



Higher Secondary Level Students' Motivation in Pursuing Tertiary Level of Education: A Descriptive Investigation


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ABSTRACT

Motivation is a goal-oriented behaviour. It influences a student's overall academic activity. To study Higher Secondary level students' motivations to pursue tertiary education, the investigators sampled 264 higher secondary students from 5 different government schools of the North 24 Parganas district of West Bengal, India. To analyse data - four hypotheses were formulated and tested with the help of descriptive (mean, median, SD, SK, & KU) and inferential statistics (t-test, ANOVA & post-hoc test). In this study, it has been found that with respect to motivations at the Higher Secondary level in tertiary education, female students' motivation is better than male students and urban area students' mean motivation is higher than their rural counterparts. On the other hand, it has also been found that Arts and Commerce students' motivation mean scores are higher than Science stream students while the General and SC students' motivation means are better than OBC and ST students. ST students' motivation to pursue tertiary level of education is found to be the lowest compared to the General, OBC and SC students.

KEYWORDS

Tertiary level of education; motivation; higher secondary level-students; enrolment.

Introduction

The term motivation means a force that influences humans to do something. It is the driving force behind all human activity, like- academic performance, self-improvement, professional improvement, goal-fulfilment, job satisfaction, etc. and it represents one of the key success factors in all kinds of human activities (Tranquillo & Stecker, 2016). Motivation is the concept that elucidates the direction, persistence, and goal-directed behaviour of a person (Rugutt & Chemosit, 2009; Ullah, et al., 2013;). It increases students' confidence and is also a crucial key to students' success and it promotes students' well-being (Nukpe, 2012; Yardimci, et al., 2017). Motivation can be classified into two kinds - intrinsic or natural motivation and extrinsic or unnatural motivation (Mangal, 2021; Ryan & Deci, 2000; Tanveer, et al., 2012). Further motivation is broadly classified into three types, namely - intrinsic motivation, extrinsic motivation and negative motivation or amotivation (Ratelle, Guay, Vallerand, Larose, & Senecal, 2007). When someone doing something new that means he/she is internally or externally motivated. The term intrinsic or natural motivation means energy that comes internally, it is the main reason for self-satisfaction and extrinsic motivation is to do an activity simply for the enjoyment of the activity itself, rather than its instrumental value and also refers to the fact that people are motivated towards the external sources through assorted kinds of rewards and grades (Guay, et al., 2010; Nur'aini, Werang, & Suryani, 2020; Ryan & Deci, 2000). Higher Secondary level student's internal or natural motivation is a crucial factor to pursue higher education (Mahdzar, et al., 2022). Intrinsic motivation is mainly observed in teenage students and extrinsic motivation is observed in children and younger students.

The tertiary level of education is also known as higher studies (Mishra & Mishra, 2015). After completion of a school degree, students enrol their name in the tertiary level or higher education. Motivation is the engine of all academic aspects including pursuing tertiary education (Mahdzar, et al., 2022). There is no debate that students' academic performance depends on their motivation. The gross enrolment ratio (GER) is the main evidence of student enrolment in higher education. The GER is a statistical measure that accurately captures the extent of growth in higher education. It is a statistical measure used by the United Nations to measure the education index of a nation (Razack & Anitha, 2021). In the year 2020-21, in India, the gross enrolment ratio (GER) in higher education was 27.3 percent (Mehta, 2023). It is a positive sign for our country. But students face various challenges in pursuing higher education, like- infrastructure problems, downgraded quality of education, financial problems, political pressure, poor environment, research and innovation, etc. (Sheikh, 2017; Veen & Peetsma, 2020).

In the academic sector, there is an interesting fact that some students want to learn new things, skills, and techniques, on the other hand, some students have very low or no interest in the same areas. What was the main reason behind these dissimilarities? (Muller & Palekic, 2005) School-going students' motivation for pursuing higher education is one of the most important discussed topics after COVID-19 situation. Various studies show that the enrolment ratio did not decrease (Jena, 2020), but facing new challenges, like the financial crisis (Samdole, et al., 2021). Despite these, students are enrolling themselves in higher education, because they are interested and motivated.

Some counter-evidence is available, e.g., West Bengal's undergraduate colleges and universities are suffering from a low number of enrolment and the government extended the online form-filling date for the academic session 2023-24. The same thing happened in the years 2021 and 2022 (Ghosh, 2022; Niyogi, 2021). In 2023 same situation is happening, undergraduate and post-graduate seats are vacant and some institutions reopened their admission portal (Bera, 2023). In this context, here the investigators have made an attempt to perform a descriptive investigation to study the Higher Secondary level students' motivation in pursuing Tertiary Level Education – with special reference to the present scenario of the state of West Bengal in India.

Operational terms

Motivation: According to Geen (1995), motivation refers to the initiation, direction, intensity, and persistence of human behaviour. It is the basic background force or drive for students' academic success and every psychological phenomenon (Acat & Kosgeroglu, 2006).

Higher education motivation: The meaning of this term is higher secondary level students' motivation to pursue tertiary education. Motivation can be classified into two kinds: intrinsic or natural motivation and extrinsic or unnatural motivation (Mangal, 2021; Ryan & Deci, 2000; Tanveer, et al., 2012). Students' motivation shifts from extrinsic to intrinsic level to increase their ages. In this study, students' intrinsic and extrinsic motivations for pursuing tertiary education have been studied.

Reviews of Related Literature

In this section, a few significant pieces of literature related to “Students' motivation toward tertiary education” are discussed. All the literature is discussed below:

Types of motivation in academics:

Ratelle, et al., (2007) conducted a person-centered analysis, they introduced three types of academic motivation- Intrinsic motivation (IM), Extrinsic motivation (EM) and Amotivation (AM). Intrinsic motivation (IM) entails performing a behaviour for reasons inherent to it, such as pleasure and satisfaction. Extrinsic motivation (EM) refers to doing something for reasons that are external to the activity itself. Amotivation (AM) refers to the lack or absence of motivation and is observed when individuals do not perceive the contingencies between their actions and their consequences. In Self-Determination Theory, Deci & Ryan (2008) added two types of motivation, Intrinsic or autonomous motivation and extrinsic motivation or controlled motivation. Intrinsic or autonomous motivation is a mental energy that comes from the core of one's mind. extrinsic motivation or controlled motivation that comes from some influence of external factors, like- reward, or punishment. Further, they also mention amotivation which is the opposite of autonomous or controlled motivation.

Motivation in tertiary education:

Davidovitch & Dorot (2023) conducted a study on “The Effect of Motivation for Learning among High School Students and Undergraduate Students- A Comparative Study”. They studied both high school and undergraduate students based on personal, family, socio-economic status, and gender. To study these factors, they collected data from 121 students with the help of a questionnaire and in this

questionnaire, 22 items are there. This study found that motivation increases with age and higher education students' motivation for further education is high compared to school students. They also found there is no difference in higher education motivation based on students' gender but a high relation is found based on their socioeconomic status. Mahdzar, et al., (2022) studied the motivational needs of secondary school students and their intentions to pursue higher education. They surveyed 137 secondary-level students. They used different descriptive and inferential statistics to know students' attitudes toward post-secondary or tertiary education and they found few significant results. This study revealed that school-going students are prepared to continue post-secondary education for their self-improvement. Yardimci, et al., (2017) worked on the study process, motivation resources, and motivation problems of nursing students in different educational systems. Their study found that intrinsic motivation is responsible for their degree completion. Nukpe (2012) worked on 'Motivation: theory and Use in Higher Education', he mentioned some factors that increase students' motivation, like as students' confidence in educators, teachers-students' good inter-personal relationships, and non-complexed administrative processes. Tella's (2007) investigation showed that, in Nigeria, there is a big shift in the selection of academic subject selection. Maximum students enroll their name in the science stream and they are interested in studying mathematics. Because there is a chance to get a better job. His studies found that there is a significant result based on gender. The study showed that students have positive motivation in selecting subjects in higher education.

Significance of the study

Tertiary education is one of the main pillars in developing a country. On the other hand, GER or Gross Enrolment Ratio for a particular level of studies is the evidence of students' enrolment status there. However, various government data show that the GER in higher education has increased but in some contexts the reality is different. In the academic session 2022-23, in West Bengal, maximum higher education institution seats have not been fulfilled and in the present session (2023-24) the seats have not been fulfilled till now (Bera, 2023; Ghosh, 2022; Niyogi, 2021). The present study is expected to shed some light in higher secondary level students' motivation toward pursuing tertiary education.

Objectives of the study

After reviewing various literature and current trends, the investigators identified a few uncharted areas. Based on these specific studies and trends, some objectives are mentioned below:

Objective 1: To understand the present status and trends of the Gross Enrolment Ratio in tertiary or higher education in India.

Objective 2: To investigate and compare the higher secondary level students' motivation toward pursuing higher education with respect to their Gender (Male and Female), Residential area (Rural and Urban), Stream (Arts, Science, and Commerce), and Caste (General, SC, ST, and OBC).

Hypotheses of the study

Above mentioned objectives paved the way to four hypotheses. All the hypotheses are given below:

H₀₁: There is no statistically significant difference between higher secondary-level boys and girls students' motivation to pursue tertiary-level education.

H₀₂: There is no statistically significant difference between higher secondary-level rural area and urban area students' motivation to pursue tertiary-level education.

H₀₃: There is no statistically significant difference among arts, science, and commerce stream higher secondary-level students' motivation to pursue tertiary-level education.

H₀₄: There is no statistically significant difference among General, SC, ST, and OBC castes higher secondary-level students' motivation to pursue tertiary-level education.

Methodology

Research design, sampling technique, and instrument

A descriptive survey method was used to explore Higher Secondary level students' motivation to pursue tertiary education or higher education. To collect related data, the investigators used a multistage stratified random sampling technique and developed a self-made five-point Likert scale which included 16 items. The entire data is collected from the North 24 Parganas district of West Bengal, India in the year 2023 from April to May. A total of 5 higher secondary-level government schools were selected and data from a total of 264 Higher Secondary level students were collected by the investigators.

Variables of the study

In this study, major variable and categorical variables were selected as follows:

Major variable

- Higher Secondary level students' motivation for tertiary education

Categorical variables (CV) with their corresponding levels

- Gender (Male & Female)
- Residential area (Rural & Urban)
- Stream (Arts, Science, and Commerce)
- Caste (General, SC, ST and OBC)

Findings

Descriptive statistics

In this study, the overall basic descriptive statistics of gender (male & female), residential area (rural & urban), stream (arts, science & commerce), and caste-wise (General, SC, OBC & ST) analysis are given below (Table: 1).

Table 1. Descriptive statistics of the categorical variables - gender (male & female), residential area (rural & urban), stream (arts, science & commerce), and caste-wise (General, SC, OBC & ST)

CV	Gender		Residential area		Stream			Caste			
	Male	Female	Rural	Urban	Arts	Science	Commerce	General	SC	OBC	ST
Levels	(121)	(143)	(152)	(112)	(122)	(94)	(48)	(69)	(101)	(70)	(24)
Total	264		264		264			264			
Mean	59.98	62.80	60.01	63.54	62.4	59.8	62.40	68.97	61.83	58.3	46
Median	60	63	60	64	63	60	63	71	62	57.5	48
Std. Dev.	7.61	8.36	7.96	7.94	8.49	7.51	8.03	5.05	5.55	6.71	4.84
Skewness	.112	-.44	.041	-.48	.04	.04	-.33	-1.04	.29	.89	1.85
Kurtosis	-.89	-.38	-.61	-.47	-.55	-.55	-.81	.34	.03	.35	5.84

Table 2. Descriptive statistics for Higher Secondary level students' motivation for pursuing tertiary education

Descriptive statistics							
Mean	Median	Variance	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
61.51	61	66.11	8.13	42	78	-.17	-.72

Inferential statistics

In this section, hypotheses-wise results and interpretations have been discussed. To analyse all the hypotheses, the investigators used t-test, ANOVA and post-hoc analysis.

Test of H₀₁: *There is no statistically significant difference between higher secondary-level boys and girls students' motivation to pursue tertiary-level education.*

Table 3. Gender-wise group statistics of Higher Education Motivation (HEM)

Group Statistics						
HEM	Gender	N	Mean	Std. Deviation	Std. Error Mean	Error
		Male	121	59.98	7.61	0.69
	Female	143	62.8	8.35	0.69	

Table 3 shows total number of male and female students are 121 and 143, respectively. Male students' mean, standard deviation and standard error of the mean are accordingly 59.98, 7.61 and 0.69. On the other hand, female students' mean, standard deviation and standard error of the mean are accordingly 62.8, 8.35 and 0.69. To test the difference between male and female students' motivation in tertiary education, investigators used an independent samples t-test.

Table 4. *Independent Samples t test_Gender-wise*

HEM	Levenes's Test for Equality of Variance		t-test for Equality of Means					
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	
Male & Female	Equal variance assumed	.65	.42	-2.84	262	.005 (*Significant at 0.05 level)	-2.81	.99

With the help of independent sample t test (Table 4), the F and p-value of Levenes's test for equality of variance is .65 and .42 ($p > .05$). So, it can be concluded that the variance is equal. On the basis of Table-4, the t-value is -2.84 and the p-value is .005 ($p < 0.05$). So, the null hypothesis (H_0) is rejected and statistically it is evident that there is a significant difference between male and female students' motivation to pursue tertiary education.

Test of H_0 2: *There is no statistically significant difference between higher secondary-level rural area and urban area students' motivation to pursue tertiary-level education.*

Table 5. *Residential area-wise group statistics of Higher Education Motivation (HEM)*

Group Statistics					
HEM	Residential area	N	Mean	Std. Deviation	Std. Error Mean
	Rural	152	60.01	7.97	0.65
	Urban	112	63.54	7.94	0.75

Table 5 shows that the total number of rural and urban areas students are 152 and 112, respectively. In rural areas, students' mean, standard deviation and standard error of the mean are accordingly 60.01, 7.97 and 0.65. On the other hand, urban area students' mean, standard deviation and standard error of the mean are accordingly 63.54, 7.94 and 0.75. To test the difference between rural and urban area students' motivation in tertiary education, investigators used an independent samples t-test.

Table 6. *Independent Samples t test Residential area-wise*

HEM	Levenes's Test for Equality of Variance		t-test for Equality of Means					
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	
Rural & Urban	Equal variance assumed	.01	.91	-3.57	262	.000 (*Significant at 0.05 level)	-3.54	.99

The result of the independent samples t test (Table 6), Levenes's test for equality of variance shows that the F value is .01 and the p-value is .91 ($p > .05$). So, it is clear that the equality of variance is assumed. The calculated t-value is -3.57 and the p-value is .000 ($p < 0.05$). So, the null hypothesis (H_0) is rejected. Based on statistical analysis, it is clear that there is a significant difference between rural and urban area Higher Secondary level students' motivation to pursue tertiary education.

Test of H_0 3: *There is no statistically significant difference among arts, science, and commerce stream higher secondary-level students' motivation to pursue tertiary-level education.*

Table 7. *One-way ANOVA of Higher Education Motivation (HEM)_Stream-wise*

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
HEM	Between Groups	400.62	2	200.31	.048
	Within Groups	16987.37	261	65.09	3.08
	Total	17387.99	263		(*Significant at 0.05 level)

Table 7 shows the calculated value between group variance and df are 400.62 and 2, respectively while within group variance and df are 16987.37 and 261, respectively. The calculated F value is 3.08 and the p-value is .048 ($p < 0.05$). On the basis of this one-way ANOVA analysis, the null hypothesis H_0 3 is rejected. Hence, it can be stated that at the Higher Secondary level, there is a significant difference in Arts, Science and Commerce students' motivations to pursue tertiary education. To identify the difference between the three groups, Tukey's HSD (i.e., Honestly Significant Difference) Test as the post-hoc test (Singh, 2021) was conducted and the result is given in Table 8. From the results, it can be seen that the mean motivation at the Higher Secondary level to pursue tertiary education is lowest for the students from the Science stream.

Table 8. *Multiple comparison of Higher Education Motivation (HEM) of Higher Secondary students _Stream-wise (Arts, Science & Commerce)*

	Stream (I)	Stream (J)	Mean Difference (I-J)
Tukey's HSD	Arts	Science	2.58
		Commerce	.04
	Science	Arts	-2.58
		Commerce	-2.54
	Commerce	Arts	-.04
		Science	2.54

Test of H₀₄: *There is no statistically significant difference among General, SC, ST, and OBC castes higher secondary-level students' motivation to pursue tertiary-level education.*

Table 9. *One-way ANOVA of Higher Education Motivation (HEM) of Higher Secondary students _Caste-wise*

		Sum of Squares	df	Mean Square	F	Sig.
HEM	Between Groups	8926.25	3	2975.42		.000
	Within Groups	8461.74	260	32.55	91.42	(*Significant at 0.05 level)
	Total	17387.98	263			

Table 9 shows that the calculated value of between group variance and df are 8926.25 and 3, respectively while the within group variance and df are 8461.74 and 263, respectively. The calculated F value is 91.42 and the p-value is .000 (p<0.05). Based on this one-way ANOVA analysis, the null hypothesis H₀₄ is rejected. Hence, it can be said that at the Higher Secondary level, there is a significant difference in General, SC, ST and OBC students' motivation to pursue tertiary education. To identify the difference between the three groups, Tukey's HSD was conducted as the post-hoc test (Singh, 2021) and the results are given in Table 10. From the results, it can be seen that the mean motivation at the Higher Secondary level to pursue tertiary education for General and SC students' motivation are far better than the OBC and ST students while that motivation is lowest for the ST students.

Table 10. *Multiple comparison Higher Education Motivation (HEM) of Higher Secondary students_Caste-wise (General, SC, ST & OBC)*

	Stream (I)	Stream (J)	Mean Difference (I-J)
Tukey's HSD	General	SC	7.14
		ST	20.93
		OBC	10.67
	SC	General	-7.14
		ST	13.79
		OBC	3.53
	ST	General	-20.93
		SC	13.79
		OBC	10.26
OBC	General	10.67	
	SC	-3.53	
	ST	10.26	

Discussion

After analysing all the data and research articles, the investigators found some eye-catching evidence. All this evidence is discussed below.

First, the present higher education enrolment in the state of West Bengal, India is lower compared to the previous year. It is matched to previous articles (Bera, 2023; Ghosh, 2022; Niyogi, 2021). This is a genuine problem in higher education at present.

Secondly, in pursuing tertiary education- girl students' motivation is more than their male counterparts. This contradicts the finding from Davidovitch & Dorot's (2023) study where they found no gender-based difference in pursuing higher education. Therefore, this is a very significant finding in the context of the state of West Bengal, India.

Thirdly, from the field survey it has been found that – at the Higher Secondary level, the rural students' motivation to pursue higher education is lower than the urban students. In this case, therefore, the residential area appeared to be a significant motivating factor for Higher Secondary level students in pursuing tertiary education.

Fourthly, motivations of the Higher Secondary level students in pursuing tertiary education seem to vary depending on their Academic streams like - Arts, Science and Commerce. Arts and Commerce students' motivation to pursue tertiary education is better than Science stream students. This finding is in conformity with the findings of Bera (2023), Ghosh (2022) and Niyogi (2021). They identified that more seats were vacant in undergraduate Science courses in colleges and universities.

Finally, in persuasion of Higher Education i.e., tertiary education to be specific - student's caste plays a critical role. Findings from the present study also showed that the General and SC caste students' motivation is far better than the OBC and ST students at the Higher Secondary level. Between OBC and ST students, ST students' motivation is very low while General caste students' motivation is better than their other counterparts. Comparing between General and ST caste students, the motivation gap is huge.

Conclusion

Tertiary education or higher education starts after the completion of two years' higher secondary level. During school education, students start mentally preparing for higher education. Some students want to pursue a general undergraduate degree while others opt for vocational educations. In this study, the main focus was on motivations of the Higher Secondary level students to pursue a general undergraduate program. After analysing different statistical techniques, various significant outcomes have been put forward. In the opinions of the investigators - one very positive finding from this study is the Higher Secondary level female students' higher motivation in pursuing tertiary education. This may be considered as a cardinal point in women empowerment in the state of West Bengal, India. However, further studies are required to find answers to the two other findings – i.e., the reasons for rural area students' lower motivation to pursue higher education and the reasons for OBC and ST students' lower motivations compared to General and SC students' motivations to pursue higher education. At this juncture, investigators are of the opinion that these two problems

can only be solved when government and other competent authorities take appropriate actions in the right directions depending on the relevant results of future studies.

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