Chapter 6

Findings, Educational Implications and Suggestions

6.1. Findings

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VI - FINDINGS, EDUCATIONAL IMPLICATIONS AND SUGGESTIONS

The study reported in the foregoing chapters was undertaken with a view to examine the impact of set of four independent variables viz., Family climate, Mental health, Study habits and Self confidence on the Academic achievement of science and arts students of senior secondary schools; to study the relative contributory role they play independently and jointly in determining the academic achievement of the students of science and arts stream, and to predict the academic achievement of the students on the basis of these predictive variables. To fulfil the requirements of multiple regression, nature of distribution of criterion and predictive variables was also studied. The sample consisted of 520 science and 345 arts students selected from 18 intermediate colleges of Etawah and Aligarh district. Data about these dependent and independent variables was collected by administering Hindi version of Family Environment Scale by Dr. Harpreet Bhatia & Dr. N. K Chadha (1993), Mental Health Battery by Dr. Arun Kumar Singh & Dr. Alpana Sen Gupta (2008), Study Habits Inventory by Palsane & Sharma (2003) and Self confidence inventory by Dr. Rekha Agnihotri (1993). The data was analysed using Correlations, Multiple regression analysis and t-test. The data was analysed by the investigator by using SPSS Version 16.0.

Analysis of the data collected on these tests brought to light certain facts about the variables studied in the research. On the basis of these facts certain findings were drawn and are presented according to objectives as follows:

6.1 FINDINGS

Findings of the present investigation are presented in two parts: (i) findings related to the major objectives, (ii) findings related to the subsidiary objectives.
6.1.1 FINDINGS RELATED TO THE MAJOR OBJECTIVES

6.1.1.1 Obj. 1: Relationship between various predictive variables and Academic achievement.

Relationship between four predictive variables and academic achievement of total students was ascertained by computing product moment coefficient of correlations and the findings thus drawn are presented below:

(v) Significant & positive relationship was found between Family Climate and Academic Achievement for total number of students.
(vi) Mental Health was found to be significantly and positively related to the academic achievement of total number of students.
(vii) Significant & positive relationship was found between Study Habits and Academic Achievement for total number of students.
(viii) Self Confidence was found to be significantly and positively related to the academic achievement of total number of students.

6.1.1.2 Obj. 2: Contributory role of various predictive variables on the Academic Achievement of total students.

In order of magnitude of regression weights, out of the eight dimensions of Family Climate only two dimensions i.e. Active recreational orientation and Independence were found prominent in determining variation in Academic achievement of total students (N=865). The role of both the dimensions was found to be significant. From the regression coefficients it was inferred that one unit increase in externality scores of Active recreational orientation and independence, cause .10738 & .08521 unit’s increment respectively in the Academic Achievement of total students.

Out of the six dimensions of Mental Health only two dimensions i.e. Intelligence and Emotional Stability were found important in determining the Academic achievement. The role of both the dimensions Intelligence and Emotional stability was found to be significant. One unit increase in
Intelligence was found to cause, .32122 units increment in the academic achievement of total students.

But a negative regression coefficient was obtained for dimension Emotional stability. And the value of the regression coefficient were indicative of the fact that with one unit increment in the Emotional Stability score, academic achievement of the total students decreases by .09257 units.

Out of the eight dimensions of Study Habits only one dimension i.e. Memory was found prominent in determining variation in Academic achievement. The role of Memory was found to be significant. One unit increase in Memory was found to cause .09653 units increment in the academic achievement of total students.

But variable Self-confidence does not play any significant role in influencing Academic achievement.

The values of R (coefficient of multiple correlation) were found to be significant in case of Active recreational orientation (R=.2198), Independence (R=.2101), Intelligence (R=.3612) & Memory (R=.1546), which reflects that significant multiple relationship exists between these variables and criterion variable. But the value of R (coefficient of multiple correlation) was found not significant in case of Emotional stability (R=-.0230), which reflects that there exists negative & not significant relationship between Emotional stability and Academic achievement.

The values of $R^2$ (coefficient of multiple determination) being .17, which shows that about 17% of the variance in Academic achievement total students is accounted by the joint contribution of the these dimensions i.e. Active recreational orientation, Independence, Intelligence, Emotional Stability & Memory, and the remaining percentage of the variance is still to be accounted for.
Therefore, the second research hypothesis “each predictor variables (i.e. family climate, mental health, study habits, and self confidence) will significantly contribute in determining the criterion variable (i.e. academic achievement)”, is partially accepted.

6.1.1.3 Obj. 3: Contributory role of various predictive variables on the Academic Achievement of science students.

In order of magnitude of regression weights, out of the eight dimensions of Family Climate only one dimension i.e. Active recreational orientation played a prominent role in determining variation in Academic achievement of science students. The role of this dimension is found to be significant. From the regression coefficients, it was inferred that one unit increase in externality scores of Active recreational orientation, cause .14950 units increment in the Academic Achievement of science students.

Out of the six dimensions of Mental Health only two dimensions i.e. Intelligence and Emotional Stability were found important in determining the Academic achievement. The role of both the dimensions was found to be significant. One unit increase in Intelligence was found to cause, .30753 units increment in the academic achievement of science students.

But a negative regression coefficient was obtained for dimension Emotional stability. And the value of the regression coefficient were indicative of the fact that with one unit increment in the Emotional Stability score, academic achievement of the science students decreases by .10048 units.

Out of the eight dimensions of Study Habits, only two dimensions i.e. Note taking and Memory were found important in determining the Academic achievement. The role of both the dimensions was found to be significant. One unit increase in Memory was found to cause, .08372 units increment in the Academic achievement of science students.
But a negative regression coefficient was obtained for the dimension Note taking. And the value of the regression coefficient were indicative of the fact that with one unit increment in the Note taking score, Academic achievement of the science students decreases by .10606 units.

Here also variable Self-confidence does not play any significant role in influencing academic achievement of arts students.

The values of R (coefficient of multiple correlation) were found to be significant in case of Active recreational orientation (R=.2020), Intelligence (R=.3292) & Memory (R=1097), which reflects that significant multiple relationship exists between these variables and criterion variable. But the value of R (coefficient of multiple correlation) was not found significant in case of Emotional stability (R=-.0132) & Note taking (R=-.0630) which reflects that there exists no relationship between Emotional stability and academic achievement & Note taking and Academic achievement.

The values of $R^2$ (coefficient of multiple determination) being .14, which shows that about 14% of the variance in academic achievement science students is accounted by the joint contribution of the these dimensions i.e. Active recreational orientation, Intelligence, Emotional Stability, Memory & Note taking and the remaining percentage of the variance is still to be accounted for.

Therefore, the third research hypothesis “each predictor variables (i.e. family climate, mental health, study habits, and self confidence) will significantly contribute in determining the criterion variable (i.e. academic achievement) for the students of science stream”, is partially accepted.

6.1.1.4 Obj. 4: Contributory role of various predictive variables on the Academic Achievement of arts students.

Out of the eight dimensions of Family Climate only two dimensions i.e. Control and Expressiveness were found important in determining the academic
achievement. The role of both the variables was found to be significant. One unit increase in Control was found to cause, .16761 units increment in the academic achievement of arts students.

But a negative regression coefficient was obtained for Expressiveness variable. And the value of the regression coefficient were indicative of the fact that with one unit increment in the Expressiveness score, academic achievement of the arts students decreases by .13805 units.

Out of the six dimensions of Mental Health only two dimensions i.e. Intelligence and Autonomy were found prominent in determining variation in academic achievement of arts students. From the regression coefficients it was inferred that one unit increase in externality scores of Intelligence and Autonomy, cause only .14180 & .13093 unit's increment respectively in the Academic achievement of Arts students.

Out of the eight dimensions of Study Habits only one dimension i.e. Budgeting time was found prominent in determining variation in academic achievement. The role of Budgeting time was found to be significant. One unit increase in Budgeting time was found to cause only, .19865 units increment in the academic achievement of arts students.

Here, also variable Self-confidence does not play any significant role in influencing academic achievement of Arts students.

The values of R (coefficient of multiple correlation) were found to be significant in case of Control (R=.2221), Intelligence (R=.2194), Autonomy (R=.1906) & Budgeting time (R=.2091), which reflects that significant multiple relationship exists between these variables and criterion variable. But the value of R (coefficient of multiple correlation) was not found significant in case of Expressiveness (R=.0763), which reflects that there exists negative & not significant relationship between Expressiveness and Academic achievement.
The values of $R^2$ (coefficient of multiple determination) being .14, which shows that about 14% of the variance in academic achievement of arts students is accounted by the joint contribution of these dimensions i.e. Control, Expressiveness, Intelligence, Autonomy & Budgeting time, and the remaining percentage of the variance is still to be accounted for.

Therefore, the forth research hypothesis “each predictor variables (i.e. family climate, mental health, study habits, and self confidence) will significantly contribute in determining the criterion variable (i.e. academic achievement) for the students of arts stream”, is partially confirmed.

6.1.1.5 Prediction of the criterion variable on the basis of predictive variables in relation to science stream group.

On the basis of the regression coefficients an ‘$X_1$’ coefficient (constant), multiple regression equations was derived for science stream population, which is being presented as under.

In case of science respondents, value of ‘$X_1$’ coefficient (constant), was 139.66, and values of regression coefficients were: .30753, .14950, -.10606 , -.10048 and .08372 for M6, F6, P4, M1 & P6 respectively, the entire regression equation for science respondents thus reads-

$$\text{Achievement} = .14950(X_2) + .20705(X_3) - .02234(X_4) + .0000(X_5) + 139.66$$

In the equation $X_1$ is the Academic Achievement predicted, while M6, F6, P4, M1 & P6 (intelligence, Active recreational orientation, Note taking, Emotional stability & Memory) are five dimensions of three predictive variables i.e. Family climate (b2), Mental health (b3) and Study habits (b4), with the equation $X_1$ (academic achievement predicted) for every student can be predicted knowing his scores on the other variables.
6.1.1.6 Prediction of the criterion variable on the basis of predictive variables in relation to arts stream group.

On the basis of the regression coefficients an ‘a’ coefficient (constant), multiple regression equations was derived for arts stream population, which is being presented as under.

In case of arts respondents value of ‘$X_1$’ coefficient (constant), was 140.64, and values of regression coefficients were: .16761, .19865, .14180, -.13805, .13093 for F8, P1, M6, F2 & M3 respectively, the entire regression equation for arts respondents thus reads-

$$\text{Achievement (}X_1\text{)} = .02956(X_2) + .27273(X_3) + 19865(X_4) + .0000(X_5) + 140.64$$

In the equation $X_1$ is the Academic Achievement predicted, while F8, P1, M6, F2 & M3 (Control, Budgeting time, Intelligence, Expressiveness, Autonomy) are five dimensions of three predictive variables i.e. Family climate (b2), Mental health (b3) and Study habits (b4), with the equation $X_1$ (academic achievement predicted) for every student can be predicted knowing his scores on the other variables.

6.1.1.7 Nature of the Distribution of Criterion and Predictive Variables Under Study

The scores of the criterion variable (academic achievement) and the four independent variables (Family climate, Mental health, Study habits and Self confidence) were found to be normally distributed in the sample. The curves of Family climate scores of arts students were found to be negatively skewed (-.086). This value suggests that the data is skewed to the left, and is approximately symmetric. The excess kurtosis (.117) is slightly greater than zero implies that distribution is slightly lepto-kurtic. For the students of science stream these curves were found to be negatively skewed (-.584). This suggests that data is skewed to the left, which implies that the distribution is moderately
skewed. The excess kurtosis (.809) is slightly greater than zero implies that distribution is slightly lepto-kurtic.

The curves of Mental health scores of arts students were found to be negatively skewed (-.221). This value suggests that data is skewed to the left. The excess kurtosis (.673) is slightly greater than zero implies that distribution is slightly lepto-kurtic. For the students of science stream the negative value of skewness (-.515) suggests that data is skewed to the left. The excess kurtosis (.020) is slightly greater than zero implies that distribution is slightly lepto-kurtic.

The Study habits scores of arts students were found to be negatively skewed (-.584). This value suggests that data is skewed to the left, and the distribution is moderately skewed. The excess kurtosis (.097) is slightly greater than zero implies that distribution is slightly lepto-kurtic. For the students of science stream the negative value of skewness (-.534) suggests that data is skewed to the left, and the distribution is moderately skewed. The excess kurtosis (.368) is greater than zero implies that distribution is lepto-kurtic.

The Self confidence scores of arts students were found to be negatively skewed (-.193). This value suggests that data is skewed to the left, and the distribution is approximately symmetric. The excess kurtosis (.031) is slightly more than zero implies that distribution is lepto-kurtic. For the students of science stream the positive value of skewness (.053) suggests that data is skewed to the right, and the distribution is approximately symmetric. The excess kurtosis (-.293) is slightly less than zero implies that distribution is plati-kurtic.

The Academic achievement scores of arts students were found to be positively skewed (.014). This value suggests that data is skewed to the right, and the distribution is approximately symmetric. The excess kurtosis (.492) is slightly more than zero implies that distribution is lepto-kurtic. This value implies reducing high probability for extreme values. For the students of science stream the negative value of skewness (-.004) suggests that data is ignorably skewed
to the left, and the distribution is approximately symmetric. The excess kurtosis (-.119) is slightly less than zero implies that distribution is plati-kurtic.

**6.1.2 FINDINGS RELATED TO THE SUBSIDIARY OBJECTIVES**

**6.1.2.1 Comparison of the Academic achievement of students of two faculties i.e., science and arts.**

Significant difference was found between the respondents of science and arts stream on the variable of Academic achievement. The calculated mean values are 263.68 and 233.57 for science and arts group respectively. And the obtained t-value is 8.30 which is found significant at 0.01 level. These values indicate that the Academic achievement of science stream students is better than that of arts stream students. Therefore, the first subsidiary hypothesis is rejected.

**6.1.2.2 Comparison of the criterion variable (i.e. academic achievement) and predictor variables (i.e. family climate, mental health, study habits and self confidence) of male and female students of Science stream.**

**6.1.2.2.1 Comparison of male and female respondents of science stream on the variable of Family climate.**

- Significant difference was found between male and female respondents of science stream. The mean value of females on factor cohesion is higher than that of males.

- Significant difference was found between male and female respondents of science stream. The mean value of females on factor expressiveness is higher than that of males.

- No significant difference was found between male and female respondents of science stream on the factor conflict.

- Significant difference was found between male and female respondents of science stream. The mean value of females on factor acceptance and caring is higher than that of males.
- Significant difference was found between male and female respondents of science stream. The mean value of females on factor independence is higher than that of males.

- Significant difference was found between male and female respondents of science stream. The mean value of females on factor active recreational orientation is higher than that of males.

- Significant difference was found between male and female respondents of science stream. The mean value of females on factor organization is higher than that of males.

- Significant difference was found between male and female respondents of science stream. The mean value of females on factor control and caring is higher than that of males.

Thus, we can say that a significant difference was found between male and female respondents of science stream. The mean value of females on the variable of Family Climate is higher than the mean value of males.

6.1.2.2.2. Comparison of male and female respondents of science stream on the variable of Mental health.

- No significant difference was found between male and female respondents of science stream on the factor Emotional stability.

- Significant difference was found between male and female respondents of science stream. The mean value of females on factor Adjustment is higher than that of males.

- Significant difference was found between male and female respondents of science stream. The mean value of females on factor Autonomy is higher than that of males.
- Significant difference was found between male and female respondents of science stream. The mean value of females on factor Security-insecurity is higher than that of males.

- No significant difference was found between male and female respondents of science stream on the factor Self concept.

- No significant difference was found between male and female respondents of science stream on the factor Intelligence.

Thus, we can say that significant difference was found between male and female respondents of science stream. The mean value of females on the variable of Mental health is higher than that of males.

6.1.2.2.3 Comparison of male and female respondents of science stream on the variable of Study habits.

- Significant difference was found between male and female respondents of science stream. The mean value of females on factor Budgeting time is higher than that of males.

- Significant difference was found between male and female respondents of science stream on factor Physical conditions for study. The mean value of females is higher than the mean value of males on factor Physical conditions for study.

- Significant difference was found between male and female respondents of science stream. The mean value of females on factor Reading ability is higher than that of males.

- Significant difference was found between male and female respondents of science stream. The mean value of males on factor Note taking is higher than that of females.
- Significant difference was found between male and female respondents of science stream. The mean value of females on factor Factors in learning motivation is higher than that of males.

- Significant difference was found between male and female respondents of science stream on the factor Memory. The mean value of females on factor memory is higher than that of males.

- No significant difference was found between male and female respondents of science stream.

- Significant difference was found between male and female respondents of science stream. The mean value of females on factor health is higher than that of males.

Thus, we can say that significant difference was found between male and female respondents of science stream. The mean value of females on the variable of Study habits is higher than the mean value of males.

6.1.2.2.4 Comparison of male and female respondents of science stream on the variable of Self confidence.

- Significant difference was found between male and female respondents of science stream on the factor Self confidence. The mean value of males is higher than the mean value of females.

6.1.2.2.5 Comparison of male and female respondents of science stream on the variable of Academic achievement

Significant difference was found between male and female respondents of science stream. The mean value of females on factor Academic Achievement is higher than that of males. Therefore, the second subsidiary hypothesis is partially confirmed.
6.1.2.3. Comparison of the criterion variable (i.e. academic achievement) and predictor variables (i.e. family climate, mental health, study habits and self confidence) of male and female students of Arts stream.

6.1.2.3.1. Comparison of male and female respondents of arts stream on the variable of Family climate.

No significant difference was found between male and female respondents of arts stream on the factor Cohesion.

No significant difference was found between male and female respondents of arts stream on the factor Expressiveness.

No significant difference was found between male and female respondents of arts stream on the factor Conflict.

No significant difference was found between male and female respondents of arts stream on the factor Acceptance & Caring.

No significant difference was found between male and female respondents of arts stream on the factor Independence.

No significant difference was found between male and female respondents of arts stream on the factor Active recreational orientation.

Significant difference was found between male and female respondents of arts stream on the factor Organization. Males possess higher mean on factor Organization as compared to females.

No significant difference was found between male and female respondents of arts stream on the factor Control.

_Thus, we can say that no significant difference was found between Male and Female respondents of Arts stream on the variable of Family climate._
6.1.2.3.2 Comparison of male and female respondents of arts stream on the variable of Mental health.

Significant difference was found between male and female respondents of arts stream. The mean value of males on factor Emotional stability is higher than that of females.

Significant difference was found between male and female respondents of arts stream. The mean value of males on factor Adjustment is higher than that of females.

Significant difference was found between male and female respondents of arts stream. The mean value of females on factor Autonomy is higher than that of males.

Significant difference was found between male and female respondents of arts stream. The mean value of females on factor Security-insecurity is higher than that of males.

No significant difference was found between male and female respondents of arts stream on the factor Self concept.

No significant difference was found between male and female respondents of arts stream on the factor Intelligence.

Thus, it can be concluded that there exists no significant difference between male and female respondents of Arts stream on the variable of Mental health.

6.1.2.3.3 Comparison of male and female respondents of arts stream on the variable of Study habits.

Significant difference was found between male and female respondents of arts stream. The mean value of females on factor Budgeting time is higher than that of males.
No significant difference was found between male and female respondents of arts stream on the factor Physical conditions for study.

No significant difference was found between male and female respondents of arts stream on the factor Reading ability.

No significant difference was found between male and female respondents of arts stream on the factor Note taking.

No significant difference was found between male and female respondents of arts stream on the factor Factors in learning motivation.

No significant difference was found between male and female respondents of arts stream on the factor Memory.

No significant difference was found between male and female respondents of arts stream on the factor Taking examinations.

No significant difference was found between male and female respondents of arts stream on the factor Health.

Thus, it can be concluded that there exists no significant difference between Male and Female respondents of Arts stream on the variable of Study habits.

6.1.2.3.4 Comparison of male and female respondents of arts stream on the variable of Self confidence.

Significant difference was found between male and female respondents of arts stream. The mean value of females on the variable of Self confidence is higher than the mean value of males.

6.1.2.3.5 Comparison of male and female respondents of arts stream on the variable of Academic achievement.

Significant difference was found between male and female respondents of arts stream. The mean value of females on variable Academic achievement is higher than the mean value of males. Therefore, the third subsidiary hypothesis is partially accepted.
6.2. EDUCATIONAL IMPLICATIONS

In order to plan remedial education and guidance programmes for underachievers, we need to know something about the factors causing underachievement. Proper diagnosis of the factors for each individual may save time and the real cause may be hit upon.

The results of the present investigation reaffirmed the importance of the four variables viz. Family climate, Mental Health, Study habits and Self confidence in the determination of Academic achievement. In this light the present study has certain implications of major importance. This study may be of immense use for the prediction of Academic achievement of pupils. This study provides an important contribution for HRD (Human Resource Development). The variables used in this study can be included in the prediction battery of senior secondary students to make suitable selections for higher studies and different vocational streams.

The results of the present study may be helpful to the educational administrators also. They may provide such situations in the school through which students may develop personality characteristics conducive to academic success.

The implication related to parents’ involvement is that schools need to continue to bring parents into the educational process and to encourage parents to activate their concerns about children’s grades. In order to further foster better communication between home and school, teachers should encourage parents to be aware of school policies and the curriculum. Letting parents know about the best ways to communicate with their teen's, to help them in their home work, to motivate them etc. Such strategies will foster a positive climate and make parents more involved and responsive to future school outreach.

Also, schools should focus on creating academically supportive teacher-student relationships which can substitute for those parents’ who rarely visit school campus.
The findings in the area of Mental health provide an important contribution to the public health field. These findings may be utilised in the guidance programme of failures and under achievers and also for the counselling of teachers (Secondary Education Commission, 1952).

The following steps can be undertaken for improving the Mental health status of secondary school students:

- Establish smaller class sizes thereby allowing greater opportunities for individual student-teacher interaction and for teachers to develop supportive and positive relationships with students.
- Educate teachers and parents about the psychological development of children and youth, particularly regarding social-emotional issues.
- Encourage Teachers’ to develop positive attitudes towards students in schools.
- Reduce gender inequity within homes, schools through education of parents, staff and students and changes in school practices.
- Promote greater school-community-parent collaboration.
- Provide professional preparation of mental health specialists (e.g., psychologists, psychiatrists, counsellors) specific to mental health promotion for children and youth.
- Develop school-based mental health promotion programs (e.g., curriculum for promoting life skills, and counseling services, Nastasi et al,1998)
- Reduce the pressure on academic performance, for example, by using alternative forms of evaluation, providing alternative educational routes (e.g., vocational training), and broadening the scope of culturally valued occupations.
- Encourage collaboration of the various sectors that provide services for youth, including government agencies (e.g., education and health ministries), religious organizations, non-governmental organizations, schools, parents, and community members.
- Develop innovative educational practices that focus on student-centered learning (e.g., through active learning, peer-based/mediated learning, and teacher as facilitator of learning).

Now, coming to the implications of Study habits we can suggest some individual & Group guidance procedures which can be used to improve the study habits and study skills of underachievers and failures. Individual counselling can serve as an effective intervention to improve their achievement and improve their study habits and study skills. Helping underachievers in such a way will surely bring out better results by proper utilisation of individual’s potentialities and thus realising the aim of education. The reason behind providing such guidance is that we find in schools the teaching-learning process is catering to the needs of only the average students where special groups like creative, slow learners, first generation learners and underachievers are neglected. There is an urgent need of counsellors for underachievers to look into the needs of these special groups.

In respect to enhance self confidence educators can guide parents to provide an atmosphere of love and warmth to their children. They can encourage teachers to initiate and develop activities that are sensitive to the diversity of students. This will provide a supportive school climate that fosters healthy traits. Apart from this they can also help children develop resiliency by taking on the role of the encourager, someone who acknowledges the significance of the defeat but does not allow it to result in a sense of personal failure. The key is to help the child see the big picture and refocus on an ability to try again or, if necessary, find alternative means to accomplish the goal. This process allows the child to accept the responsibility for the effort but also be reassured of his or her own worth. Children also need to believe that accomplishment comes through their own actions. This is often referred to as self-efficacy or self-determination. Children who lack this ability may be less resilient, overly dependent, or tend
not to accept responsibility for their actions because they do not believe they are in control.

To summarize, the present research presents a predictive instrument of academic achievement that can be utilised by parents, teachers, administrators and guidance personnels for substantially enhancing the academic performance of students, especially for those studying in senior secondary schools.

6.3. SUGGESTIONS FOR FURTHER RESEARCH

Academic achievement is the central concept in the area of Educational Psychology. Therefore immense importance is placed on academic achievement and the factors involved therein. The present study has thrown some light and insight into the relationship between predictive variables viz. Family climate, Mental Health, Study habits and Self confidence and the criterion variable i.e. Academic achievement of science and arts stream students of senior secondary school. Some broad suggestions on the lines on which further research studies can be conducted are given below:

(xi) The present investigation was carried out on 520 science stream and 345 arts stream students, studying in class XII of the intermediate colleges of Etawah and Aligarh city. Similar study can be carried out on a larger sample to get better and more authentic results.

(xii) A similar study can be carried out upon the students of different educational levels, different age groups, different educational streams and different levels of socio-economic status.

(xiii) A comparative study of similar type may be conducted on rural and urban students.

(xiv) The predictive variables used in this study viz. Family climate, Mental Health, Study habits and Self confidence can be studied in relation to other variables like creativity, aspiration levels, self-concept etc.
(xv) The academic achievement of students can be studied in relation to factors other than Family climate, Mental Health, Study habits and Self confidence.

(xvi) The most puzzling result of this study was the low contribution of self confidence in determining the academic achievement of the students. This has made the investigator curious to know about the causes underlying this state of affairs. The investigator is therefore of the opinion that it would be meaningful if further research in this area is conducted.

(xvii) Research may be planned to develop projective tools for measuring the predictive variables undertaken in the present investigation.

(xviii) The board of intermediate education offers also the agriculture, constructive, business streams of courses. The present research has attempted to study the achievement in only science and arts streams. Prediction of achievement in other streams other than scientific and literary courses should also be made.

(xix) The present investigation is confined only to the students studying in intermediate classes (XII) of U.P. Board of Aligarh and Etawah Districts. Other districts or regions of the state should be included for further research.

(xx) This study is confined only to govt. U.P. Board senior secondary school students; its findings cannot be applied to all the stages of education. Thus there is a need to generalize this study by taking a sample from all level of schooling to corroborate the findings of the study.

6.3.1. Topics suggested for future researches:

Some topics suggested by the investigator are given below on which further research studies can be conducted:

- Family climate, Study habits, Self confidence and academic achievement as predictors of Mental health at senior secondary stage.
- A comparative study of Family climate, Mental health, Study habits and Self confidence of rural and urban students.
- A comparative study of the level of self confidence between students of medicine and engineering.
- A study of the Mental Health status of the students of A.M.U., Aligarh.
- A study of types of Study habits of Arts, Commerce and Science students of Secondary schools.
- Self concept, Mental ability and Parental support as correlates of Academic self confidence.
- A study of Academic achievement of Children of Nuclear and Joint family.
- Mental Health Problems in Secondary School Children and its Relation to Self confidence and Scholastic Achievement.
- Family climate, peer relations, and academic achievement as predictors of happiness and loneliness.