Self-Efficacy, Self-Esteem and Academic Achievement

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Abstract--This research is designed to address two important variables which are self-efficacy and self-esteem as they play a vital role in students' academic outcomes. The focus of the study is the relationship between self-efficacy and self-esteem and its impact on academic achievement on university students. Participants were from both genders and from different educational background. An adapted questionnaire was used to measure self-efficacy and self-esteem. Those participating in the study were asked to complete two scales through an online survey that consist of self-efficacy scale and self-esteem scale. As well as various demographic questions and grade report (GPA). The purpose of this research was to study the relationship of self-efficacy, self-esteem and academic achievement. Descriptive statistics, inferential statistics and Pearson product moment correlation analysis were used for analyzing the results. The analysis of the data showed that there is a significant positive relationship between students' self-efficacy and self-esteem ($r=.324**$ $p< .001$).

Keywords--Self-efficacy; Self-esteem; Academic achievement

I. INTRODUCTION

Students' achievement is an outcome of many factors. Self-efficacy and self-esteem are variables that have a great influence on academic achievement. A number of researchers have suggested that self-efficacy and self-esteem are strongly related and have been linked to academic achievement.

Self-efficacy is defined as optimistic self-belief in our capability or possibilities of effectively achieving a task and creating a good result. Self-efficacy plays a major influence in deciding our chances for success, some psychologists' rate self-efficacy above ability in the formula for success [1]. According to Bandura [2] strong sense of self efficacy improves human achievement and individual well-being in different ways. Individuals with high confirmation in their capacities approach the troublesome task as challenges to be controlled / mastered instead of as threats to be maintained a strategic distance from [2]. Additionally, the presence of self-efficacy attitude has been found to be able to notice precise differences in students' performance context and to mediate students' academic achievement [3].

Self-efficacy is a key element source of individuals' selection of activities, how much effort they are willing to put and how long they are willing to sustain the effort in managing with challenging circumstances [4].Self-esteem is simply defined as the opinion and value you have of yourself [5]. Self-esteem is a strong and accurate indicator of academic accomplishment and general self-esteem is also a huge indicator of superior school performance [6].

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Brown [7] stated that educators believe that self-esteem plays a basic part in academic achievement and many researchers have suggested that self-esteem is established on the perception that one has certain positive characteristics and qualities. Brown [7] points out as well that high self-esteem includes general, global liking for oneself. Low self-esteem is just the opposite.

Ross and Broh[8] suggested that the belief of self-efficacy have impact on academic achievement, but it shows no relationship with self-esteem. Nevertheless, Ross and Broh[8] emphasized that earlier academic achievement and parental support increase self-esteem.

Afari[9] stated that the outcome of the research was showed that there is association between self-esteem and self-efficacy. Furthermore, the findings outcome also showed that educational achievement and academic self-efficacy are related Afari[9].Caprara [10] stated that individuals with a low sense of self-efficacy also have a low-self-esteem. Therefore, they have pessimistic ideas and thoughts about their achievements.

Giofrè et al. [11] mentioned that academic self-esteem is considered a non-cognitive factor that was effective at predicting achievement when the cognitive factors were controlled. Therefore, academic self-esteem was found to have an indirect influence on academic achievement. In the study, the role of motivation and self-esteem in the academic achievement of Turkish gifted students it showed significant correlations between self-esteem, motivation, and achievement [12].

Yazon[13] mentioned there is a notable connection between self-esteem and self-efficacy outcomes. The researcher concluded that how the students feel about themselves have a statistically significant correlation with how they expect they can successfully achieve [13]. Moreover, stated that someone with a high self-esteem is expected to perform well academically. Nevertheless, Yazon [13] established that there is no association between the students' self-efficacy scores and academic performance.

Ümmet[5] claimed that the self-esteem of the students showed a significant difference asto educational level of mother and perceived parent attitudes by them, whereas the educational level of father and gender did not have an effect on self-esteem. Naderi et al. [14] investigated that self-esteem indicates a strong significant relationship between academic achievement when gender is controlled and a significant difference between gender and self-esteem was observed. The study self-efficacy, self-esteem and their impact on academic performance indicated a significant relationship between self-efficacy and self-esteem among postgraduate students.

Shkullaku [15] study finding stated that although there was a significant difference between males and females in self-efficacy. There was no difference between males and females in academic performance. Additionally, Shkullaku[15] mentioned that a remarkable relationship was noticed between self-efficacy and academic performance of the students.

Arbabisarjou et al. [16] have stated that the relationship between gender and self-efficacy of students was significant. In addition, there was an association between gender and academic achievement. As well, there was no

association between age and academic achievement [16]. As well, the students' self-efficacy and academic outcomes were studied and remarkable relationship was noticed [16,21].

Puzziferro[17] study was intended to investigate the performance as a system of scoring and course fulfillment in online accessible undergraduate level education, particularly students' self-efficacy for education through online system education. Puzziferro [17] suggested that the study showed that online accessible education self-efficacy level didn't correspond with student performance.

Additionally, Galyon [18] conducted a study to examine the relationship of three levels of academic self-efficacy high, medium and low in class discussion and course exam among undergraduate students. The results indicated that all the levels of self-efficacy significantly predicted levels of student's participation and exam performance [18,20].

Academic achievement is recognized as a vital element to judge one's capabilities and limits. Therefore, it is very crucial for the students to have high academic achievement as it refers to the degree of progress and success. Joshi and Srivastava [19] defined academic achievement as learning the state of mind or ability created in the school usually designed by test scores assigned out by an instructor. Hence, the academic achievement could be characterized as self-perception and self-assessment of one's goal achievement.

The aim of the presented study is to examine the relationship of self-efficacy, self-esteem and academic achievement among students. Therefore, this study goal is to investigate and explore the connection between self-efficacy and self-esteem and to discover impact of those two variables on academic achievement.

II. METHODOLOGY

The type of research design used in this study is correlation research design. The sample comprised of 121 participants. The participants were asked to agree to the informed consent attached to the survey if they are voluntarily agreeing to participate. There are 113 participants agreed to take part in the study and 8 participants withdraw from the study. About 79 female participated who were between the ages of 20 to 35 and 34 male participants took part in the study who were between the ages 20 to 30. The selected participants are from different levels and majors in undergraduate and postgraduate education. The participants were from a different demographic background as well. The data were gathered by utilizing a self-report online survey (Google survey). All the data was collected from participants agreed to take part in the study through informed consent attached to the self-report online survey.

The Rosenberg self-esteem questionnaire: Self-esteem is measured in this study by the Rosenberg self-esteem scale. The scale comprises of ten items. Half of the items are positive items and half of those were negative items. The positive and negative items were presented in random order. The items responses vary from strongly agree to strongly disagree. All items were only related to the self-acceptance aspect of self-esteem. The Rosenberg Self-Esteem Scale internal consistency is 0.77 to 0.88.

The General Self-Efficacy Scale: Self-efficacy is measured in this study by the General Self-Efficacy Scale. The scale comprised of ten items. It is designed to evaluate self-beliefs to manage and deal with a variety of challenging demands that require effort and determination. The scale has been originally developed in German by Matthias Jerusalem and Ralf Schwarzer and has been used in many studies with hundred thousands of participants. The respondents were instructed to evaluate the degree to which each item is true to them on a scale that have responses varying from not at all true to exactly true. For Internal reliability for General Self-Efficacy (GSE) = Cronbach's alphas between 0.76 and 0.90.

Academic achievement: The data on academic achievement was gathered by the GPA grade score of the recent semester reported by the participants.

Procedure

The present research was conducted among undergraduate and postgraduate participants from different universities. An online self-report survey was sent to the participants through Google survey, attached with informed consent. The participants had to respond various parts of the survey informed consent, demographic questions, the self-efficacy scale, the self-esteem scale and provide their GPA. All the participants were informed about the purpose of the study and their right to withdraw. Data were collected during a time period of 25 days. Statistical Package for Social Sciences SPSS (version 24) was used to analysis the data. Descriptive statistics, inferential statistics and Pearson product moment correlation analysis were used for analyzing the results.

III. RESULT AND DISCUSSION

Table 1 shows that Age (22 and less) and (23 and above) has a frequency of 53 and 60 respectively with a percent of 46.9 and 53.1 respectively. Gender of male and female has a frequency of 34 and 79 respectively with a percent of 30.1 and 69.9 respectively. Nationality of Non-Saudi and Saudi has a frequency of 62 and 51 respectively with a percent of 54.9 and 45.1 respectively. Mother education did not complete high school, high school, graduate, and post-graduate has a frequency of 18, 38, 52 and 5 respectively with a percent of 15.9, 33.6, 46.0 and 4.4 respectively. Father education did not complete high school, high school, graduate, and post-graduate has a frequency of 15, 14, 59, and 25 respectively with a percent of 13.3, 12.4, 52.2 and 22.1 respectively. Student education graduate and post-graduate has frequency of 106 and 7 respectively with a percent of 93.8 and 6.2 respectively (see Table 1).

Table 1: Frequency Distribution of Study variable (N=113)

Variables	Criteria	Frequency (f)	Percentage (%)
Age	22 and less	53	47
	23 and above	60	53
Gender	Male	34	30.1
	Female	79	69.9

Nationality	Saudi	62	54.9
	Non-Saudi	51	45.1
Mother education	Did not complete high school	18	15.9
	High school	38	33.6
	Graduate	52	46
	Post-graduate	5	4.4
Father Education	Did not complete high school	15	13.3
	High school	14	12.4
	Graduate	59	52.2
	Post-graduate	25	22.1
Student Education	Graduate	106	93.8
	Post-graduate	7	6.2

The self-efficacy and self-esteem items were both checked for reliability using Cronbach's Alpha analysis. Table 2 shows that self-efficacy was highly reliable upon checking the 10 items for reliability ($\alpha = .88$). The self-esteem items were also highly reliable ($\alpha = .86$).

Table 2: The Psychometric Properties of the Scales

Scale	No. of items	Cronbach's Alpha (α)
Self-efficacy scale (SEF)	10	.88
Self-esteem scale (SES)	10	.86

To test the correlation between self-efficacy and self-esteem, Pearson correlation analysis was performed in SPSS. The result of the correlation analysis shown in Table 3 indicates that there is a strong significant correlation between self-esteem and self-efficacy ($r = 324** p < .001$) two tailed.

Table 3: Intercorrelation of the study variables

Variable	Mean	SD	SES	SEF
SES	18.75	6.02		
SEF	30.37	5.28	.324**	

Note. SES stands for Self-esteem scale and SEF stands for self-efficacy scale.

The correlation between self-efficacy and self-esteem upon the gender was identified. The result in Table 4 indicates that male participants scored higher in self-esteem than female participants.

Table 4: Intercorrelation of the study variables

Gender	N	Mean	SD	t
t_SEF				
male	34	30.56	6.85	0.258
female	79	30.29	4.48	
t_SEF				
male	34	20.09	4.91	1.72**
female	79	18.18	6.38	

Note. **p < .01

IV. OVERALL DISCUSSION

The obtained results indicate that there is a positive significant relationship between self-efficacy and self-esteem. Therefore, this study provides additional information on the importance of self-efficacy and self-esteem relationship within students. The outcome of the current study demonstrated that students with high self-efficacy scored high on the self-esteem scale.

So, it important to support and cultivate those two variables in students as they play a vital role in helping students to cope with the challenges and overcome the problems they face to achieve the desired educational outcome. The results also showed that there was a partially remarkable relationship between self-efficacy and academic achievement. It was interesting to find that there is a gender difference in self-esteem with male participants scoring a higher level of self-esteem than the female participants. This current study future recommendation is that this interesting aspect to be explored and examined more through a larger sample to obtain a variety of results and to include more scales in order to improve the outcome of the current research.

V. CONCLUSION

In conclusion, this study explores and examines whether self-efficacy and self-esteem are related and if self-efficacy have an impact on academic achievement. The results seem to show consistency with the previous studies that mainly stated a statistically significant relationship between self-efficacy and self-esteem. Self-efficacy and self-esteem have a crucial influence on a student academic outcome and performance. Therefore, such study will provide more understanding on how to reinforce and support those aspects in students as it plays a vital role in education outcome. Whereas, self-efficacy and academic achievement results indicated that they are partially related. This result didn't meet some previous studies which mostly indicated that there is a significant relationship. Therefore, it requires more study to be done considering the limitation of this current study for better results.

VI. ACKNOWLEDGMENTS

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