Original Article

Self-Esteem and its Correlates among University Freshmen Biotechnology Major

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ABSTRACT
Self-esteem is a personal opinion of an individual about herself/himself and the appreciation of his/her worth. It refers to an accurate, justified, balanced appreciation of one's worth as a person. However, it can also refer to an inflated, arrogant, grandiose, unwarranted sense of conceited superiority over others. Although it is assumed that self-esteem is a trait that is innate and stable across time within a person, studies have shown that it may not be the case sometimes. Some experts argued that this trait can be influenced by some factors such as family, peers, environment and the school. Likewise, self-esteem is believed to have a relationship with the socioeconomic status, health and health related behavior and the self-efficacy. Reports have implicated the significance of self-esteem to academic performance or achievement. Hence, the present undertaking was conducted to determine this line of argument. The result of the study showed that both the male (Mean = 2.745) and female (Mean = 3.3) student respondents showed positive perception of their self-esteem. When the perceived self-esteem of the male students was compared with the female counterpart, using the Pearson Product Moment Correlation, the obtained value of r at p≤0.05 is 0.948. It showed a very high correlation based on Munro's strength of correlation coefficients. However, the perceived self-esteem of both, male and female respondent showed a low correlation with their academic performance (r = 0.42).
Key words: self-esteem, academic performance, self-concept, self-image

INTRODUCTION

Self-esteem is literally defined by how much value people place on themselves and it is the evaluative component of self-knowledge. High self-esteem refers to a highly favorable global evaluation of self, while low self-esteem refers to unfavorable definition of the self. Self-esteem may refer to an accurate, justified, balanced appreciation of one's worth as a person and one's successes and competencies, but it can also refer to an inflated, arrogant, grandiose, unwarranted sense of conceited superiority over others. Whereas, low self-esteem can be an accurate, well-founded understanding of one's shortcomings as a person or a distorted, even pathological sense of insecurity and inferiority.

Self-esteem is the personal opinion of a person about himself or herself and appreciation of his/her worth. An individual with high self-esteem has many positive effects and benefits. Students who feel positive about themselves have fewer sleepless nights, succumbs less easily to pressure of conformity by peers, and are less likely to use drugs and alcohol, are more persistent at difficult tasks, are happier and are more sociable, and most importantly they tend to perform better academically.

There are individuals who have a low self esteem; apparently, this is due to poor self image which might have been brought about by their negative attitude. These people may feel inferior and not able to face obstacles that confront them. They are submissive to the will of others and would commit what others would want them to do, which in the end they lost self-respect and confidence. However, there are some who have high self-esteem, as such, they are confident, they lack anxiety, highly motivated, able to face and tackle problems, and are happy with their situation.

The family plays a vital role in the development of the self-esteem of an individual. The synergistic events and the consequent behavior of each of the member of the family contribute to the unique individuality of each member. Hence, a parent with high self-esteem would most likely influence the personality and well being of the child. Likewise, school may also play an important role in the development and creation of positive self-esteem among the students, particularly in the early

years of their studies. Somehow, it is believed that those people with high self-esteem have low self destructive tendencies.

Conrath (1986) argue that the best way for a child to sustain a sense of confidence is to acquire and demonstrate competence. Consequently, self-confidence will be revealed with success in skill development and learning. In addition, academic achievement is influenced by perceived competence, autonomy and motivation (Weist et al., 1998).

Accordingly, "we develop and maintain our self-concept through the process of taking action and then reflecting on what we have done and what others tell us what we have done. We reflect on what we have done and can do in comparison to our expectations and the expectation of others and to the characteristics and accomplishments of others" (Brigham, 1986). Indeed, self-concept is not innate; it is developed or learned in the course of individual interaction with the environment and reflecting on the interaction. This dynamic aspect of self-concept (self-esteem) is essential in the sense that it can possibly be modified or changed. Franken (1994) states that "there is growing body of research which indicates that it is possible to change the self-concept. Self-change is not something that people can will but rather depends on the process of self-reflection. Through self-reflection, people often come to view themselves in a new, more powerful way, and it is through this new, more powerful way of viewing the self that people can develop possible selves".

There seems to have an agreement between self-esteem and academic achievement. It has been argued that students to be able to perform well academically should have positive self-esteem. In fact, it was reported that when the level of self-esteem was enhanced there was a corresponding increase in academic performance, whereas, the academic performance decline when there was a decrease in self-esteem (Covington, 1989). This contention is tantamount to saying that as the level of self-esteem increases there is a corresponding achievement scores, and as self-esteem decreases, achievement decrease. It appears that, self-esteem could have been most likely the result rather the cause of academic performance (Holly, 1987).

Thus, self-esteem is a perception rather than reality. For example, it may refer to a person's belief about whether he or she is intelligent and attractive, but it does not necessarily say anything about whether the person is actually is intelligent and attractive.

Then, to show that self-esteem is itself important, research would have to demonstrate that their beliefs about themselves have an important consequence regardless of what the underlying realities are.

Henceforth, in view of the above premise, the present study was undertaking to evaluate the self-esteem of the freshmen students enrolled in Bachelors degree in Biology major in Biotechnology, Rizal Technological University, Mandaluyong City. Specifically, the study endeavored to answer the following questions:

1. What is the perception of the students in regards to their self-esteem?
2. Would there be a relationship between the self-esteem of the male and female students? And,
3. Would there be a relationship between the perceived self-esteem and the academic performance of the respondents.

The profile of the respondents was also taken, specifically: a. Sex and b. Age

MATERIALS AND METHOD

A. Participants

The data were collected from thirty-three freshmen B.S. Biology major in Biotechnology students of the College of Arts and Sciences, Rizal Technological University, Mandaluyong City, Philippines. School Year 2011-2012.

B. Material

A self-administered survey that rates the level of self-esteem using the Rosenberg Self-Esteem Test (Rosenberg, 1985) was used. The Rosenberg Self-Esteem Scale Test was used because it is being referred to as generally the standard tool against which other measures of self-esteem are compared. It is composed of 10 questions and scored using the four-point response scale, ranging from strongly disagree to strongly agree. Blascovitch and Tanaka (1991) reported that the items included in the Rosenberg Self-Esteem Test are face valid, scale is short and easy. In addition, the

tool has the extensive and accepted reliability, and validity information. A higher score in the scale indicates high self-esteem, whereas lower score in the scale indicates weak or low self-esteem. The grade weighted average (GWA) of the students from previous semester was computed and reflected by the respondents on the survey instrument.

C. Statistical Tool

The Pearson Product Moment Correlation was used to determine the level of significance of the following:

    a. Relationship between the perceived self-esteem between the male and female respondents and,

    b. Relationship between the perceived self-esteem of the male and female respondents against their GWA. The GWA was used as a measure of their academic achievement.

RESULTS

The results of the present study are presented in a matrix form for clarity and greater understanding.

There were thirty three freshmen students enrolled in the Bachelors Degree in Biology program and the respondents of the study. From the total population, 11 were male students which composed 33.33%, whereas, twenty two students were female. The female respondents comprised sixty six and sixty-seven hundredths (66.67%) of the overall respondents.

The ages of the respondents who participated in the study were as follows: forty eight and four eighty five hundredths (48.486%) were at the age bracket of 16 years and below, and comprised about sixteen students. This is followed by about fourteen students which comprised about forty-two and four twenty four hundredths (44.424%). About three students were on the bracket age between twenty and twenty-three years old which comprised nine and ninety one hundredths (9.091%) of the total population.

Table 1: The Perceived Self-esteem of the Student Respondents

Respondents	Over all Mean	Adjectival Interpretation
Male	2.745	A
Female	3.300	SA

    A = Agree; SA = Strongly Agree

The over-all-mean perception of the male student respondents in regards to their self-esteem based on the result of the self-accomplished survey is 2.745; with an adjectival interpretation as agree. While, the female student respondents arrived at a mean of 3.300 which is interpreted as strongly agree.

From the result, it could be inferred that the student respondents have a positive outlook of themselves as.

As a whole, the male student respondents are satisfied with their "self" and are also aware of their good qualities which showed a mean of 3.090, respectively. The respondent perceived strongly of their worth as individuals and apparently are at par with other people that surrounds them (Mean = 3.090). But most of all, they recognized their positive attitude towards their "self" (Mean =3.272).

The perception of the female student respondents in regards to their self-esteem based from the result of the self-accomplished survey form is reflected in Table 2.

As shown, the female student showed similar perceived self-esteem as compared to the male respondents. However, it is very evident that the female students have a higher regards on themselves as shown by the perceived over all mean of 3.300 which is interpreted as strongly agree. Likewise, the female students perceived highly of their self satisfaction as indicated by the mean score of 3.954, which means strongly agree. In addition, they strongly agree that they have good qualities (Mean = 3.500), can perform task comparable to other people (Mean = 3.636). The female respondents strongly agree that they are persons of worth and could translate equally with other people (Mean= 3.909).

Table 2: Perceived Positive Self-Esteem Score by Both Male and Female Students Respondents

Items	Male		Female	
	Mean	**Adjectival Interpretation**	**Mean**	**Adjectival Interpretation**
On the whole, I am satisfied with myself.	3.090	SA	3.954	SA
I feel that I have a number of good qualities.	3.090	SA	3.500	SA
I am able to do things as well as most other people.	3.272	SA	3.636	SA
I feel that I am a person of worth, at least on an equal plane with others	3.090	SA	3.909	SA
I take a positive attitude toward myself	3.272	SA	3.818	SA

*SA = strongly agree

Somehow, the male respondents agree that they feel that sometimes they are not good at all (Mean = 2.727). However, in consideration to their positive outlook in life, they strongly disagree that they have the least qualities to be proud of (Mean = 2.181), useless at times (Mean = 2.000), and above all they strongly disagree that as a whole they are inclined to feel useless and is a failure (Mean = 1.545).

In spite of some good perceived behavior, however, the female student respondents strongly felt that they are useless sometimes (Mean = 3.409). Similarly, they disagree that they do not have good qualities to be proud of (Mean =2.409), at times, felt useless (Mean = 2.454). Likewise, the female respondents do not agree that they are inclined to feel that their lives is failure (Mean =2.272).

Table 3: Pearson Moment Product Correlation (r)

Group	Over all Mean	GWA	r
Male	2.745	1.97	(b) 0.42
Female	3.818	1.95	(c) 0.29
(a) r	0.948116		

Note: (a) Perceived Self-esteem between Male and Female
(b) Perceived Self-esteem of the Male and GWA
(c) Perceived Self-esteem of the Female and GWA

Table 3 reflects the Pearson Moment Product Correlation. As shown when the perceived self-esteem of the male student respondents was compared to that of the female counterpart, using the Pearson Moment Product Correlation, the obtained r at $p≤0.05$ is 0.948116. This value showed a very high correlation based from the Munro's descriptive term for the strength of correlation coefficients (Kerlinger, 1986).

When the perceived self-esteem of the male student respondents was compared to their Grade Weighted Average (GWA), using the Pearson Moment Product Correlation, the obtained r at $p≤0.05$ is 0.42. Likewise, based from Munro's descriptive term for the strength of correlation coefficients, the obtained r has an interpretation of low correlation.

Lastly, when the perceived self-esteem of the female student respondents was compared to their Grade Weighted Average (GWA), using the Pearson Moment Product Correlation, the obtained r at $p≤0.05$ is 0.29 and is interpreted as with low correlation based from the Munro's descriptive term for the strength of correlation.

DISCUSSION

Generally, in Psychology the word "self" connotes conscious reflection of his/her "being" or identity as an object apart from other or from the environment. Furthermore, "self" can be viewed in two ways; Self-concept (cognitive) and self-esteem (affective). Self-concept is being referred to as "the totality of a complex, organized, and dynamic system of learned beliefs, attitudes and opinions that each person hold to be true about his or her personal existence" (Purkey, 1988). Whereas, self-

esteem generally refers to how one's feel and how we value ourselves or one's self-worth. Franken (1994) demonstrated that self-concept is related to self-esteem and wrote "people who have good self-esteem have a clearly differentiated self-concept and when people know themselves they can maximize outcomes because they know what they can and cannot do". Self-concept has been defined as how a person perceived himself or herself which was formed through exposure and experiences with the environment, influenced by environmental reinforcements and significant others (Shavelson et al., 1976).

Several studies have been reported trying to implicate the influence of the societal stature of parents and children in a family, to their self-esteem. When an assessment was made on this premise, Rosenberg and Pearlin (1978) reported no association between social class of parents and the self-esteem among younger children, a modest association among adolescents, and a moderate association among adults based on their own social class.

Self-esteem has been shown to be related with several behavioral and/or psychological factors. Report showed that adolescents with high self-esteem are less depressed, are more satisfied and rank lower on psychological, psycho-physiological measures of anxiety, on overt aggression, irritability and anomie (Rosenberg, 1985). It appears that global self-esteem is relatively stable and does not change easily (Bachman and O'Malley, 1986).

In school, the most probable significant others are the teachers and classmate who most likely or unlikely give a significant impact on the student interest in school work. However, literature review showed that the teacher is likely the least effective agent of change (Hattie, 1992). Furthermore, this was substantiated by a study which demonstrated that in early childhood education, the teacher is most unlikely influential in enhancing academic performance beyond the family (Scarr and Thompson, 1994).

The result of the present study would avouch the above cited argument. After being barely one year in the university, the student's academic performance apparently showed no bearing with the self-esteem of the student respondents. Although they showed positive perception of their self-esteem, it failed to establish possible correlation with their academic performance. Then, it is most likely that the student respondents of the present undertaking have already established and attained directly or indirectly a certain level of self-esteem, that could have been influenced by the family, peers and school starting from their elementary grade.

A study among elementary grade students reported a positive correlation between self-esteem and academic achievement (Strassburger et al., 1990). In addition, other workers reported similar results conducted among high school students (Lee et al., 2001and Bayani, 2000).

Somehow, cultural influence may also be an underlying and contributory variable in shaping the very individuality of a person and may contribute to his/her academic success. It was reported that Hispanics had a significantly lower mean grade-point average compared to the Anglos; however, their mean perceived self-esteem score was found not significant (Strassburger et al., 1990).

In contrast, study showed that honors students demonstrated higher academic self-esteem and competency. Apparently, the academic self-esteem became the motivational factor for the direct correlation between the academic achievement and the self-esteem (Moeller, 1994). Seemingly, it was most likely that students with low levels of academic achievement attribute less importance to school-related areas and reveal less favorable attribute towards school (Alves_Martinez et al., 2002). In similar report, a significant result was obtained when academic achievement was compared with the self-esteem of college students (Bray, 2000).

Marsh (1992) showed that the relationship of self-concept to school achievement is very specific. He asserts that that self-concept and non-academic aspects of self-concept are not related to academic work; general academic achievement measures are related moderately to academic success. On the other hand, Hamacheck (1995) asserted that self-concept and school achievement are related.

Now, the major issue is the direction of the relationship: does self-concept produce achievement or vice versa.

Bridgeman (1986) written that evidences have accumulated, to indicate that level of school success over many years, predicts level of regard of self and one's own ability; whereas level of self-esteem does not predict level of school achievement. Then, it is implied that the academic

successes and failures of the students depend on their history of success and failure that gives them the information with which to assess themselves (Gage and Berliner, 1992). Henceforth, increasing self-esteem results when success is improved relative to expectations.

CONCLUSION
The present undertaking attempted to evaluate the self-esteem of the freshmen student enrolled in the degree of Bachelor of Science in Biology Major in Biotechnology. Likewise, it attempted to establish possible correlation between their self-esteem and academic performance.

The results of the study established the following:

1. Both the male and female student respondents showed positive perception of their self-esteem.
2. The perceived self-esteem of the male and female respondents showed a very high correlation based from the Munro's Strength of Correlation Coefficients, and lastly
3. The self-esteem of the student respondents showed low correlation with their academic performance based from Munro's Strength of Correlation Coefficients.

RECOMMENDATION
In view of the results and findings of the present work, it is hereby recommended that:

1. Further studies may be done to integrate some factors that may have an influence on the self-esteem of the students such as, the economic well being of the students   and the parents and other factors that might show relevance in the study,
2. Maybe it could be worthwhile to determine the self-esteem of honors students and average ordinary students and relate the perceive self-esteem to the academic performance and lastly,
3. Whereupon experts are still divided on the issue of relationship between self-esteem and academic performance, it is recommended that both should be considered as an integral component of students learning experience in the institution.

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