

Influence of Parent-Child Relationship on the Attitude of High School Students of Scheduled Castes Towards the Subject Mathematics

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Abstract

Society is a web of social relations. Social relation starts to grow with the development of a child. The first social relation of a child grows with family members, then neighbours, then society, then school and so on. These kinds of social relations are very essential for proper development and fruitful living. The parent-child relationship is also an important social relation which can help the child a lot in their proper growth and development of every aspect of life. In developing positive and negative attitudes towards any subject or object parent-child relationship can play a very significant role. The purpose of this study is to find out the influence of the Parent-Child relationship on the attitudes of High School students of scheduled castes towards the subject of Mathematics. A total of 400 students were selected for the study from the provincialised High Schools of Nalbari district of Assam. Three standardized scales were used for the study. The results show that the Parent-Child relationship has a significant influence on the attitude of High School students' of schedule castes towards the subject of Mathematics.

Keywords: Influence, Parent-Child, Relationship, Attitude, Mathematics

Introduction

Society is a web of social relations. Man is a social animal and he cannot live alone in society without social relations. There are various processes through which man establishes social relations of give and take with other members and becomes a part of society. A man living in society cannot remain indifferent to or unconcerned with his fellow members. He must be conscious and be concerned with other members and

share the feelings and experiences of joy and sorrow with them. He must consciously realize the presence of others. He should come in touch with others and consciously observe their reaction and behaviour of them. These are nothing but social relations. Thus, social relations are essential things needed for survival and happy living. Social relation starts to grow with the development of a child. The first social relation of a child grows with family members, then neighbours, then society, then school and so on. These kinds of social relations are very essential for proper development and fruitful living. The parent-child relationship is also an important social relation which can help the child a lot in their proper growth and development of every aspect of life.

Concept Of Parent-Child Relationship

The Parent-Child relationship refers to the bond that the parent forms with his or her child. The parent-child relationship consists of a combination of behaviours, feelings and expectations that are unique to a particular parent and a particular child. The relationship involves the full extent of a child's development. Of the many different relationships people form throughout the life span the relationship between parent and child is the most important. Like many other social relationships, parent-child relationships provide resources for individual development while they may also imply constraints for each other's needs fulfilment. It is such a relationship which influences every aspect of child development. The foundation for children's learning is provided by positive Parent-Child relationships. Parent's sensitive, responsive and predictable care, can help young children to develop the skills they need to succeed in life. Through these, positive Parent-Child relationships children learn the skills they need to engage with others and succeed in different environments. With parent's positive involvement children can do better in school, also, they can go to better schools.

Concept of Attitude

Attitude is one of the most important aspects of an individual's personality. It is a specific mental state. Attitude is a general tendency of an individual to act in a certain way under certain conditions. Attitude may be expressed as how one expresses his likes and dislikes towards people, things and occurrences. An attitude is an expression of favour or disfavour toward a person, place, thing or event. It is a point of view, that one holds towards a person, object, task or idea. An attitude can be defined as a positive or negative evaluation of people, objects, events, activities, ideas or just about anything in one's environment. An attitude is a particular feeling about something. It

involves a tendency to behave in a certain way towards a person, idea or object. It is partially rational and partially emotional and is acquired, not inherent, in an individual. It is a tendency to react favourably or unfavourably toward a designated class of stimuli, such as a national or racial group, a custom or an institution. It is a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour. The sum total of a man's inclinations and feelings, prejudice or bias, pre-conceived notions, ideas, fears, threats and convictions about any specific topic or a particular object is called attitude.

Attitude Towards Mathematics

Mathematics now dominates almost every field of one's activities. Knowledge of Mathematics is an essential tool for fruitful living in the society. It is a tool that can be used in our daily lives to overcome the difficulties faced by us. The lack of theoretical framework characterizes research on attitudes toward Mathematics. A large portion of studies do not provide a clear definition attitude towards Mathematics. Various studies mainly refer to one of the three following types of definitions:

1. Attitude towards Mathematics is just a positive or negative emotional disposition toward Mathematics.
2. An individual's attitude towards Mathematics is defined by the emotions, beliefs and behaviour that he/she associates with Mathematics.
3. Attitude towards Mathematics is seen as the pattern of beliefs and emotions associated with Mathematics.

Therefore, it is difficult to give a definition of attitude towards Mathematics that would be suitable for all situations. But we can present a working definition of attitude towards Mathematics as: 'Attitude towards Mathematics is just a positive or negative emotional disposition towards the subject, pattern of beliefs regarding the subject and behaviour related to Mathematics.'

Literature Review

The literature related to the present study is surveyed and presented as follows:

Gupta S and Pathak P. (2011) write in 'Involvement of Family and School Enrich Development of Children' that evidence shows a strong connection between parent

and family involvement in schools and children's academic achievement attendance, attitude, and continued education.

Choudhury R and Das K.D. (2012) studied on 'Influence of Attitude towards mathematics and study habit on the achievement in Mathematics at the secondary stage.' A Sample of 500 (250 boys and 250 girls), standard IX students from secondary schools of south Kamrup district of Assam were selected at random. The objectives of the study were) to enquire about the pupils' attitude towards Mathematics, b) to enquire about the pupils' study habits, and c) to find the achievement of the pupil in school examination from IX standard. They found that student's attitudes towards mathematics affect their achievement in mathematics. Moreover, the achievement of the subject of mathematics mostly depends on concept and practice. Attitude towards mathematics depends mainly on the home environment and parent's attitude towards mathematics.

Sjaastad J. (2013) studied 'Significant persons influence attitude towards science and mathematics.' He found that young people's attitudes towards science, technology, engineering and mathematics are subject to the interpersonal influence of significant persons.

Swamy R.N. (2013) has studied 'Parenting and Adolescent Behaviour: Feedback from the Classroom'. The study uses qualitative measures for parent involvement analysis. The main objective of the study was to determine the relationship between parenting and adolescents' problem behaviour in schools. The sample of the study consisted of 100 teachers who were drawn from three schools (CBSC) from Thiruvananthapuram district, Kerala. The findings of the study highlighted significant relationships between parenting styles and children's behavioural problems. Parents affect their adolescent's problem behaviour. When there is no proper monitoring and adequate support from family, adolescents are more likely to fall into behavioural problems.

Xavier A.S and Monika A.V. (2013) have studied the 'Relationship between Parental Involvement and Achievement of Higher Secondary Students in Commerce: A study'. The purpose of the study was to investigate the influence of parental involvement on the academic achievement of 11th-standard commerce students. In this study 1100, 11th standard commerce students studying in 24 higher secondary schools of Madurai Revenue District have been taken as samples. They observed that the child's first place of contact with the world is the family. The child, as a result, acquires initial education

and socialization from parents and other significant persons in the family. The parents are in short, the child's first teacher. They are the first and primary source of social support for young children. When parents are involved in the education of their children, children tend to model their parent's attitudes and actions.

Need and Significance of the Study

The present age is the age of Science and Technology. In such an age if India seeks to establish itself as a knowledge superpower then it is essential to give more importance towards teaching Science and Technology in school. But the existing scenario of Science education is very pathetic in Assam. The government has initiated various programmes to improve the situation. As a result, significant changes took place in towns and cities. But such changes have not reached the rural areas of our state, especially, the villages where Schedule Castes peoples are more. If we observe the results of the High School Leaving Certificate (H.S.L.C.) and enrolments in Higher Secondary (H.S.) level it is found that every year a very low percentage of total High School students go for Science Stream at 10+2 level. This percentage is much lower among the Schedule Castes students.

The world is progressing day by day in the fields of health, engineering, agriculture, electronics and telecommunications, nuclear science, bio-science etc. To cope with world progress a large number of our students have to study science and technology. Therefore, our school children must be provided with proper knowledge of Science and Mathematics at their school level so that they can prepare themselves for future life and future study in science and technology. Thus, there is a need to create an environment so that a maximum number of students can be attracted towards Science education.

Most of the children have a fear and hesitation towards the subject Mathematics in High School standard. Among Schedule Castes children such attitude seems to be much more than the general castes children due to their family environment, social environment, parents' illiteracy, poverty etc. The base of all knowledge and attitude is built up at home and is influenced by family. Scientific temper and attitude are also developed through the family. In the development of scientific temper and attitude, the role of parents is most important. Parents can influence a lot and can play a very significant role in the development of their children's attitudes. In developing positive and negative attitudes towards Mathematics Parent-Child Relationship can play a very

significant role. So the investigator felt the need and significance to do an investigation on this topic.

Objective of the Study

To study the influence of the Parent-Child relationship on the attitudes of High School students towards the subject of Mathematics

Hypothesis

H₁ : Parent-Child relationship has a significant influence on the attitude of High School students towards the subject of Mathematics.

Methodology

As the selected problem of investigation is concerned with current status phenomena, the investigator has selected the Descriptive Survey method for the present study.

Sample of the Study

In the present study, the Stratified Random Sampling technique is adopted for selecting the school sample and student sample. The whole Nalbari District was divided into two areas, Rural and Urban area. A total of 40 schools out of 166 were selected for the study. Out of these 40 schools, 20 were from rural areas and 20 from urban areas.

Regarding the student sample, a representative sample of 400 (200 male and 200 female) students was selected for the study, comprising 10 students from each school. The representative sample of Rural areas was 200(100 male and 100 female) and Urban areas were 200(100 male and 100 female).

Tools for Data Collection

The following tools were used for the collection of data in the present study:-

Parent-Child Relationship Scale: - This Scale was developed by the Late Nalini Rao, Bangalore University, Bangalore. There are 100 statements in the scale both for father and mother. The respondents were asked to rate the statements on a five-point scale as 'Always-5', 'Many times-4', 'Sometimes-3', 'Rarely-2' and 'Very rarely-1'. The total score on the scale is the Raw Score for it. The minimum and maximum range of possible Raw Score is 100 – 500. A higher score indicates a more favourable Parent-Child Relationship. When the Raw Scores were obtained after scoring the scale, the same was converted into Z Scores and then Grades and Levels of Parent-Child Relationship were determined. The reliability coefficients of the scale were found 0.770 to 0.871 for boys and 0.772 to 0.873 for girls.

Mathematics Attitude Scale: - This Scale was developed by Dr. Ali Imam of Integral University, Lucknow and Dr. Tahira Khatoun of Aligarh Muslim University, Aligarh. There are 22 statements on the scale consisting of 11 positive and 11 negative items. It is a 5-point scale ranging from 5 – 1 for positive items and 1 – 5 for negative items. The respondents were asked to rate the statements as 'Strongly Agree-5/1', 'Agree-4/2', 'Undecided-3/3', 'Disagree-2/4' and 'Strongly Disagree-1/5'. The total score on the scale is the Raw Score for it. The minimum and maximum range of possible Raw Score is 22 – 110. A higher score indicates a more positive attitude of students towards Mathematics. When the Raw Scores were obtained after scoring the scale, the same was converted into Z Scores and then Grades and Levels of Mathematics Attitude were determined. The reliability coefficients of the scale were found 0.91 by the Split-Half (odd-even) method.

Statistical Techniques Used for Analysis of Data:

The following statistical techniques were used for interpreting and analyzing the collected data:-

- Percentage
- Mean
- Standard Deviation
- Co-efficient of Correlation
- Graphical Representation

Statement of the Problem

Considering the need and significance of the study the investigator states the problem with the following title:

Influence of parent-child relationship on the attitude of high school students of scheduled castes towards the subject Mathematics

Influence of Parent-Child Relationship on Mathematics Attitude:

In order to find out the influence of the Parent-Child relationship on the attitudes of High School students of Schedule Castes towards the subject Mathematics, the categories of the Parent-Child relationship and the categories of Mathematics attitudes were found as follows:

Categories of Parent-Child Relationship

To find out the Parent-Child Relationship the Parent-Child Relationship Scale was used for the students. The responses of the students are sorted out and placed in appropriate tables. Then the scores of the students were separated according to the category of parent-child relationship as shown in table-1.

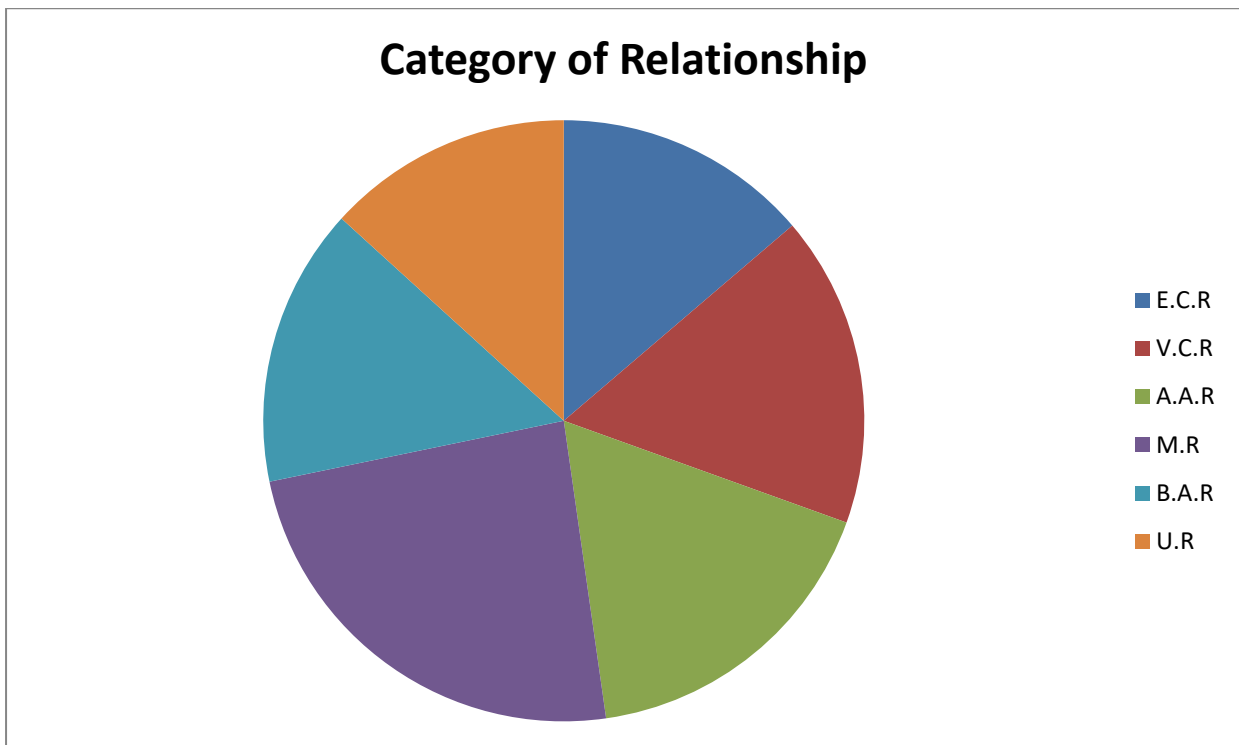
Table 1 Categories of Parent-Child Relationship

Category of relationship	No. of students	Percentage
Extremely cordial relationship	55	13.75 %
Very cordial relationship	67	16.75 %
Above average relationship	69	17.25 %
Moderate relationship	96	24.00 %
Below average relationship	60	15.00 %
Unfavourable relationship	53	13.25 %
TOTAL = 400		TOTAL = 100%

Table No-1 shows that 13.75 % of children have Extremely Cordial Relationships, 16.75 % of children have Very Cordial Relationships, 17.25 % of children have Above Average Relationships, 24.00 % of children have Moderate Relationships, 15.00 % of children have Below Average Relationships and 13.25 % children have Unfavourable Relationship with their parents respectively. It means that $(13.75\%+16.75\%+17.25\%) = 47.75\%$ children have favourable relationships and $(15.00\%+13.25\%) = 28.25\%$ children have unfavourable relationships with their parents. Again, 24.00% of children have neither favourable nor unfavourable relationships with their parents.

The Categories of Parent-Child Relationship are graphically presented in Fig.-1 as follows:

Figure-1 Categories of Parent-Child Relationship



(E.C.R- Extremely Cordial Relationship, V.C.R- Very Cordial Relationship, A.A.R- Above Average Relationship, M.R- Moderate Relationship, B.A.R- Below Average Relationship and U.R- Unfavourable Relationship)

Categories Of Mathematics Attitude:

In order to find out the Mathematics attitude the Mathematics Attitude Scale was used for the students. The responses of the students were sorted out and placed in appropriate tables. Then the scores of the students were separated according to the category of attitude as shown in table-2.

Table 2 Categories of Mathematics Attitude

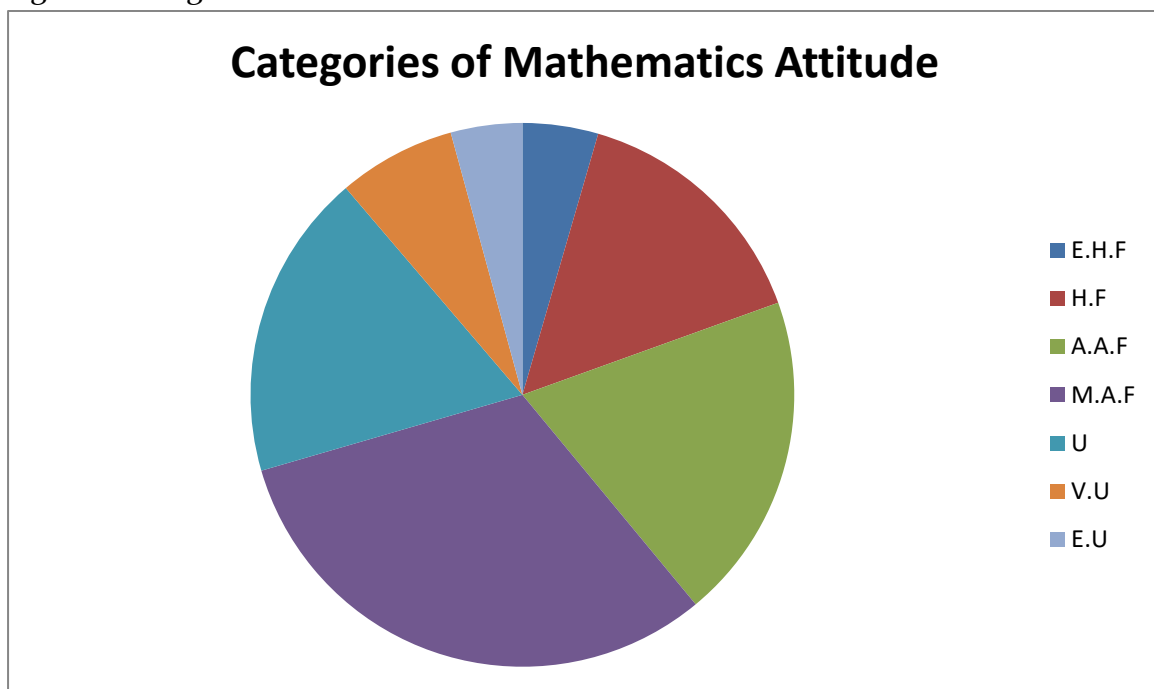
Categories of Attitude	Mathematics Attitude
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	No of students	Percentage
Extremely High favourable	18	4.50%
High favourable	60	15.00%
Above average favourable	78	19.50%
Moderate/ average favourable	126	31.50%
Unfavourable	73	18.25%
Very Unfavourable	28	7.00%
Extremely Unfavourable	17	4.25%
TOTAL	400	100%

Table No. 2 shows that the percentage of favourable Mathematics attitudes among students is $(4.50\%+15.00\%+19.50\%+31.50\%) = 70.5\%$ and the percentage of unfavourable Mathematics attitudes among students is $(18.25\%+7.00\%+4.25\%) = 23.8\%$.

The Categories of Mathematics Attitude are graphically presented in Fig.-2 as follows:

Figure 2 Categories of Mathematics Attitude



(E.H.F- Extremely High favourable, H.F- High favourable, A.A.F- Above average favourable, M.A.F- Moderate/ average favourable, U- Unfavourable, V.U- Very Unfavourable and E. U- Extremely Unfavourable)

Influence Of Parent-Child Relationship On Mathematics Attitude:

The Influence of the Parent-Child Relationship on the attitude of High School students of Schedule Castes towards the subject Mathematics is shown in the following Table 3.

Table 3 Influence of Parent-Child Relationship on Mathematics Attitude

Variable	N	M	S.D.	Pearson r
Parent-child relationship	400	297.39	31.96	0.94
Mathematics Attitude	400	83.10	9.95	

Table 3 shows that the calculated Pearson r value for the Influence of Parent-Child Relationship on Mathematics Attitude is 0.94. Since the calculated value of r is included in the category of very high correlation or quite dependable relationship, so, it can be interpreted as significant. Thus, the Parent-Child relationship has a significant influence on the attitude of High School students of scheduled castes towards the subject of Mathematics.

Findings Of The Study

1. The study reveals that 47.75% of children have favourable relationships and 28.25% of children have unfavourable relationships with their parents. 24.00% of children have neither favourable nor unfavourable relationships with their parents.
2. The percentage of favourable Mathematics attitudes among students is 70.5% and the percentage of unfavourable Mathematics attitudes among students is 23.8%.
3. The calculated Pearson r value for the Influence of Parent-Child Relationship on Mathematics Attitude is 0.94.
4. Since the calculated value of r is included in the category of very high correlation or quite dependable relationship, so, it is significant.
5. This indicates that Parent-Child Relationships have a significant influence on the attitude of High School students towards the subject of Mathematics.

Conclusion

The Parent-Child relationship is the most important relationship people form throughout the life span. The relationship involves the full extent of a child's

development. Like many other social relationships, parent-child relationships provide resources for individual development while they may also imply constraints for each other's needs fulfilment. Parent-child relationships differ from other relationships. It can be viewed as a special case of close relationships. Parent-child relationships are the biologically based universal starting point for all further development. Positive Parent-Child relationships provide the foundation for children's learning. In the attitude formation home and family environment plays a leading role. The child by identifying himself with his parents and other members of the family picks up their attitudes. A healthy family environment and positive attitudes of the parents and family members have a desirable impact on children in picking up desirable attitudes while parental negative attitudes lead them to imbibe ascendant and aggressive attitudes. The present study attempts to examine the influence of the Parent-Child relationship on High School students' attitudes towards the subject of Mathematics. It has been found from the study that the Parent-child relationship has a significant influence on the attitude of Schedule Castes students studying in high school standard towards the subject Mathematics in Nalbari district.

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