

A Study of the Relationship Between Global Self-Concept and Academic Achievement

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This study was aimed at assessing the relationship between global self-concept (i.e., attitudes towards the self) and academic achievement. For this purpose, 352 high school students were selected by stratified random sampling, and were asked to complete the Tennessee Self-Concept Scale (Fitts, 1991). Analyses revealed a significant association between global self-concept and academic achievement, as well as a significant difference in global self-concept scores of males and females. There was no significant difference in global self-concept between urban and rural students. Global self-concept scores differed significantly with the course of study. Participants' gender and level of study interacted significantly with students' ratings of global self-concept.

Keywords: Global self-concept; Academic achievement.

Introduction

The idea of self-concept includes attitudes, feelings and knowledge about ability, skills, and social acceptance capability of the self. Self-concept covers all aspects of our cognitive, perceptual, and affectional evaluation. Therefore, a collection of personal attitudes towards oneself is known as self-concept (Gross, 1992; Hoge & Renzulli, 1993). Philosophers and psychologists have grappled with the idea of self-concept throughout the history of mankind.

Recently, researchers seem to have come to the conclusion that the experience of self-concept and psychological experience are unique to Man. Rogers was the first person to explain the concept of the self, and played an instrumental role in introducing self-concept to the psychological research field. The meaning of self is the main structural meaning in Roger's

view. After Rogers, other researchers like Cooley, Mead, Allport, Alder, Jung, Maslow, and Covington also introduced hypotheses about the meaning of self and self-concept (Richards, 2001).

In recent years, psychologists have paid more attention to factors related to the formation and development of self-concept. This issue is very important to the field of mental health, as an individual's conception of his or her person, which is linked to the personality, to a certain extent determines the attitude of that person to his or her environment. It may then be suggested that if self-concept is positive and normal, the individual will possess normal mental health. Adversely, if self-concept is negative and abnormal, the individual may behave abnormally in his or her environment.

The consensus appears to be that self-concept is largely acquired. This point is very important for an individual and for those who are involved in their upbringing, particularly their parents. Other factors affecting self-concept are the behavior of others around them, and social stimulation. Self-concept is a general term with the following three components: (a) self-

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image concerns the way we express ourselves, and our perception of ourselves (whether or not we are the same person consistently in different situations); (b) self-esteem: while self-image is basically descriptive, self-esteem has an evaluation aspect, and points out the extent to which we like ourselves, whether we accept the self, and what we think about it; and (c) ideal self: this refers to the kind of personality which we would like to be. It also has different degrees and extensions. Generally, if the distance between self-image and ideal image is large, then self-esteem declines (Gross, 1992).

Another issue in this field is academic self-concept. Academic self-concept refers to the image students have concerning their academic capability, which itself has an effect on academic performance. It seems that academic self-concept and academic performance are reciprocal (Marsh, Kong, & Hau, 1999).

Self-concept is classified in three categories: global self-concept, academic self-concept, and non academic self-concept. Global self-concept is a collection of the individual's belief about him or herself, which is difficult to change. Marsh's (1992) study showed there is relation among the three categories of self-concept; it was also reported there is a relationship between verbal performance and verbal self-concept, and between achievement in mathematics with self-concept related to mathematics. Students evaluate their academic self-concept with the help of two judgmental rules. The first is the external judgement rule, in which the skills of the students in one lesson are compared to the skills of the other students; the second is the internal judgement rule, in which skills of the student in one lesson are compared with his or her performance in other lessons (Hunt, 1997). Here, Bloom's hypothesis on learning is important (Koutsoulis, 2001).

The feelings of students have an effect on the formation of their academic self-concept. In his study, Lau (1992) showed there is a relation between a child's self-concept and the parents' attitude toward training, in that the more positive the parents' attitude to training, the higher the child's self-concept. Studies also show that females have a higher self-concept than males. Hamachek (1995) found a positive correlation between a student's academic self-concept and educational performance, and that academic achievement can be predicted by measuring academic self-concept. He also found that, by extension of educational experience, the relation between academic self-concept will be stronger with educational progress. Considering academic self-concept, there is evidence of differences between successful and unsuccessful primary school pupils. Social factors also affect performance. A number of variables were found to have a direct effect on academic self-concept, such as: review of behaviour and success, parents' expectations, review of performance by the teachers, role of students, and a teacher's

Table 1
Tukey's multiple comparisons for hypothesis number four.

	Mean level of education		
	First year (<i>M</i> = 355.30)	Second year (<i>M</i> = 383.78)	Third year (<i>M</i> = 369.88)
<i>M</i> ₁ = 355.30		28.48*	14.48*
<i>M</i> ₂ = 383.78			14.00*
<i>M</i> ₃ = 369.88			

Note. Tukey's HSD = 9.55

* *p* < .05

positive feed back and negative feedback (Donahue, Perry, & Weinstein, 2003). Craven, McInerney, and Marsh (2000) showed that there is a significant relationship between high levels of self-concept, self-esteem, and academic achievement in high school students.

Feldhusen and Nimolos (1992) found a stronger relationship between self-concept and the rate of success among males than females. Marsh et al. (1999) showed that females have more positive self-concepts than males. Hage and Renzulli (1993) found that gifted students have higher self-concept than non-gifted students.

Hunt (1997) found there to be a relation between self-concept, hope, and academic achievement. The results indicate that feelings of hopelessness and depression have a negative effect on educational success.

Carven et al.'s (2000) studies on students show that academic achievement has a relationship with cognitive components of self-concept. Marsh et al. (1999), in their studies on self-concept of students, found that, not only does self-concept predicted academic achievement, but also that feedback and labels available to individuals can be good predictors of self-concept. Koutsoulis' (2001) study demonstrates that expectations of teachers has an effect on self-concept and academic achievement of students. And Rickards (2001), Donahue, Perry, and Weinstein (2003), and Marsh (1992) all found that, not only does academic self-concept affect academic achievement, but also that there exists a relationship between self-concept and other behavioral and personality aspects of students.

Our Six Hypotheses

After a review of related literature, we decided to study the issue of self-concept from the stand-point of the following hypotheses: (a) There is a significant relationship between self-concept and academic achievement of high school students; (b) There is significant gender difference in global self-concept; (c) There is

Table 2
Multiple comparisons related to hypothesis number five

	Humanities & Social Sciences (M = 377.87)	Sciences (M = 365.78)	Mathematics (M = 369.47)	Technical (M = 360.73)	Work & Science (M = 382.34)
$M_1 = 377.87$		12.0*	8.40*	17.1*	4.52
$M_2 = 365.78$			3.69	5.05	16.6*
$M_3 = 369.47$				8.74*	16.9*
$M_4 = 360.73$					21.7*
$M_5 = 382.34$					

Note. Tukey's HSD = 7.38

* $p < .05$

significant difference between global self-concept of urban and rural students; (d) Global self-concept varies with level of education (primary, secondary, and tertiary); (e) Global self-concept differs among fields of study such as, human sciences, mathematics, technical and natural science; and (f) Gender and level of education interact significantly in global self-concept.

Method

Participants and Materials

In this study, 352 high school students from the Golestan province (Bandar Torkman township) were selected. They were requested to complete the Tennessee questionnaire on global self-concept. Academic achievement of the students was judged by the mean score in the previous term. The Tennessee self-concept questionnaire consists of 99 informative questions, with Likert-type five-scale response options, namely, completely correct to not correct (with a score

range of one to five), and a range of final scores of 99 to 495. The validity and reliability of the questionnaire has been determined in previous studies (Hynes, 1989).

Results

Pearson's correlation was used to assess the first hypothesis; for the second and third hypotheses, *t*-test was used; for the fourth and fifth hypotheses, one way ANOVA was used; and for the sixth hypothesis factorial variance analysis was used.

Hypothesis number one. In this study, the correlation, $r = .19$ ($df = 350$) between global self-concept and achievement proved significant ($p < .05$), such that students with greater levels of achievement revealed more positive global self-concepts.

Hypothesis number two. Regarding gender comparisons, $t(350) = 2.965$, $p < .05$. Thus, there was a significant difference in the global self-concepts of females versus males.

Table 3
Multiple comparisons related to hypothesis number six

Mean Level of Education	Females			Males		
	First (M = 358)	Second (M = 373)	Third (M = 354)	First (M = 365)	Second (M = 374)	Third (M = 390)
$M_1 = 358$		15.0*	4.00	7.00	16.0*	32.0*
$M_2 = 373$			19.0*	8.00	1.00	17.0*
$M_3 = 354$				11.0	20.0*	36.0*
$M_4 = 365$					9.00	25.0*
$M_5 = 374$						16.0*
$M_6 = 390$						

Note. Tukey's HSD = 12.05

* $p < .05$

Hypothesis number three. With respect to comparisons involving urban and rural students, $t(350) = 1.004$, $p > .05$. As such, there was no significant difference in the global self-concepts of urban and rural students.

Hypothesis number four. In a comparison of different levels of education, $F(2349) = 15.96$, $p < .001$. Thus, global self-concept differs significantly with differing levels of education; specifically, greater levels of education were associated with more positive self-concepts.

For analyzing and comparing each mean in hypothesis number four, Tukey's Honest Significant Differences (HSD) test was used, which showed that the mean differences in global self-concept of students in the different levels of schooling differed significantly.

Hypothesis number five. In a comparison of different courses of study, $F(4203) = 7.58$, $p < .05$. Thus, self-concept differed significantly among students pursuing different degrees and courses of study. Tukey's multiple comparisons revealed the details of these differences (see Table 2).

Hypothesis number six. This hypothesis concerned the effect gender \times level of education interaction. Regarding the direct effect of sex on global self-concept, $F(1346) = 9.96$, $p < .01$. Thus, we may conclude that gender had a direct effect on the global self-concept of the students. Regarding the effect of educational level on global self-concept, we found that $F(2346) = 48.79$, $p < .001$, and thus conclude that level of education had a direct effect on students' global self-concept.

Concerning the gender \times educational level interaction in predicting ratings of global self-concept, since $F(2346) = 5.37$, $p < .05$, it is concluded that gender and educational level interacted significantly. Multiple comparisons revealed that the difference in self-concept of students in their first and second years was significant, while that between the first- and third-year students was not. However, between females in their first year and males in their second year there was also a significant difference in terms of global self-concept. The difference in self-concept of females in their third year and males in their second year was also significant, and the same results were found for both females and males in their third year. There was also significant difference in self-concept between students in their first and second years and third-year students, as shown in Table 3.

Conclusion

The results of the first hypothesis show that a significant relationship exists between global self-concept and performance of students. This is in line with the results reported by Marsh (1992) and Richards (2001). Marsh showed there is a positive relationship between certain aspects of self-concept and academic

achievement. Hunt (1997) found a positive association between global self-concept and academic achievement. Lau and Kwokleung (1992) also obtained the same results.

The results of the second hypothesis show a significant gender difference in global self-concept. However, Hoge and Renzulli (1993) found there to be no significant gender difference in global self-concept. Feldhusen and Nimolos (1992) as well did not observe any significant gender differences in self-concept.

The results of the third hypothesis show no significant difference in global self-concept between students from rural and urban areas. Previous studies have also not shown any effect of residential area on the global self-concept. Hence, it appears that place of domicile is not a determining factor in global self-concept of the students.

The results of hypothesis number four show that global self-concept scores differed significantly with levels of education. This may be explained by differences in growth and development.

The results of hypothesis number five show that global self-concept of students vary with course of study. Therefore, it appears that course of study affects global self-concept of students. The results of hypothesis number six show gender and level of education to have direct interactional effect on the rate of global self-concept among students.

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