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## INVESTIGATING THE DETERMINANTS OF STUDENT ACADEMIC PERFORMANCE: A STUDY ON COMILLA UNIVERSITY

#### Associate Professor Mohammed Belal UDDIN

Comilla University, Bangladesh Email: belal\_137@yahoo.com

Abstract:

This study seeks to investigate firstly to recognize the institutional and significant competences (influencing factors) that have allowed students to achieve better academic performance, and secondly, the interrelationship between student academic performance and the influencing factors. This study identified social support, student psychology, and self-esteem as determinants of academic performance of students. If it is true, students should concern about self-reliance, and sound mental health. Educational institutions should ensure proper educational support and environment. Families as well as society should concern about family and social relationship and environment. Theoretical framework and hypotheses have been developed by considering the positive relationship of determinants and outcome of academic performance of students with the support of relevant theories and existing literatures. Data were collected from one public university namely, Comilla University through questionnaire survey. Principal component analysis (PCA) and structural equation modeling (SEM) including confirmatory factor analysis (CFA), and path analysis were applied to assess the reliability and validity of models and test the proposed hypotheses of the study. The empirical results provided supportive evidence in favor of the hypotheses and theoretical arguments. The study found positive relationships among social support, student psychology, self-esteem, and academic performance of undergraduate level students.

*Keywords:* Social support, student psychology, self-esteem, and academic performance

#### Introduction

When students enroll in undergraduate or post-secondary level of education, they experience extensive pressure and there is a chance to decline their academic performance. Some factors like social support. student psychology, and self-esteem have a significant influence on their academic achievement. Social support (mental health and psychology components) is considered predicting components of academic achievement

(Karimi et al., 2012; Mackinnon, 2012). Generally, it is assumed that social support and students' psychological condition have a direct influence on academic performance. On the other hand, self-esteem, which is defined as own evaluation about oneself has a mediating role between social support, psychology, and academic performance (Kinnunen, et al., 2008). Different factors like motivation. learning style. economic and social conditions. parenting style have been taken under consideration for student performance in several studies (Lounsbury, et al., 2004; Mackinnon, 2012; Zakeria and Karimpour, 2011). But, one of the important elements is self-esteem that is supported by perceived social support and psychology has influence on students' academic performance.

Social support is positively associated with student academic performance. Social support is categorized as perceived and received. Social support may economical. instrumental. informational. or emotional (Ikiz and Cakar, 2010). Whatever the category of support, it is crucial for a higher level of selfconfidence hiaher level of and academic achievement. Higher level of self-confidence i.e., self-esteem provide courage to cope with a challenging Consequently, people can event. achieve their desired goals. To build a strong mindset it is necessary to have a sound mental health and high morale (Kinnunen, et al., 2008). Academic performance is not only the result of environmental and economical or instrumental supports, but also the consequent of psychological aspects of individuals (Karimi et al., 2012). Sound mental health is supportive for selfesteem as well as has an impact on students' academic performance.

There is a growing literature suggesting that psychosocial variables such as self-esteem are actually outcomes, rather than antecedents of academic achievement (Baumeister et al., 2003). But, in this study, psychology and self-esteem have been taken as the predictors of academic performance of students. Because if the mental health and confident level are not in expected level people can to do or achieve what they expect. In this study, attention is devoted to developing a relationship among social support, student psychology, self-esteem, and

student academic performance. The interrelationship of social support, student psychology, self-esteem, and student academic performance are introduced as a new approach for research in performance evaluation of students. The influences of social support and student psychology on student academic performance are also a matter of consideration. Two main questions in this study are:

(1) What are the influencing factors of student academic performance?

(2) What is the interrelationship between student academic performance and the influencing factors?

## Theoretical arguments and hypotheses development

Social support can be defined as the supports that are accessible or obtainable to an individual (Hupcey, 1998) or a student. It is changeable, and over time it's changed rather it is stable (Bergeman, et al., 2001). It can economical. informational. be or affecting mechanical. (lkiz and Cakar, 2010). Self-esteem is defined as evaluation the self of oneself (Kinnunen, et al., 2008). Self-esteem shows our level of confidence towards our thinking, coping with challenges, success, happiness, deserves, and eniovina the available benefits. Supportive social relationship ensures the benefits like morale, health, and Consequently, high social copina. support is related to high self-esteem (Kinnunen, et al., 2008). High selfesteem facilitates to build a social relationship. other hand. On the interaction between parent and children i.e., parenting style is associated with children self-esteem (Zakeria and 2011). When Karimpour. financial. instrumental, and other facilities are available students get confidence on

their own mind. These facilities also improve the academic performance of students. Any negative or challenging be managed event can through sufficient social support (Mackinnon, 2012). Strong internal commitment, performance-oriented culture. and leadership are more significant for individual's performance (Mansor, et al., 2012). Friendly relationship among students also fosters to achieve their expected academic goals. Thus, I posit:

**H1:** There is a positive relationship between social support and student self-esteem.

**H2:** There is a positive relationship between social support and student academic performance.

Psychology is expressed through human thinking and behavior. It is the combination of human thoughts, emotion, and behavior. It encompasses an inclusive perceptive of affecting issues at the deep core level which about physical carries condition. pleasure and functionality in the human. Self-esteem, anxiety and motivation are by psychological affected factors 2011). The dimensions of (Juuso. psychology such as consciousness. extroverted. agree-ability. and emotional stability have influence on the extent of self-esteem. Morosanu (2012) and Kinnunen, et al. (2008) found psychometric symptoms predict the extent of self-esteem of an individual. On the other hand. psychological aspects such as personality flecks and learning styles have a crucial effect on student academic achievement (Karimi et al., 2012). And the function of personality is greater than the intelligence in the

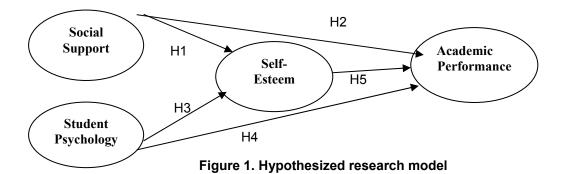
domain of academic performance. Psychologically sound i.e. more conscious, extrovert, and emotionally stable people can perform better than those who are psychologically weak (Morosanu, 2012). They get motivation engage in learning. to and consequently improve in academic performance. Even, there is a positive impact of school psychological services on student academic performance. Therefore, I Propose:

**H3:** There is a positive relationship between student psychology and student self-esteem.

**H4:** There is a positive relationship between student psychology and student academic performance.

Self-esteem is internal conviction organism that values oneself. It shows individual values. how much an approves, prizes, of likes him or herself (Blascovich and Tomaka, 1991). This self-evaluating factor has an influence emotions, expectation, thinking on process and performance attainment (Rahmani, 2011). High self-esteem increases individual's, initiatives and creates happiness. High self-esteemed people are more attentive in their assigned job and become reliable than the people having low-esteem (Baumeister, et al, 2003). Self-esteem is a critical issue sometimes it is a predictor of better performance. sometimes better performance ensure high self-esteem. Positive outcomes and benefits are the consequent of selfesteem (Baumeister, et al. 2003: Kinnunen, et al., 2008). So, I predict:

**H5:** There is a positive relationship between student self-esteem and student academic performance.



# Research design and methodology

#### Survey instrument

hypotheses То test а questionnaire survey method was used to collect data. Two rounds survey was conducted under this research endeavor most of the measurement items were from existing literatures. Some items were directly adopted from previous survev instrument to operationalize the constructs in this study. Many new items also included in different constructs to get a good response from data collection through survey. I have taken ideas from different scholars' studies and develop items for constructs in some cases. In the survey, a mapping rule has been defined i.e. a scheme for assessing numbers to represent aspects of the event for being measured (Cooper et 2012). constructs al., All were measured using multiple items by a point Likert-type scale (1= seven strongly disagree, 2= disagree, 3= moderately disagree, 4= neutral, 5= moderately agree, 6= agree, and 7= strongly agree).

#### Data and sample

First round test was conducted with 74 responses from undergraduate students Department level of of Accounting & Information Systems in Comilla University, Bangladesh, out of which 63 percent was male and 37 percent was female students. They were asked to fill the questionnaire and to provide comments of the wording of the measurement items. Principal component analysis (PCA) with a Varimax rotation was conducted on the preliminary sample. Table-2 presents the factor analysis result of first round survey. Cut-off point as 0.40 (suppress absolute value less than 0.40) was imposed in factor analysis. Based on the result principal component analysis and suggestions from (PCA) the preliminary survey one item (V14 was deleted) that belongs to 'self-esteem' construct was removed from the final questionnaire and one item belongs to 'academic performance' was modified. Then final questionnaire was prepared for second round survey containing total 17 items. Table-1 presents the summary of descriptive statistics of first round survey.

#### Table 1

Summary statistics of preliminary survey

Constructs	No. of items	Mean	SD	α				
Social support	4	4.976	1.212	0.838				
Student psychology	6	6.020	0.785	0.831				
Self-esteem	5	5.970	0.708	0.678				
Academic performance	3	3.995	0.974	0.565				

SD = standard deviation;  $\alpha$  = cronbach alpha; overall  $\alpha$  = 0.777

Table 2

				Table 2			
Result of factor analysis (preliminary survey)							
	Social	Student	Self-esteem	Academic			
	support	psychology		performance			
V1	0.788						
V2	0.831						
V3	0.854						
V4	0.789						
V5		0.596					
V6		0.612					
V7		0.909					
V8		0.678					
V9		0.651					
V10		0.838					
V11			0.929				
V12			0.545				
V13			0.761				
V14							
V15			0.914				
V16				0.418			
V17				0.858			
V18				0.822			
Eigenvalue	4.411	2.724	2.180	1.706			
Variance	24.50	39.64	51.75	61.22			
explained (%)							
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Notes: Principal component analysis (PCA) is performed on preliminary sample; factor loadings less than 0.40 are not shown

In the second round, the formal survey was conducted on undergraduate level students of 14 departments of Comilla University. Total 520 questionnaires were distributed among the students (1<sup>st</sup> to 10<sup>th</sup> top CGPA holders of each department as well as each batch) of Comilla University. 492 complete and usable responses were received

(response rate is 95 percent). Fifty-two percent (52 percent) respondents were men and forty-eight (48 percent) percent were female students. 26 percent respondents were up to twenty years, and 74 percent were above twenty years old.

#### Analyses and results

Structural equation modelina software (AMOS 17.0) was used to analyze data by applying structural equation modelina that includes measurement model or CFA model and structural model. The measurement model provides reliability and validity of constructs that comprises convergent validity. discriminant validity. and nomological validity. The confirmatory factor analysis (CFA) was conducted to do validity analysis, and then structural model based on path analysis method was conducted to test hypotheses of this study. Before that, an iterated factor analysis with principal component analysis (PCA) with a Varimax rotation was conducted on formal three groups of sample. As a conservative heuristic, cut-off point as 0.50 (suppress absolute value less than 0.50) was imposed in factor analysis. This process results in a four factors model. Items with a factor loading less than 0.50 (if any) were deleted. It is notable that all calculated alpha values are above the widely recognized rule of thumb of 0.70 (Nunnally, 1978), that expresses a robust internal consistency among items within each construct applicable for the each group of sample responses also. Table-3 shows the rotated factor loadings and their respective eigenvalues cronbach alpha and values.

Table 3

	Social	Student	Self-esteem	Academic
	support	psychology		performance
V1	0.763			
V2	0.732			
V3	0.843			
V4	0.836			
V5		0.860		
V6		0.862		
V7		0.820		
V8		0.802		
V9		0.808		
V10		0.749		
V11			0.861	
V12			0.849	
V13			0.884	
V14			0.816	
V15				0.841
V16				0.879
V17				0.851
Eigenvalue	6.941	2.853	1.965	1.246
Variance	40.83	57.62	69.18	76.51
explained (%)				
Cronbach	0.843	0.920	0.932	0.893
alpha				

Result of factor analysis