Exploring the Relationship between Self-Concept and Intellectually Gifted Senior Secondary Students of Navodaya Schools

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Abstract

The goal of this study is to investigate the relationship of self-concept among intellectually gifted students of the Class XI of Jawahar Navodaya Vidyalayas (JNVs). The data were analysed to test the significant differences between the self-concept scores of gifted males and females and the sample consisted of 383 students from the various district of JNVs of Uttar-Pradesh. Out of which, 90 were identified as gifted through the Raven's Advanced Progressive Matrices. The self-concept questionnaire by Saraswat has been administered to measure self-concept. Pearson correlation coefficient and independent sample t-test were used to test the variables investigated. Results indicated that a positive non-significant relationship exists between self-concept scores and intelligence scores of gifted students. There exists no significant difference in self-concepts scores with regard to sex. Additionally, no significant differences were found to exist between the self-concepts scores of gifted with regard to their caste.

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Introduction

The study of an individual self-concept is one of the most significant aspects of education and psychology. Self-concept has been seen as the core of personality and developed by individuals through interaction with their environment. Attention is being focused on developing a positive self-concept, which has been viewed as one of the reasons to improve the academic achievement (Purkey, 1970; Srivastava and Joshi, 2014). A key component of personality or the qualities that others reflect on one, observations about the self, or a collection of all other characteristics that differentiate an individual from others based on information obtained from the environment is self-concept.

The phenomenon of intelligence is regarded as the best criteria to identify and differentiate giftedness. There are various perceptions about giftedness definition. There is one common meaning about the concept of giftedness. There are 'Children who are gifted and talented, capable of high performance and demonstrate achievement or potential skills in a variety of areas, including intellectual, creative, leadership, artistic, and particular academic domains' (Marland Report, 1972).

The study of the self-concept on gifted populations is significant for understanding the emergence and maintenance of gifted behavior. Researchers who assert that gifted students are positively correlated with self-concept than their peers. Coleman and Cross (2000) suggest that many gifted students demonstrate a higher level of self-concept, social-skills, self-awareness, and moral duties than their classmates. To develop gifted behaviours, Tannenbaum claimed that intelligence and self-concept work in a partnership. A feedback loop is created: if a person believes that he or she is gifted, he or she will behave in accordance with that belief, and these high successes will further strengthen the self-concept (Tannenbaum, 1986).

Al-Srour and Al-Oweidi (2016) administered the Self-Description Questionnaire III (SDQIII) on 301 students (105 gifted and 196 non-gifted) to assess the level of self-concept among gifted and non-gifted children and the link between gender and self-concept. According to the findings, gifted children's average performance in all domains is higher than that of non-gifted children. There are no statistically significant differences linked to gender in any domain for gifted children, with the exception of appearance and emotions, appearance in favour of females, and the emotions domain favours males.

Hawkins (1993) evaluated the self-concept levels of 125 gifted students who had high and low achievement. According to the results, there were no statistically significant differences in self-concept among students yet some hypothesise that self-concept in gifted students might be more negative than in nongifted peers. It is believed that the high

expectations expressed through the labelling process, lead to feelings of failure since the individual never meets to the expected expectations (Buescher, 1991). Kaur et al. (2009) investigated home environment and academic achievement as predictors of self-concept using a sample of 300 adolescents. They demonstrated a positive but not a significant correlation between self-concept and academic achievement. Further, the study discovered a substantial negative correlation between the adolescents' self-concept with components of the home environment (rejection, social isolation, and deprivation of privileges).

Self-concept

To investigate self-concept, however, one must first define it. Generally, researchers believe that self-concept relates to a person's perception of himself or herself. Woolfolk (2001) defines self-concept as "the value an individual sets on his or her own characteristics, talents, abilities, and deeds."

It refers to our total perception of oneself, which encompasses both cognitive and emotive assessments. Self-concept is multi-dimensional, including our ideas of ourselves from various perspectives (e.g., physical, social, emotional, spiritual, religious). Psychologist Bruce A. Bracken has believed that self-concepts are like plants, it grows differently in different media and climates. He has given a theory of multi-dimensional self-concepts representing six domains of self-concept:

(i) **Academic:** individual feeling about himself or herself within an academic environment.

(ii) **Affect:** individual self-evaluative understanding and acceptance of emotional states.

(iii) **Competence:** individual ability to fulfil their basic necessities.

(iv) **Family:** how individuals feel about themselves as family members or how successfully they work together as a family member.

(v) **Physical:** how an individual feels about one's appearance, health, physical condition, and overall abilities

(vi) **Social:** individual ability to socialise and participate socially with others.

For growing a healthy self-concept, it is similar to preparation of the soil and carefully planting the seeds of positive self-concept.

Giftedness and Self-concept

There have been various attempts to assess gifted children's self-concepts. All studies were conducted with academically and intellectually gifted children who were identified by their performance on an IQ level or academic achievement test. These studies had contradictory findings. Some state that there are no differences in self-concepts between academically or intellectually gifted students (Hoge and McSheffrey, 1991; Tong and

Yewchuk, 1996; Kaur et al., 2009). Other studies have found that students who are gifted academically or intellectually report more positive self-concepts (Yates, 1975; and Colangelo and Pfleger, 1978; and Chan, 1988; and Gradiner, 1992; and Al-Srour and Al-Oweidi, 2016; and Ayğari and Gündoğdu, 2017), and a few discovered that gifted students have poor self-concepts (Coleman and Fults, 1982; Forsyth, 1987).

Gradiner (1992) administered four self-concept measures 'Who Am I' task, Importance Scale, Self-Description Questionnaire, and a Pie Chart) on 37 integrated gifted and 251 regular students of Grade V. He found that the gifted had significantly higher self-concepts than the regular ones. Chan (1988) found that in middle school, intellectually gifted students had a higher general self-concept than their non-gifted peers, especially in areas of cognitive and general self-worth. Colangelo and Pfleger (1978) concluded that a student's success in academic areas is positively linked with high self-concept. Ayğari and Gündoğdu (2017) also concluded that the self-perceptions of gifted students are higher than other students.

In contrast, Tong and Yewchuk (1996) found that the global self-concept of gifted is similar to their peers, and also male and female adolescents are not differing in their global self-concept. Bartel and Reynold (1986) examined depression and self-perception of 145 gifted and non-gifted Grades IV and V students, and they concluded that gifted students did not differ from their non-gifted students.

Maharmeh (2018) investigated the level of academic self-concept among 110 gifted students with low academic achievement. The findings revealed that gifted children with low academic achievement had a low level of academic self-concept. As a result, their academic achievement is adversely affected by their lack of academic self-concept.

Beaman (2009) investigated the effects of grouping and curriculum on gifted self-concept and found that neither had a significant impact on student's academic self-concept. In a longitudinal study of the psychological characteristics of 139 academically gifted students attending a residential academy, Cross, Adam, and Holland (2004) summarised that the gifted students attending residential academies were psychologically similar to their non-gifted peers measured by the Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A) on the 10 clinical scales as well as a variety of supplemental scales.

Feldhusen et al. (1990), on the other hand, found a substantial difference in self-concept between participants and non-participants in gifted enrichment programmes.

Self-concept changes with developmental stages, so findings from one age group cannot be applied to other age groups. Thus, it is hard to generalise about the self-concepts of gifted students

because it is clear from these studies that multiple factors influence one's self-concept.

Purpose of the Study

The National Policy on Education, 1986 proposed to establish Jawahar Navodaya Vidyalayas (JNVs) for rural talented and gifted children. This school's main aim is to provide an opportunity for rural students to learn how to live and learn together and, thus, achieve their potential. These schools are residential, co-educational, fully financed by government of India. Free education provided to students includes free board and accommodation, stationary, uniform, medical care, and more. Students in Grades IX and XII pay a fee of Rs. 200 each month. But girls and children from low-income and SC/ST families don't pay fees. Thus, it is a system of central schools for rural talented students who lack access to accelerated learning due to social, financial, or geographical disadvantages.

Gifted students have unique abilities which make them different from other pupils, and in turn, require the use of specialised educational programs suited to their abilities. So, educators and scholars draw special attention to reconsidering the necessity of providing psychological and counselling services to these students.

The purpose of the present study investigates the degree of relationship between self-concept and intellectually gifted students observed on the population of Senior Secondary school students of (JNVs).

Objectives of the Study

1. To study the level of self-concept of intellectually gifted students of JNVs.
2. To study the significant relation between self-concept and intellectually gifted students of JNVs.
3. To study the significant difference between self-concept of intellectually gifted male and female students of JNVs.
4. To study the significant difference between self-concept of intellectually gifted students of JNVs with respect to caste.

Hypotheses of the Study

H_{01}: There will be no significant relationship between self-concept and intellectually gifted students of JNVs.

H_{02}: There will be no significant difference between self-concept of intellectually gifted male and female students of JNVs.

H_{03}: There will be no significant difference between self-concept of intellectually gifted students of JNVs with respect to caste.

Methodology

The investigation was carried out using a descriptive research approach.

Sample

The total sample collected for the study were 383 students from the Class XI, out of which 90 students were identified as intellectually gifted (44 male, 46 female). Selections were based on the randomisation sampling

technique from seven different JNVs in Uttar Pradesh.

Scale of the Study

The investigator adopted the Advanced Progressive Matrices by Raven, Court and Raven (1977, 1998, 2003 updated) for measuring intelligence. Criterion levels of intellectually giftedness were set at the level of equal to or greater than 125. For measuring the self-concept, the Self Concept Questionnaire (SCQ-s) by Raj Kumar Saraswat (2019) were adopted. These tools were administered on 14–8 years, measuring self-concept on six separate domains, namely, physical, social, temperamental, educational, moral, and intellectual.

Procedure

After collecting the data from the respondent of the selected schools, the data were analysed. The product-moment method of correlation coefficient was used to find out the relationship between the variables. Independent sample t-test was used to compare the mean difference of the variable with respect to demographic variables.

Findings and Discussion

The descriptive statistics on identified gifted students (90) are given in the below following tables. The table presents the total sample distribution of the variable on the various levels. Charts and tables also indicate the percentage distribution of the variables in accordance with demographic variable.

Table 1 shows the percentage level of self-concept of intellectually gifted students, in which most of the intellectually gifted students (51.1%) lie in a moderate level of self-concept.

Table 1
Levels of Self-concept of Intellectually Gifted Students

Levels of Self-concept	Score Range	N	Percentage
Low level	Below 167	22	24.4
Moderate level	Between 167-194	46	51.1
High level	Above 194	22	24.4
Total		**90**	**100.0**

Table 2
Levels of Self-concept of Intellectually Gifted Students by Gender

Levels of Self-concept	Male		Female	
	N	***%***	***N***	***%***
Low level	13	29.5	9	19.6
Moderate level	21	47.7	25	54.3
High level	10	22.7	12	26.1
Total	**44**	**100.0**	**46**	**100.0**

Table 2 shows the percentage level of self-concept of intellectually gifted male and female students. Gifted female students surpass in high and moderate levels of self-concepts than their male counterparts. Hence, the male had low level of self-concept than their female counterparts.

Table 3 shows the percentage level of self-concept of intellectually gifted SC/ST, OBC, and general category students. The SC/ST gifted students show low level of self-concept than the OBC and general category students. At a moderate level, gifted students of general category surpass those of SC/ST and OBC. Lastly, at a high level all the three castes had quite a similar level of self-concept.

Table 4 shows the Mean (M), Standard Deviation (SD), Skewness, and Kurtosis of intellectually gifted students and self-concept.

Table 3

Levels of Self-concept of Intellectually Gifted Students by Caste

Levels of Self-concept	SC/ST		OBC		General	
	N	***%***	***N***	***%***	***N***	***%***
Low level	6	35.3	12	22.6	4	20.0
Moderate level	7	41.2	28	52.8	11	55.0
High level	4	23.5	13	24.5	5	25.0
Total	**17**	**100.0**	**53**	**100.0**	**20**	**100.0**

Hypotheses Tested

H_{01}: There will be no significant relationship between self-concept and intellectually gifted students of JNVs.

Table 4

Descriptive Statistics

Variables	Mean	SD	Skewness	Kurtosis
Intellectually Gifted Students	26.17	2.86494	.251	.374
Self-Concept	181.22	15.82473	-.227	-1.009

The coefficient of correlation has been applied to identify the correlation between self-concept and intellectually gifted senior secondary school students from JNVs.

Table 5

Results of Pearson Product Moment Correlation Analysis

Variablez	N	R	P	Sig.
Self-concept	90	.006	>0.05	NS
Intellectually Gifted Students	90			

The information from Table 4 illustrates that there is no statistically significant link between self-concept and intellectually gifted senior secondary school students. Self-concept and intellectual giftedness have a positive but non-significant relationship (r=0.006). The null hypothesis is accepted based on the findings.

Table 6

Result of T-test

Gender	N	Mean	SD	t-value	p-value
Male	44	179.32	16.03	.686	.267 (NS)
Female	46	183.04	15.58		

H_{02}: There will be no significant difference between self-concept of intellectually gifted male and female students of JNVs.

The t-test analysis has been applied to identify the significant difference in the self-concept between male and female intellectually gifted senior secondary school students from JNVs.

The information from Table 6 illustrates that there is no statistically significant difference in self-concept between male and female intellectually gifted senior secondary school students. The self-concept of intellectually gifted male and female students differ positively but in a non-significant way (t=0.686). The null hypothesis is therefore not accepted.

H_{03}: There will be no significant difference between self-concept of intellectually gifted students of JNVs with respect to caste.

The analysis of variance has been applied to identify the significant difference between the self-concept of intellectually gifted senior secondary school students of JNVs with respect to caste.

Table 7

Result of ANOVA

Sources of variation	Sum of squares	df	Mean Sum of Squares	F value	p-value	Sig.
Between groups	248.022	2	124.011	.490	.615	NS
Within groups	22039.534	87	253.328			
Total	22287.556	**89**				

The information from Table 7 clearly illustrates that there is no statistically significant difference observed between the self-concept of intellectually gifted students with respect to SC/ST, OBC, and General caste (F=0.490) of JNVs at a 5 per cent level of significance. Therefore, the null hypothesis is accepted.

Discussion

The findings of this study are to be viewed in the context of other research findings. The findings reveal a positive but not statistically significant link between self-concept and intellectually gifted students. It indicates that the level of intelligence has almost no effect on the level of self-concept of students from Navodaya Vidyalayas school. This finding is in line with the results of Kaur et al., (2009) found that self-concept is positively but not significantly correlated to the academic achievement of adolescents. The results of Hamachek (1995) observed that achievement is influenced by only the academic part of self-concept, not by the general self-concept.

In contrast to the finding of this study, Guay et al. (2010) discovered that students who believed they were academically competent got better scores because their academic self-concept motivated them to strive more at school.

The study found no significant differences in self-concept between male and female intellectually gifted students of JNV schools. It showed that the opinions held about oneself by both intellectually gifted male and female students of JNV were similar. Yates (1975), Hassaneen (2008), Yusuf and Balarabe (2013), and Al-Srour and Al-Oweidi (2016) all found similar results. Yusuf and Balarabe (2013) revealed that both male and female students show similar levels of academic self-concept. Yates (1975) found that there exists no significance difference in gifted self-concept scores on sexes. The findings of Hassaneen (2008) and Al-Srour and Al-Oweidi (2016) reported that there were no statistically significant difference found in the self-concept of males and females.

The findings of the study revealed no significant differences in intellectually gifted students' self-concept attributed to the caste variable. The intellectually gifted students of each caste (SC/ST, OBC, and General) have quite a similar level of self-concept.

Conclusion

This article explored the link between intellectually giftedness and self-concept. Self-concept of students is not significantly related to their intelligence level of students. So, an increase or decrease in students' self-concept does not impact students' level of intelligence. However, the study also reveals that there is no significant difference found in the self-concept of male and female or

the SC/ST, OBC, and General caste of gifted senior secondary students of JNVs. Thus, the results suggest that gifted male and female or gifted students from different castes (SC/ ST, OBC, and General) should be provided with equal opportunities or support in JNV schools. This school provides equal provisions besides their gender or caste differences and make them competent enough to work hard to achieve their educational goal.

Implications

The study showed that there is no evidence that self-concept constitutes a problem for gifted students. Thus, this study suggests several points:

(i) For building up a positive self-concept in students, special care and personalised support programs have been developed.

(ii) Learning achievement, general behavioural patterns, and high participation in school activities are all dependent on positive self-concept.

(iii) A team approach may be useful in accomplishing the goal. Teachers, school counsellors, consultants, psychologists, and parents are the medium to help the child in growing a healthy perception of their selves in JNVs.

(iv) Teachers and educators should be fully upgraded and trained to assist the learner who is deprived of a positive perception of self.

(v) Conservative environments (like gender or caste biases) in any learning situation and institution should be avoided.

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