



**ORIGINAL RESEARCH PAPER**

**Education**

**COGNITIVE ABILITY IN RELATION TO ACADEMIC RESILIENCE AND SELF-REGULATION OF SCHOOL STUDENTS IN PUNJAB**

**KEY WORDS:** Cognitive ability, Academic Resilience and Self-Regulation

**Dr. Jasraj Kaur**

Professor and Head, Department of Education and Community Service, Punjabi University Patiala, Punjab (India), Pin Code: 147002

**Bagga Singh**

Research Scholar, Department of Education and Community Service, Punjabi University Patiala, Punjab (India), Pin Code: 147002

**ABSTRACT**

The study was conducted to explore the cognitive ability in relation to academic resilience and self-regulation among school students. The study was conducted on 100 school students from Patiala. Cognitive Ability Scale (Gupta and Lakhani, 2018), Academic Resilience Scale (Mallick and Kaur, 2015) and Self-Regulation Scale (Erickson et al., 2015) were used for data collection. The results indicated significant relationship between cognitive ability and academic resilience of school students. It was also found that a significant relationship exists between cognitive ability and self-regulation of school students.

**INTRODUCTION**

Education is a lifelong process and there is no end of education. It is not that you read books, pass papers and end with education. The entire life from the moment of birth till die, is a procedure of assisting learning with which we become able to face challenges of life situations, struggle successfully and achieve own goals. According to Mukherjee (2021) education is the basis of a knowledgeable society. This is keystone on which an advanced democratic society is built, where the rule of law holds up and where others are respected. Education can take place in the formal, informal and non-formal settings. Education means all round development including physical, intellectual, spiritual, social and moral. Koul (2020) stated that education is a process by which cultural tradition is transmitted from generation to generation. Every individual learns education or gains information at every stage of life or at every phase of life. Education strives to carry about changes in faiths, ideas, vision and value system of indigenous. Education is the most powerful instrument which is related to change of behaviour, acquisition of knowledge, aptitude, skills, values, beliefs and habits. It contributes to the growth and progress of individual and society. It improves character of the people, affords physical and mental standard and changes people's living status. It encourages the sentiments of bodily, rational and communal welfare by providing superior life. Good education is the productive in nature which builds our future. Okolie and Yasin (2017) stated that human beings are not able to appropriately survive without education as it is man making process. It helps a person to develop his/her eminence of mind, body and spirit. It offers us a lot of confidence by giving us majority of knowledge in various fields. Education enables us to know inner and outer strengths, abilities which enable us to stand on our feet and to achieve the desired goals in our life. Individuals can gain maximum profit from education only if they have required cognitive ability. With the advancement, individuals find it difficult to balance between their academic, personal, emotional and social life. To handle so many things at a same time, individuals need to have cognitive ability and academic resilience.

Cognitive ability is a brain based skill needed in acquisition of all kinds of knowledge, manipulation of knowledge and applicable of knowledge. Cognitive ability is a conscious intellectual activity such as thinking, reasoning, remembering, imagining, problem-solving, learning words and used very loosely in several contexts. Cain et al. (2004) cognitive ability is imperative in defining socio-economic results that figure whole health above the lifecycle progress. Cognitive ability is powerfully connected with student's school enactment. Every day in school, society and other activities students face educational and societal conflicts,

those complexities and stress may decline their attainments and clue to drop out of school. Heckman and Mosso (2014) opined that cognitive ability has been assumed to be one of the most imperative overlooked variables in human investment models for output and incomes.

Academic resilience is a dynamic developmental process that involves the student's internal and external progressive factors that contribute to effective adjustment in situations, to deal effectively in adverse circumstances to manipulate existing behaviour. Academic resilience is an ability to adjust with complications, to achieve academic and communal desires goals. Martin and Marsh (2003) expressed that academic resilience is the capability to efficiently arrangement in setback, stress or pressure in the academic setting. According to Hijon (2017) academic resilience is the capability to reduce the troubles faced in attaining personal, professional, academic goals. Self-regulation is a definite procedure by which pupils can plan and regulate perceptions, moves and behaviour in indication which helps to systematically attain their own behavioural, motivational and intellectual learning tasks. Vohs and Baumeister (2004) presented self-regulation as frequently used to large efforts by humans to alter their thoughts, feelings, desires and actions in the viewpoint of achieving upper goals. Baumeister et al. (2014) opined that self-regulation is basically a substance of varying individual reactions, involving opinions, feelings and movements. Self-regulation included popular of performances of self-control serve to hinder and avoid certain reaction.

**REVIEW OF RELATED LITRATURE**

Review of related literature established superior understanding and precision about the problem under analysis. It helps to provide the ideas, theories, explanations and hypothesis valued for formulating problems. The reviews provide the researcher a perception into the problem that includes the systematic and scientific identification, locality and study of documents covering evidence associated to investigation.

Siregar et al. (2018) stated self-regulation, emotional intelligence with character building in elementary school. The sample consisted of 150 elementary school students from Meuraxa districts in Banda Aceh. The results revealed that positive relation of self-regulation with character formation (2) existence positive correlation of emotional intelligence with character building (3) existence positive relation of self-regulation and emotional intelligence with character building. Emotional intelligence is the higher cognitive so that the individual recognizes, understands, and uses emotions better. Choo et al. (2019) explained academic resilience as mediator of multidimensional perfectionism and

academic performance among gen-Z undergraduate students. The sample contained of 132 undergraduate students from Malaysia. The result indicated that academic resilience could have played a predicting role in perfectionist's and academic performance.

Galla et al. (2019) stated why high school grades are better predictors of on-time college graduation than are admissions test scores: the roles of self-regulation and cognitive ability. This sample included of 47,303 high school students from Pennsylvania. The results revealed that high school grades better at predicting college graduation. It was also found that success in college requires not only cognitive ability but also self-regulatory competencies that are better indexed by high school grades. It was incremental predictive validity of high school grades for college graduation was explained by composite measures of self-regulation, whereas the incremental predictive validity of test scores was explained by composite measures of cognitive ability.

Staylor (2019) examined academic resilience and persistence among community college students. This sample included of 789 college students from Southern California. The results had shown that needing to work and financial difficulties. Positive family interaction and persistent beliefs and behaviors were predictive of belonging to transfer level courses. Encouraging students to develop more resistant beliefs and behaviors are focused on alleviating the financial challenges reported by a significant number of students, including food insecurity and homelessness.

Toomey et al. (2019) investigated cognitive ability and cognitive style: finding a connection through resource use behavior among 67 university students from United States. The results indicated that spatial ability, particularly lower spatial ability, predicts resource use behavior. The study thus contributes to the literature with theory-based, empirical evidence that cognitive ability is reflected in cognitive style. The study provides information needed to better understand the interplay between individuals' cognitive style and cognitive ability and how these may be addressed in the design and implementation of learning.

Bala and Majeed (2020) presented impact of emotional maturity and family environment on academic resilience of college students. The sample consisted of 200 including 100 boy and 100 girl college students from Kashmir. The result revealed that family environment is using more impact on academic resilience of college students as compared to emotional maturity. Dworaka et al. (2020) studied using the international cognitive ability resource as an open source tool to explore individual differences in cognitive ability. This sample comprised of a growing set of items from 19 different subdomains from United States. The results had found that these items might benefit open science in contrast to more established proprietary measures. These items have been used in outside studies is provided in addition to ways we would love to see the use of public-domain cognitive ability items grow.

Fomina et al. (2020) studied self-regulation and psychological well-being in early adolescence: a two-wave longitudinal study among 239 secondary schools students from Moscow. The results indicated that highlight the significance of research on the conscious self-regulation of learning activities as a resource for pupil's psychological well-being, which is predictive for its maturation in the subsequent ages. Fiorenzato et al. (2021) examined cognitive ability and mental health changes and their vulnerability factors related to COVID-19 lockdown in Italy. The sample consisted of 1215 students from Italy. The results had found that subjective cognitive ability and mental health severely changed in association with the lockdown. Under government regulations, cognitive complaints were mostly perceived in

routine tasks involving attention, temporal orientation and executive functions with no changes in language abilities.

Romano et al. (2021) studied academic resilience and engagement in high school students in relation to the mediating role of perceived teacher emotional support. The sample consisted of 205 high school students from Italy. The results had shown that there was significant relationship between academic resilience, teacher emotional support and school engagement. Findings were discussed by underlining the importance of fostering personal and contextual resources in the school context to promote students well-being.

Vazquez et al. (2021) analyzed the self-regulation of motivation and confinement by COVID-19 Spanish university students. The sample consisted of 75 university students from Spain. Results of the study had shown that the change from face-to-face classes to virtual learning decreased the self-regulation of motivation among university students and was related to worse sleep quality. Women showed higher levels of self-regulation of motivation than men, but these levels were reduced to the same extent in both genders.

### SIGNIFICANCE OF THE STUDY

In the present time, the world is growing and changing swiftly. As the world is moving every individual's needs and requirements are increasing and also varies. Education though grow and develop human beings with education individual becomes able to stand on foot, flexible and creative. Turkkahraman (2021) stated that educations not only contribute to economic development and productiveness to upliftment of the living standards of the citizens, but also helpful for making them better citizens. With the advancement life has become full of problems. The problems start from birth and end with death. Every person wants to solve the problems, achieve the goals and satisfaction in life. According to Tilak (2020) education helps in the reduction of poverty, crime, violence, income equality, improvement in health, nutrition and life expectancy; is strengthening of democracy and in the overall improvement of all aspects of development. So, education is the most powerful tool in individual is life. Findings of the study will help the teachers to provide suitable environment, beneficial material, curricular and co-curricular activities, directions, guidance and counseling for students' physical and psychological growth. So, keeping in view the ideas of many psychologists, we take this topic to investigate cognitive ability in relation to academic resilience and self-regulation of school students in Punjab.

### OBJECTIVES

- To study relationship between the cognitive ability and academic resilience of school students.
- To study relationship between the cognitive ability and self-regulation of school students.

### HYPOTHESES

- There will be no relationship between the cognitive ability and academic resilience of school students.
- There will be no relationship between the cognitive ability and self-regulation of school students.

### RESEARCH METHOD

The study was conducted through descriptive method of research.

### SAMPLE OF THE STUDY

The sample comprised of 100 school students from Patiala, by using the convenient sampling.

### TOOLS USED

- Cognitive Ability Scale (Gupta and Lakhani, 2018).
- Academic Resilience Scale (Mallick and Kaur, 2015).
- Self-Regulation Scale (Erickson et al., 2015).

### Relationship Between Cognitive Ability, Academic Resilience And Self-regulation Of School Students

The scores of school students on cognitive ability, academic resilience and self-regulation were correlated by using Pearson's coefficient of correlation.

**Table 1-Relationship between Cognitive Ability and Academic Resilience Among School Students**

| Variable            | N   | Correlation (r) |
|---------------------|-----|-----------------|
| Cognitive Ability   | 100 | 0.20*           |
| Academic Resilience |     |                 |

\*Significant at 0.05 level

The result of correlation indicated that coefficient of correlation (r) of score on tests of cognitive ability and academic resilience of school students is 0.20. It is significant at the level of 0.05 level. On the basis of the results the hypothesis that "There was no significant relationship between cognitive ability and academic resilience among school students" is rejected. It means that there is significant relationship between cognitive ability and academic resilience of school students. It may be because the students having high cognitive ability can grasp the learning material more quickly and can easily achieve academic goals.

**Table 2-Relationship between Cognitive Ability and Self-Regulation among School Students**

| Variables         | N   | Correlation (r) |
|-------------------|-----|-----------------|
| Cognitive ability | 100 | 0.27**          |
| Self-Regulation   |     |                 |

\*\*Significant at 0.01 level

The result indicated that coefficient of correlation (r) of score on tests of cognitive ability and self-regulation of school students is 0.27. It is significant at the level of 0.01 level. On the basis of the results the hypothesis that "There was no significant relationship between cognitive ability and self-regulation among school students" is rejected. It means that there is significant relationship between cognitive ability and self-regulation of school students. It may be because if individuals have the ability to reason, remember, imagine and able to solve the problems, then they are more liable to regulate themselves.

**CONCLUSIONS**

- There is significant relationship between cognitive ability and academic resilience of school students.
- There is significant relationship between cognitive ability and self-regulation of school students.

**Educational Implications**

- The teachers should engage students in those activities which can increase their cognitive ability so that they can perform better in academics.
- While engaging students in cognitive activities, teachers should also focus on improving basic skills among students which in turn help students to regulate themselves.
- Academic resilience based interventions could be developed for the school students who have low level of academic resilience. The teachers should encourage the students to utilize their resources and strengths in order to become more resilient.
- The school should organize time to time counseling sessions for the students to maintain a good level of academic resilience and self-regulation.
- Teachers should provide learning conditions for promoting cognitive ability, academic resilience and self-regulation. To facilitate this type of learning conditions, the teachers have to reorient themselves for new challenges in educational system.
- Teachers should be expert in the field of educational psychology, guidance and counseling. It will help them to recognize the problems of their students and help them to confront the issues related to their academic resilience.

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