

## Relationship Between Achievement Motivation and Academic Performance

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### ABSTRACT

This research was conducted to study the relationship between achievement motivation and academic performance after covid, between two schools, from urban and rural school settings. Through the process of judgemental sampling also known as purposive sampling, 80 Indian students pursuing their secondary education (N=80) were surveyed for the study, aged 16 and 17. The procedure included for the students to fill in 140 survey questions in the Achievement Motivation Profile on a Likert scale ranging from 1-5, after which grades (in the form of GPA) of end semester of the students were collected for secondary examinations conducted after covid-19, which were analysed using standard deviations and t-tests. One of the two major predictors of academic achievement have been highlighted, which are motivation and attitude. The results of the study depict that, females were observed to have higher motivation in number compared to the males. The urban students have moderate motivation in number compared to the rural students. In case of the relationship between achievement motivation and academic achievement it was observed that there was no significant relation, rather, weak correlation between achievement motivation and academic achievement between urban – rural students and boy – girl students.

**Keywords:** *Relationship, Achievement Motivation, Academic Performance*

Achievement was initially recognized as an important source of human motivation by the American psychologist Henry Murray in the late 1930s. Although Murray identified achievement motivation as important to the behaviour of many people, it was the American psychologists David McClelland and John Atkinson who devised a way of measuring differences in achievement motivation (Cofer C. N, Petri; 2020). Achievement motivation is the need for excellence and significant accomplishment, despite what rewards may be offered after the achievement has been met. (Hsieh PH. 2011). It is one's inner drive to achieve. Motivation and attitude were the best predictors of student academic performance (Hendricks, 1997).

Studies conducted in the recent past, sought to seek the different levels of achievement motivation of students belonging to two different communities (i.e., tribal, and non-tribal) of Goalpara district in Assam. They were administered the measures of Achievement Motivation Scale by Gopal Rao. 't' test and co-efficient of correlation (r) was applied to

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study the significance of difference between means and significant relation between achievement motivation academic achievement respectively and it was observed from the study there was no significant relationship between AM (Achievement Motivation) and AA (Academic Achievement) in case of Tribal students and boys' students. Yet in another study, researchers purposed the study to study the relationships between the achievement motivation, attitude, and student academic performance in Malaysia.). However, a negative and low correlation ( $r = -.038$ ,  $p > .05$ ) was observed between students' achievement motivation (nAch) and their academic achievement. (Bakar.et.al;2010). Recent studies among Turkish Early and Young Adolescents in the Netherlands, the authors conducted 3 studies Turkish adolescents indicated higher family- oriented achievement motivation than did their Dutch counterparts. Their findings suggested the importance of cultural values for achievement motivation and educational outcomes (Verkuyten, Thijs, Canatan;2001). Researchers also concluded in another study that, intrinsic motivation significantly predicted participants' academic performance, amotivation (i.e., lack of motivation) was also negatively associated students' performance (Turner, Heffer; 2009).

There is significant amount of study done around the relationship between achievement motivation and academic performance among students. However, there are limited studies with relation to secondary students and almost none in connection to secondary students and socio- economic status in South India. This study looks at self-reports and statistical measures to analyse the problem and its results data. To do that, the Achievement Motivation Profile (AMP) is used, which a self-report assessment tool is measuring a students' motivation to achieve as well as personality characteristics, interpersonal skills, and work style.

The Achievement Motivation Profile has been normed in the United States and Canada with an  $n=1,738$ . It can be administered by computer or in a paper-pencil format. Concepts related to achievement motivation theory include achievement task completion, goals, commitment, need, and competitiveness. The number of items on this instrument could be problematic in some settings. (Smith,2015). The rationale for using this is that this design is flexible and provides opportunity for considering different aspects of the problem.

The purpose of this study is to understand the relationship between achievement motivation which is an independent variable and academic performance which is a dependent variable, among secondary students of two different socio-economic statuses being high and low class especially in South India. The researchers desire to discover and confirm the relationship between these two variables and they have strictly followed two tailed t-test.

### **THEORETICAL FRAMEWORK**

Some of the advantages of Achievement Motivation are that some studies have shown that individuals with high achievement motivation are more independent and self-sufficient. Also, it has been shown that people with high achievement motivation perform much better under high stress situations. People with high achievement motivation have also been known to have a higher likelihood to facilitate a phenomenon known as 'flow' discovered by Mihaly Csikszentmihalyi, which causes a person's sense of ego and self-consciousness to vanish, therefore allowing someone to do what they want to do and how to do it. (First,2014) While there have been significant studies examining the role of human emotions and motivation, this study steps forward to study the association between achievement motivation and academic achievement.

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### *Context of the Present Study*

This study has been conducted in India and holds value in examining the status quo of the relationship between achievement motivation and academic achievement in Indian school students. Through this study, we can assume via comparison of results to see if there is a difference in achievement motivation on academic performance among these secondary students of high and low socio-economic statuses.

### **METHOD**

This study included (N=80) participants from South India. All the participants are of ages 16 and 17 and are attending school, who were chosen through the process of judgemental sampling also known as purposive sampling. The case selection strategy is homogenous as the cases chosen are representative of the larger population of cases, all the items in the sample are chosen because they have similar or identical traits. The researcher sent Google forms to the email ids of the 40 urban school students, with Achievement Motivation Profile survey questions (attached in Appendix, (which has parent consent in the beginning) that had to be answered on a Likert scale ranging from 1-5. For the rest of the 40 students belonging to the rural school, hard copies of the forms were handed to be filled in. Along with this, the students' GPA grades were collected via email and in the physical classroom for urban and rural students, respectively. All the survey questions were answered, and GPAs were collected successfully within 7 days.

*Table-1: Demographics characteristics of the sample*

	Range	%
Age	16-17	
Female		33 %
Male		47 %

### *Instruments Used for The Study*

The participants were provided with The Achievement Motivation Profile (AMP) which a self-report assessment tool is measuring a students' motivation to achieve as well as personality characteristics, interpersonal skills, and work style.

The Achievement Motivation Profile has been normed in the United States and Canada with an n=1,738. It can be administered by computer or in a paper-pencil format. Concepts related to achievement motivation theory include achievement task completion, goals, commitment, need, and competitiveness. The number of items on this instrument could be problematic in some settings (Smith,2015).

The AMP is an ideal way to evaluate underachieving or unmotivated students. The AMP tells you why students are underachieving and how to help them change. (Unlocking Potential)

The test includes two forms: High School/College and Grades 5–8. Both produce scale scores for four domains: **Motivation for Achievement; Inner Resources; Interpersonal Strengths; and Work Habits.**

In addition, three validity measures alert you to inconsistent, self-enhancing, and self-criticizing response styles.

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Validated against objective measures of achievement, the AMP provides a sound basis for instructional or psychotherapeutic intervention.

The Achievement Motivation Profile-AMP consists of 140 self-descriptive statements that are answered on a 5-point Likert scale. The AMP has been used with students ages 14 and older in educational settings. It identifies personal factors that affect academic performance and provides specific recommendations for improvement (unlocking potential). Under the profile, section Motivation for Achievement the following concepts are measured:

- Achiever (ACH)–Achievement and task completion; achievement of specific goals; follow-through.
- Motivation (MOT)–Inner commitment to achieve; strength of inner emotions, need, and values; inner drive.
- Competitiveness (COMP)–Need to win, to perform better than others, or to surpass standards of achievement or performance.
- Goal Orientation (GOAL)–Having clear goals and objectives.

The validity is established using the statistical measure of correlation coefficient. When the correlation coefficient is close to +1, there is a positive correlation between the two variables. If the value is close to -1, there is a negative correlation between the two variables. When the value is close to zero, then there is no relationship between the two variables (QuestionPro)

The rationale for using this is that this design is flexible and provides opportunity for considering different aspects of the problem.

For the analysis of data standard deviation, t-test and correlation coefficient was used to show the correlation between two variables. The square root of the variance is used to calculate the standard deviation, a statistic that expresses how widely distributed a dataset is in relation to its mean. By calculating the deviation of each data point from the mean, the standard deviation may be determined as the square root of variance.

The bigger the deviation within the data collection, the further the data points deviate from the mean; hence, the higher the standard deviation, the more dispersed the data. To evaluate whether there is a significant difference between the means of two groups that may be related in some ways, a t-test is a sort of inferential statistic that is utilised. Three crucial data variables are needed to perform a t-test. They consist of the number of data values in each group, the standard deviation of each group, and the difference between the mean values from each data set (referred to as the mean difference). A correlation coefficient is a statistical measure that calculates the strength of the relationship between two variables, a value measured between -1 and +1.

The relationship between two variables in each school who have two different socio-economic statuses of students, will be compared with each other.

### ***Procedure***

The students aged 16-17, had to fill in 140 survey questions in the Achievement Motivation Profile (which has parent consent in the beginning) on a Likert scale ranging from 1-5, after which grades (in the form of GPA) of end semester of the students were collected for secondary examinations conducted after covid-19.

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The researcher sent Google forms to the email ids of the 40 urban school students from Delhi Public School in Gachibowli, Hyderabad, India; with Achievement Motivation Profile survey questions (attached in Appendix) that had to be answered on a Likert scale ranging from 1 -5. For the rest of the 40 students belonging to the rural area, Pudami School in JNRM Colony which is in the outskirts of the city Hyderabad, India; hard copies of the forms were handed to be filled in. Each student was asked to attempt the AMP questionnaire which took about 20-30 minutes Along with this, the students' GPA grades were collected via email and in the physical classroom for urban and rural students, respectively. Both are private schools attended by high and low-class students, respectively. All the survey questions were answered, and GPAs were collected successfully within 7 days. Then the validity was established using the statistical measures of standard deviation, t-test and correlation coefficient.

### RESULTS

The following table-2 includes the statistics of highly motivated, moderately motivated and the least motivated scores from the urban – rural schools and among the male – female students, for the Achievement Motivation Profile.

*Table-2: Descriptive statistics of Achievement Motivation Profile*

Categories of students	Number	Highly Motivated	Moderately Motivated	Less Motivated
Entire	80	23	56	1
Urban	40	11	30	1
Rural	40	12	26	0
Males	47	12	35	1
Females	33	11	21	0

The following table-3 includes all the statistics of the Standard Means, Standard Deviations, T- test results, and Correlation Coefficient.

*Table-3: Descriptive statistics of Means, Standard Deviations and Correlation Coefficient*

Categories of students	Number	SM	SD	T-test	r
Entire	80				
Urban	40	14	0.742052397	0.311731332	0.004980363
Rural	40	12.6	0.901050438	0.311731332	0.004980363
Males	47	16	0.812398147	0.350010578	0.213263977
Females	33	10.6	0.827246711	0.350010578	0.213263977

*Note: Sample size (N=80). SM=Standard Mean; SD=Standard Deviation; r = Correlation coefficient*

The following Table-4 and Table-4 are the t-test results for rural-urban students and male-female students, respectively.

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**Table-4: T-test results for Urban-Rural Students**

t-Test: Two-Sample Assuming Unequal Variances		
	Variable 1	Variable 2
Mean	3.130952381	2.944736842
Variance	0.683164925	0.652809388
Observations	42	38
Hypothesized Mean Difference	0	
df	78	
t Stat	1.01823999	
P(T<=t) one-tail	0.155855951	
t Critical one-tail	1.664624645	
P(T<=t) two-tail	0.311711901	
t Critical two-tail	1.990847069	

**Table-5: T-test results for Urban-Rural Students**

t-Test: Two-Sample Assuming Unequal Variances		
	Variable 1	Variable 2
Mean	3.114893617	2.939393939
Variance	0.659990749	0.684337121
Observations	47	33
Hypothesized Mean Difference	0	
df	68	
t Stat	0.941049574	
P(T<=t) one-tail	0.175005289	
t Critical one-tail	1.667572281	
P(T<=t) two-tail	0.350010578	
t Critical two-tail	1.995468931	

From the collected data it was found that the p-value is certainly higher than the alpha ( $\alpha = 0.05$ ), there is no evidence that the mean is different from 78 in the case of rural and urban students and 68 in the case of male and female students. Hence, we accept the null hypothesis in both the categories of students.

In the following T-test two tailed test table, the t-test results are highlighted, which falls in between 0.846 – 1.043.

<b>t Table</b>												
cum. prob	$t_{.50}$	$t_{.25}$	$t_{.10}$	$t_{.05}$	$t_{.025}$	$t_{.01}$	$t_{.005}$	$t_{.001}$	$t_{.0005}$	$t_{.0001}$	$t_{.00005}$	$t_{.00001}$
one-tail	0.50	0.25	0.20	0.15	0.10	0.05	0.025	0.01	0.005	0.001	0.0005	0.0001
two-tails	1.00	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01	0.002	0.001	0.0005
df												
1	0.000	1.000	1.376	1.963	3.078	6.314	12.71	31.82	63.66	318.31	636.62	
2	0.000	0.816	1.061	1.386	1.886	2.920	4.303	6.965	9.925	22.327	31.599	
3	0.000	0.765	0.978	1.250	1.638	2.353	3.182	4.541	5.841	10.215	12.924	
4	0.000	0.741	0.941	1.190	1.533	2.132	2.776	3.747	4.604	7.173	8.610	
5	0.000	0.727	0.920	1.156	1.476	2.015	2.571	3.365	4.032	5.893	6.869	
6	0.000	0.718	0.906	1.134	1.440	1.943	2.447	3.143	3.707	5.208	5.959	
7	0.000	0.711	0.896	1.119	1.415	1.895	2.365	2.998	3.499	4.785	5.408	
8	0.000	0.706	0.889	1.108	1.397	1.860	2.306	2.896	3.355	4.501	5.041	
9	0.000	0.703	0.883	1.100	1.383	1.833	2.262	2.821	3.250	4.207	4.781	
10	0.000	0.700	0.879	1.093	1.372	1.812	2.228	2.764	3.169	4.144	4.687	
11	0.000	0.697	0.876	1.088	1.363	1.796	2.201	2.718	3.106	4.025	4.437	
12	0.000	0.695	0.873	1.083	1.356	1.782	2.179	2.681	3.055	3.930	4.318	
13	0.000	0.694	0.870	1.079	1.350	1.771	2.160	2.650	3.012	3.852	4.221	
14	0.000	0.692	0.868	1.076	1.345	1.761	2.145	2.624	2.977	3.787	4.140	
15	0.000	0.691	0.866	1.074	1.341	1.753	2.131	2.602	2.947	3.733	4.073	
16	0.000	0.690	0.865	1.071	1.337	1.746	2.120	2.583	2.921	3.686	4.015	
17	0.000	0.689	0.863	1.069	1.333	1.740	2.110	2.567	2.898	3.646	3.965	
18	0.000	0.688	0.862	1.067	1.330	1.734	2.101	2.552	2.878	3.610	3.922	
19	0.000	0.688	0.861	1.066	1.328	1.729	2.093	2.539	2.861	3.579	3.883	
20	0.000	0.687	0.860	1.064	1.325	1.725	2.086	2.528	2.845	3.552	3.850	
21	0.000	0.686	0.859	1.063	1.323	1.721	2.080	2.518	2.831	3.527	3.819	
22	0.000	0.686	0.858	1.061	1.321	1.717	2.074	2.508	2.819	3.505	3.792	
23	0.000	0.685	0.858	1.060	1.319	1.714	2.069	2.500	2.807	3.485	3.768	
24	0.000	0.685	0.857	1.059	1.318	1.711	2.064	2.492	2.797	3.467	3.745	
25	0.000	0.684	0.856	1.058	1.316	1.708	2.060	2.485	2.787	3.450	3.725	
26	0.000	0.684	0.856	1.058	1.315	1.706	2.056	2.479	2.779	3.435	3.707	
27	0.000	0.684	0.855	1.057	1.314	1.703	2.052	2.473	2.771	3.421	3.690	
28	0.000	0.683	0.855	1.056	1.313	1.701	2.048	2.467	2.763	3.408	3.674	
29	0.000	0.683	0.854	1.055	1.311	1.699	2.045	2.462	2.756	3.396	3.659	
30	0.000	0.683	0.854	1.055	1.310	1.697	2.042	2.457	2.750	3.385	3.646	
40	0.000	0.681	0.851	1.050	1.303	1.684	2.021	2.423	2.704	3.307	3.551	
60	0.000	0.679	0.848	1.045	1.296	1.671	2.000	2.390	2.660	3.232	3.460	
80	0.000	0.678	0.846	1.043	1.292	1.664	1.990	2.374	2.639	3.195	3.416	
100	0.000	0.677	0.845	1.042	1.290	1.660	1.984	2.364	2.626	3.174	3.390	
1000	0.000	0.676	0.842	1.037	1.282	1.646	1.962	2.330	2.581	3.098	3.300	
<b>Z</b>	0.000	0.674	0.842	1.036	1.282	1.645	1.960	2.326	2.576	3.090	3.291	
	0%	50%	60%	70%	80%	90%	95%	98%	99%	99.8%	99.9%	

### **DISCUSSION AND CONCLUSION**

Within its constraints, the current study has consequences for society overall, educational planners, administrators, instructors, and parents. According to the data collected and analysed, females were observed to have higher motivation in number compared to the males. The urban students have moderate motivation in number compared to the rural students. The results of the study depict that, in case of the relationship between achievement motivation and academic achievement it was observed that there was no significant relation between achievement motivation and academic achievement between urban – rural students and boy – girl students. It was found that the p-value is certainly higher than the alpha ( $\alpha = 0.05$ ), there is no evidence that the mean is different from 78 in the case of rural and urban students and 68 in the case of male and female students. Hence in conclusion, we accept the null hypothesis in both the categories of students that in case of the relationship between achievement motivation and academic achievement it was observed that there was no significant relation or rather, weak correlation between achievement motivation and academic achievement between urban – rural students and boy – girl students.

These results contribute to the findings of studies conducted earlier which show that there is a weak correlation between achievement motivation and academic achievement, although, previous studies found that there are other intellectual and emotional factors involved along with achievement motivation that could affect academic achievement in a positive manner. Ethical considerations were strictly followed. This study was conducted both online and offline for urban and rural students, respectively. All participants either filled the google forms online with their email ids or physically filled in the hard copies, of the survey questions. The consent box to be ticked, for the parents' approval and the participants' approval or unwillingness to participate from the study at any stage, was at the beginning of the survey.

Due to COVID-19 pandemic, it was extremely challenging to gather participants for the data collection. Initially the researcher wanted to work with school going students aged 16-17 during the time of COVID-19, but due to lack of reachability due to pandemic restrictions, researchers decided to work with the students' post-pandemic.

It is also evident in this research that despite the motivational levels of the students, the GPAs achieved by the students were not as great as the GPAs achieved pre-pandemic. Many students lost the motivation to turn in assignments or turn on cameras during remote lessons since they didn't have the support of the majority of extracurricular activities like sports, theatre, and music to keep them interested. Keeping up with curriculum standards and continuously needing to come up with new strategies to keep their kids engaged in their learning, have many teachers feeling burnt out and disappointed. The students are getting back into a routine and hence we have more moderately motivated students compared to the highly motivated students.

The future researcher can study other factors involved to develop achievement motivation that could significantly affect the academic achievement in a positive manner. Effective strategies could be developed to help the students get highly motivated addressing to other personal and educational factors that could influence academic achievement.

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review board and obtained informed consent from all participants. We are thankful to the University's support and encouragement.

### ***Conflict of Interest***

Authors have no conflict of interest and have contributed equally to the study.

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