

Study on Self-Concept, Academic Achievement and Achievement Motivation of the Students

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Abstract: Multiple variables leading to socio-economic discrimination include gender, caste, levels of father's education; father's occupation etc. may contribute to self-concept, academic achievement and achievement motivation. The present study attempts to explore whether various social categories of school going adolescents differ with respect to self-concept, academic achievement and achievement motivation. 846 students from 28 schools of West Bengal, India, constituted the sample chosen by SRSWOR by the sampling scheme of Rao, Hartley and Cochran (1962). To test hypothesis of simultaneous equality of a set of variables such as self-concept, academic achievement and achievement motivation across the social categories, ANOVA was undertaken. The results revealed that gender difference was significant for four dimensions of self-concept out of six dimensions considered. However, for academic achievement and achievement motivation, gender difference was not found to be significant. Caste wise students differed significantly in academic achievement. When father's education and occupation were considered, highly significant differences were observed for academic achievement and achievement motivation but insignificant difference with respect to dimensions of self-concept.

Key words: *Self-concept, Academic Achievement, Achievement Motivation*

I. Introduction

Self-concept is an important notion in child development. In recent years,— renewed interests in the studies of the self-concept and adolescents have led educators to become interested regarding self-concept (Chan, 2002). Various researchers have defined self-concept in various ways. It is defined as the value that an individual places on his or her own characteristics, qualities, abilities and actions (Woolfolk, 2001). The importance of self-concept within educational settings has been addressed by several scholars. It is the totality of a complex, organized and dynamic system of learned beliefs, attitudes and opinion that each person holds to be true about his or her personal existence (Purkey, 1988). Franken (1994) stated that self-concept gives rise to possible selves and it creates the motivation for behavior. Some researches have also been done in this area in India and various definitions of self-concept have also been given by different researchers. Saraswat and Gaur (1981) described self-concept as the individual's way of looking at himself as well as way of thinking, feeling and behaving. According to Ahluwalia (1999) self-concept seems to be a comprehensive and exhaustive area which can represent the personality at large and which gives direction to the whole life. Like Self-concept, student's academic achievement and educational attainment have been studied within different frameworks. Academic achievement has always been the centre of educational research and a major aim of education. The academic developments of the child continue to be the primary and most important goal of education (Bala, 2011). It has become an index of child's future in the competitive world. Now-a-days, children are becoming more and more concerned about their academic achievements and at the same time, there are students who may be bright but perform poorly despite the good learning facilities in their homes as well as their schools. Among the factors that contribute to the pupil's poor academic achievement is low achievement motivation (Muola, 2010). Achievement motivation is used to mean the pupil's need or drive towards the achievement of success in academic work (Amalaha, 1975; Moen and Doyle, 1977). According to Slavin (2006), achievement motivation is what gets one going, keeps one going and determines where one is to go. A great deal of research has found that students high in achievement motivation are more likely to have increased levels of academic achievement and have lower dropout rates (Blank, 1997). According to Gesinde (2000), achievement motivation could be seen as self determination to succeed in academic work. Several studies have reported positive relationship between motivation and academic achievement and success (Kushman et al. 2000; Sandra, 2002; Broussard and Garrison, 2004; Skaalvik, S., Skaalvik, 2004; Skaalvik, S., Skaalvik, 2006). There are various factors that affect the various levels of self-concept in adolescents such as gender, ethnicity, social class etc. (Act for youth, 2003). Moreover, it is of decisive importance to focus upon multiple variables which include gender, caste, low levels of father's education, father's occupation etc. which may contribute to self-concept, academic achievement and achievement motivation. Although social class is the strongest predictor of educational achievement, it intersects in complex ways with other factors, notably gender and ethnicity. Age and gender had differential associations

with various self-concept dimensions (Marjoribanks and Mboya, 2001). Uma Devi et al. (1998) noticed that higher percentage of girls had average and high self concept compared to their counterparts but the difference is not statistically significant. Tyagi and Kaur (2001) found that girls had higher level of self concept than boys in the subscales of behavior, intellectual and popularity. Kalyani Devi (2004) reported high self concept of girls than the boys. Sood (2006) and Bester (2007) found no gender difference between boys' and girls' on self-concept which is in line with Nuthana (2007) who found that boys and girls do not differ significantly on self-concept. However, (Adsul et al., 2008; Liu & Zhu, 2009) observed that girls' self-concept was much lower than boys among the high school students

The Indian society is a hierarchy ridden society. In terms of caste, it may be classified into four broad categories, namely: the Upper Caste, Other Backward Caste (OBC), the scheduled Caste (SC) and Scheduled Tribe (ST). The STs and SCs in Indian society have been subjected to various kinds of sufferings including lagging in academic achievement, personality etc. (Daftuar et al., 2000). Students' academic achievement and educational attainment have been studied by different researchers. Many of them have a focus on parents' education and occupation (Akinsanya et al., 2011). Fathers' earnings are linked to their children's educational attainment (Ermish and Francensoni, 2002). Rothman (2004) observed that the most important factors associated with the educational achievement of children are not race and ethnicity but parental educational levels, parental occupational status etc.

The above mentioned studies motivate the present study which attempts to explore whether various social categories of school going adolescents differ with respect to dimensions of self-concept, academic achievement and achievement motivation.

II. Method

This research used a cross sectional survey involving various socio-economic groups. It was a quantitative design using a sampling method by Rao, Hartley and Cochran (1962).

III. Sample

Multistage stratified sampling scheme was adopted in this study. As per a recent specification by the National Sample Survey Organization (NSSO), Govt. of India (NSSO Report, 2004-2005), total 19 districts of West Bengal were divided into 4 strata. Because of special importance, Kolkata (Capital of West Bengal) was treated as the first stratum. Treating the total number of schools in a district, as per latter's size measure, the districts were selected independently from the strata 2, 3 and 4 by applying Rao, Hartley and Cochran (1962) scheme of sampling. 2 districts were selected from each of the three strata. Thus sampling was ended up by selecting 7 districts and 4 schools were selected independently by SRSWOR (Simple Random Sampling Without Replacement). As a result, 28 schools were selected for the purpose of this study. The sample comprised of 846 high school students in the age range of 14 to 21. They were the students of Government and Government aided schools under the West Bengal Board of Secondary Education (WBBSE), India.

IV. Tools

3.1 Self-Concept Questionnaire (Saraswat, 99)

The Self-concept inventory provides six dimensions of self-concept, viz., i) Physical, ii) Social, iii) Temperamental iv) Educational v) Moral and vi) Intellectual Self-concept. It also gives a total Self-concept score. The inventory contains 48 items. Each dimension contains eight items. Each item is provided with five alternatives. There is no time limit for responding all the items. Participants in this study have to read each item carefully and respond to it by marking a tick (✓) on any one of the five responses given against that item. The operational definitions of self-concept dimensions measured by this questionnaire are i) Physical (SC1) - Individuals' view of their body, health, physical appearance and strength. ii) Social (SC2) - Individuals' sense of worth in social interactions. iii) Temperamental (SC3) - Individuals' view of their prevailing emotional state or predominance of a particular kind of emotional reactions. iv) Educational (SC4) - Individuals' view of themselves in relation to school, teachers and extracurricular activities. v) Moral (SC5) - Individuals' estimation of their moral worth; right and wrong activities. vi) Intellectual (SC6) - Individuals' awareness of their intelligence and capacity of problem solving and judgments.

Considering the situation that students of Bengali Medium Schools may not be at home with English, the language used in the inventory, all the 48 items were translated in Bengali before administration of the inventory. Reliability (Cronbach's Alpha) of the Bengali version of the questionnaire was found to be 0.84.

3.2 Deo Mohan Achievement Motivation Scale (n-ach) (Deo and Mohan, 2002)

The scale developed in 2002 for measuring achievement motivation contains 50 items representing the following fifteen factors: i) Academic motivation, ii) Need for achievement, iii) Academic challenge, iv) Achievement anxiety, v) Importance of grades/marks, vi) Meaningfulness of task, vii) Relevance of

school/college to future goals, viii) Attitude towards education, ix) Work methods, x) Attitude towards teachers, xi) Interpersonal relations, xii) Individual concern, xiii) General interests, xiv) Dramatics, xv) Sports etc. There are 5 response categories viz., Always, Frequently, Sometimes, Rarely and Never. There are 37 positive items and 13 negative items in this scale. The scoring procedure covers numerical weightage from 4 to 0 for the positive items and reverse of it for the negative items. The total score is the summation of all the positive and negative items scores. The score ranges between 0 and 200. The test has no time limit to complete responses.. The questionnaire was also translated in Bengali and Cronbach's Alpha of 0.86 was found for the Bengali version.

3.3 Academic Achievement

Detailed mark sheets of all the students selected in the sample who appeared in the Madhyamik Examination conducted by West Bengal Board of Secondary Education (WBBSE) were collected from the sampled schools. The marks obtained by the students in the examination were considered as the academic achievement score of the students.

3.4 Biographical Information Schedule

A student Biographical Information Schedule was prepared covering relevant Socio-economic information about the participants, and was administered along with the selected tools.

V. Analysis

As stated earlier that variables considered in this study are:

- i) Six dimensions of Self-concept (as per Self-Concept Questionnaire (Saraswat, 99)
- ii) Achievement Motivation (as per Deo Mohan Achievement Motivation Scale (Deo and Mohan, 2002) along with Biographical Information Schedule
- iii) Academic Achievement (as per marks obtained in the Madhyamik Examination)

Scores obtained by the students of different categories (as emerged from the Biographical Information Schedule such as Gender, Caste, Father's Education and Father's Occupation) with respect to the variables considered (Self-concept dimensions, Academic Achievement and Achievement Motivation) were analyzed using One Way Analysis of Variance (ANOVA). In the result tables abbreviations have been used for the variables stated above. Full name of the variables and their abbreviations are given below:

Physical Self-concept (SC1), Social Self-concept (SC2), Temperamental Self-concept (SC3), Educational Self-concept (SC4), Moral Self-concept (SC5), Intellectual Self-concept (SC6), Academic Achievement (AA) and Achievement Motivation (AM), The results are as follows:

ANOVA table for testing equality of means for the dimensions of Self-concept, Academic achievement and Achievement motivation across genders is given in Table – 1.

Table – 1 Anova Results With Respect To Gender Categories And The Respective Variables

	SEX		F ratio	Probability
	Boys	Girls		
SC1	27.96	25.55	58.1426	0.000**
SC2	26.73	26.29	5.0916	0.024*
SC3	30.61	30.19	5.8334	0.016*
SC4	32.25	32.19	4.7918	0.029
SC5	32.09	32.66	2.9147	0.088
SC6	24.48	23.89	8.2314	0.004*
AA	431.87	392.90	0.0112	0.916
AM	148.91	150.69	0.1077	0.743

* significant at 5% level

** significant at 1% level

From the Table 1 it is seen that the boys and girls differ significantly in most of the Self concept dimensions except Educational (SC4) and Moral self concept (SC5). However, no significant differences are observed for Academic Achievement and Achievement Motivation. Various studies are in agreement of such findings especially regarding Academic Achievement and Academic Motivation. Gupta et al. (2012) studied on secondary school students and found that gender had no significant difference in academic achievement. Parveen et al. (2013) revealed that high school boys and girls have not shown any significant difference in academic achievement in General Science, Mathematics and Urdu. Researchers like Nagarathanamma & Rao (2007) found no significant difference between boys and girls with regard to achievement motivation level. Similar findings were reported by Kaushik & Rani (2005). Boys and girls students do not differ significantly in their academic achievement (Singh, 2012).

ANOVA table for testing equality of means for the dimensions of Self-concept, Academic achievement and Achievement motivation across castes is shown in Table -2

Table - 2 Anova Results With Respect To Caste Categories And The Respective Variables

	CASTE				F ratio	Probability
	SC	ST	OBC	GEN		
SC1	27.31	26.45	26.47	26.51	1.3318	0.256
SC2	26.59	27.57	26.19	26.51	0.7604	0.551
SC3	30.95	30.12	30.67	30.08	1.9289	0.104
SC4	32.74	32.34	32.85	31.88	2.7629	0.027*
SC5	32.30	33.09	32.53	32.38	0.2248	0.925
SC6	24.36	24.48	23.91	24.00	0.8940	0.467
AA	396.33	302.96	458.32	439.76	11.8148	0.000**
AM	148.98	148.77	150.31	150.92	2.7066	0.029*

* significant at 5% level

** significant at 1% level

Legend: SC is the short form of Scheduled Cast category
 ST is the short form of Scheduled Tribe category
 OBC is the short form of Other Backward Cast category
 GEN is the short form of General (Caste) category

It is revealed from the Table 2 that students differ significantly in Academic Achievement over caste categories. However, little difference is observed in Self-concept dimensions except Educational (SC4) self-concept and Achievement Motivation.

Analysis of father's education on self-concept, academic achievement and achievement motivation is shown in the Table- 3.

Table - 3 Anova Results With Respect To Father's Education Categories And The Respective Variables

	FATHERS' EDUCATION						F ratio	Probability
	Illiterate	Primary	Up to Class-X	Madhyamik Pass	Graduate	Above Graduate		
SC1	27.02	26.48	25.89	27.76	27.36	26.53	1.3164	0.255
SC2	26.15	26.50	26.08	27.09	26.59	27.00	1.2489	0.284
SC3	30.89	30.44	29.27	31.19	30.29	31.52	3.1349	0.008**
SC4	32.42	32.29	31.96	33.28	31.11	32.06	1.3228	0.252
SC5	31.56	32.55	32.00	33.23	32.16	32.35	1.7947	0.111
SC6	23.76	24.85	23.42	24.65	24.18	23.60	3.1237	0.008**
AA	352.49	372.60	401.93	404.46	518.26	550.50	28.1124	0.000**
AM	146.12	147.63	147.80	154.90	153.52	156.59	6.5533	0.000**

** significant at 1% level

In Table 3, significant differences have been observed in Academic Achievement and Achievement Motivation. In other words, mean scores on Academic Achievement and Achievement Motivation are significantly different across the groups with educated fathers and the group with less educated fathers implying a positive relationship between fathers' education and their children's academic achievement and achievement motivation. However, certain Self-concept variables (Temperamental and Intellectual Self-concept) also indicate significant differences among students of different educational status of father.

Role of father's Occupation on the variables considered were investigated and results are given in Table -4.

Table 4 Anova Results With Respect To Father's Occupation Categories And The Respective Variables

	FATHERS' OCCUPATION				F ratio	Probability
	Farmer	Professional	Business Man	Petty Traders		
SC1	26.79	26.92	26.66	26.18	0.3337	0.990
SC2	26.54	26.63	26.51	26.20	1.0676	0.384
SC3	30.11	30.28	30.52	30.87	0.7446	0.730
SC4	32.57	31.51	32.37	32.59	1.6180	0.069
SC5	32.14	32.26	32.47	32.38	0.7895	0.681
SC6	23.71	24.38	24.35	23.94	0.8048	0.664
AA	351.38	449.14	421.15	390.71	5.3872	0.000**
AM	145.99	151.34	150.92	150.67	2.7067	0.001**

** significant at 1% level

Table 4 depicts that Academic Achievement and Achievement Motivation differed significantly over categories of father's occupation. But differences were rather insignificant for various dimensions of self-concept.

VI. Conclusion

Average score on each dimension of self-concept was higher for boys than girls. However, the differences of such scores were found to be significant in various dimensions of self-concept except Educational and Moral self-concept. Thus, gender has an effect on self-concept.

Effect of gender on academic achievement and achievement motivation were insignificant. In other words, average scores of boys and girls did not differ much for academic achievement and also for achievement motivation.

Social discrimination resulting from the caste system in Indian Society had an effect on Academic Achievement. Students differed significantly in Academic Achievement over caste categories. However, the same was not true for Achievement Motivation and Educational self-concept where differences were found to be insignificant.

Children of educated fathers had higher scores on Academic Achievement and Achievement Motivation. Mean scores on Academic Achievement and Achievement Motivation were significantly different across the group with educated fathers and the group with less educated fathers. The finding tends to imply a positive relationship between fathers' education level and their children's academic achievement and achievement motivation.

Average score on Temperamental self-concept and Intellectual Self-concept were also significantly different with education level of fathers implying a possible positive relationship among academic achievement and achievement motivation, Temperamental self-concept and Intellectual Self-concept.

Effect of fathers' occupation and fathers' education level were found to be similar on academic achievement and achievement motivation. This could be due to the positive relationship between education level and occupation category.

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