A Study on Meta Cognition and Academic Resilience among Higher Secondary School Students

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Abstract

This study investigates the relationship between Metacognition and Academic Resilience among higher secondary school students. Metacognition, the awareness and regulation of one's own cognitive processes, plays a crucial role in learning and problem-solving. Academic resilience, defined as the ability to effectively deal with academic challenges and setbacks, is a critical determinant of student success. The study employs a quantitative research design, collecting data through validated questionnaires administered to a sample of higher secondary students. Statistical analysis explores the correlation between Metacognitive skills and Academic resilience, as well as the influence of demographic variables such as gender, medium and locality. The findings aim to provide insights for educators to foster these attributes, enhancing students' academic performance and overall well-being.

Introduction

Education is essential for personal and societal progress, with academic success playing a vital role in shaping future opportunities. In today's complex educational landscape, students face challenges that require both cognitive abilities and emotional resilience. Among the critical factors influencing success, Metacognition and Academic resilience stand out.

Metacognition involves understanding and managing one's learning processes through planning, monitoring, and evaluating cognitive activities. It enables students to set realistic goals, use effective strategies, and adapt to academic demands. Academic resilience, meanwhile, refers to the capacity to overcome adversities like pressure and setbacks, maintaining motivation and perseverance.

The interplay between Metacognition and resilience is pivotal, as Metacognitive skills equip students to navigate challenges effectively. For higher secondary students, a stage marked by increased academic pressure and career preparation, understanding this relationship is crucial. This study explores their connection, offering insights for interventions that enhance learning outcomes and student well-being.

Need for the Study

The transition to higher secondary education represents a significant developmental milestone, marked by heightened academic demands and increased expectations. While there is substantial research on the independent roles of Metacognition and Academic Resilience,

there is limited exploration of their interaction, particularly in the Indian context. Given the diverse cultural and socioeconomic backgrounds of Indian students, understanding how these factors manifest and influence academic outcomes is critical. Furthermore, as educators strive to create inclusive and supportive learning environments, insights from this study can guide the design of interventions aimed at fostering both cognitive and emotional skills.

The findings will not only contribute to the theoretical understanding of Metacognition and Resilience but also have practical implications for curriculum design, teacher training, and student support services. By equipping students with the tools to think critically and persevere through challenges, educational institutions can enhance learning outcomes and prepare students for future success.

OBJECTIVES OF THE STUDY

- To find out the level of Meta Cognition and Academic Resilience among Higher Secondary School Students.
- To find out the significant difference in the Meta Cognition and Academic Resilience mean scores of Higher Secondary School Students based on Gender, Medium of Instruction and Locality.
- To find out the relationship between Meta Cognition and Academic Resilience among Higher Secondary School Students.

HYPOTHESES

- The level of Meta Cognition among Higher Secondary School students is moderate.
- The level of Academic Resilience among Higher Secondary School students is Average.
- There is no significant difference in the Meta Cognition and Academic Resilience mean scores of Higher Secondary School Students based on Gender, Medium of Instruction and Locality.
- There is no significance relationship between Meta Cognition and Academic Resilience among Higher Secondary School Students.

METHOD ADOPTED IN THE PRESENT STUDY

The investigator has selected survey method for this study entitled "**A Study on Meta Cognition and Academic Resilience among Higher Secondary School Students**".

TOOLS USED

The following tools are used to collect data relevant to the

1. **Meta Cognition** questionnaire prepared by Schraw and Dennison
2. **Academic Resilience** questionnaire prepared by Simon Cassidy.

SAMPLE

Random sampling Technique has been adopted to choose the sample. Random sample of 300 Students from XI standard were selected from different Higher Secondary schools of Tiruvallur District.

STATISTICAL TECHNIQUES USED

Suitable statistical techniques were used to interpret the data to draw out more meaningful results in the present study. The following statistical measures were used.

    A. Descriptive analysis (Mean Percentage, mean & S.D)
    B. Differential analysis (t -test)
    C. Correlation analysis

DESCRIPTIVE ANALYSIS

HYPOTHESIS 1

Meta Cognition among Higher Secondary School Students is Moderate.

Using quartiles, frequency and percentage of students in each category is given in Table 1

Table 1

Frequency and Percentage of students in each category of Meta Cognition

Variable	Range	Category	N	Percentage
Meta Cognition	110-149	Low	78	9.3%
	150-177	Moderate	146	73.7 %
	178-199	High	76	25.3 %

INFERENCE

From the table 1, it is observed that more number of students lie in the moderate category showing that the Meta Cognition of the higher Secondary school students is moderate as hypothesized.

HYPOTHESIS 2

Academic Resilience among Higher Secondary School Students is Average.

Using quartiles, frequency and percentage of students in each category is given in Table 2

Table 2

Frequency and Percentage of Students in each category of Academic Resilience

Variable	Range	Category	N	Percentage

	35-57 Low		85	28.4 %
Academic Resilience	58-66 Average		140	46.6 %
	66-100	High	75	25 %

INFERENCE

From the table 2, it is observed that Academic Resilience of Higher Secondary School Students is average as hypothesized. Since, maximum number of students lie in this category.

DIFFERENTIAL ANALYSIS

HYPOTHESIS 3

There is no significant difference in the Meta Cognition **mean scores of Higher Secondary School Students based on Gender, Medium of Instruction and Locality.**

Mean, standard deviation and t-test have been calculated and presented in Table 3

Table 3

Mean, standard deviation and t- value for Meta Cognition –

Gender, Medium and Locality Wise

Meta Cognition		N	Mean	S.D	t-value	L.S
Gender	Male	150	162.26	18.40	0.46	NS
	Female	150	161.34	15.74		
Medium	Tamil	150	160.82	15.43	0.98	NS
	English	150	162.78	18.51		
Locality	Rural	138	160.78	16.64	0.92	NS
	Urban	162	162.62	17.79		

INFERENCE

From the above table it is observed that the Meta Cognition score of Male Higher Secondary school students is 162.26 and Female Higher Secondary school students is 161.34.The t-value (0.46) is less than the table value 1.96 at 0.05 level showing no significant difference between the two means.Hence the null hypothesis is accepted.

It is observed that the Meta Cognition score of Tamil Medium Higher Secondary school students is 160.82 and score of English medium Higher Secondary school students is 162.78.The t-value 0.98 is less than table value 1.96 at 0.05 level showing no significant difference between Tamil Medium and English Medium Higher Secondary School Students. Hence the null hypothesis is accepted.

It is observed that the Meta Cognition score of Rural among Higher Secondary school students is 160.78 and Urban of Higher Secondary school students is 162.62.The t-value 0.92 is less than table value 1.96 at 0.05 level showing no significant difference between Rural and Urban Students. Hence the null hypothesis is accepted.

HYPOTHESIS 4

There is no significant difference in Academic Resilience mean scores of Higher Secondary school Students based on Gender, Gender, Medium of Instruction and Locality.

Table 4

Mean, Standard Deviation and t-value for Academic Resilience

– Gender, Medium and Locality wise

Academic Resilience		N	Mean	S.D	t-value	L.S
Gender	Male	150	72.32	18.40	1.85	NS
	Female	150	68.65	15.74		
Medium	Tamil	150	67.99	15.43	2.54	S at 0.05
	English	150	72.99	18.51		
Locality	Rural	138	60.39	13.89	2.71	S at 0.01
	Urban	162	79.89	17.50		

INFERENCE

From the above table it is observed that the mean Academic Resilience score of Male Higher Secondary school students is 72.32 greater than the mean score of Female 68.65 Higher Secondary school students. The t-value 1.85 is less than the table value 1.98 at 0.05 level showing no significant difference between Male and Female Students. Hence the null hypothesis is accepted.

From the above table it is observed that the mean Academic Resilience score of English Medium Higher Secondary School Students is 72.99 greater than the mean score of Tamil Medium 67.99 Higher Secondary school students. The t-value 2.54 is greater than the table value 1.98 at 0.05 level showing significant difference between Tamil and English Medium Students.Hence the null hypothesis is rejected.

From the above table it is observed that the mean Academic Resilience score of Urban Higher Secondary School Students is 79.89 greater than the mean score of Rural Higher Secondary School Students. The t-value 2.71 is greater than the table value 2.58 at 0.01 level showing significant difference between the two means. Hence the null hypothesis is rejected.

CORRELATION ANALYSIS

HYPOTHESIS 5

There is no significant relationship between Meta Cognition and Academic Resilience among Higher Secondary School Students.

Correlation is calculated and presented in Table 5

Table 5

Correlation between Social Support and Academic Resilience

VARIABLE	N	r value	L.S
Meta Cognition			
Academic Resilience	300	0.084	S

INFERENCE

From the above table, it is observed that there is a significant positive relationship between Meta Cognition and Academic Resilience at 0.01 level. Therefore, the null hypothesis is rejected.

FINDINGS

- ❖ The level of Meta Cognition of Higher Secondary School Students is moderate.
- ❖ The level of Academic Resilience of Higher Secondary School Students is average.
- ❖ There is no significant difference in the Meta Cognition among Higher Secondary School Students based on Gender, Medium of Instruction and Locality.
- ❖ There is no significant difference in the Academic Resilience among Higher Secondary School Students based on Gender
- ❖ There is significant difference in the Academic Resilience among Higher Secondary School Students based on Medium of Instruction. English Medium (72.99) students have high mean score than Tamil Medium students (67.99).

- ❖ There is significant difference in the Academic Resilience among Higher Secondary School Students based on Locality. Urban (79.89) students have high mean score than Rural Students (60.39).
- ❖ There is positive relationship between Meta Cognition and Academic Resilience among Higher Secondary School Students.

IMPLICATIONS OF THE STUDY

The findings of this study have significant approach for educational practice. Schools can incorporate Metacognition training into the curriculum to enhance students' ability to plan, monitor, and evaluate their learning strategies. For students, this study emphasizes the importance of developing self-awareness and self-regulation in their learning processes. By honing Metacognition, students can better plan and monitor their academic goals, identify effective strategies, and adapt to diverse challenges. Building resilience equips students to approach setbacks with a growth mindset, maintaining motivation and perseverance even in difficult circumstances. These combined skills not only enhance Academic Resilience but also prepare students to handle future life challenges with confidence and adaptability

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