

## Influence of academic self-concept and achievement motivation on academic resilience of higher secondary students

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### Abstract

The research sought to study the influence of Academic Self Concept and Achievement Motivation on Academic Resilience of Higher Secondary Students. A sample composed of 350 Higher Secondary Students from Pathanamthitta district of Kerala state was selected using random sampling technique. The collected data using Academic Self Concept Scale, Achievement Motivation Scale and Academic Resilience Scale were analysed using descriptive statistical techniques, percentage analysis and Regression analysis. The findings revealed that Academic Self Concept and Achievement Motivation are the significant predictors of Academic Resilience of Higher Secondary students. So, these variables can be considered as the explanatory variables of Academic Resilience. The findings of the study also revealed that 64% and 62% of the total sample possess moderate level of Academic Self Concept and Achievement Motivation respectively. The level of Academic Resilience of 82% of the total sample was also moderate. This leads to the conclusion that Higher Secondary Students have moderate level of Academic Self Concept, Achievement Motivation and Academic Resilience. The study recommends remedial measures such as personal and academic counseling in the purview of school settings for enabling the students to meet the challenges they face in academic setting.

**Keywords:** Academic Self Concept; Achievement Motivation; Academic Resilience

### 1. Introduction

Self-concept is an individual's understanding of who they are. It provides a comprehensive understanding of one's identities across social, emotional, physical and spiritual dimensions (Neill, 2005). In other words, it is judgments about oneself. Though both biological and environmental factors influence self-concept, social interaction is key to its development. Academic Self Concept is an individual's self-assessment of their own academic abilities and potentials or how they view their competence in academic domain (Trautwein, Ludtke, Koller & Baumert, 2006). It can also be defined as the way in which an individual perceives himself as a student or learner in an academic setting and perform academic activities. Students' perception about their own abilities places a significant role in their academic life. (Herrera, Al-Lal & Mohamed, 2020). Therefore, a high self-concept is considered as the desirable outcome in all educational programs. Academic Self Concept is closely associated with academic achievement and motivational outcomes, particularly Achievement Motivation (Wigfield et al., 2015). Achievement Motivation is an intrinsic thrust to attain some assigned standards of excellence (Chetri, 2014). To some extent majorities of the students are motivated by their desire to success. However, students who are driven by the need to achieve success and working hard attain the desired goal (Zenzen, 2002). Literature reviews designated that Achievement Motivation is a significant causal factor of academic achievement (Snyder & Wormington, 2020; Wigfield & Gladstone, 2019). Students with high Academic Self Concept possess greater Achievement Motivation and are more ambitious (Bong & Skaalvik, 2003).

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Resilience is the ability to overcome or adapt to difficult situation. A resilient person easily adjusts to changes and often shows greater flexibility and tolerance when faced with new experiences and readily engages in self-regulatory behaviours that help them overcome challenges (Loh, Schutte&Thorsteinsson,2014). Academic Resilience is the ability of students to accomplish academic activities and perform well between the challenges and adversities. Consequently, Academic Resilience is crucial for students as it enable them to adapt and thrive in the face of surprising challenges while pursuing their academic goal. Academic Resilience is a key factor in predicting how well students adjust and stay motivated to succeed especially in the increasingly stressful learning.

(Hartley,2011; Leary&DeRosier,2012). Academic Resilience is essential for students to manage anxiety, stress and academic pressure. One of the main reasons for poor academic performance is pressure or stress among students. Lack of adequate measures to help students to overcome the pressure or challenges in the schools as well as in the society create stress or anxiety. Resilient people have the potential to handle adversity and academic threats and reconstruct their lives (Masten,2001). The construct of Academic Self Concept, Achievement Motivation and Academic Resilience have relevance in the Kerala context due to the emphasis on academic success couple with the demands of Higher Education. A significant positive correlation exists between academic resilience and learning environment (Mallick&Kaur,2016). So, the understanding about these variables and their current level among Higher Secondary Students help the teachers, counselors and curriculum developers to create more support and conducive learning environment that contribute to Student welfare and academic success.

### 1.1. Research Questions

- What is the level of Academic Self Concept of Higher Secondary Students?
- What is the level of Achievement Motivation of Higher Secondary Students?
- What is the level of Academic Resilience of Higher Secondary Students?
- Does Academic Self Concept influence Academic Resilience of Higher Secondary Students?
- Does Achievement Motivation influence Academic Resilience of High Secondary students?

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## 2. Statement of the problem

A positive self-concept is one of the keys determining factors of academic abilities of students. A strong belief in one's sound abilities help the students to succeed in, dealing with academic challenges and to bounce back from academic setbacks. The study intended to find out whether the changes in Academic Self Concept and Achievement Motivation have any effect on Academic Resilience of Higher Secondary students. Hence the study is entitled as "INFLUENCE OF ACADEMIC SELF CONCEPT AND ACHIEVEMENT MOTIVATION ON ACADEMIC RESILIENCE OF HIGHER SECONDARY STUDENTS"

### 2.1. Definition of key terms

#### 2.1.1. Academic Self Concept

Academic Self Concept is students' self assessment regarding their educational abilities and potentials they process (Trautwein, Ludtke, Koller & Baumert ,2006)

In the present study Academic Self Concept refers to students' subjective perception and believes about their competence, abilities and performance in academic activities reflecting on past academic experience which is measured as the total score obtained in the Academic Self Concept Scale.

### 2.2. Achievement Motivation

Achievement motivation refers to an individual's drive to achieve something above other individuals or consistently improve their abilities and developed competence rather than simply comparing themselves to others. (Brunstein & Heckhausen,2018)

In the present study Achievement Motivation refers to students' drive to overcome challenges, succeed and perform well towards highest performance level which is measured as the total score obtained in Achievement Motivation Scale.

### 2.3. Academic Resilience

Academic Resilience is defined as the ability of an individual to achieve academic success and demonstrate high level of performance in spite of adverse experiences and unfavorable environmental situations (Brewer, van kessel, 2019)

In the present study Academic Resilience refers as the ability of students to face adverse circumstances academic setback or personal hardship and maintain performances which is measured as the total score obtained in Academic Resilience Scale

#### **2.4. Higher Secondary students**

Higher Secondary students refer to students enrolled in the XI and XII grades of school.

In the present study Higher Secondary Students means student studying standard XI following Kerala state syllabus

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### **3. Hypotheses of the study**

- H1: The level of Academic Self Concept of Higher Secondary Students is moderate
- H2: The level of Achievement Motivation of Higher Secondary Students is moderate
- H3: The level of Academic Resilience of Higher Secondary Students is moderate
- H4: There is significant influence of Academic Self Concept on Academic Resilience of Higher Secondary students
- H5: There is significant influence of Achievement Motivation on Academic Resilience of Higher Secondary Students

#### **3.1. Objectives of the study**

- To find out the level of Academic Self Concept of Higher Secondary Students
  - To find out the level of Achievement Motivation of Higher Secondary Students
  - To find out the level of Academic Resilience of Higher Secondary Students
  - To find out the influence of Academic Self Concept on Academic Residence of Higher Secondary Students
  - To find out the influence of Achievement Motivation on Academic Resilience of Higher Secondary students
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### **4. Methodology**

#### **4.1. Research Design**

Normative survey method was used for the study. Normative survey method is a widely used research method in social science and Humanities research to collect and analyse data to determine what is normal or to describe the current condition, practices and belief.

##### *4.1.1. Variables of The Study*

- Independent variable -. Academic Self Concept
- Achievement Motivation
- Dependent variable - Academic Resilience

#### **4.2. Tools Used for the Study**

Academic Self Concept Scale (Liu and Wang,2005) was adapted to find out the Academic Self Concept of Higher Secondary Students.

- Achievement Motivation Scale developed and standardized by the investigator
- Academic Resilience Scale developed and standardized by the investigator

##### *4.2.1. Sample*

A sample of 350 XI standard students from four different schools following Kerala state syllabus at Pathanamthitta district was selected using random sampling technique.

##### *4.2.2. Statistical Technique Used*

- Descriptive Statistics
- Percentage Analysis
- Regression Analysis

## 5. Analysis and interpretation of data

**Table 1** Descriptive analysis of variables Academic Self Concept, Achievement Motivation and Academic Resilience

Variables	N	Mean	S. D	Skewnwss	Kurtosis
Academic Self Concept	350	87.68	6.53	-2.65	17.32
Achievement Motivation	350	102.40	8.68	-2.23	14.04
Academic Resilience	350	81.98	7.21	-2.8	13.60

The above table shows Mean, Standard Deviation, Skewness and Courtosis of the variables of the study for the total sample N= 350. The value of arithmetic mean of the variables Academic Self Concept, Achievement Motivation and Academic Resilience is 87.68 102.40 and 81.98 respectively. The corresponding value of standard deviation are 6.53, 8.68 and 7.21 respectively. The value of skewness for the variable Academic Self Concept (-2.65) , Achievement Motivation

(-2.23) and Academic Resilience (-2.8) shows that the distribution is highly negatively skewed. This means that there are many students who scored higher than the average score of the group. Kurtosis values 17.32,14.03 and 13.60 shows that the distribution is extremely leptokartik. This means that the distribution is far from the normal distribution and majority of students have high value of Academic Resilience.

### 5.1. Percentage analysis of academic self concept for the total sample (n=350)

The mean and standard deviation of Academic Self-Concept of Higher Secondary Students for the total sample are found to be 87. 68 and 6.53. The value of ( $M + \sigma$ ) is 94.21 and the value of ( $M - \sigma$ ) is 81.15. Hence the number of students scored above and equal to 94 are classified as high group and the number of students scored equal to and below 81 is classified as low group. The number of students scored in between the scores 94 to 81 are considered as the moderate group. The frequency and percentage of Academic Self Concept for the total sample is given in Table 2

**Table 2** The frequency and percentage of number of students belongs to each level of Academic Self Concept for total sample.

Level	High	Moderate	Low
Norm	$M + \sigma$	$M + \sigma$ to $M - \sigma$	$M - \sigma$
Score	94.21	94 - 81	81.15
No: of Students	60	224	66
Percentage	17.14%	64.00%	18.86%

Among 350 students, 60 students belong to high group, 224 belong to moderate group, and 66 students belong to low group, this indicate that 17.14% (N=60) of the total sample of students have high level of Academic Self Concept, 64.00% (224) of students have moderate level of Academic Self Concept and 18.86% (N= 66) have low level of Academic Self Concept. Hence it reveals that the level of Academic Self Concept Higher Secondary Students is moderate.

## 6. Percentage analysis of achievement motivation for the total sample (n=350)

The mean and standard deviation of Achievement Motivation of the students for the total sample are found to be 102.40 and 8.68. The value of ( $M + \sigma$ ) is 111.08 and the value of ( $M - \sigma$ ) is 93.72. Hence the number of students scored above and equal to 111 classified as high group and the number of students scored equal to and below 94 are classified as low group. The frequency and percentage of Achievement Motivation of total students is given in the Table 3.

**Table 3** The frequency and percentage of number of Students belongs to each level of Achievement Motivation for total Sample.

Level	High	Moderate	Low
Norm	$M + \sigma$	$M + \sigma$ to $M - \sigma$	$M - \sigma$
Score	111	111 - 94	94
No: of Students	67	217	66
Percentage	19.14%	62.00%	18.86%

Among 350 students 67 students belongs to high group, 217 students belong to moderate group and 66 students belongs to low group. This shows that 19.14% (N=67) of the total sample of students have high level of Achievement Motivation, 62.00% (N=217) of students belongs to moderate level and 18.86% (N=66) have low level of Achievement Motivation. Hence it is revealed that the level of Achievement Motivation of Higher Secondary School Students is moderate

### 6.1. Percentage analysis of academic resilience for the total sample (n=350)

The mean and standard deviation of Academic Resilience of the students for the total sample are found to be 81.98 and 7.21. The value of ( $M + \sigma$ ) is 89.19 and the value of ( $M - \sigma$ ) is 74.77. Hence the number of students scored above and equal to 89 classified as high group and the number of students scored equal to and below 75 are classified as low group. The frequency and percentage of Academic Resilience of total students is given in the Table 4.

**Table 4a** The frequency and percentage of number of Students belongs to each level of Academic Resilience for total Sample.

Level	High	Moderate	Low
Norm	$M + \sigma$	$M + \sigma$ to $M - \sigma$	$M - \sigma$
Score	111	111 - 94	94
No: of Students	31	287	32
Percentage	8.73%	82.00%	9.28%

Among 350 students 31 students belongs to high group, 287 students belong to moderate group and 32 students belongs to low group. This shows that 8.73% (N=31) of the total sample of students have high level of Academic Resilience, 82.0% (N=287) of students belongs to moderate level and 9.28% (N=32) have low level of Achievement Motivation. Hence it is revealed that the level of Academic Resilience of Higher Secondary School Students is moderate

**Table 4b** Value of R,  $R^2$ , Adjusted R square, Standard Error for Regression Analysis for finding the influence of Academic Self Concept on Academic Resilience of Higher Secondary Students.

Variables	No. of Observation	Standard Error	Adjusted $R^2$	$R^2$	R
Academic Self Concept on Academic Resilience	350	5.23	0.351	0.35	0.59

summarizes the relevant Regression analysis. R represents the coefficient of correlation, the R value 0.59 reveals that Academic Self Concept has a positive moderate relationship with Academic Resilience of Higher Secondary Students. The value of  $R^2$  is 0.35 which implies that 35% of variation in Academic Resilience is explained by the variable Academic Self Concept. Details are in ANOVA Table 5.

**Table 5** ANOVA for finding the influence of Academic Self Concept on Academic Resilience

Variables	df	Sum of Squares	Mean Square	F	Significance of F value
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Academic Resilience	1	5089.52	5089.52		
Academic Self Concept	348	9450.81	27.26	187.40	0
Total	349	14540.33			

From the Table 5, F value  $F(1,398) = 187.40$   $p < 0.05$ , which means dependent variable Academic resilience is more reliable. Details are in Regression model coefficient Table

**Table 6** Regression Model- Coefficients

Coefficient Model	Unstandardised co-efficient	Std. Error	t value	p value
Constant	45.26	3.12	14.55	0
Academic Self Concept	0.53	0.04	13.70	0

Table 6 reports the coefficient for Academic Self Concept helps in improving the Academic Resilience of Higher Secondary Students. The model coefficients are used in the construction of regression equation. As the significance value  $p$  less than 0.05, then the regression model significantly predicts Academic Resilience of Higher Secondary Students.

- The Regression equation for the above data is
- Academic Resilience,  $Y = 45.26 + 0.53 X$
- From the Regression equation it is clear that Academic Self Concept has a positive effect of Academic Resilience of Higher Secondary Students.

## 6.2. Influence of achievement motivation on academic resilience of higher secondary students

*6.2.1. The details of Regression Analysis to find out the influence of Achievement Motivation on Academic Resilience of Higher Secondary Students is given below*

**Table 7** Value of  $R$ ,  $R^2$ , Adjusted  $R$  square, Standard Error for Regression Analysis for finding the influence of Achievement Motivation on Academic Resilience of Higher Secondary Students.

Variables	No. Observation	Standard Error	Adjusted $R^2$	$R^2$	$R$
Achievement Motivation on Academic Resilience	400	7.45	0.289	0.29	0.53

Table 7 summarizes the relevant Regression analysis.  $R$  represents the coefficient of correlation, the  $R$  value 0.53 reveals that Achievement Motivation has a positive moderate relationship with Academic Resilience of Higher Secondary Students. The value of  $R^2$  is 0.29 which implies that 29% of variation in Academic Resilience is explained by the variable Achievement Motivation. Details are in ANOVA Table.

**Table 8** ANOVA for finding the influence of Achievement Motivation on Academic Resilience

Variables	df	Sum of Squares	Mean Square	F	Significance of F value
Academic Resilience	1	8103.069	8103.069	143.262	0
Achievement Motivation	348	19904.60	56.90		
Total	349	28007.669			

From the Table 8, F value  $F(1,398) = 143.262$   $p < 0.05$ , which means dependent variable Academic resilience is more reliable. Details are in Regression model coefficient Table 9

**Table 9** Regression Model- Coefficients

Coefficient Model	Unstandardised co-efficient	Std. Error	t value	p value
Constant	49.79	4.53	11.02	0
Achievement Motivation	0.68	0.053	11.92	0

Table 9 reports, the coefficient for Achievement Motivation helps in improving the Academic Resilience of Higher Secondary Students. The model coefficients are used in the construction of regression equation. As the significance value  $p$  less than 0.05, then the regression model significantly predicts Academic Resilience of Higher Secondary Students.

The Regression equation for the above data is, Academic Resilience,  $Y = 49.79 + 0.68 X$

From the Regression equation it is clear that Achievement Motivation has a positive effect of Academic Resilience of Higher Secondary Students.

## 7. Findings of the study

- The level of Academic Self Concept, Achievement Motivation and Academic Resilience of Higher Secondary Students found to be Moderate. The study revealed that 17.14%, 64% and 18.86% of Higher Secondary Students have high, moderate and low level of Academic Self Concept. 19.14%, 62% and 18.86% of Higher Secondary Students have high, moderate and low level of Achievement Motivation. The study also revealed that 8.73%, 82% and 9.28% of Higher Secondary Students possess high, Moderate and low level of Academic Resilience.
- The study revealed that Academic Self Concept has a positive influence on Academic Resilience of Higher Secondary Students. Therefore, the null hypothesis "There is no significant influence of Academic Self Concept on Achievement Motivation of Higher Secondary Students" is rejected.
- The studies also revealed that Achievement Motivation has a positive influence on Academic Resilience of Higher Secondary Students. Therefore, the null hypothesis "There is no significant influence of Achievement Motivation on Academic Resilience of Higher Secondary Students" is rejected.

## 8. Conclusion

In the present study, the investigator found that there exists moderate level of Academic Self Concept, Achievement Motivation and Academic Resilience of Higher Secondary Students. The study also revealed that Academic Self Concept and Achievement Motivation has influence on Academic Resilience of Higher Secondary Students. So Academic Self Concept and Achievement Motivation can be considered as the explanatory variable of Academic Resilience of Higher Secondary Students. This emphasizes that how students evaluate themselves and their aspiration for success within the academic environment greatly affect their resilience. The findings of the study highlighted the need for remedial strategies, including personal and academic counseling, to support students dealing with challenges and learned helplessness in their academic pursuits.

## Compliance with ethical standards

### *Disclosure of conflict of interest*

I, Dr. Sethu S. Nath, first author of the article declare that I have no conflict of interest whether financial or otherwise, that could influence the outcome of this research.

I, Dr. Jayaprakash R.K, second author of the article affirm that I possess no financial or other conflicts of interest, that would distort the findings of this research.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study

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