Effect of Persistence on Academic Performance of Socially Advantaged and Disadvantaged Secondary Students

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ABSTRACT

The concept of social disadvantage is a broad concept. Bernstein (1960), first used the term socially disadvantaged to cover a large group of factors, for handicapped children in schools, keeping them away from fully using their potentialities, and who have parents of low educational level. The term persistence has been used to refer to subjects momentary goals as revealed by their remarks about successes and failure and their modes of attack on the problems assigned them. Persistence is an important individual social motivation, which is also related to the achievement motivation. Hoppe (1930) represents persistence as a person's expectations, goals, claims or his future achievement in a given task. Secondary students are the young people who make choices that will have an important bearing on the rest of their lives. Persistence has been defined as an acquired behavioral tendency for continuing or pursuing an achievement goal in a face of obstacles. The focus of the present study was to analyze the academic achievement of socially advantaged and disadvantaged secondary students and the effect of persistence on their academic performance.

Keywords: Persistence, academic performance, socially advantaged, disadvantaged students

The concept of social disadvantage is a broad concept. Instead of merit and ability, in the brave new world of education revolution, those students considered disadvantaged will be placed at the head of the queue for tertiary entry. Children of disadvantaged groups have been neglected for a long period in our country. Bernstein (1960), first used the term socially disadvantaged to cover a large group of factors, for handicapped children in schools, keeping them away from fully using their potentialities, and who have parents of low educational level. Generally the whole world may be divided into two broad classes- rich and poor, privileged and under privileged, higher and lower classes, socially advantaged and disadvantaged, culturally deprieved and non-deprieved, higher and lower achiever etc. one may use any term.

Children of disadvantaged groups have been neglected for a long period in our country. They are still deprieved of many facilities which are provided to common man. It is the major duty of the nation

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to look after their interests and fulfill their needs. It is through education alone that changes in the life of disadvantaged groups can be brought out. In the field of education, facilities are being provided to disadvantaged students, but the help rendered to them has not proved much beneficial and results have not been encouraging since the government programme designed to uplift the disadvantaged involved larger outlays of expenditure and call for more funds. It is essential to have factual assessment of the situation and the investment which have to yield more returns.

The concept of social disadvantage is a broad concept. Bernstein (1960), first used the term socially disadvantaged to cover a large group of factors, for handicapped children in schools, keeping them away from fully using their potentialities, and who have parents of low educational level. Keach *et al.* (1967) has stated the socially disadvantaged child is the product of disorganized multi problem with a family environment that militates against the child's capacity and willingness to learn. Kalusmeer and Ripple (1971) have opined that the poor home, unresponsive schools along with low socio-economic status, impoverished neighborhood conditions are major environmental contributors to development of social disadvantage child. The socio-genic factors are outside the child in the socio-economic conditions, in the political power structure, and in the cultural values.

In the educational process, academic performance is of paramount significance. In present-day society, individual performance largely leads to status and power rather than the ascribed qualities. In the formal system of education, academic performance at school or in college provides possibilities of access to power positions. The formal education system has its own hierarchy based on academic performance. There are various correlates of academic performance, like personality, socioeconomic status, backwardness and failure and many others.

Persistence is an important individual social motivation, which is also related to the achievement motivation. Today each and every individual who is

ambitious in some or other form aims at reaching a definite goal in performance and in doing so, he sets a desire for distinction which has an inner structure known as 'persistence'. It is therefore a form of self motivation involving competition with one's own past performance. When an individual is actively involved in a task, he himself sets a new standard or goal to achieve. He tries to gain excellence and attempts to do better then he did before.

The term persistence has been used to refer to subjects momentary goals as revealed by their remarks about successes and failure and their modes of attack on the problems assigned them. Hoppe (1930) represents persistence as a person's expectations, goals, claims or his future achievement in a given task. He further stresses that the "experiences of performance" as a success of failure does not depend upon its objective goodness alone but also on the persistence reached. According Elliott (1933) "persistence is a term which is best explained as a frame of reference involving self esteem or alternatively as a standard with reference to which an individual experiences i.e. has the feeling of success or failure". In Lewin's view (1944) persistence is the difference between how a person expects or persists to perform on a given task and how actually does he perform. If he succeeds in fulfilling his expectations, persistence raises, if he fails, the persistence falls.

Persistence is very necessary to sustain an activity towards the attainment of goal. So, persistence can be conceptualized as an acquired behavioral tendency for continuing or perusing and achievement goal in the face of obstacles. On going through the above views it can be inferred that persistence is an individual's expectation or ambition and it refers to the estimate of one's future performance in a given task.

Secondary students are the young people who make choices that will have an important bearing on the rest of their lives. Many young people have to make decisions for the future before they might mean. Secondary students are not however unique in this respect. Aacademic performance was predicted by a combination of academic factors and academic

adjustment. Academic adjustment was predicted by locus of control, perceived social support, and high school class rank.

Objectives of the study

The main objectives of the study were the following:

- ◆ To compare the academic performance of socially advantaged and disadvantaged boys and girls.

- ◆ To study the relationship among persistence and social disadvantage with the academic performance.

- ◆ To analyze the interaction effects of these selected variables on academic performance of students.

The secondary objective was:

- ◆ To develop a reliable and valid tool for assessing the social disadvantage in the students.

Methodology

The focus of the present study was to analyze the academic achievement of socially advantaged and disadvantaged secondary students and the effect of persistence on their academic performance. The academic performance of socially advantage and socially disadvantage students was the dependent variable. The Persistence was taken up as independent variables.

Population of the study

The population of the study was taken as secondary school students. The students studying in intermediate of the age group 16-20 years in the academic session of 2007-2008. The sample was chosen from district Almora. The samples of the present study were secondary students of district Almora (Uttarakhand). At first the schools were selected from urban and rural areas of district Almora randomly from boys and girls senior secondary schools. The second stage from these randomly choosen schools were to select intermediate class students.

The sample of three hundred (300) students (150 boys and 150 girls) was taken up. The structure of the sample has been presented in Table 1.

Table 1: Structure of Sample

Sl. No.	Name of School	Number of students		Total
		Boys	Girls	
1	G.I.C. Bade Chhina	28	35	63
2	G.G.I.C. Bade Chhina	_	7	7
3	Shree Shree Maa Aanandmayee Govt. Inter College Dhaul Chhina	14	11	25
4	Hari Dutt Petsali Inter College Chitai	7	11	18
5	G.I.C. Lodhia	26	11	37
6	G.I.C. Almora	53	_	53
7	G.G.I.C. Almora	_	40	40
8	Adms Girls Inter College Almora	_	35	35
9	Ramsey Inter College Almora	22	_	22
Total		150	150	300

Tools in the study

The following tools were employed for collecting data:

A. **Social Disadvantage Scale-** developed by the Investigator.

B. **Persistence Questionnaire-** by Nisha Dhawan.

C. **Academic Performance-** The performance of the students of Intermediate classes was measured by percentage of marks obtained in the Intermediate Board examination.

Persistence questionnaire

Persistence has been defined as an acquired behavioral tendency for continuing or pursuing an achievement goal in a face of obstacles. Persistence questionnaire was developed by Dr. (Mrs.) Nisha Dhawan in 1982. On the basis of empirical and theoretical knowledge about persistence certain characteristics were identified and these were used for selecting items for the questionnaire. Using these behavioral characteristics as a guideline a large pool of items was prepared. Each item conveyed only

a single idea and involved 'Yes' and 'No' type of responses. There are 20 items in the final persistence questionnaire.

Internal Consistency was computed by correlating each scale item score with the total score on the selected 20 items. These correlations ranged from 0.46 to 0.56 with an average r values of 0.46 (N=240).

The split-half (odd-even) reliability coefficient of correlation was calculated for these 20 items .Using the Spearman Brown formula, an r value of 0.89 was obtained. The test- retest reliability obtained after a period of one month was 0.78.

The questionnaire was validated against a projective measure persistence developed by the author. The correlation coefficient obtained between scores on the questionnaire and the projective test was 0.46 (N=240) indicating considerable validity for the measuring technique.

Each item is given a score of 1. Since there are 20 items the maximum score that can obtained is 20 and the minimum score obtained is 0. All items checked as 'Yes' are given a score of 1, except on seven items (1, 3, 12, 14, 16, 19, 20) where 'No' is given a score of 1. An individual scoring on the upper end of the scale is more persistent than one scoring on the lower end. The questionnaire was administered on girls and boys of secondary students with age group of 15 years. T scores for the sample were prepared due to non availability of norms. The questionnaire is useful and can provide a reliable index of differences in persistence levels among individual.

Design of the study

The role of persistence was to be studied in the academic performance of socially advantaged and socially disadvantaged students. For this purpose the effects and interaction effects were studied by using factorial design, each of these variables was studied separately.

The role of persistence was studied. The subjects with low and high persistence were identified by using Kelley's Dichotomy. Similarly the socially

advantaged and socially disadvantaged subjects were identified by using Kelley's Dichotomy. The groups were made as low persistent advantaged, low persistent disadvantaged, high persistent advantaged and high persistent disadvantaged. The subjects having both the attribute were identified. The students were allocated from boys and girls both groups. This 2 × 2 × 2 factorial design for the analysis of Persistence x Social disadvantage × Sex is given in Table 2.

Table 2: Cells for interaction analysis of Persistence × Social disadvantage × Sex
(P × D × S)

Sex	Low Persistence (P_1)		High Persistence (P_2)	
	Soc. Ad. (D_1)	Soc. Dis. (D_2)	Soc. Ad. (D_1)	Soc. Dis. (D_2)
Boys (S_1)	$\sum P_1 D_1 S_1$	$\sum P_1 D_2 S_1$	$\sum P_2 D_1 S_1$	$\sum P_2 D_2 S_1$
Girls (S_2)	$\sum P_1 D_1 S_2$	$\sum P_1 D_2 S_2$	$\sum P_2 D_1 S_2$	$\sum P_2 D_2 S_2$
Total	$\sum P_1 D_1$	$\sum P_1 D_2$	$\sum P_2 D_1$	$\sum P_2 D_2$

Table 2 showed that this design involves eight cells. The 2 × 2 × 2 factorial design and analysis of variance technique was applied to analyze the data.

Statistical Techniques used

The main objective of the study was to analyze the relationship of social disadvantage with the student's characteristics. The social disadvantage was measured by administering social disadvantage scale. The persistence was measured by administering their tests. The data were collected. The significance of difference among means of different cell was tested by t-test. The Chi-square test was also used for testing whether an obtained distribution of scores is normally distributed. The Chi-square test of goodness of fit was applied by computing the expected frequencies of observed frequencies.

Data Collection

In the present study the data were collected for social disadvantage, persistence and academic achievement of secondary school students. The

test administration and data collection have been reported. The students were selected in the sample from secondary schools of district Almora. It was desirable to select them and then administer the test. The investigator prepared his schedule for test administration.

Collection of the Data for social Disadvantage

The response sheet of these scales were scored out, the obtained score were converted into percentile scores. Thus the scores for social disadvantage scale were obtained and submitted for the analysis.

The Chi-square test was applied for the male and female sample distribution separately. The value of Chi-square, mean and standard deviation for all of these characteristics for boys group have been presented in Table 3.

Table 3: Values of χ^2 for the characteristics of Boys group (N=150)

Students Characteristics	Mean	S.D.	df	χ^2 value
Persistence	50.51	8.73	2	5.74
Social Disadvantage	50.13	9.90	2	1.85

Table 3 also indicates that the mean of Persistence scores were found to be 50.51 and Standard Deviation as 8.73. The top 27% and the bottom 27% subject of this distribution were identified as low and high persistent respectively. The 27th percentile of this distribution was found to be 43 and 73rd

percentile as 54. The subject who scored below 43 was designated as low persistent and who scored above 54 was designated as high persistent. Thus, 43 low persistent and 79 high persistent subjects were located from the distribution of 150 boys.

Table 3 also showed that the mean of Social Disadvantage scores were found to be 50.13 and Standard Deviation as 9.90. The top 27% and the bottom 27% subject of this distribution were identified as socially advantaged and socially disadvantaged respectively. The 27th percentile of this distribution was found to be 45 and 73rd percentile as 56. The subject who scored below 45 was designated as socially advantaged and who scored above 56 was designated as socially disadvantaged. Thus, 46 socially advantaged and 45 socially disadvantaged subjects were located from the distribution of 150 boys.

Further, the normality of the girl's distribution was tested. The value of χ^2, mean and S.D. for their characteristics have been presented in Table 4.

Table 4: Values of χ^2 for the characteristics of Girls group (N =150)

Students Characteristics	Mean	S.D.	df	χ^2 value
Persistence	49.04	9.68	2	4.10
Social Disadvantage	49.99	10.38	2	0.86

It may be seen from Table 4 that the value of χ^2 for the distribution of each characteristics are not found

Table 5: Data for analysis of Persistence × Social Disadvantage × Sex (P × D × S) groups

Sex	Values	Low Persistence (P_1)		High Persistence (P_2)	
		Soc. Ad. (D_1)	Soc. Dis. (D_2)	Soc. Ad. (D_1)	Soc. Dis. (D_2)
Boys (S_1)	N=	7	15	15	14
	$\sum x=$	381	715	840	744
	$\sum x^2=$	21061	34469	47914	39786
	M=	54.43	47.67	56.0	53.14
Girls (S_2)	N=	15	12	11	13
	$\sum x=$	796	596	611	683
	$\sum x^2=$	42944	30376	34229	36869
	M=	53.07	49.67	55.54	52.53

to be significant at any level of confidence each with 2 degree of freedom. It may be interpreted that there is no significant difference between obtained and expected distribution.

It may be noted from Table 4 that the mean of Persistence scores were found to be 49.04 and Standard Deviation as 9.68. The top 27% and the bottom 27% subject of this distribution were identified as low and high respectively. The 27th percentile of this distribution was found to be 43 and 73rd percentile as 54. The subject who scored below 43 was designated as low persistence and who scored above 54 was designated as high persistence. Thus, 51 low persistent and 67 high persistent subjects were located from the distribution of 150 girls.

Table-4 also indicates that the mean of Social Disadvantage scores were found to be 49.99 and Standard Deviation as 10.38. The top 27% and the bottom 27% subject of this distribution were identified as socially advantaged and socially disadvantaged respectively. The 27th percentile of this distribution was found to be 43 and 73rd percentile as 56.23. The subject who scored below 43 was designated as socially advantaged and who scored above 56.23 was designated as socially disadvantaged. Thus, 43 socially advantaged and 40 socially disadvantaged subjects were located from the distribution of 150 girls.

Interaction effect of Persistence × Social disadvantage × Sex (L × D × S):

The subjects for low and high persistence and social advantage and social disadvantage were identified. The sex variable were studied along with these, the subject were identified for each cell of 2 × 2 × 2 factorial design. The scores for academic performance (X) of these subjects were taken up for the analysis. The detail these data have been summarized for the design in Table 5.

Table 5 provides all the required values for the computation of F ratios. The analysis of variance of

X scores was done and has been presented in Table 6.

Table 6: Analysis of Variance for Persistence × Social Disadvantage × Sex (P × D × S) groups

S V	df	S S	M S	F
P	1	229.91	229.91	4.71**
D	1	386.08	386.08	7.91**
S	1	0.28	0.28	0.005
P × D	1	27.65	27.65	0.567
P × S	1	4.39	4.39	0.089
D × S	1	15.48	15.48	0.317
P × D × S	1	18.52	18.52	0.379
Within cells	94	4586.32	48.79	

*Significant at 0.05 level ** Significant at 0.01 level

It may be noted from Table 6 that the F ratios for persistence (P) and social disadvantage (D) were found to be 4.71 and 7.91 each with 1 and 94 degrees of freedom respectively. These F ratios were significant at 0.01 levels. The other F ratios for sex (S), P × D, P × S, D × S and P × D × S were not found significant at any level. It may be interpreted that the main effect of persistence and social disadvantage were significant with regard to achievement scores.

The 't' test was applied to locate the actual difference in the groups. The standard error mean values and 't' values for different combination of cells were calculated and have been shown in Table 7.

Table 7: Significance of difference between means of Persistence × Social Disadvantage × Sex (P × D × S) groups

Combi-nation Number	Groups	Difference of means	S.E.D.	df	T value
1	$P_1 \sim P_2$	50.64 ~ 53.97	1.24	159	2.68**
2	$P_1D_1S_1 \sim P_2D_1S_1$	54.43 ~ 56.00	3.54	20	0.44
3	$P_1D_2S_1 \sim P_2D_2S_1$	47.67 ~ 53.14	1.80	27	3.039**
4	$P_1D_1S_2 \sim P_2D_1S_2$	53.07 ~ 55.55	2.55	24	0.970
5	$P_1D_2S_2 \sim P_2D_2S_2$	49.67 ~ 52.54	3.50	23	0.820
6	$P_1D_1S_1 \sim P_1D_2S_1$	54.43 ~ 47.67	2.73	20	2.478*
7	$P_2D_1S_1 \sim P_2D_2S_1$	56.00 ~ 53.14	2.40	27	1.193

8	$P_1D_1S_2 \sim P_1D_2S_2$	$53.07 \sim 49.67$	2.98	25	1.142
9	$P_2D_1S_2 \sim P_2D_2S_2$	$55.55 \sim 52.54$	3.12	22	0.964
10	$P_1D_1S_1 \sim P_1D_1S_2$	$54.43 \sim 53.07$	3.28	20	0.415
11	$P_1D_2S_1 \sim P_1D_2S_2$	$47.67 \sim 49.67$	2.64	25	0.757
12	$P_2D_1S_1 \sim P_2D_1S_2$	$56.00 \sim 55.55$	2.77	24	0.164
13	$P_2D_2S_1 \sim P_2D_2S_2$	$53.14 \sim 52.54$	2.71	25	0.196

*Significant at 0.05 level; ** Significant at 0.01 level

It may be observed from Table 7 that the 't' values for combination 1 was found to be 2.68 with 159 degree of freedom. This value was significant at 0.01 level. It may be said that high persistent students have significantly better performance than the low persistent students. Table-18 indicate that the 't' value for combination 3 was 3.039. This value was significant at 0.01 levels. The 't' values for combinations 2, 4 and 5 were found to be 0.44, 0.97 and 0.82 respectively. The 't' values were not significant at any level. It may be interpreted that the high persistent boys showed better performance than low persistent boys at social disadvantage level but high and low persistent boys were not significantly different at social advantage level. High and low persistent girls were not significantly different at advantaged and disadvantaged level.

Again it may be noted from Table 7 that the 't' value for combination 6 was found to be 2.478 with 20 degree of freedom. This value was significant at 0.05 level. The other 't' values for combinations 7,8,9,10,11,12 and 13 were found to be 1.193, 1.142, 0.964, 0.415, 0.757, 0.164 and 0.196 respectively. All of these values were not significant at any level. In combination 6 the mean value of $P_1D_1S_1$ cells was higher than the $P_1D_2S_1$ cells. It may be interpreted from combination 6 and 7 that the low persistent boys showed significantly high performance at advantaged level than the disadvantaged level but high persistent boys were not significantly different at advantaged and disadvantaged level. The high or low persistent girls were not significantly different at advantaged and disadvantaged level. Further from combination 10, 11, 12 and 13, it may be said that the boys and girls were not significantly different on high and low persistence.

Finding of the study

In view of the discussion of results the following findings have been summarized:

◆ Social disadvantage of students appeared to be negatively and significantly related with their academic performance.

◆ The disadvantaged boys showed significantly lower performance than the advantaged boys.

◆ Persistence appeared to be significantly related with academic performance. High persistent subjects showed significantly higher performance than low persistent subjects.

◆ High persistent boys appeared to be significantly better in performance than low persistent boys at disadvantaged level but they were not significantly different at advantaged level.

◆ High and low persistent girls were not significantly different at advantaged or disadvantaged level.

◆ The advantaged girls were significantly better in performance than disadvantaged girls at internal control but not at external control level.

◆ Socially advantaged and disadvantaged girls were not significantly different at any encouragement level.

◆ The boys and girls were not significantly different in performance.

Conclusion

The effect of persistence × social disadvantage × sex was studied by using 2 × 2 × 2 factorial design. The scores of their academic performance (X) were taken up and analyzed. The F ratios for persistence and social disadvantage were found to be significant at 0.01 level but not for sex. The 't' value for combination 1 was significant at 0.01 level. The mean of P_2 group was higher than P_1 group. It may be inferred that persistence is related to academic performance. It may be noticed from combinations 2, 3, 4, & 5 that the 't' value for

combination 3 was significant but not the other 't' values. It may be concluded that high persistent boys showed significantly higher performance than low persistent boys at disadvantaged level but they were not significantly different at advantaged level. High and low persistent girls were not significantly different. In combination 6, 7, 8, & 9, the 't' value for combination 6 was significant and not other 't' values. It may be interpreted from these that the advantaged boys showed significantly higher performance than disadvantaged boys at low persistence level but not at high persistence level. In combination 10, 11, 12 & 13, all the 't' values were not significant at any level. It may be said that boys and girls were not significantly different in their performance.

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