



A Study of Relationship between Mental Health and Conceptual Understanding in Mathematics of Class VIII Students of U. P. Board.

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If we ask somebody that, do you like yourself? Different individual may answer it differently. Some body may answer it positively but some may say “I don’t know” or “There are times I hate myself”. From the above we may say that some people are well adjusted but some may have some problem in adjustment. Generally a person who likes himself may be regarded as mentally healthy. Conversely strong dislikes of one’s self is a typical symptom of maladjustment. A mentally healthy individual feels that he is an accepted member of a social group and they in turn like him. But the maladjusted person may reject in totally different way.

Educationist thinks that a mentally healthy person is one who is physically fit, mentally sound, emotionally balanced and socially well adjusted. Education is a dynamic process which influences physical, mental and emotional developments of every individual. Health is a state of complete physical, mental and social well being. Mental health largely depends on a good condition of the body, mind and spirit. An active brain has normal blood circulation and if blood will flow to the brain rapidly, brain cell will get adequate nourishments and power of thinking will be increased. Education nurtures the mind and insures that each individual achieves knowledge and wisdom. Complexities of modern life and societal demands have made human life full of tension and anxiety. This leads to mental and physical ill health. Thus finding ways to foster and enhance the mental and physical health of children and youth has become a prime necessity of modern life and education.

Mental health plays an important role in social and educational adjustment of individual. A mentally healthy person is socially useful and productive. On the other hand, a mentally healthy person is an emotionally and socially maladjusted and a burden on the society. The problem of mental health must be solved if one wants to have a peace full and prosperous society and nation. These facts have attracted the attention of educationists, psychologists and researcher towards mental health.

Indian concept of mental health is available in the Atharva Veda which provides detailed information on mental disorder and their treatment. According to Atharva Veda mental

personality consists of three gunas or characteristics: Sattya, Rajas and Tamas. The imbalance of these gunas causes mental disorder. These gunas are in the mind since birth, but they keep certain equilibrium in a normal person. So normal mental health means living in Rajas and Tamas to a certain degree.

The **Charak Samhita** and **Susrut** have also given the concept of mental health, but they do not differ significantly from the Atharva Veda's concept of mental health. These concepts of mental health are used in Aiurveda.

Various studies for example, Anand, S.P. 1988, Pradhan, S.L. 1988, Agrawal, A. 1989, Anand, S.P. 1989, Singh, A. 1998 AND Dwivedi,G.K. 2002 etc. have been conducted on academic achievement and mental health. But, there was no study available to the investigator who aims to study the relationship between mental health and conceptual understanding in mathematics of class 8th grade students. Therefore, the proposed study has been selected to the study the relationship between mental health and conceptual understanding in mathematics.

Need of the study:

The concept of mathematics is fully abstract in nature. Traditional approach of teaching mathematics is mainly responsible for drifting the students away from a naturally interesting subject. Thus to understand this, is very difficult in relation to other learning subjects. Through observation it has been seen that many students have the ability to apply mathematical operations like , +,-, x & divisions in real numbers, while some have the absence of proper handling to these operations. This is an example of real numbers but they have a major problem with the rational, fractional, positive-negative integers etc. These happen due to lack of conceptual understanding in mathematics. Resolution of these problems need to be found out and shorted out. Many factors which influences conceptual understanding, have been researched out and worked out. Mental health is another factor which influences every aspect of student's life like, social, psychological, economical, personal, and educational.

Keeping the above facts and views in mind, the present investigator selected the fallowing problem for extensive and detailed study to specifically provide an empirical answer to the fallowing research questions.

Research questions:

The following are the research questions of the study:

1. What is the level of conceptual understanding in mathematics of class VIII students of U.P. Board?
2. What is the level of mental health of class VIII students of U.P. Board?
3. What is the relationship between mental health and conceptual understanding in mathematics of class VIII students of U.P. Board?

Title of the problem:

On the basis of review of some literatures, need of the study, suggestions given in the previous dissertations etc. the present study have been entitled as, "***A Study of Relationship***

between Mental Health and Conceptual Understanding in Mathematics of Class VIII Students of U. P. Board”.

Definitions of the key words:

Mental health:

According to Dictionary of education (C.V.GOOD, 1973), mental health is defined as follows:

“Wholesomeness of mind analogous to wholesomeness of body, implicit in physical health, extended in modern usage to include all aspects of the adequacy of personality integration”.

However, in the present study six components of mental health have been taken into consideration. These are:

- (1) Self-concept
- (2) Concept of life
- (3) Perception of others
- (4) Perception by others
- (5) Adjustment and
- (6) Achievement

Mental health has been assessed in terms of total mental health scores by summing the scores gained by different respondents on the characteristics mentioned above by mental health questionnaire.

Conceptual understanding in mathematics:

In this study a self made, ‘conceptual understanding test’ have been made to estimate the understanding of concepts about few chapters in mathematics. The score acquired by the students represents their conceptual understanding in mathematics.

Objectives of the study:

This study achieved the following specific objectives:

- 1) To study the relationship between mental health and conceptual understanding in mathematics of class VIII students of U.P. Board.
- 2) To study the relationship between all components of mental health and conceptual understanding of class VIII students of U.P. Board.

Hypothesis of the study:

The following statistical hypotheses were tested in this study at 0.05, level of significance.

- 1) There is no significant relationship between mental health and conceptual understanding in mathematics of VIII class students.

Methodology: A descriptive survey method is used for conducting the proposed study.

Population: The study is conducted on VIII class students of U.P Board and in Varanasi district of U.P.

Sample of the study: A sample of reasonable size is selected randomly for conducting this study.

Sample of the study were consists of 100 students from U.P. Board of different schools of Varanasi district randomly.

Delimitation of the study:

Due to scarcity of time and money, the main delimitations of the study are as follows.

- i) The study has been limited to U.P. Board of Varanasi district only.
- ii) Both the tools have been used in Hindi.
- iii) Out of many dimension of mental health only six components were selected for study because they were supposed to be elementary in nature and are present in all the complex structures of mental health.
- iv) Test for conceptual understanding in mathematics have only five concepts to assess.

A detailed description of the sample has been described in the following different tables.

PRESENTATION OF THE DATA

(1) Distribution of the total sample:

Table-1

Distribution of the total sample:

S.No.	Name of schools	Board	Male	Female	Total no. of students
1	Sanatan dharm Inter College.	U.P.	25	0	25
2	Vidya vihar Inter College.	U.P.	10	30	40
3	Ram Krishna vidya mandir Inter College.	U.P.	14	0	14
4	Kanyakumari balika Inter College.	U.P	0	21	21
	TOTAL		49	51	100

Distribution of the sample according to the locale and board:

Table-2

Locale and board wise distribution of the sample:

S.No.	Board	Locale		Number
		U	R	
1	U.P.	36	64	100

Table-3

Mean,Median and S.D. of different board group of students:

S.NO.	Variable	Board	Mean	Median	S.D.	N
1	Mental health and C.U. in Maths	U.P.	131.92	134	22.79	100

Hypothesis testing :

On the basis of the 1st objective of the study as, ‘to study the relationship between mental health and conceptual understanding in mathematics of U.P. Board students of class VIII ’. Thus we analyzed data in following way fulfill this need of the study

Relationship between mental health and conceptual understanding in mathematics of class VIII students of U.P. Board.

Table-4

S.No.	Variable	N	Df	Correlation	Level of significance	Result
1	Mental health	100	99	0.359837	0.195	Significant
2	Conceptual understanding	100			0.05	

From the above table it is evident that, the correlation is significant at 0.05, level of significance. The calculated r-value is greater than the table value at significant level 0.05 with degree of freedom 99, is significant.

Interpretation – The null hypotheses ‘H01- *There is no significant relationship between mental health and conceptual understanding in mathematics of class VIII students of U.P. Board.*’, is rejected.

Discussion- The above result shows that there is significance correlation between mental health and conceptual understanding in mathematics of u p board students. It means mental health and conceptual understanding is positively correlated in u p board of class VII students. Which shows the students of class VIII having good mental health will also posses high conceptual understanding.

Although mental health is very significantly correlated with conceptual understanding in mathematics, but at the same times it is also a matter of interest to see the significance of correlation between the components of mental health and conceptual understanding.

Here there are six components viz., **self concept, concept of life, perception of others, perception by others, adjustment and achievement.**

Relationship between components of mental health and conceptual understanding in Mathematics of class VIII of U.P. Board.

Table -5

S.No.	Variable 1	Variable 2	df	Correlation	Level of significance	Result
1	Self concept	Conceptual understanding	99	0.19616	0.05	Significant
2	Concept of life			0.38114	0.05	Significant
3	Perception of others			0.373734	0.05	Significant
4	Perception by others			0.19706	0.05	Significant
5	Adjustment			0.234295	0.05	Significant
6	Achievement			0.1998	0.05	Significant

From the above table it is evident that every components of mental health have a significant relationship with conceptual understanding in mathematics of students of class VIII, at the level of significance 0.05.

The third component, concept of life and perception of others has the more impact on conceptual understanding in mathematics of students of class VIII. It means with all the components of mental health, the perception of others are related with the conceptual understanding in mathematics positively.

Finding:-

Analysis of the data was performed by rearranging the data and keeping in view the objective and hypotheses of the study. On the basis of that analysis the findings were as follows:

- The distribution of the mental health and conceptual understanding in mathematics of class VIII students was found to be normal with a mean of 131.92, median 134 and S.D. 22.79 however the peak was somewhat platykurtic and the curve was negatively skewed.
- There is a significant relationship was found between mental health and conceptual understanding of Hindi medium students of class VIII students.
- Positive correlation was found in mental health and conceptual understanding in mathematics of class VIII students , means 'mental health is related with the conceptual understanding in mathematics positively'.

Conclusion:-

On the basis of the findings of this study researcher arrived at some different conclusions. Due to the limitations of the tool, small size of the sample and the selection of some relevant variables only, it is difficult to assign any cause and affect relationship among variables. However study aimed at establishing same fundamental relationship among variables. Thus keeping in mind the above facts and the level of significance 0.05, it may be conclude that mental health is related with the conceptual understanding in mathematics of class VIII students positively.

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