

## “Meta-Cognition, Self-Confidence & Peer Pressure As Determinants Of Academic Achievement Of Senior Secondary School Students”

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### Abstract

The aim of the current investigation was to explore meta-cognition, self-confidence and peer pressure as determinants of academic achievement of sr. sec. school students. ‘Academic achievement’ has taken as dependent variable while Meta-cognition (High & Low), Self-confidence (High & Low), and Peer pressure (High & Low) have been taken as independent variables. In the current investigation descriptive survey method was employed. 600 sr. sec. school students were chosen via random sampling technique. For the Academic achievement measure, the researcher had to depend upon the school examination record of the respective school of their previous class test scores i.e. 10<sup>th</sup> class. Meta-cognition Inventory by Singh and Bali (2017); Self-confidence Scale by Gupta and Lakhani (2018) and Peer Pressure Scale (PPS) by Saini and Singh (2010). The obtained data was analyzed using Mean, SD, t-test, ANOVA and co-efficient of correlation (r). It was found that all the independent variables i.e. meta-cognition, self-confidence and peer pressure, were positively correlated with school students’ academic achievement. A significant triple interaction effect of meta-cognition, self-confidence & peer pressure was found on academic achievement of school students.

**Keywords:** “Academic achievement, Meta-cognition, Self-confidence, Peer Pressure, Sr. Sec. School Students”

## INTRODUCTION

Since students are the leaders of tomorrow, their future and social impact are largely determined by their academic achievement. The current educational system in India puts a lot of pressure on students to do well in order to receive external rewards and grades. Meta-cognition plays very important in successful learning. Meta-cognitive techniques provide an internal framework for individuals to cope with challenges in any problem-solving situation, especially in the context of education. They also assist students in becoming aware of their strengths and shortcomings as learners. By employing Meta-cognitive thinking, pupils may develop into adaptable, imaginative, and independent learners. In particular, meta-cognition helps students with extra educational requirements comprehend assignments and fosters the growth of autonomous learning & learning abilities.

Acquired information about cognitive processes that may be applied to regulate cognitive processes is referred to as meta-cognitive knowledge. High levels of thinking order are necessary for great academic accomplishment. In the academic sphere, meta-cognition helps in improved adjustment by providing appropriate suggestions and promoting learning. Yemliha (2018) investigated meta-cognition in college students. The study's conclusions showed that children with high levels of meta-cognition also had high levels of introspective and analytical thinking, which helps them solve problems and make decisions. The study also revealed that academic level rises with an increase in meta-cognition. Abri and Tyovenda (2021) investigated how meta-cognition affected the arithmetic performance of secondary school pupils. This study showed that the use of a metacognitive approach improved students' performance in mathematics. Acharya (2021) found that meta-cognitive abilities contribute to improved adolescent adjustment and learning results.

When it comes to academic achievement, confidence is important since it is a key indicator of success. Low self-esteem can damage a student's experience in college and add to the persistent issue of dropout cycles that many universities are dealing with. Self-assurance, belief, or faith in oneself are measured by self-confidence. Positivity and realism about oneself, as well as one's surroundings and life conditions, are attributes of self-confidence. One's level of self-confidence indicates how secure they feel in

their ability to make their own decisions. Self-confidence is the most crucial component of a person's personality. If students are confident in themselves, they may overcome obstacles in the intellectual, social, academic, and individual domains. Self-confidence enhances academic and intellectual performance and helps people become more self-aware. One's chances of succeeding academically are better the more confident they are. In order to increase pupils' academic performance, learning capacities, and self-esteem and confidence, parents and teachers work together to a great extent.

Children in India are under strain as a result of the country's modernity and intense competition for children. Peer pressure refers to pressure exerted by those who share comparable characteristics -such as age, grade, position, or area of interest and share other characteristics. Peer pressure can be advantageous or disadvantageous based on the circumstances. Depending on the composition of the group, peer influence has a bigger effect on academic accomplishment in both positive and negative ways (Ezzarrouki, 2016). In terms of children's social, emotional, and intellectual development, peer groups are crucial. Peer pressure becomes paramount in nearly every element of the life of the teenagers, ranging from social circumstances and structures to academic accomplishment. Some students discover that interacting with their peers encourages them to focus more intently on their schoolwork. Some people associate with peer groups, which can lead to a decrease in school attendance and have an effect on academic performance. Peer pressure that is harmful can lead to issues at school, such as decreased attendance and even worse grades. It can also have an impact on families by increasing circumstances when family members must travel far from one another, which reduces the amount of time spent with them at home, and by causing communication problems.

#### **OBJECTIVES**

1. "To find out the relationship between Academic achievement & meta-cognition of sr. sec. school students".
2. "To find out the relationship between Academic achievement & self-confidence of sr. sec. school students".
3. "To find out the relationship between Academic achievement & peer pressure of sr. sec. school students".

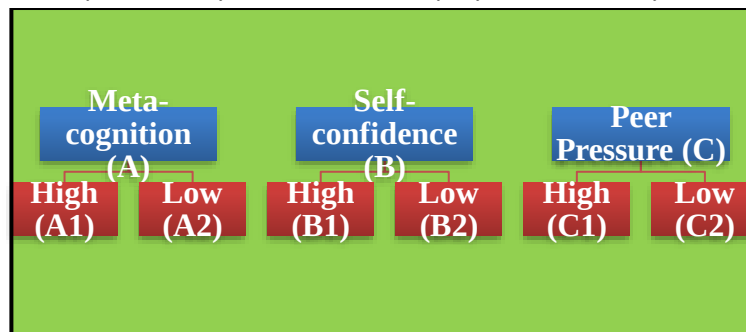
4. “To find out triple interaction effect of meta-cognition, self-confidence and peer pressure on academic achievement among sr. sec. school students”.

### HYPOTHESES

- H<sub>01</sub>** “There is no significant relationship between Academic achievement & meta-cognition of sr. sec. school students”.
- H<sub>02</sub>** “There is no significant relationship between Academic achievement & self-confidence of sr. sec. school students”.
- H<sub>03</sub>** “There is no significant relationship between Academic achievement & peer pressure of sr. sec. school students”.
- H<sub>04</sub>** “There is no significant triple interaction effect of meta-cognition, self-confidence and peer pressure on academic achievement of sr. sec. school students”.

### RESEARCH METHODOLOGY & DESIGN

‘Descriptive survey method’ was employed in the study.



### POPULATION AND SAMPLE

All the students studying in 11<sup>th</sup> class of all private sr. secondary schools affiliated to C.B.S.E. of Haryana state were constituted the target population for current investigation. ‘Multi-stage Random Sampling technique’ was employed to choose a sample of 600 Sr. Sec. school pupils of Rohtak and Bhiwani Districts of Haryana State.

### TOOLS USED

- ❖ **Academic achievement:** For the Academic achievement measure, the researcher had to depend upon the school examination record of the respective school of their previous class test scores i.e. 10<sup>th</sup> class.
- ❖ **Meta-cognition Inventory** by Singh and Bali (2017).
- ❖ **Self-confidence Scale** by Gupta and Lakhani (2018).
- ❖ **Peer Pressure Scale (PPS)** by Saini and Singh (2010).

### STATISTICAL TECHNIQUES

Mean, SD, t-test, 3-way ANOVA & Co-efficient of correlation (r) were used to study academic achievement of sr. sec. school students as determined by meta-cognition, self-confidence & peer pressure.

### DATA ANALYSIS AND INTERPRETATION

**O<sub>1</sub>: “To find out the relationship between Academic achievement and meta-cognition of senior secondary school students”.**

**H<sub>01</sub>** “There is no significant relationship between Academic achievement and meta-cognition of senior secondary school students”.

**Table-1 “Coefficients of Correlation (r) between Academic Achievement and Meta-cognition of Senior Secondary School Students”**

|                             | Correlation         | Meta-cognition |
|-----------------------------|---------------------|----------------|
| <b>Academic Achievement</b> | Pearson Correlation | <b>0.618**</b> |
|                             | Sig. (2-tailed)     | <b>.000</b>    |
|                             | N                   | <b>600</b>     |

\*\* ‘Significant at 0.01 level’

Table-1 indicates that the coefficient of correlation (r) between academic achievement & meta-cognition of sr. sec. school students is 0.618 which is significant at 0.01 level. So, **H<sub>01</sub>** stands rejected. The magnitude of ‘r’ indicates that meta-cognition positively correlated with academic achievement of sr. sec. school pupils. Therefore, it can be inferred that more the meta-cognition among pupils better their academic achievement.

**Objective 2: “To find out the relationship between Academic achievement and self-confidence of senior secondary school students”.**

**H<sub>02</sub>** “There is no significant relationship between Academic achievement and self-confidence of senior secondary school students”.

**Table-2 “Coefficients of Correlation (r) between Academic Achievement and Self-confidence of Senior Secondary School Students”**

|                             | <b>Correlation</b>  | <b>Self-confidence</b> |
|-----------------------------|---------------------|------------------------|
| <b>Academic Achievement</b> | Pearson Correlation | <b>0.713**</b>         |
|                             | Sig. (2-tailed)     | <b>.000</b>            |
|                             | N                   | <b>600</b>             |

\*\* ‘Significant at 0.01 level’

Table-2 shows that coefficient of correlation (r) between academic achievement & self-confidence of senior secondary school pupils is 0.713 which is significant at 0.01. So,  $H_{02}$  stands rejected. The magnitude of ‘r’ indicates that self-confidence significantly positively correlated with academic achievement of sr. sec. school pupils. So, it can be concluded that more the self-confidence among pupils higher their academic achievement.

**Objective 3: “To find out the relationship between academic achievement and peer pressure of senior secondary school students”.**

$H_{03}$  “There is no significant relationship between academic achievement and peer pressure of senior secondary school students”.

**Table-3 “Coefficients of Correlation (r) between Academic achievement and Peer Pressure of Senior Secondary School Students”**

|                             | <b>Correlation</b>  | <b>Peer Pressure</b> |
|-----------------------------|---------------------|----------------------|
| <b>Academic Achievement</b> | Pearson Correlation | <b>0.575**</b>       |
|                             | Sig. (2-tailed)     | <b>.000</b>          |
|                             | N                   | <b>600</b>           |

\*\* ‘Significant at 0.01 level’

Table-3 indicates that coefficient of correlation (r) between academic achievement & peer pressure of senior secondary school students is 0.575 which is significant at 0.01 level. So,  $H_{03}$  stands rejected. The magnitude of ‘r’ indicates that positive correlation is

found between peer pressure and academic achievement. So, it can be concluded that positive peer pressure plays a very important role in elevated the academic achievement of the pupils.

**Objective 4: “Triple Interaction effect of Meta-Cognition, Self-Confidence and Peer Pressure on Academic Achievement among Senior Secondary School Students”.**

**H<sub>04</sub>** “There is no significant triple interaction effect of meta-cognition, self-confidence and peer pressure on academic achievement of senior secondary school students”.

**Table-4 “Summary of Three Way ANOVA (2x2x2 Factorial Design) for Academic Achievement of Senior Secondary School Students with respect to Meta-cognition, Self-confidence and Peer Pressure”**

| Sources of Variance                                                                         | Df  | Sum of Squares (SS) | Mean Sum of Squares (MSS) | F-ratios |
|---------------------------------------------------------------------------------------------|-----|---------------------|---------------------------|----------|
| <b>Triple Interaction Effect</b>                                                            |     |                     |                           |          |
| <b>Interaction<br/>Meta-cognition x Self-confidence x<br/>Peer Pressure<br/>(A x B x C)</b> | 1   | 4553.469            | 4553.469                  | 18.600** |
| <b>Between Cells</b>                                                                        | 7   | 142750.465          | .....                     |          |
| <b>Within Cells</b>                                                                         | 422 | 103310.517          | 244.812                   |          |
| <b>Total</b>                                                                                | 429 |                     |                           |          |

\*\* Significant at 0.01 level

“Table-4 describes that the F- ratio (18.600) for the interaction effect of Meta-Cognition x Self-Confidence x Peer Pressure (AxBxC) on academic achievement of sr. sec. school students is found significant at 0.01 level. Therefore, **H<sub>04</sub>** stands rejected. Further, t-test was employed to find out the difference in mean scores of academic achievement of sr. sec. school students for different groups”. The outcomes for the same have been presented in the Table-5.

**Table-5 “t-values for Mean Scores of Academic Achievement of Senior Secondary School Students for Different Groups of Meta-cognition x Self-confidence x Peer Pressure”**

| Sr. No. | Groups                                                                                       | N  |    | Means |       | SDs   |       | t-values   |
|---------|----------------------------------------------------------------------------------------------|----|----|-------|-------|-------|-------|------------|
| 1       | A <sub>1</sub> B <sub>1</sub> C <sub>1</sub> vs A <sub>1</sub> B <sub>1</sub> C <sub>2</sub> | 62 | 29 | 88.01 | 80.20 | 16.89 | 19.20 | 1.87(NS)   |
| 2       | A <sub>2</sub> B <sub>2</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>2</sub> | 31 | 71 | 54.96 | 86.92 | 10.62 | 18.76 | 10.90**    |
| 3       | A <sub>1</sub> B <sub>1</sub> C <sub>1</sub> vs A <sub>1</sub> B <sub>2</sub> C <sub>2</sub> | 62 | 82 | 88.01 | 70.85 | 16.89 | 13.16 | 6.62**     |
| 4       | A <sub>1</sub> B <sub>1</sub> C <sub>2</sub> vs A <sub>1</sub> B <sub>2</sub> C <sub>2</sub> | 29 | 82 | 80.20 | 70.85 | 19.20 | 13.16 | 2.42*      |
| 5       | A <sub>1</sub> B <sub>2</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>1</sub> C <sub>2</sub> | 36 | 26 | 75.72 | 68.96 | 15.55 | 17.10 | 1.59(NS)   |
| 6       | A <sub>1</sub> B <sub>2</sub> C <sub>2</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>2</sub> | 82 | 71 | 70.85 | 86.92 | 13.16 | 18.76 | 6.04**     |
| 7       | A <sub>1</sub> B <sub>1</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>2</sub> | 62 | 71 | 88.01 | 86.92 | 16.89 | 18.76 | 0.352 (NS) |
| 8       | A <sub>1</sub> B <sub>1</sub> C <sub>2</sub> vs A <sub>1</sub> B <sub>2</sub> C <sub>1</sub> | 29 | 36 | 80.20 | 75.72 | 19.20 | 15.55 | 1.01 (NS)  |
| 9       | A <sub>2</sub> B <sub>1</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>1</sub> | 93 | 31 | 69.05 | 54.96 | 13.87 | 10.62 | 5.89**     |
| 10      | A <sub>1</sub> B <sub>1</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>1</sub> C <sub>1</sub> | 62 | 93 | 88.01 | 69.05 | 16.89 | 13.87 | 7.34**     |
| 11      | A <sub>1</sub> B <sub>1</sub> C <sub>2</sub> vs A <sub>2</sub> B <sub>1</sub> C <sub>2</sub> | 29 | 26 | 80.20 | 68.96 | 19.20 | 17.10 | 2.29*      |
| 12      | A <sub>1</sub> B <sub>2</sub> C <sub>2</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>1</sub> | 82 | 31 | 70.85 | 54.96 | 13.16 | 10.62 | 6.62**     |
| 13      | A <sub>1</sub> B <sub>1</sub> C <sub>2</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>2</sub> | 29 | 71 | 80.20 | 86.92 | 19.20 | 18.76 | 1.59 (NS)  |
| 14      | A <sub>1</sub> B <sub>2</sub> C <sub>1</sub> vs A <sub>1</sub> B <sub>2</sub> C <sub>2</sub> | 36 | 82 | 75.72 | 70.85 | 15.55 | 13.16 | 1.63 (NS)  |
| 15      | A <sub>1</sub> B <sub>1</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>1</sub> C <sub>2</sub> | 62 | 26 | 88.01 | 68.96 | 16.89 | 17.10 | 4.78**     |
| 16      | A <sub>1</sub> B <sub>2</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>1</sub> | 36 | 31 | 75.72 | 54.96 | 15.55 | 10.62 | 6.45**     |
| 17      | A <sub>1</sub> B <sub>1</sub> C <sub>2</sub> vs A <sub>2</sub> B <sub>1</sub> C <sub>1</sub> | 29 | 93 | 80.20 | 69.05 | 19.20 | 13.87 | 2.90**     |
| 18      | A <sub>1</sub> B <sub>2</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>2</sub> | 36 | 71 | 75.72 | 86.92 | 15.55 | 18.76 | 3.27**     |
| 19      | A <sub>1</sub> B <sub>2</sub> C <sub>2</sub> vs A <sub>2</sub> B <sub>1</sub> C <sub>1</sub> | 82 | 93 | 70.85 | 69.05 | 13.16 | 13.87 | 0.882 (NS) |
| 20      | A <sub>1</sub> B <sub>1</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>1</sub> | 62 | 31 | 88.01 | 54.96 | 16.89 | 10.62 | 11.51**    |
| 21      | A <sub>1</sub> B <sub>2</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>1</sub> C <sub>1</sub> | 36 | 93 | 75.72 | 69.05 | 15.55 | 13.87 | 2.25*      |
| 22      | A <sub>1</sub> B <sub>2</sub> C <sub>2</sub> vs A <sub>2</sub> B <sub>1</sub> C <sub>2</sub> | 82 | 26 | 70.85 | 68.96 | 13.16 | 17.10 | 0.517(NS)  |
| 23      | A <sub>2</sub> B <sub>1</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>1</sub> C <sub>2</sub> | 93 | 26 | 69.05 | 68.96 | 13.87 | 17.10 | 0.024(NS)  |
| 24      | A <sub>1</sub> B <sub>1</sub> C <sub>2</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>1</sub> | 29 | 31 | 80.20 | 54.96 | 19.20 | 10.62 | 6.24**     |
| 25      | A <sub>2</sub> B <sub>1</sub> C <sub>1</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>2</sub> | 93 | 71 | 69.05 | 86.92 | 13.87 | 18.76 | 6.74**     |
| 26      | A <sub>2</sub> B <sub>1</sub> C <sub>2</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>1</sub> | 26 | 31 | 68.96 | 54.96 | 17.10 | 10.62 | 3.62**     |
| 27      | A <sub>2</sub> B <sub>1</sub> C <sub>2</sub> vs A <sub>2</sub> B <sub>2</sub> C <sub>2</sub> | 26 | 71 | 68.96 | 86.92 | 17.10 | 18.76 | 4.46**     |
| 28      | A <sub>1</sub> B <sub>1</sub> C <sub>1</sub> vs A <sub>1</sub> B <sub>2</sub> C <sub>1</sub> | 62 | 36 | 88.01 | 75.72 | 16.89 | 15.55 | 3.65**     |

\*\*\* Significant at 0.01 level \* Significant at 0.05 level NS = Not Significant”

A<sub>1</sub> – High Meta-cognition; B<sub>1</sub> – High Self-confidence;  
C<sub>1</sub> – High Peer Pressure

**A<sub>2</sub>– Low Meta-cognition;      B<sub>2</sub> – Low Self-confidence;  
C<sub>2</sub> – Low Peer Pressure**

The result presented in Table-5 depicts that t-values (1.87, 1.59, 0.352, 1.01, 1.59, 1.63, 0.88, 0.517 and 0.024 for the groups A<sub>1</sub>B<sub>1</sub>C<sub>1</sub> vs A<sub>1</sub>B<sub>1</sub>C<sub>2</sub> ; A<sub>1</sub>B<sub>2</sub>C<sub>1</sub> vs A<sub>2</sub>B<sub>1</sub>C<sub>2</sub> ; A<sub>1</sub>B<sub>1</sub>C<sub>1</sub> vs A<sub>2</sub>B<sub>2</sub>C<sub>2</sub>; A<sub>1</sub>B<sub>1</sub>C<sub>2</sub> vs A<sub>1</sub>B<sub>2</sub>C<sub>1</sub> ; A<sub>1</sub>B<sub>1</sub>C<sub>2</sub> vs A<sub>2</sub>B<sub>2</sub>C<sub>2</sub> ; A<sub>1</sub>B<sub>2</sub>C<sub>1</sub> vs A<sub>1</sub>B<sub>2</sub>C<sub>2</sub> ; A<sub>1</sub>B<sub>2</sub>C<sub>2</sub> vs A<sub>2</sub>B<sub>1</sub>C<sub>1</sub>; A<sub>1</sub>B<sub>2</sub>C<sub>2</sub> vs A<sub>2</sub>B<sub>1</sub>C<sub>2</sub> and A<sub>2</sub>B<sub>1</sub>C<sub>1</sub> vs A<sub>2</sub>B<sub>1</sub>C<sub>2</sub> are not found significant at 0.05 level. This means that pupils belonging to these groups do not differ significantly with each other with reference to their academic achievement.

An assessment of Table-5 reveals that t-value (10.90) for pupils having low meta-cognition with low self-confidence & high peer pressure (A<sub>2</sub>B<sub>2</sub>C<sub>1</sub>) and students having low meta-cognition with low self-confidence & low peer pressure (A<sub>2</sub>B<sub>2</sub>C<sub>2</sub>) is significant at 0.01 level. It can be observed from average scores that students having low meta-cognition with low self-confidence & high peer pressure (54.96) got less academic achievement than students having low meta-cognition with low self-confidence & low peer pressure (86.92). From table-5, it can be observed that t-value (6.62) for pupils having high meta-cognition with high self-confidence & high peer pressure (A<sub>1</sub>B<sub>1</sub>C<sub>1</sub>) and students having high meta-cognition with low self-confidence & low peer pressure (A<sub>1</sub>B<sub>2</sub>C<sub>2</sub>) is significant at 0.01 level. It can be inferred from mean scores that pupils having high meta-cognition with high self-confidence & high peer pressure (88.01) hold higher academic achievement than students having high meta-cognition with low self-confidence & low peer pressure (70.85). The t-value (2.42) for pupils having high meta-cognition with high self-confidence & low peer pressure (A<sub>1</sub>B<sub>1</sub>C<sub>2</sub>) and students having high meta-cognition with low self-confidence & low peer pressure (A<sub>1</sub>B<sub>2</sub>C<sub>2</sub>) is significant at 0.05 level. Average scores concluded that students having high meta-cognition with high self-confidence & low peer pressure (80.20) possess higher academic achievement comparatively those students who have high meta-cognition with low self-confidence & low peer pressure (70.85).

As evident from the Table-5 that t-value (6.04) for pupils having high meta-cognition with low self-confidence & low peer pressure (A<sub>1</sub>B<sub>2</sub>C<sub>2</sub>) and students having low meta-cognition with low self-confidence & low peer pressure (A<sub>2</sub>B<sub>2</sub>C<sub>2</sub>) is significant at 0.01 level. Average scores concluded that pupils having high meta-cognition

with low self-confidence & low peer pressure (70.85) have less academic achievement than students having low meta-cognition with low self-confidence & low peer pressure (86.92). The t-value (5.89) for pupils having low meta-cognition with high self-confidence & high peer pressure ( $A_2B_1C_1$ ) and students having low meta-cognition with low self-confidence & high peer pressure ( $A_2B_2C_1$ ) is significant at 0.01 level. It can be seen from mean scores that pupils having low meta-cognition with high self-confidence & high peer pressure (69.05) have higher academic achievement as compare to students having low meta-cognition with low self-confidence & high peer pressure (54.96).

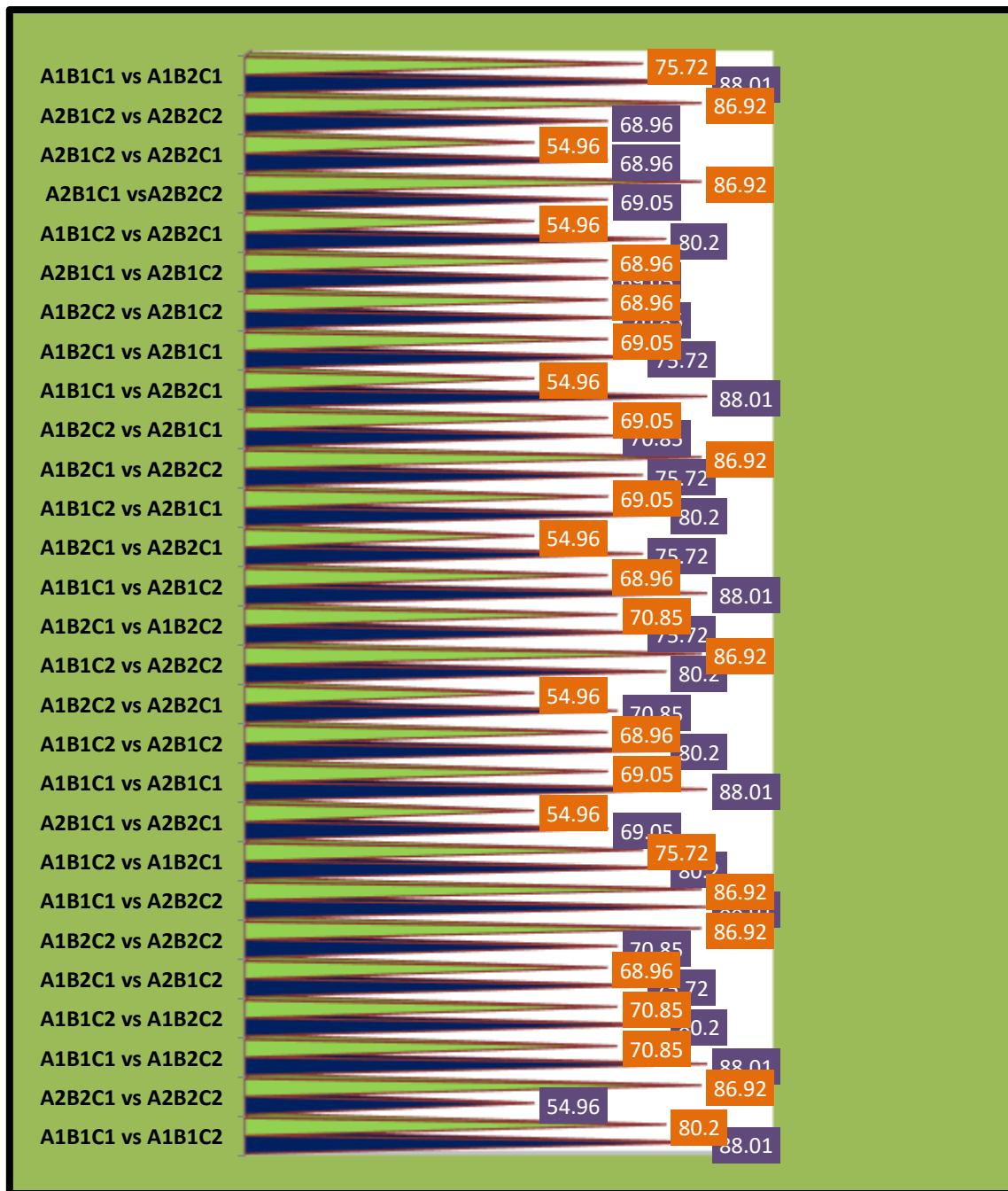
It is flagrant from Table-5 that t-value (7.34) for pupils having high meta-cognition with high self-confidence & high peer pressure ( $A_1B_1C_1$ ) and students having low meta-cognition with high self-confidence & high peer pressure ( $A_2B_1C_1$ ) is significant at 0.01. While comparing average scores it can be seen that pupils having high meta-cognition with high self-confidence & high peer pressure (88.01) possess higher academic achievement than students having low meta-cognition with high self-confidence & high peer pressure (69.05). The t-value (2.29) for pupils having high meta-cognition with high self-confidence & low peer pressure ( $A_1B_1C_2$ ) and students having low meta-cognition with high self-confidence & low peer pressure ( $A_2B_1C_2$ ) is significant at 0.01 level. Mean scores showed that pupils having high meta-cognition with high self-confidence & low peer pressure (80.20) holds higher academic achievement as compare to students having low meta-cognition with high self-confidence & low peer pressure (68.96). The t-value (6.62) for pupils having high meta-cognition with low self-confidence & low peer pressure ( $A_1B_2C_2$ ) and students having low meta-cognition with low self-confidence & high peer pressure ( $A_2B_2C_1$ ) is significant at 0.05 level. Average scores represented that students having high meta-cognition with low self-confidence & low peer pressure (70.85) got higher academic achievement than students having low meta-cognition with low self-confidence & high peer pressure (54.96).

Table-5 again concludes that t-value (4.78) for pupils having high meta-cognition with high self-confidence & high peer pressure ( $A_1B_1C_1$ ) and students having low meta-cognition with high self-confidence & low peer pressure ( $A_2B_1C_2$ ) is significant at 0.01 level. It can be concluded from mean scores that pupils having high meta-cognition with high self-confidence & high peer pressure

(88.01) have higher academic achievement than students having low meta-cognition with high self-confidence & low peer pressure (68.96). The t-value (6.45) for students having high meta-cognition with low self-confidence & high peer pressure ( $A_1B_2C_1$ ) and students having low meta-cognition with low self-confidence & high peer pressure ( $A_2B_2C_1$ ) is found significant at 0.01 level. Average scores showed that students having high meta-cognition with low self-confidence & high peer pressure (75.72) have better academic achievement as compare to students having low meta-cognition with low self-confidence & high peer pressure (54.96). The t-value (2.90) for pupils having high meta-cognition with high self-confidence & low peer pressure ( $A_1B_1C_2$ ) and students having low meta-cognition with high self-confidence & high peer pressure ( $A_2B_1C_1$ ) is significant at 0.01 level. Comparison of average scores represents that pupils having high meta-cognition with high self-confidence & low peer pressure (80.20) have higher academic achievement than students having low meta-cognition with high self-confidence & high peer pressure (69.05). Furthermore, the Table-5 concludes that t-value (3.27) for pupils having high meta-cognition with low self-confidence & high peer pressure ( $A_1B_2C_1$ ) and students having low meta-cognition with low self-confidence & low peer pressure ( $A_2B_2C_2$ ) is significant at 0.01 level. Average scores concluded that pupils having high meta-cognition with low self-confidence & high peer pressure (75.72) got less academic achievement as compare to students having low meta-cognition with low self-confidence & low peer pressure (86.92). The t-value (11.51) for pupils having high meta-cognition with high self-confidence & high peer pressure ( $A_1B_1C_1$ ) and students having low meta-cognition with low self-confidence & high peer pressure ( $A_2B_2C_1$ ) is found significant at 0.01 level. Mean scores described that pupils having high meta-cognition with high self-confidence & high peer pressure (88.01) have higher academic achievement as compare to students having low meta-cognition with low self-confidence & high peer pressure (54.96).

Table-5 showed that t-value (2.25) for pupils having high meta-cognition with low self-confidence & high peer pressure ( $A_1B_2C_1$ ) and students having low meta-cognition with high self-confidence & high peer pressure ( $A_2B_1C_1$ ) is found significant at 0.05 level. Average scores indicated that students having high meta-cognition with low self-confidence & high peer pressure (75.72) have higher academic achievement than students having low meta-cognition

with high self-confidence & high peer pressure (69.05). The t-value (6.24) for pupils having high meta-cognition with high self-confidence & low peer pressure ( $A_1B_1C_2$ ) and students having low meta-cognition with low self-confidence & high peer pressure ( $A_2B_2C_1$ ) is found significant at 0.01 level. Comparison of average scores demonstrated that students having high meta-cognition with high self-confidence & low peer pressure (80.20) have higher academic achievement than students having low meta-cognition with low self-confidence & high peer pressure (54.96). The t-value (6.74) for pupils having low meta-cognition with high self-confidence & high peer pressure ( $A_2B_1C_1$ ) and students having low meta-cognition with low self-confidence & low peer pressure ( $A_2B_2C_2$ ) is found significant at 0.01 level. Average scores make it clear that pupils having low meta-cognition with high self-confidence & high peer pressure (69.05) holds less academic achievement comparatively students having low meta-cognition with low self-confidence & low peer pressure (86.92). Table-5 showed that t-value (3.62) for Pupils having low meta-cognition with high self-confidence & low peer pressure ( $A_2B_1C_2$ ) and students having low meta-cognition with low self-confidence & high peer pressure ( $A_2B_2C_1$ ) is found significant at 0.05 level. It can be concluded from mean scores that students having low meta-cognition with high self-confidence & low peer pressure (68.96) have higher academic achievement than students having low meta-cognition with low self-confidence & high peer pressure (54.96). An assessment of Table-5 concludes that t-value (4.46) for pupils having low meta-cognition with high self-confidence & low peer pressure ( $A_2B_1C_2$ ) and students having low meta-cognition with low self-confidence & low peer pressure ( $A_2B_2C_2$ ) is found significant at 0.01 level. Mean scores represents that students having low meta-cognition with high self-confidence & low peer pressure (68.96) got less academic achievement than students having low meta-cognition with low self-confidence & low peer pressure (86.92). Lastly, the t-value (3.65) for pupils having high meta-cognition with high self-confidence & high peer pressure ( $A_1B_1C_1$ ) and students having high meta-cognition with low self-confidence & high peer pressure ( $A_1B_2C_1$ ) is found significant at 0.01 level. Average scores make it clear that pupils having high meta-cognition with high self-confidence & high peer pressure (88.01) possess higher academic achievement as compare to students having high meta-cognition with low self-confidence & high peer pressure (75.72).



**Fig. 1: “Mean Scores for Interaction Effect of Meta-cognition, Self-confidence & Peer Pressure (AxBxC) on Academic Achievement of Senior Secondary School Students”**

#### DISCUSSION OF RESULTS

The present study concluded that meta-cognition is positively correlated with academic achievement of school students. The finding of the study supported by (Poonam, 2013; Hossain and Chowdhury, 2019) who also revealed a positive and significant

correlation between meta-cognition and academic achievement. Self-confidence is also positively correlated with academic achievement. This finding is in line with Karimi & Zohre (2014) who discovered a strong correlation between self-confidence and academic performance. Significant positive correlation is found between peer pressure and academic achievement. So, it can be concluded that positive peer pressure plays a vital role in elevated the academic achievement of the students. The study's outcome was corroborated by Peterson's (2011) research, which showed a strong positive correlation between academic achievement and peer group pressure. It has been discovered that positive pressure, such as that which comes from reading, writing assignments, taking part in extracurricular activities, and working in groups, promotes academic progress. Boehnke (2018) also discovered that students do well in school and have excellent academic outcomes when they are encouraged and favourably impacted by their classmates.

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