study was to find out the relationship between stress and self- efficacy among university students. A randomly selected 456 students from Universities of Tigray were participated in this study and a descriptive survey with a quantitative design was utilized. The instruments of data collection for this study were adopted; and Pearson product-moment correlation coefficient was applied by using SPSS version 20 to answer the basic research questions of this study. A chi square test was also used to determine the observed and expected frequencies of the variable sex. Accordingly, the result indicated that students' stress and their self-efficacy have significant strong negative correlation ( $r = - 0.681, p < 0.01$ ). It also indicated that self-efficacy and academic performance have very strong positive correlation ( $r = 0.965, p < 0.01$ , two-tailed test).

**Index Terms - Correlation, Stress, Self-efficacy, University students.**

## 1. INTRODUCTION

Stress is an inevitable part of man's life. Anyone cannot be free of stress throughout his/her life, though the degree of the stress experience might vary from individual to individual. Selye (as cited in Lewis, 2006) affirmed this idea by stating that the time in which human beings become free of stress is after their death.

Likewise, many higher education students are confronted with a number of stressors that adversely affect their daily lives in their own campuses (Brown and Ralph, 1999; Adlaf et al., 2001; Simons et al., 2002; Lo, 2002). These days, the vast knowledge of the advanced world challenged the higher education students that require them to have a better ability to sort and assemble it in the actual ground (Simons et al., 2002). According to Fisher (1994) and Ross et al. (1999), compared to their earlier schools, universities become an intricate stressful situation for their students in different activities like dealing with academic pressures, developing new interpersonal relationships with others, organizing time for the different activities and managing their financial limitations. Hence, the students are forced to make an adjustment for each one of these and other similar issues in order to have a stable campus life. Research results of other scholars also revealed related results in this issue. According to them, because of the direct relationship of the students' health and their educational activities, the experience of this stress makes the students to have low performance in their academic areas. (Williamson, Birmaher, Ryan, and Dahl, 2005). A study carried out by Khan, Altaf and Kausar, (2013) again confirmed that students' performance is adversely affected by the experience of their academic stress.

### 1.1 Students' self-efficacy and stress

The term self-efficacy refers to individuals' learning ability of new things and strongly believing in the ability to succeed against all perceptual obstacles that occur in them. Regarding this issue, previous research works revealed that, irrespective of life hardship, students with more self-efficacy will perceive their academic success as inevitable part of their life challenges and strongly believe in their ability to solve their own problems (Jerusalem & Schwarzer, 1992; Schwarzer, 1992, 1993). Besides, academic self-efficacy play a critical role in predicting academic success of students during their college life and in controlling

the influence of the school related stressors on their perceived stress experience (Zajacova, Lynch, & Espenshade, 2005). Schunk (2011) also applied the concept of self-efficacy in the academic result of many students and he concluded that the students' choices of different activities are influenced by their self-efficacy level. According to this researcher, Students with high self-efficacy have a solid tendency to work hard and exert more effort on learning challenging tasks that those with low self-efficacy level.

What is more, Bandura (1993) postulates that self-efficacy beliefs affect students' outcomes by increasing their motivation and persistence to master challenging academic tasks and by fostering the efficient use of acquired knowledge and skills. As well, as to the research result of Sim & Moon (2015), better self-efficacy was confirmed to be the most important positive factor in students' adjustment of university life and achievement of better outcomes. That is, students with high levels of academic self-efficacy can easily adjust their college life and develop manageable experience of stress. Torres and Solberg (2001) also found the students' academic self-efficacy and the amount of time they spent in studying their materials was positively associated.

### 1.2 Relation of Self-Efficacy and Stress

The close relationship of the concepts of self-efficacy and stress was affirmed by many previous research results. According to these studies, a given task which is perceived as a stressful or threatening affects the confidence of individuals about their competence to handle a given situation effectively (Chemers, Hu, and Garcia, 2001; Lazarus and Folkman, 1984; Pintrich and De Groot, 1990).

A number of research studies repeatedly indicated that the college students' self-efficacy and stress have a moderate to strong negative relationships (Solberg and Villarreal, 1997; Gigliotti and Huff, 1995; Torres and Solberg, 2001). Similarly, a study carried out in Pai Chai University of Korea (Sim and Moon, 2015) also affirmed that there was an inverse relationship between stress and self-efficacy. For them, high levels of academic self-efficacy correlates with less stress experience, better adjustment to college life and better academic results.

To sum up, in order universities can actualize their educational goals effectively, they have to identify the relation of stress and self-efficacy of their students, and recognize the influence of these variables on the health and academic achievement of the students, so that they can prepare appropriate remedies on time. However, this issue was not well addressed so far in our context and that is why my study is targeted at assessing the relationship of self-efficacy and stress on Tigray university students. In doing so, the following research questions were addressed.

1. What is the relationship between students' self-efficacy and their experience of stress?
2. Do students with high self-efficacy scores better academic performance than those with low self-efficacy?

### 2. Objective of the study

The general objective of this study was targeted at assessing the relationship of stress and self-efficacy among Tigray university students. It also intended to identify the influence of self-efficacy on the academic performance of the students.

### 3. Methods of the study

This study utilized quantitative descriptive survey research design. There are three governmental universities in Tigray regional state, which is located in the northern part of Ethiopia. Out of the total number of the university students (i.e, 36086 students who were attending their education only in regular programs and only in similar colleges of all the universities), 380 students were randomly selected for this study based on Krejcie and Morgan (1970) sample size determination formula; and to increase the level of precision of this study, the researcher added 25% of the participants from the population to the study sample. Accordingly, 475 questionnaires were distributed to the participants of this study. But, after the data was collected, 19 participants were excluded from the final sample size as they were inappropriately filled the data collection instruments. Hence, the final sample size of this study was 456 proportionately selected students (male = 278 and females = 178). What is more, to measure the

students' self-efficacy, general self-efficacy scale was adopted from Schwarzer & Jerusalem (1995) and to measure their stress level, a students' stress questionnaire was adopted from Thawabiah and Qaisy (2012). Finally, two data analysis tools were applied based on the research questions and the nature of the variables of this study.

#### 4. Results of this Study

This sub-topic presented the results of the data obtained from the participants. Accordingly, the basic research questions of this study and the main demographic characteristics of the participants were addressed as follows.

##### 4.1. Demographic Characteristics of the Respondents

Table 1: Demographic variables of the study

Variable	Category	Frequency	Percent	Total	Mean	X <sup>2</sup>
Sex	Male	278	61	456		21.930 <sup>a</sup> , df = 1 Asymp. Sig = .000
	Female	178	39			
University	Aksum	123	27	456		
	Adigrat	160	35.1			
	Mekelle	173	37.9			
GPA	1.75 – 2.5	104	22.8	456	2.909	
	2.6 – 3.19	215	41.7			
	3.2 – 3.49	68	14.9			
	3.5 – 4.00	69	15.1			

In this study, out of the total distributed questionnaires, 96% of them were properly filled and returned. As you can see from table 1, there are three different demographic variables listed there. This study comprises 61 percent male and 39 percent female participants. The chi-square test in the same table also indicated that there is a significant mean difference between the expected and observed frequencies of the number of male and female participants included this study ( $\chi^2 = 21.930^a$ ,  $df = 1$  and  $p < 0.05$ ). The possible reason for this might be that the cultural influences imposed on the female individuals and the great responsibilities they carry out in homes still make the female students to have lower participation in academic areas.

The other demographic variable of this study is a university in which the students attend their educational programs. Subsequently, 27 percent, 35.1 percent and 37.9 percent of the participants were taken from Aksum, Adigrat and Mekelle universities in that order. What is more, most of the participants of this study (41.7%) have scored from 2.6 up to 3.19 grade point average (GPA) during their stay in their respective campuses, and smaller number of them (14.9%) scored from 3.2 up to 3.49 GPA.

#### 4.2. Relationship between Stress and Self-Efficacy

Table 2: Table of correlation for stress and self-efficacy

		1	2
1. Stress	Pearson Correlation		
	Sig. (2-tailed)		
	N	456	
2. Self-efficacy	Pearson Correlation	-.681**	
	Sig. (2-tailed)	.000	
	N	456	456

\*\* . Correlation is significant at the 0.01 level (2-tailed).

One of the research questions of this study was targeted in assessing the relationship between the variables of stress and self-efficacy of the aforementioned university students. So, as you can observe from table 2, the result of this study affirmed that stress level of the students had a strong negative correlation with their self-efficacy ( $r = -0.681$ ,  $p < 0.01$ , two-tailed test). This implies that students with better self-efficacy have better ability of managing their stress level. So, this result is similar with most of the previous research works mentioned in the introductory part. For instance, as to the research results of Solberg and Villarreal (1997), Gigliotti and Huff (1995) and Torres and Solberg (2001), the college students' self-efficacy and experience of stress repeatedly indicated a moderate to strong negative relationships. In the same way, a study carried out in Pai Chai University of Korea (Sim and Moon, 2015) also affirmed that there was an inverse relationship between stress and self-efficacy.

#### 4.3. Interrelation between Self-Efficacy and Academic Performance

Table 3: Table of correlation for self-efficacy and academic performance

		1	2
1. Self-efficacy	Pearson Correlation		
	Sig. (2-tailed)		
	N	456	
2. GPA of students	Pearson Correlation	.965**	
	Sig. (2-tailed)	.000	
	N	456	456

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Regarding the issue of the relationship between self-efficacy and the students' academic performance, as it is displayed in table 3, these two variables have very strong positive correlation ( $r = 0.965$ ,  $p < 0.01$ , two-tailed test). This indicated that students with high self-efficacy scores better academic performance than those with low self-efficacy during their campus life. This result is also comparable to previous research works. For instance, Bandura (1993) postulates that self-efficacy beliefs affect students' outcomes by increasing their motivation and persistence to master challenging academic tasks and by fostering the efficient use of acquired knowledge and skills. Better self-efficacy was confirmed to be the most important positive factor in students' adjustment of university life and achievement of better outcomes (Sim & Moon, 2015). Again, as to the study result of Schunk (2011), Students with high self-efficacy have a solid tendency to work hard and exert more effort on learning challenging tasks than those with low self-efficacy level.

## 5. Conclusions

The main research questions in this study concern the relationship between stress and self-efficacy among university students and influence of demographic variables if any. So, based on the result of this study, the following conclusions were drawn.

1. Students with high levels of self-efficacy have better ability of managing the experience of their stress.
2. Students with high self-efficacy scores better results in their academic performance.

## 6. Recommendations

1. It is better if the universities will offer a professional counseling service for the students that help them to increase their self-efficacy, so that they will manage their stress level effectively and score better academic results.
2. The concerned administrative bodies and the students should collaborate together to discuss about the issues of stress, self-efficacy and their consequences aiming to develop the awareness of the students.
3. As far as my knowledge, this research is a first attempt to explore the relationship between students' stress and their self-efficacy in our country. Therefore, it should be replicated with more numbers of participants to find out either similar or dissimilar results.

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