

Research Paper

Self-concept and Academic Achievement of Government School Students

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ABSTRACT

The present study was undertaken to investigate the self-concept of high and low achieving school students in Ranchi town. For this purpose, participants were selected based on two levels of achievement (high and low) and two levels of gender (boys and girls). A total of 160 students from government schools were selected. Thus, a 2×2 factorial design was employed, resulting in four strata. From each stratum, 40 students were randomly selected. The Self-Concept Rating Scale developed by Dr. S. P. Ahluwalia and Dr. Hari Shankar Singh was used to collect the data. The results revealed that the level of self-concept varied across the total sample and its different subgroups. There was a significant effect of gender and achievement level on self-concept. However, no significant interaction effect of gender and achievement level was found on the self-concept of school students in Ranchi town.

Keywords: *Self-concept, Gender, Academic Achievement*

According to Raimy (1943) self-concept is the map which each person consults in order to understand himself during the moments of crisis or choice. The self includes all that a person embraces in the words “I”, “Me”, “Mine” and “Myself”. It is within each person, the core and the substance of his experience as a human being. Cooley (1964), views that man’s ideals about himself are reflections of how others see him. He coined the term social or “looking-glass self”, which is comparable to Miller’s (1964) subjective public entity. The self is not the same as the human organism; it is a cognitive construct of the organism; which is in certain ways identified with the organism itself. The self has also been described as a nucleus of personality. According to Mead (1934), it is reflexive; it is an object to itself and it can be both object and subject. It is knower and the known, a perceiver and the perceived. Wenkart (1950) adds that, as a knower, the self can take a panoramic view of the total personality. According to Combs and Snyggs (1959) what

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a person thinks and how he behaves is largely determined by the concept the holds about himself and his abilities. Murphy (1947) described self as “The individual known to the individual.”

Thus, self-concept appears to be a comprehensive and exhaustive area which can represent the personality at large. Recognizing its broader coverage than any other trait of personality, self-concept has been chosen as one of the possible dimensions which gives direction to the whole life.

Several studies have consistently demonstrated a reciprocal relationship between academic self-concept (ASC) and academic achievement. A meta-analysis by Marsh and Craven (2006) highlighted that ASC and achievement are mutually reinforcing, each leading to gains in the other. Academic self-concept has consistent reciprocal effects with both achievement and educational attainment, while self-esteem has almost none. High self-concept is related to high academic performance, with correlations ranging from .20 to .27 (Huang, 2011). Academic self-concept significantly predicts achievement and vice versa, with the relationship being moderated by student age, achievement level, and types of achievement measurement (Huimin Wu et al., 2021). Academic achievement has a strong impact on self-concept, with stronger dimensional comparison effects when subjects are dissimilar in the math-verbal continuum and stronger positive paths from achievements to corresponding self-concepts (J. Moller et al., 2020). Academic self-concept correlates significantly more strongly with achievement than general self-concept, motivation, and classroom behaviour (Lyon et al., 1993). Increases in academic self-concept lead to increases in subsequent academic achievement and other desirable educational outcomes (Marsh et al., 2011). Academic self-concept and achievement relations are content specific and less correlated than achievement scores (Marsh et al., 1992).

Objectives

- To assess and compare the self-concept between male and female students of government schools.
- To assess and compare the self-concept of high and low achievers among students of government schools.
- To study the main and interaction effect of gender and academic achievers on self-concept among students of government schools.

Hypotheses

- There would be no significant difference between male and female students in self-concept.
- There would be no significant difference between low and high achievers in self-concept.
- There would be no significant interaction effect of gender and low and high achievers on the self-concept of students of government schools.

METHOD

Research Design

The random sampling technique was applied to draw the participants from 10th class, aged 14-15 of different government schools of Ranchi town. The sample of the proposed study was based on a 2*2 factorial design. There were four strata based on gender and Scholastic Achievement. From each stratum 40 cases were selected thus, altogether 160 participants were selected. The stratification was based on:

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- Gender (Boys and Girls)
- Achievers (High Achievers- above 70% scores; and Low Achievers- below 50% overall score)

Measures

- **Personal data questionnaire (PDQ):** To collect information, the investigator developed a personal data questionnaire, where pertinent data on the sample criteria, such as the respondents' age, gender, educational achievement, religious affiliation, family income, and residence history, were collected.
- **Children's Self-Concept Scale:** The Children's Self-Concept Scale, prepared by the Dr. S.P. Ahluwalia and Dr. Hari Shankar Singh, was used to evaluate students' levels of self-concept for the current study. The 80 items in the scale are all focused on the student's self-concept abilities. The six sub-scales which are included in the self-concept scale are considered to be important in the psychological world of children and adolescents. The names of these sub-scales are: Behaviour; Intellectual and School Status; Physical Appearance and Attributes; Anxiety; Popularity; and Happiness and Satisfaction.

Procedure

The investigator gave the participants a brief explanation of the study's objectives and collected data in accordance with those objectives. A total of 160 school students were selected as a sample from various schools in Ranchi town. Individual testing was conducted with the students. They received a thorough and understandable explanation of the entire inventory completion process. They were provided with an explanation of the questionnaire's instructions. They were also told that their responses would be kept confidential. It was verified that no participant omitted any questions from the discussion or circled both the questions and the answers.

RESULTS

The first objective was to study the main and interaction effects of gender and achievement level on self-concept among students of government schools which can be tested with the help of the responses of the sheets participants on Children's self-concept scale, which were scored and statistically analysed using two-way ANOVA (Analysis of Variance) The results are as given in Table 1, and 2.

Table 1: Descriptive Statistic of Self-concept of Students of Government School

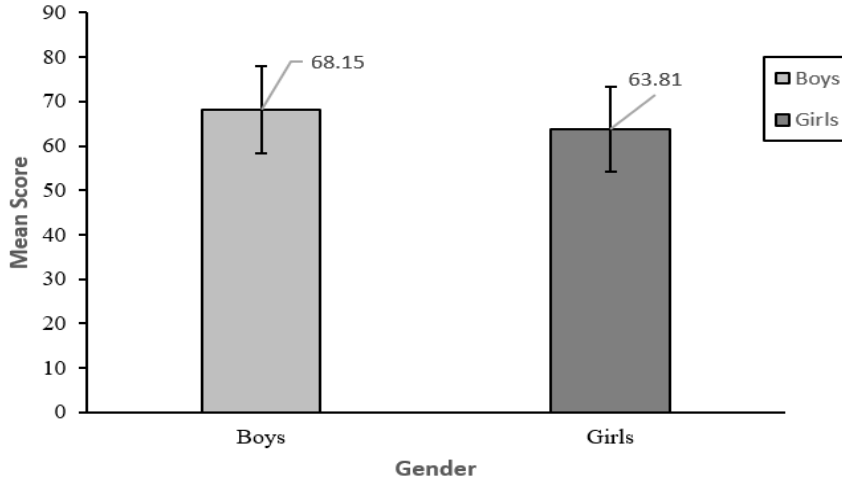
Gender	Achievers	N	Mean	Std. Deviation
Boys	High Achievers	40	72.03	5.26
	Low Achievers	40	64.28	11.64
	Total	80	68.15	9.79
Girls	High Achievers	40	67.18	7.91
	Low Achievers	40	60.45	9.82
	Total	80	63.81	9.48
Total	High Achievers	80	69.60	7.11
	Low Achievers	80	62.36	10.87
	Total	160	65.98	9.85

Table 2: Gender-wise *M*, *SD*, *N* and *t*-Value of Self-concept of students

Gender	Mean	SD	N	Mean Difference	t-value
Boys	68.15	9.79	80	4.34	2.84**
Girls	63.81	9.48	80		

Note. **= Significant at 0.01 Level

Figure 1 Mean Score of Self-Concept of Boy and Girl Students of Government School



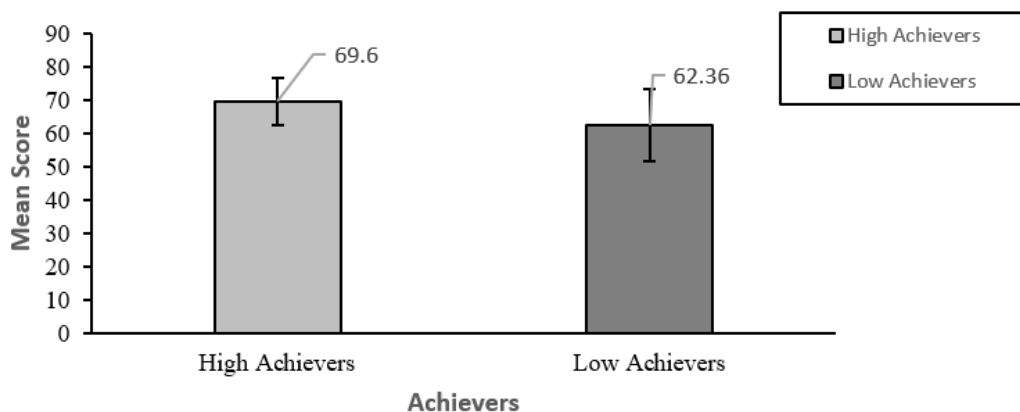
From Table 2, it is evident that the *t*-value is 2.84, which is significant at the 0.01 level with *df* = 158. It shows that the mean scores of self-concept of boys and girls differ significantly. Thus, the null hypothesis that there is no significant difference between the mean scores of self-concept of boys and girls students is rejected. Further, the mean score of self-concept of boys is 68.15, which is significantly higher than that of girls, whose mean score is 63.81. It may, therefore, be said that boys were found to have significantly greater belief in their own ability to succeed in a situation than their girl counterparts.

Table 3: Achievers-wise *M*, *SD*, *N* and *t*-Value of Self-concept of students

Achievement Levels	Mean	SD	N	Mean Difference	t-value
High Achievers	69.60	7.10	80	7.24	4.98**
Low Achievers	62.36	10.87	80		

Note. **= Significant at 0.01 Level

Figure 2: Mean Score of Self-Concept of High and Low Achievers Students of Government School



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From Table 3, it is evident that the t-value is 4.98, which is significant at the 0.01 level with $df = 158$. It shows that the mean scores of self-concept of High Achievers and Low Achiever differ significantly. Thus, the null hypothesis that there is no significant difference between the mean scores of self-concept of High Achievers and Low Achiever is rejected. Further, the mean score of self-concept of High Achievers, whose mean score of self-concept is 69.60, which is significantly higher than that of Low Achiever, whose mean score of self-concept is 62.36. It may, therefore, be said that High Achievers were found to believe significantly more in their own ability to succeed in a situation than their Low Achiever counterparts.

Table 4: Factorial ANOVA of Gender and Scholastic Achiever on Self-concept

Source	Sum of Squares	df	Mean Square	F	Sig.
Gender (A)	752.56	1	752.56	9.34	0.001
Achievers (B)	2095.26	1	2095.26	26.01	0.001
A x B	10.51	1	10.51	0.13	0.718
Error	12566.63	156	80.56		
Total	15424.94	159			

As per objective-1 there were two variables, namely, Gender and Scholastic Achievement. Boys and Girls were two levels of gender, while High and Low Achievers were two levels Scholastic Achievements. Thus, the data were analysed with the help of two way ANOVA (2x2 factorial design) using SPSS-26. The outputs are given above Table 1 and 2.

From Table 4, it can be seen that the F-Value for Gender is 9.34, which is significant at the 0.001 level with $df = 1/159$. It indicates that the mean scores of self-concept of boys and girls differ significantly. That is, there was a significant influence of gender on the self-concept of students. Thus, the null hypothesis that there is no significant influence of gender on the self-concept of school students is rejected. Therefore, it may be said that boys and girls were found to have different levels of self-concept.

The F-Value for Scholastic Achievement is 26.01, which is significant at the 0.001 level with $df = 1/159$. It indicates that the mean scores of self-concept of High and Low Scholastic achievers differ significantly. That is, there was a significant influence of scholastic achievement on the self-concept of students. Thus, the null hypothesis that there is no significant influence of scholastic achievement on self-concept of school students is rejected. It may, therefore, be said that both High and Low Scholastic Achievers were found to have different levels of self-concept.

The F-value for the interaction between Gender and Scholastic Achievement is 0.13, which is not significant. It indicates that the mean scores of self-concept of boys and girls at high and low levels of scholastic achievement did not differ significantly. That is, there was no significant influence of the interaction between Gender and Scholastic Achievement on the self-concept of students. Thus, the null hypothesis that there is no significant influence of the interaction between Gender and Scholastic Achievement on the self-concept of students is not rejected. It may, therefore, be said that self-concept was found to be independent of the interaction between gender and scholastic achievement of students.

DISCUSSION

The findings of the present study reveal a statistically significant difference in the self-concept scores of boys and girls. The rejection of the null hypothesis indicates that gender plays a meaningful role in shaping students perceptions of their own abilities. This outcome

aligns with previous research suggesting that boys often demonstrate greater confidence in their academic and personal competencies than girls (Marsh, 1990; Singh & Shukla, 2015). One possible explanation for this difference is the influence of socio-cultural expectations. Boys are frequently encouraged to exhibit independence, assertiveness, and self-reliance, which may contribute to stronger self-concept development (Eccles & Wigfield, 2002). Conversely, girls may face societal pressures that emphasize conformity and modesty, potentially limiting their self-perceptions of competence (Steinberg, 2011). These findings underscore the importance of considering gendered socialization processes when examining self-concept among adolescents.

The results also highlight the implications for educational practice. Since self-concept is closely linked to motivation, academic achievement, and overall psychological well-being (Byrne, 1996; Marsh & Craven, 2006), educators should be attentive to gender differences in self-belief. It is important to note, however, that while boys scored higher on self-concept, this does not necessarily translate into superior academic performance. Prior studies have shown that girls often outperform boys in academic performance despite reporting lower self-concept scores (Hyde, 2014). This paradox suggests that self-concept interacts with other factors, such as motivation, study habits, and teacher expectations, in complex ways. Future research should therefore explore these potential mediating variables to gain a more nuanced understanding of gender differences in self-concept.

The results presented in Table 3 demonstrate a significant difference in self-concept between High Achievers and Low Achievers. This finding suggests that academic achievement is closely associated with students' perceptions of their own abilities, with High Achievers exhibiting stronger self-belief than their Low-Achieving counterparts. These results are consistent with previous studies that have highlighted the reciprocal relationship between self-concept and academic performance (Marsh & Craven, 2006). Students with higher achievement levels often develop more positive self-concepts, which in turn may reinforce their motivation and persistence in academic tasks (Byrne, 1996). Conversely, Low Achievers may internalize negative academic experiences, leading to diminished self-concept and reduced confidence in their ability to succeed (Guay, Marsh, & Boivin, 2003). This cycle underscores the importance of fostering positive self-concept among all students, particularly those who struggle academically.

The findings also align with the expectancy-value theory of motivation, which posits that students' beliefs about their competence strongly influence their academic choices and performance (Eccles & Wigfield, 2002). High achievers, who perceive themselves as capable, are more likely to engage in challenging tasks and persist in the face of difficulties. Low Achievers, on the other hand, may avoid such tasks due to lower self-belief, thereby potentially perpetuating achievement gaps. In conclusion, the significant difference in self-concept between high and low achievers emphasizes the critical role of self-belief in academic success. While High Achievers may benefit from stronger self-concept, targeted efforts are needed to uplift Low Achievers perceptions of their abilities, thereby promoting equity and improved educational outcomes.

The results indicate that both gender and scholastic achievement exert significant influences on students' self-concept. The F-value for gender demonstrates that boys and girls differ meaningfully in their self-concept scores, thereby rejecting the null hypothesis of no gender effect. This finding is consistent with prior research suggesting that gender differences in self-concept are shaped by socialization patterns, cultural expectations, and differential

reinforcement in academic contexts (Eccles & Wigfield, 2002; Marsh, 1990). Boys often report higher self-concept, possibly due to greater encouragement toward independence and assertiveness, while girls may experience pressures that emphasize modesty and compliance (Steinberg, 2011). Similarly, the F-value for scholastic achievement confirms that high achievers and low achievers differ significantly in their self-concept. High achievers reported stronger self-belief compared to low achievers, supporting the reciprocal relationship between academic performance and self-concept (Marsh & Craven, 2006). Students who perform well academically are more likely to perceive themselves as competent, which may further enhance motivation and persistence (Guay, Marsh, & Boivin, 2003). Conversely, low achievers may internalize academic struggles, leading to diminished self-concept and reduced confidence in their abilities.

Interestingly, the interaction effect between gender and scholastic achievement was not significant ($F = 0.13, p > .05$), indicating that the influence of gender and scholastic achievement on self-concept did not significantly interact. In other words, while both gender and achievement level significantly affected self-concept, their combined effect does not produce a statistically significant additional variation. This finding suggests that interventions aimed at improving self-concept can target gender and achievement separately, without needing to account for complex interaction effects. It also highlights the possibility that self-concept is influenced by multiple, distinct factors. From an educational standpoint, these findings underscore the importance of fostering positive self-concept among all students. For girls and low achievers, targeted strategies such as mentorship, confidence-building activities, and supportive classroom environments may help bridge the observed gaps (Schunk & Pajares, 2009). Since self-concept is closely linked to motivation, academic success, and psychological well-being (Byrne, 1996), addressing differences in self-concept is essential for promoting equity in educational outcomes.

CONCLUSIONS

To sum up, the study examined all three hypotheses as proposed. The findings revealed variations in the level of self-concept among the total sample and its sub-groups. There was a significant difference in self-concept based on gender and achievement levels of students. Self-concept was found to be independent of the interaction between gender and achievement level of students.

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Conflict of Interest

The author(s) declared no conflict of interest.

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