'A Study on Academic Achievement of Secondary School Students in relation to their Mental Health and Personal Adjustment in Science'

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Abstract: In the present study an attempt was made to elaborate Academic Achievement of Secondary School Students in relation to their Mental Health and Personal Adjustment in Science. The sample of 100 Secondary School Students (50 Male and 50 Female) were taken from Government, Aided and Unaided Schools at Belagavi District in Karnataka State. Tools used for the study were the Mental Health Battery (Singh and Gupta 2005) and the Academic Achievement was assessed by the results of their matriculation board examination in the subject of Science. Results clearly indicated that there is a highly significant relation between academic achievement and certain dimensions of mental health namely overall adjustment and intelligence for the sample as a whole.

Keywords: Academic Achievement, Adolescents, Mental Health

I. INTRODUCTION

Education in its general sense is a form of learning in which the knowledge, skills, and habits of a group of people are transferred from one generation to the next through teaching, training, or research. Education frequently takes place under the guidance of teachers, but may also be autodidactic. Any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational. Education is commonly divided into stages such as Pre-School, Primary School, Secondary School and then College, University or Apprenticeship.

II. MENTAL HEALTH, PERSONAL ADJUSTMENT AND ACADEMIC ACHIEVEMENT

Academic achievement is one of the most important goals of education in this competitive age. Achievement itself on varying degree depends upon various factors like age, sex, intelligence, personality, motivation, socio-economic status, attitude, study habits, mental health etc. which are termed as correlates of achievement and in turn categorizes pupils as high achievers, average achievers and low achievers. Out of these Mental Health and Personal Adjustment can be considered as important factors, as good intellect depends on the sound Mental Health and Personal Adjustment with the classmates.

Academic achievement of a student refers to the skills developed in school subjects that are evaluated by school authorities with the help of achievement tests that may be either standardized or teacher made. In other words academic achievement may be defined as competence that is really revealed in school subjects in which they have received instructions.

In spite of all the best efforts made in schools to raise the abilities, capabilities and personality traits of children, it is not possible for us to attain the optimum level of educational goals i.e. all round development of one's personality.

One of the major factors influencing educational products is the sound Mental Health and Personal Adjustment which is a key to success in all domains of life. Health is an indispensable quality in human beings. It has been described as soul from which the finest flowers grow. A healthy individual is not only physically healthy, but is also mentally healthy. The modern concept of health extends beyond the proper functioning of the body. It includes a sound, efficient mind and controlled emotions.

Mental Health which today is recognized as an important aspect of one's total health status is a basic factor that contributes to the maintenance of physical health as well as social effectiveness.

Modern age is the age of competition, which results in tension and mental illness. The present era of educational scene is fast changing. Curriculum and co-curriculum offerings have tremendously expanded thereby gripping the students in adjustment problems. Good Mental Health is obtained and maintained by helping pupils to overcome serious conflicts and frustrations. They are to be helped to understand their own potentialities, abilities, aptitudes, interests and the environmental conditions so that they can work harmoniously at an optimum level of functioning.

III. NEED OF THE STUDY

A number of studies have been conducted in context of Academic Achievement of Secondary School Students in relation to their Mental Health and Personal Adjustment. These clearly indicate that we have some evidences regarding association of Academic Achievement with Mental Health and Personal Adjustment but none of the study was found pertaining to Academic Achievement of Secondary School Students in relation to Mental Health and Personal Adjustment in Science. So a need was felt to study Academic Achievement in relation to Mental Health and Personal Adjustment of Secondary School Students.

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IV. STATEMENT OF THE PROBLEM

'A Study on Academic Achievement of Secondary School Students in relation to their Mental Health and Personal Adjustment in Science.'

Objectives of the Study:

The objectives of the present study are as follows:

1. To know the relationship of Mental Health on Academic Achievement.

2. To know the relationship of Academic Achievement and Personal Adjustment.

3. To study the influence of Mental Health of Secondary School Students on their Academic Achievement.

4. To study the influence of Personal Adjustment of Secondary School students on their Academic Achievement.

5. To study the relationship of Mental Health and Personal Adjustment with the Academic Achievement of Secondary School students.

6. To study the difference between Boys and Girls belonging to difference type of management in respect of their Academic Achievement.

7. To study the difference between Boys and Girls in respect of their Personal Adjustment.

Hypothesis 1:

There is no significant difference between Male and Female students of Secondary Schools with respect to Academic Achievement in Science.

To achieve this hypothesis, the unpaired 't-test' was applied and the results are presented in the following table.

Table: Results of 't-test' between male and female students of secondary schools with respect to academic achievement in science

Gender	n	Mean	SD	t-value	P-value	Significance
Male	50	68.62	14.52	-4.6540	0.00001	
Female	51	81.22	12.64		<0.05	S

From the results of the above table, it can be seen that, there is a significant difference was observed between Male and Female students of Secondary Schools with respect to Academic Achievement in Science (t=-4.6540, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted.

Hypothesis 2:

There is no significant difference between Male and Female students of Secondary Schools with respect to Mental Health Scores.

To achieve this hypothesis, the unpaired 't-test' was applied and the results are presented in the following table.

Table: Results of 't-test' between Male and Female students of Secondary Schools with respect to Mental Health Scores.

Gender	n	Mean	SD	t-value	P-value	Signi
Male	50	237.98	3.22	-3.7375	0.0003	
Female	51	241.41	5.66		<0.05	S

From the results of the above table, it can be seen that, there is a significant difference was observed between male and female students of secondary schools with respect to mental health scores (t=-3.7375, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted.

Hypothesis 3:

There is no significant difference between Male and Female students of Secondary Schools with respect to Personal Adjustment Scores.

To achieve this hypothesis, the unpaired 't-test' was applied and the results are presented in the following table.

Table: Results of 't-test' between Male and Female students of Secondary Schools with respect to Personal Adjustment Scores

Gender	N	Mean	SD	t-value	P-value	Signi
Male	50	122.78	3.03	-2.5942	0.0109	
Female	51	124.41	3.29		<0.05	S

From the results of the above table, it can be seen that, there is a significant difference was observed between Male and Female students of Secondary Schools with respect to Personal Adjustment Scores (t=-2.5942, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted.

Hypothesis 4:

There is no significant difference between Aided, Unaided and Government Secondary School Students with respect to Academic Achievement in Science.

To achieve this hypothesis, the one way ANOVA test was applied and the results are presented in the following table.

Table: Results of ANOVA test between Aided, Unaided and Government Secondary School Students with respect to Academic Achievement in Science.

Sources of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F-value	p-value	Signi
Between Managements	5300.49	2	2650.25	15.2658	0.00001	
Within Managements	17013.4	98	173.61		<0.05	S
Total	22313.9	100				

From the results of the above table, it can be seen that, there is a significant difference was observed between Aided, Unaided and Government Secondary School Students with respect to Academic Achievement in Science Scores (F=15.2658, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted.

Hypothesis 5:

There is no significant difference between Aided, Unaided and Government Secondary School Students with respect to Mental Health Scores.

To achieve this hypothesis, the one way ANOVA test was applied and the results are presented in the following table.

Table: Results of ANOVA test between Aided, Unaided and Government Secondary School Students with respect to Mental Health Scores

Sources of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F-value	p-value	Signi.
Between Managements	528.25	2	264.13	13.7945	0.00001	
Within Managements	1876.42	98	19.15		<0.05	S
Total	2404.67	100				

 From the results of the above table, it can be seen that, there is a significant difference was observed between Aided, Unaided and Government Secondary School Students with respect to Mental Health Scores (F=13.7945, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted.

Hypothesis 6:

There is no significant difference between Aided, Unaided and Government Secondary School Students with respect to Personal Adjustment Scores.

To achieve this hypothesis, the one way ANOVA test was applied and the results are presented in the following table.

Table: Results of ANOVA test between Aided, Unaided and Government Secondary School Students with respect to Personal Adjustment Scores.

Sources of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F-value	p-value	Sig ni
Between Managements	272.458	2	136.23	17.0352	0.00001	
Within Managements	783.700	98	8.00		<0.05	S
Total	1056.15	100				

From the results of the above table, it can be seen that, there is a significant difference was observed between Aided, Unaided and Government Secondary School Students with respect to Personal Adjustment Scores (F=17.0352, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted.

Hypothesis 7:

There is no significant relationship between Academic Achievement in Science with Mental Health and Personal Adjustment Scores of Secondary School Students.

To achieve this hypothesis, the Karl Pearson's correlation coefficient method was applied and the results are presented in the following table.

Table: Results of correlation coefficient between Academic Achievement in Science with Mental Health and Personal Adjustment Scores of Secondary School Students.

Variables	Achievement in science	Mental health	Personal adjustment
Achievement in science	-		
Mental health	r=0.6724*	-	
Personal adjustment	r=0.8708*	r=0.5142*	-

*p<0.05

From the results of the above table, it can be seen that,

1. A significant and positive correlation was observed between academic achievement in science and mental health scores of secondary school students (r=0.6724, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the academic achievement in science and mental health scores of secondary school students is dependent on each other.

2. A significant and positive correlation was observed between academic achievement in science and personal adjustment scores of secondary school students (r=0.8708, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the academic achievement in science and personal adjustment scores of secondary school students is dependent on each other.

3. A significant and positive correlation was observed between mental health and personal adjustment scores of secondary school students (r=0.5142, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the mental health and personal adjustment scores of secondary school students is dependent on each other.

V. DELIMITATIONS OF THE STUDY

1. The present study will be confined to Secondary School Students of Belagavi District in Karnataka State.

2. The Study will be further restricted to students studying in IX Standard.

3. The Study will be limited to only Academic Achievement in Science.

4. The Study will be restricted to Mental Health and Personal Adjustment only.

VI. COLLECTION OF DATA

To collect of the necessary data required for the study, printed copies of Academic Achievement Test, Mental Health and Personal Adjustment Inventory will be used. The objective of the study is to investigate the relationship of Mental Health and Personal Adjustment on Academic Achievement of Secondary School Students.

VII. TECHNIQUES FOR STATISTICAL ANALYSIS

To test the hypothesis based on the objectives of the study, following statistical techniques were used to analyze the data and interpretation.

1. t-test
2. Simple correlation
3. ANOVA

VIII. MAJOR FINDINGS

1. The Female students of Secondary Schools have higher Mental Health scores as compared to Male students.

2. The Female students of Secondary Schools have higher Personal Adjustment scores as compared to Male students.

3. The Female students of Secondary Schools have higher Personal Adjustment scores as compared to Male students.

4. The students of Aided, Unaided and Government Secondary Schools have different Academic Achievement in Science scores.

5. The students of Aided Secondary Schools have higher Academic Achievement in Science scores as compared to Government Schools.

6. The students of Unaided Secondary Schools have higher Academic Achievement in Science scores as compared to Government Schools.

7. The students of Aided, Unaided and Government Secondary Schools have different Mental Health scores.

8. The students of Unaided Secondary Schools have higher Mental Health scores as compared to Aided Schools.

9. The students of Unaided Secondary Schools have higher Mental Health scores as compared to Government Schools.

10. The students of Aided, Unaided and Government Secondary Schools have different Personal Adjustment scores.

11. The students of Aided Secondary Schools have higher Personal Adjustment scores as compared to Government Schools.

12. The students of unaided Secondary Schools have higher Personal Adjustment scores as compared to government schools.

13. Increase in Mental Health increases Academic Achievement of Secondary School Students.

14. Increase in Personal Adjustment increases Academic Achievement of Secondary School students.

15. Increase in Mental Health increases Academic Achievement of Secondary School Students.

IX. CONCLUSIONS

The main purpose of the present study was to find out the effect of Mental Health and Personal Adjustment on Academic Achievement in Science. Findings of study clearly reveal that for better Academic Achievement a healthy environment which nurtures Mental Health and Personal Adjustment should be provided to adolescents by family, school, neighborhood and society in general. The results also show that special attention is needed for the students studying in Government Schools. The Government and authorities should pay due attention towards Government schools. The facilities and infrastructure of the Government schools should be augmented liberally.

X. EDUCATIONAL IMPLICATIONS

1. Implementing supportive public policies.

2. Developing safe, caring, and supportive environments.

3. providing direct instruction for students on skills and strategies

4. Creating infrastructure for community action

5. Coordinating with community agencies, schools, families, and students to create a common vision, language, and coordinated services to support healthy outcomes.

6. As girls scored high in both Science and Mental Health than the boys the parents and teachers should give more attention towards the development of Mental Health among the boys.

7. Similarly, girls scored high on achievement in Science and also personal adjustment when compared to boys, precautions to be taken to develop Personal Adjustment character tics among the boys.

8. Based on the findings it is suggested that, more and more attention in the development of Mental Health and Personal Adjustment to be given and to be promoted through number of programmes in Government schools.

9. Even in the case of Mental Health more attention should be given for the Government School to develop Mental Health and Personal Adjustment.

10. Increase in Mental Health and Personal Adjustment increased Academic Achievement of students in Science.

XI. REFERENCES

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