

Relationship between Self Concept and Academic Achievement among Secondary School Students in Zaria Education Zone, Kaduna State, Nigeria

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ABSTRACT

The study employs ex-post facto experimental design to examine the relationship between self concept and academic achievement among secondary school students in Zaria Education Zone of Kaduna State, Nigeria. Four research questions and four hypotheses were formulated to guide the study. The population of this study comprises all secondary school students in Zaria Education Zone of Kaduna State. Stratified random sampling technique was employed to select 6 secondary schools in the study area. These include two each from boys, girls and mixed secondary schools respectively. A total population of 420 students made up the sample of the study. Mean, Pearson r and t-statistics were used to analyze the data. The findings reveal among others that self concept correlates positively with academic achievement, though the correlations were generally low for all the groups. From the results, it is observed that the female students have higher self concept than their male counterparts. Hence, equal learning environment to enhance academic achievement with respect to gender is recommended among others.

Keywords: *Self Concept, Academic Achievement and Secondary School Students*

INTRODUCTION

The dynamics of personality development are hinged on several theories that tap on a variety of human functions. There are several related concepts that a person holds of the self including extra-sensory ones. Zimmerman (2002); Marsh and O'neil (1997) agree that of the entire concepts that affect personality, none has more profound significance than the person's perception of self and status in the society. Their studies also affirm that a positive view of self gives the holder a tremendous advantage in dealing with life's varied endeavours as it provides the basis of personal strength and achievement. Abdullahi (1992) and Bandura (1997) posit that students who feel good about themselves and their abilities are the ones that are most likely to succeed. Also they maintain that individuals with poor self concept may also lead to poor academic achievement. Hence, it indicates a persistent and significant relationship between self concept and academic achievement. Erickson (1956) sees self concept simply as life being aware of it, while Marsh and O'neil (1997) see it as self perception formed through environmental reinforcement and the reflected appraisals of others. Scheiver and Krant (1979) state that self concept is a complex construct consisting of descriptive, evaluative, and affective domains in an individual's task. Marsh and O'neil (1997) see that self concept as tapping on various facets of an individual's functioning. For instance, academic self concept (reading, writing and related abilities) and

non academic self concept (social relationships, physical abilities and physical appearances) suggested that individuals perception of the self in one situation does not necessarily transfer to another (Bandura, 1997; Craven, Marsh and Debus, 1991). Adolescence is a critical stage of identity seeking partially through the vehicle of widening peer relationships (Rosenberg and Gaier, 1976). This period is characterized by biological and emotional conflicts and the adolescent is learning to cope with changes and at the same time is concerned with self image, self esteem, social expectation and academic achievement, carrier choices and romantic relationships.

Frinkelstein and Gaier (1983) find that older students had significant lower scores on an identity scale than non students peers, which shows that formal schooling has the unintended effect of prolonged adolescence. Abdullahi (1992) maintains that early mature boys were more self confident than late mature boys. Late mature boys were found to have stronger feeling of inadequacy, rejection, and generally more dependent. In contrast, only a few mature boys had the same characteristics or feelings. Female under-achievers are ambivalent in their female roles and are not clearly defined in terms of academic success as in the male (Abdullahi, 1992).

Studies in educational psychology have attempted to demonstrate how self concept differentiated into academic and non academic areas correlates in school age children with other school variable such as achievement. The notion of a self that a child develops during his school years is important and significant in his ability to learn. Positive self concept is a significant contributor to academic success (Purkey, 1976; Bloom, 1976; Abdullahi, 1992 and Yakassai, 2000). They were able to demonstrate between the two variables with correlation ranging between .30 to .40 with strong link between low self concept and low academic performance. Abdullahi (1992) also finds that academic self concept made a more significant contribution to the prediction of academic achievement than intelligence quotient (IQ).

Yakassai (2002) in a cross validation study of Marsh and O'neil (1979), Shavelson and Bulus (1982) model in the Nigerian educational setting find a relationship of 0.52 and 0.55 between general self concept and academic self concept among science students and technical students respectively. Craven, Marsh and Debus (1991) examine the casual ordering between non academic self concept and academic self concept then state that academic self concept has an influence on non academic self concept which in turn has an effect on achievement. The objective of this study is to examine the relationship between self concept and academic achievement among secondary school students in Zaria education zone of Kaduna State. Four research hypotheses were formulated to guide the study.

- H₀1: There is no significant relationship between self concept and academic achievement
- H₀2: There is no significant difference among students' academic levels and their self concept
- H₀3: There is no significant difference between the developmental level (age) and student's self concept
- H₀4: There is no significant difference in self concept by gender.

METHOD

This study employed the ex post facto experimental design to investigate the relationship between self concept and academic achievement among senior secondary schools in Zaria Educational Zone of Kaduna State, Nigeria. The population of the study comprises 47,424 students of 54 secondary schools in Zaria education zone. Stratified random sampling technique was used in selecting six different types of secondary schools for the study (two boys, two girls and two mixed secondary schools). A random sample was drawn using Krejcie and Morgan as cited in Kerlinger (1973) table for drawing a sample of 70 students from each of the sampled schools from the population of the study. The simple random sampling technique was used to draw the sample of 420 students for the study. A pilot study was carried out to establish the validity of the instrument. Two schools were used for the study namely GSS Chindit Barracks (boys) and GGSS Dogon-Bauchi (girls). Using the simple random sampling procedure, a sample of 100 students was drawn comprising of 50 boys and 50 girls from the boys and girls schools respectively. To do this, self concept was structured into five components based on James (1890) self theory. The five components are physical, social, academic, spiritual and material self concepts. Items were raised for each of these components on a five points Likert type questionnaire. The total number of items raised was 35. In addition end of item results were aggregated on percentages as indices of academic achievement. A total number of 420 students were used. These provided the baseline data for the study. The first research question was on the relationship between self concept and academic achievement. For this the students were divided into two groups (JSS and SSS). Reliability Test was established using the Cronbach alpha measure for internal consistency which yielded a measure of .659, for the questionnaire, retest reliability yielded a measure of .875 for the teacher made tests. The teacher made test was used for academic achievement of which the test/retest were used to establish its reliability. Thus, data were presented on tables and analysed using statistical tools such as mean, standard deviation, t-statistics and Pearson r .

RESULTS AND DISCUSSION

Table 1 shows that both private and public schools formed part of the study and equal number of subjects were drawn from each sampled school irrespective of school population. The result on table 3 does not reveal significant difference between the senior and junior secondary school students in their self concept. However, there was significant difference between the students of the two levels in their social self concepts. There was no significant difference between the students in the overall aggregate self concept. The observed t - value (0.226) is lower than the critical value of 1.96. This implies that the hypothesis that there is no significant difference between self-concept of students of different educational levels in the selected secondary schools is accepted. The data on table 4 indicate that the difference between the means indicated by $t = 1.651$ is less than the critical $t = 1.96$. The null hypothesis which states that there is no significant difference between early and late

adolescence in their self concept is therefore rejected. It can also be observed that the students differ significantly in physical self-concept as t is higher than the critical value and the mean for early adolescents is higher than the late adolescents. This indicates that early adolescents have higher physical self concept than the late adolescents. The results also show that the late mature adolescents have higher spiritual and academic self concepts than early mature adolescents. The results on table 4 indicate that the t -test value of 2.978 was robust and significant thus, the null hypothesis which states that no significant difference exists among boys and girls in self concept was rejected.

A further look at the data reveals a significant difference in the physical, spiritual, and material self concept in the boys than that of the girls. The means portray the girls as having higher self concept than the boys in these attributes. The students did not differ significantly in their social self concept as indicated on the table ($t = .507$). This trend was also observed in the students' academic self concept where the students did not differ significantly ($t = .794$). It is found that self concept correlated positively with academic achievement even though the correlations were generally low for all the groups. The results also show that even though the ratings on self concept were high for the two groups, academic achievement tended to be low with an average of 46.37% and 44.72% for the JSS and SSS students respectively. The correlations between self concept and academic achievement tended to be higher for the JSS students than their SSS counterpart. These findings are consistent with those of Purkey (1976) who points out that positive self concept contributed to academic achievement. Rosenberg and Gaier (1976) also report similar observations when they state that there is a reciprocal relationship between academic achievement and self concepts of students.

The aggregated data show no difference in self concept between students of different academic levels. There was however, a significant difference between JSS and SSS students in their social self concept with the junior students having higher scores on the subscale. This finding supports that of Finkelstein and Gaier (1983) who report that older students have significant lower scores on identity scale than younger students. The results also show no significant difference in the aggregate self concept of students in their early and late adolescent stages. While students in early adolescent stage have higher physical self concept and those in late stage have higher academic and spiritual self concepts.

It is observed that when students are compared by age the difference in the various components of self concept tends to be more robust but when aggregate means were compared this difference disappeared. The findings however do not necessarily contradict those of Finkelstein and Gaier (1983), Zimmerman (2002) and Abdullahi (1992) who report that early mature boys were more confident than late mature boys and that late mature boys tend to have stronger feelings of inadequacy and generally more dependent. They resort to spirituality and academic commitment. This explains a developmental process that is positive for the older boys. From the results it was observed that the female students have higher self concept than their male counterparts. This finding is consistent with that of Abdullahi (1992) who observes that girls were consistently higher in self concept than boys.

Table 1: Selected Schools: Types, Population and Sample

School	Type	Population	Sample
GGSS, Zaria	Public (female)	2145	70
Barrack college	Public (male)	2010	70
Al Hudahuda College	Public (male)	3145	70
GGSS Chindit	Public (female)	801	70
Terbow School	Private (mixed)	2000	70
Hallmark Int. School	Private (mixed)	752	70
Total		10853	420

Source: Ministry Of Education Report, 2013

Table 2: Correlation between Students Self Concept and Academic Achievement (JSS level)

variables	Mean	SD	S.E	t-value	r	DF
Academic achievement	46.35	11	.316	.763		
Physical self-concept	24.55	4	.549	.315	.350	207
Social self-concept	23.20	4	.770	.330	.273	207
Academic self-concept	26.12	5	.273	.365	.318	207
Spiritual self-concept	25.30	5	.608	.388	.114	207
Material self concept	24.89	5	.489	.380	.151	207
Aggregate self-concept	124.05	17	.764	1.229	.226	207

Source: Survey, 2013

Table 3: Two sample t-test on self concept by students' level of secondary school.

Self concept	Level	Mean	SD	S.E	t-value	DF	t-critical
Physical	JSS level	24.55	4.549	.315	.658	418	1.96
	SSS level	24.86	5.302	.365			
Social	JSS level	23.20	4.770	.330	2.173	418	1.96
	SSS level	22.19	4.835	.333			
Academic	JSS level	26.12	5.273	.365	.016	418	1.96
	SSS level	26.13	5.333	.367			
Spiritual	JSS level	25.30	5.608	.388	.523	418	1.96
	SSS level	25.60	5.964	.411			
Material	JSS level	24.89	5.489	.380	1.055	418	1.96
	SSS level	24.33	5.358	.369			
Aggregate self	JSS level	124.05	17.764	1.229			
	SSS level	123.11	18.770	1.292	.226	438.599	1.96

Source: Survey, 2013

Table 4: Two sample t-test on self concept by early and late adolescents in the selected schools

Self concept	Stage	Mean	SD	S.E	t-value	DF	t-critical
Physical self-Concept	Early	24.27	4.537	.312	2.049	418	1.96
	Late	23.03	4.760	.829			
Social self-concept	Early	23.61	4.857	.334	.201	418	1.96
	Late	23.42	4.690	.816			
Academic self-concept	Early	25.59	5.160	.354	2.830	418	1.96
	Late	28.24	3.783	.659			
Spiritual self-concept	Early	24.69	5.473	.376	3.301	418	1.96
	Late	28.00	4.479	.780			
Material self concept	Early	24.38	5.264	.362	.304	418	1.96
	Late	24.73	4.230	.736			
Aggregate self concept	Early	122.36	17.616	1.210	1.651	418	1.96
	Late	127.61	12.070	2.101			

Note: SD= Standard Deviation, SE= Standard Error, DF= Degree of Freedom

Source: Survey, 2013

Table 5: Two sample t-test on self concept by students' level of secondary school.

Self concept	Sex	Mean	SD	S.E	t-value	DF	t-critical
Physical	Boys	23.78	5.111	.326	4.673	418	1.96
	Girls	26.01	4.374	.332			
Social	Boys	22.59	4.753	.303	.502	418	1.96
	Girls	22.83	4.931	.374			
Academic	Boys	25.95	5.175	.330	.794	418	1.96
	Girls	26.37	5.470	.415			
Spiritual	Boys	24.91	6.138	.391	2.266	418	1.96
	Girls	26.21	5.168	.392			
Material	Boys	24.13	5.772	.368	2.163	418	1.96
	Girls	25.29	4.826	.366			
Aggregate	Boys	121.37	19.280	1.229	2.978	418.003	1.96
	Girls	126.71	16.260	1.233			

Note: SD= Standard Deviation, SE= Standard Error, DF= Degree of Freedom

Source: Survey, 2013

CONCLUSION AND RECOMMENDATIONS

This study was designed to examine the relationship between self concept and academic achievement among secondary school students in Zaria Education Zone of Kaduna State. Based on the findings, it is observed that self concept correlates positively with academic achievement but the correlations were generally low for all the groups. The aggregated data showed no difference in self concept between students of different academic levels. The results show no significant difference in the aggregate self concept of students in their early and late adolescent stages. Female students were observed to have higher self concept than their male counterpart. Hence, it is recommended that teachers, parents and curriculum planners should be aware of student's perception about self concept and developmental pattern. Teachers and counselors should identify student difficulties in developing self concepts and work with them through their difficulties in order to forestall behavioural problems in the short and long run. Equal learning environment should be provided in order to enhance academic achievement with respect to gender.

REFERENCES

- Abdullahi, Y. B.** (1992). A study of the relationship between adolescent's self concept and academic performance in schools. Unpublished M.Ed thesis submitted to Ahmadu Bello University, Zaria.
- Bandura, A.** (1997). Self-efficacy: Towards a unifying theory of behavioural changes. *Psychological Review*, 84, 191-215.
- Bloom, B. S.** (1976). *Human Characteristics and School Learning*. New York: Mc-Graw Hill.
- Craven, R. G. Marsh, H. W. and Debus, R. L.** (1991). Effects of Internally Focused Feedback and Attributions on Enhancement of Academic Self Concept. *Journal of Educational Psychology*, 83, 17-27.

- Erickson, E. H.** (1956) *Childhood and Society*. New York: Norton
- Finkelstein, R. and Gaier, M.** (1983). Self concept and esteem. Retrieved on 13/10/13 from <http://www.findarticles.com>
- James, W.** (1890). *Self Theory*. New York: McGraw Hill
- Kerlinger, F. N.** (1973). *Foundation of Behavioural Research* (2nd ed). New York: Holt, Rinehart and Winston.
- Marsh, H. W. and O'neil, R.** (1997). Separation of Competency and Affective Components of Multiple Dimensions of Academic Self Concept: A Developmental perspective. *Merill Palmer Quarterly*, 45, 567-601.
- Mussen, P.** (1973). *The Psychological Development of the child*. New York: Prentice Hall
- Purkey, W. W.** (1976). *Self Concept and School Achievement*. New Jersey: Prentice-Hall.
- Rosenberg, M. and Gaier, M.** (1976). *Conceiving the Self*. New York: Basis Books.
- Shavelson, R. J. and Bulus, R.** (1982). Self Concept: The Interplay of Theory and Method. *Journal of Educational Psychology*, 32, 195-208
- Scheiver, M. A. and Krant, R. E.** (1979). Increasing Educational Achievement via Self concept change. *Educational Research Review*, 49 131 -150
- Yakasai, M. I.** (2000). Self-Concept and Achievement: A construct validation study of the Marsh & Shavelson model among senior secondary students. Unpublished Ph.D thesis submitted to Ahmadu Bello University, Zaria.
- Zimmerman, B. J.** (2002). *Self Regulated learning and Academic Achievement. Theory Research and Practice*. New York: Springer Verlag