



CORRELATION ON ENVIRONMENT FACTORS, LEARNING HABITS AND SELF-ESTEEM OF HIGHER SECONDARY MATHEMATICS STUDENTS

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ABSTRACT

It is an attempt to determine the significant relationship between environmental factor, learning habits and Self-esteem at higher secondary mathematics students with reference to certain demographic variable such as gender, standard, locality of the school, nativity of the student, nature of school, type of management, medium of institution and status of the family. It tested that there is no significant relationship between environmental factor, learning habits and Self-esteem of higher secondary mathematics students with reference to same demographic variable. The investigator has applied descriptive survey. Environmental Factors Inventory (EFI), Learning Habits Inventory (LHI) and Self-Esteem Inventory (SEI) tools were used in this study. Stratified sampling has been used to select the sample for the investigation. There is significant difference between nuclear family student and joint family students in their home environment, school environment, social environment and total environment. There is no significant difference among boys, girls and co-education school students in their environmental factors. There is significant difference among government, aided and self financing school students in their competency, global self esteem, family, body and physical appearance and total self esteem.

KEYWORDS : Environment Factors, Learning Habits and Self-Esteem

INTRODUCTION:

Mathematics as an expression of the human mind reflects the active will, the contemplative reason, and the desire for aesthetic perfection. Its basic elements are logic and intuition, analysis and construction, generality and individuality - Courant and Robbins. Education is the development of all those capacities in the individual which will enable him to control his environment and fulfill his possibilities- John Dewey. Education today has become a powerful tool for the development of the society. Education is considered as an instrument for social changes resulting in industrialization, urbanization and social enlistment. The modern school is not a knowledge shop and the learning experience should not be limited to four walls of the classroom. The school should provide various opportunities to the students for participating in social services, community, activities, and health campaigns literacy derives and other kinds of public service of educational importance. This will break the barriers between the school and the community and make school life and experiences meaningful lively, realistic and natural (Mohanty 2004). Education should help to discover lasting values so that pupil does not merely cling to formulate or repeat slogans; it should help them to break down their national and social barriers, instead of emphasizing for the bread antagonism between man and man. Thus education should awaken the capacity to be self-aware and merely indulge in gratifying.

The Objectives of Secondary Education as proposed by Secondary Education Commission involve the full and all-round development of every individual's personality. Mathematics plays an important role in accelerating the social, economical and technology growth of a nation. It is more so in India as the nation is rapidly moving towards globalization in all aspects. Mathematics is regarded as the mother of all sciences. If our students are to function effectively in this era of rapid technological advancement and globalization, they must be mathematically literate. Those who understand and can do mathematics have significantly enhanced opportunities and options that will open doors to productivity.

Everything in education is planned and set for the benefit of the students. They are to be given varied learning experiences

for the modification of their behavior and development of their personalities. Different subjects of the curriculum contribute towards the realization of this aim. So does the mathematics. Like other subjects in teaching of mathematics many things are planned and set in advance. Curriculum and syllabi are framed, new techniques and devices are explored, variety of audio-visual aids are collected, appropriate text-books are written, various equipments are purchased and suitable facilities for the effective learning are provided. In spite of all these preparations and planning the most important thing that can never be challenged and matched for is the presence of a component and effective teacher. No machine and no other source how sophisticated it may be replace him. In order to cater to the needs of the heterogeneous group a teacher has to adopt several methods and techniques. The knowledge of the psychological traits is helpful to the teacher to know about the needs of the students and to succeed in his / her teaching process. Many factors are influenced in the learning process likely environment and self esteem. **Environment Factors:** Environment is a powerful factor, which influences the development of a child. Every child is born in a family at a particular place and time in a specific environment. This environment either controlled or uncontrolled exerts its influence upon the growing child in different ways. Influence of the environment on personality can roughly be divided into that at home and school. The elements of both school environment and home environment have a strong and direct impact on the academic performance of students. Skinner (1995) defined school is a special environment where a certain quality of life and certain types of activities and occupations are provided with the object of securing Childs development along desirable lines. A proper and adequate environment is very much essential for the fruitful learning of the child. Especially, the home and the school should provide the necessary stimulus for learning. Environment stands for all those circumstances which are asserting their influences on the individual since birth to death. Environment is such a powerful factor that it influences the development of child consciously or unconsciously or both. One cannot escape its influence at any cost. Education is a process based on and conditioned by the environment in which the child is brought up.

Environment stands for all those circumstances which are asserting their influences on the individual since birth to death. Learning takes place effectively only when congenial environment is provided for children in class room, school, home and the society, which area part of his learning environment. The learning environment is an important determinant of success in any educational system. In the present investigation, the factors of learning environment considered are divided by internal and external factors. In this connection both variables are much importance to accessible in the current educational environment. There are six internal factors are involved during the learning period such as age, intelligence, attention, interest, mental and physical health and fatigue. There are six external factors are involved during the learning period such as nature of knowledge, recitation, meaningfulness, exercise of repetition, by parts learning and reward and punishment. Some other factors are directly influencing in during the learning period such as home Environment refers to the environment existing in home, which includes the atmosphere created by parents, siblings and other family members. School environment includes the environment prevalent in school other than the classroom and Social environment refers to the impact of various social factors on an individual. A proper and adequate environment is very much necessary for a fruitful learning of the child. Especially, the home and the school should provide the necessary stimulus for learning experience.

Self Esteem:

When an individual has established a concept of self, then he is able to determine or not he is satisfied with what he feels about himself. Thus self-esteem can be judged. It will be more appropriate to indicate have that all individuals have self-esteem because they have worth, value and high regard, but it may range from high to low in various individuals and in various aspect of the substantive self. Self-esteem is the individual's satisfaction with his self-concept; positive beliefs of them are termed as positive self-esteem. It is the complex picture of perceived self value. It is the disposition to feel worthy of happiness, respect, friendship, achievement and success defined feelings of self-worth provide the foundation for motivation. Doherty (1980) defined self-esteem refers to the way a person perceives and defines himself is postulated to have an effect upon his behaviour, how he will relate to other people, what tasks he will attempt, what states of tension he will experiences and how he subsequently will perceive himself. The aspects of self-esteem are Self-Concept described as, "the individuals appraisal or evaluation of himself." Self-image: the perfect and ideal state which the individual imagines himself to be after identification with an idealized conception of what he should be. Self-acceptance: a healthy attitude towards one's worth and limitations consisting of an objective recognition of each quality and an acceptance of each as being part of the self. Self-insight: an awareness of one's basic motivation and the effects that these motivations may have on thinking and conduct. Self-knowledge: requires an intelligent inventory of personal assets and liabilities and self-understanding and self-esteem. There is a perfect relationship between high scholastic achievements and a positive self-concept, while the low ones have got a negative self-concept.

Need and Importance of the Study:

Good self-esteem is important because it helps your students to hold their head high and feel proud of their accomplishments and abilities. It gives them the courage to try new challenges and the power to believe in themselves. It allows them to respect themselves-even when they make mistakes. Research shows that a positive self-concept is more important to academic success than a high IQ score. Children will have greater self-esteem if they feel a sense of ownership and responsibility for their experiences. Huitt (2004) should

that the relationship of self-esteem to school achievement is very specific. General self-esteem and non-academic aspects of self-esteem are not related to academic work; general academic performance measures are related moderately to academic success specific measures of subject- related self-esteem are highly related to success in that content area. The learning environment is an important determinant of success in any educational system. A proper and adequate environment is very much essential for the fruitful learning of the child. Especially, the home and the school should provide the necessary stimulus for learning. Home is said to be the first school of the child and home environment is one of the most potential factors which influences a Childs' achievement (verma and gupta 1990: Tandon, 1983: Jaganathan, 1986) and it develops various abilities in children (Frasser, 1981). Children coming from high home environment achieve better in schools than their counter parts coming from low home environment. Parents education, personality characteristic, emotional and social behavior, mutual affection, love and quarrels, their interest and attitudes and general character etc. (Pereira 2016). Parents are responsible for developing disciplined behavior and creative thinking in their child from very early childhood. Next to home, school is the second most important institution in the developmental process of child. Schools should promote the complete development of individuality of a child. It can provide a variety of learning experiences through curricular and co-curricular activities. The social environment which influences the intellectual development of the child includes the family, friends and classmates, neighbors, teachers, members of the community and society. The means of mass communication, recreation, religious places, social centers, clubs and libraries can form contributions factors for academic performance.

Learning takes place effectively only when congenial environment is provided for children with high self-esteem in classroom, school and home. Realizing this, the investigator has planned to find the relation of environment factors and self-esteem of higher secondary mathematics students which will in turn to nurture the importance of learning mathematics more effectively in coming era.

OBJECTIVES:

The objectives of this study are to find out the environment factors and self esteem of higher secondary mathematics students with reference to certain demographic variables such as gender, locality of the school, nativity of the student, nature of school, type of management, medium of institution and status of the family. To find out the significant relation if any in environment factors and self esteem of higher secondary mathematics students.

Hypothesis:

There is no significant relationship between environment factors and self esteem of mathematics student at higher secondary level with reference to certain same demographic variables.

Research Method:

The aim of the present study is to find out the correlation of environmental factors and self-esteem of mathematics at higher secondary students. The descriptive survey method is the most suitable method for the present study. Research Tools: The Investigator constructed and standardized the Environmental Factors Inventory (EFI) for assessing environmental factors and taken the available Self-Esteem Inventory (SEI) of Sasikala and Karunanidhi (2011) with reliability and validity.

Environmental Factors Inventory (EFI):

The tool environmental factors inventory (EFI) with 103 positive and negative statements fall into three areas such as:

home environment, school environment and social environment with the five point scale such as strongly agree, agree, neutral, disagree and strongly disagree. The five point scale is scored 5, 4, 3, 2 and 1 for positive statements and scored reversely for negative items. A preliminary try out of the tools was arranged to find out the weakness and workability of the items. For this purpose the tools were given to 100 higher secondary mathematics students randomly covering high, average and low achievers in four schools.

Content validity

relates to the degree to which a test samples the content area which is to be measured. The draft tool was given to teacher educators and experts for their comments and suggestions. Some items were reformulated and refined on the basis of the suggestions given by them. To estimate the worth of the items, the investigator with the help of the suggestions given by the field experts, modified certain items and made them appropriate. Thus, the content validity of the tool was established.

Items Validity:

For finding the truthfulness of test items and inter-connectedness of different items in the same tool, item validity was calculated as it is very essential for selecting items to the final tool. From the responses obtained from 100 students on the draft tool, the sum of scores on each dimension of value scale was calculated. Then 'r' is calculated by correlating the individual item score and the corresponding component score. For further improvement and refinement of the scale, the tool was administered again to the sample. The scale was scored accordingly 't' value was calculated by identifying the high and low group. The total number of sample is taken as N which is multiplied by 0.27 and rounded off the result to the nearest whole number. This number is called 'n'. By applying this simple method, the investigator identified the top 27% and the bottom 27% in other words the high and the low group. The 't' value for each item was computed. At 5% level of significance the table value is 2.06 have been retained. The final tool consists of 65 items.

Reliability

is the degree of accuracy and consistency. The prepared tool was subjected to test-retest method. The tool was administered to a set of 100 students of higher secondary in mathematics. Again the same tool was administered to the same set of students after an interval of two week. The responses of the respondents were scored and the correlation co-efficient was found to be 0.78 for the two sets of scores. Thus the final form of the environmental factor scale consists of 65 items as such home environment (20 items), school environment (23 items) and social environment (22 items). Self-Esteem Inventory (SEI): The researcher employed for his investigation the Self-Esteem Inventory for adolescents prepared by Bharathi et al (2015). Self-esteem inventory consists of 83 items in the form of statements. It has both positive and negative items. Each statement has four alternative responses such as 'always', 'most of the time', 'sometimes', and 'never' with a score of 4, 3, 2 and 1. The negative items are scored reversely. The inventory measures

six dimensions of self-esteem: competency, global self-esteem, moral & self-control, social-esteem, family and body and physical appearance. The investigator had established the reliability coefficient for the Self-Esteem Inventory by using spilt half method. The Tamil version was given to the randomly selected 100 students studying in higher secondary schools in Villupuram district. Then correlation co-efficient by using spilt half reliability of the scale has been found to be 0.76. The investigator based on the suggestions given by the field experts, modified certain items and made them appropriate. Thus, the content validity of the tools was established.

Population and Sample:

The population of this study is the higher secondary school students studying in Villupuram district in Tamilnadu. Stratified sampling has been used to select the sample for the investigation. In Villupuram district there are 193 higher secondary schools functioning under the state board syllabus. Among the 193 higher secondary schools, the investigator has selected randomly 15 higher secondary schools and chosen 278 Mathematics students through Stratified sampling.

Limitations:

The study was conducted for twelfth standard mathematics students in the higher secondary schools of Villupuram district only. The study did not include students from any other science group other than mathematics.

Data Collection:

The investigator contacted the higher secondary students in mathematics with prior permissions. The researcher explained the purpose of the study and administered the tools.

Findings:

Based on percentage analysis it is found that the value of social environmental factors, boys are higher than girls. The same is true for urban students who have better percentage score the rural students. The percentage score for environment with regard to nativity is higher for rural students than for urban students. The same score for higher for boys' school than for girls schools. The percentage score for social environment is higher for government school. The percentage score for social environment of students from joint family is much higher than that of students from nuclear family this means joint family promotes social environment. The percentage score for self esteem of girls is higher. The percentage score for self esteem is higher among urban school students. The same is true with regard to nativity as urban school students have better percentage score in self esteem. The percentage of self esteem score of English medium studying students on select dimension is higher as students better than Tamil medium. The percentage score of self esteem among students from nuclear families is higher than that of students than joint family

This study has found that there is positive high correlation among environment factors as a whole, home environment, school environment, social environment and also with self esteem. The 'r' values significant at 0.01 level are given in the following table.

Correlation	Home Environment	School Environment	Social Environment	Environment Factors As A Whole	Self Esteem
Home Environment	1.00	0.617	0.583	0.528	0.625
School Environment	0.617	1.00	0.569	0.610	0.746
Social Environment	0.583	0.569	1.00	0.502	0.705
Environment Factors as a Whole	0.528	0.610	0.502	1.00	0.687
Self Esteem	0.625	0.746	0.705	0.687	1.00

CONCLUSION:

Based on the correlation found between environmental factors and self esteem of students, the investigator suggests with

following conclusions that varieties of co-curricular activities in mathematics like mathematics exhibition, puzzles, mathematics games, mathematics club meetings etc., should

be organized for the students in the schools. Parents should provide congenial atmosphere for the student to learning well at home. Parents should encourage their children to learning mathematics and reporting the progress of the students regularly to the parents will be presented. Provision of proper classroom with adequate facilities and providing calm and healthy environment of the school will yield conducive to education. Self-esteem develops and changes over the course of one's life. Therefore as regards family esteem, experiences and relationships with family members from birth until the present are strong influences. Self-acceptance in students could be improved by providing multiple ways for students to be successful in the class. Struggling students could be helped to understand the material they learning. Opportunities should be provided for the students to work with each other. Students must be allowed to explore options in different situations. They must be helped to develop a 'can do' attitude. Students must not allow past experiences to determine their lives. They should be trained to take time regularly to be alone and enjoy their own company. Hobbies, individual sports, crafts and reading are examples of ways to be alone. They must be trained to become creative and have their own ideas. They should be asked about their other activities. This article ensured that there is a positive correlation existed between environment factors and self-esteem of higher secondary mathematics students.

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