

A Study on Family Environment and Academic Performance of Engineering Students

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Abstract—Society contains of various sub parts and family is one of them. Role of a healthy family climate is as important in a child's life as it is of other aspects of society such as school, peer group and culture. One can say that family is the first building block of a child's social life. A healthy and positive family system will help the child to form and develop self esteem, abilities, skills, adjustment capability and other social and psychological components. This paper lays emphasis on the topic that how different family environments effects academic performances of a child or a student in particular. For this purpose 60 undergraduate engineering students were purposively selected. To study family environment Harpreet Bhatia & N.K. Chaddha's family environment scale has been used. Academic results were taken into consideration for Academic Performance. The objective of this research is "to study the relationship between family environment and academic performance of engineering students". The findings of the study shows that there exists a positive relation between the two variables. This work throws light on the positive outcomes of a peaceful family climate on scholastic achievements it also brings to our notice that parents who provide their children with a good study environment and those families where conflicts and debates are less to occur directly or indirectly affects a child's performance. A child's mind is peaceful when the family environment he is living in is peaceful.

1. INTRODUCTION

Among the major agents of socialization, one of the most prominent among them is "Family". Family is the first platform where the child gains experience and knowledge. Before being influenced by any other agent of socialization a child is influenced by his/her family, therefore role of the family is great in the child's development. Family provides the base onto which other social groups build up their individual aspects of living life. Family is a social group which consists of parents and their children. Family in broader terms can also be noted as a group of people who come from same ancestor. Members of a family usually live together and have a sense of responsibility towards the other members of the family.

1.1. Types of Family

1.1.1. Nuclear Family – This type of family consists of two parents and their children. It is also known as elementary or traditional family. This type of family may provide a very restricted environment to their children which may make the children reserved and self-centered. Advantage this family holds is that a small number of people provides better communication among the family members.

1.1.2. Single Parent Family – Nowadays raising a child alone is not that uncommon anymore. a mother or father alone raises their child. Advantages of this type of family is increase of closeness among the family members at the same time there can be a number of loop holes which includes financial problems and time management.

1.1.3. Extended Family - Extended Families are Families in which two or more adults live together with their children. For example, two adults (Husband & Wife) living with their parents and their children together. This type of family helps children provide social support and helps in developing feelings of care, love, support and a sense of responsibility.

1.1.4. Step Family – A Family in which two or more families merge into one, it can be due to either because of divorce of one parent living with child and has married to someone who is also divorced or someone who has never married before. Advantages include support of two parents, living with new siblings and disadvantages may include adjustment problems.

1.2. Family Environment

Family Environment is a broad term that covers all social aspects within a family. Every family is composed of different individuals who act and respond differently to different situations. Thus, individual differences among individuals who live together contribute towards variations in family environment. Therefore, each family environment is unique and different from one another. Environment of families can vary on the basis of socio-economic factors, demographic factors etc. While one family may live life lavishly at the same the other family may find it difficult even to meet ends. Most often the family environment is consistent, Parental influences may not be felt at certain times but the ideologies, attitude and behavior expressed day after day leave their mark inevitably.

In some ways family environment can be negative too, sometimes family members take out their frustrations on other members of the family, which creates a negative impact onto them especially it leaves a bad mark on children of young age. This may also affect their emotions and behavior which could continue even later in life. Instead of being friends in the same house the family members become readymade source of victims and enemies. Family becomes the source of the cruelest words spoken.

1.5. Academic Performance

It refers to the extent to which performance outcomes are achieved by a person. The specific goals accomplished in the environments such as school, colleges, universities etc. Mostly schools measure the cognitive abilities such as critical thinking in different subjects taught in school to be considered as a measure of academic excellence. In different academic institutions there are different criteria to measure academic excellence. Whether it may be grades, academic excellence tests or any other measures of academic excellence the thing common among them is that they all measure intellectual capacities of a student.

In 1939 Crow & Crow defined academic performance as the amount of knowledge and wisdom gained by a student through methodology and given instructions. Academic performance can be well measured by the test scores and grades a student secures.

1.5.1. Factors Affecting Academic Performance of Students

There may be certain factors which may influence the academic performance of students. Besides mental capabilities environment surrounding the student also has its influence on the performance of a student.

- 1) Geographical area is a relevant factor to say that the geographical area of the educational institution also plays a vital role in helping a student perform better.
- 2) Diversity of student's profile studying in the same class.
- 3) Discrimination in admissions on the basis of prior backgrounds of academic performances.
- 4) Language barriers play a vital role in influencing the academic achievements of the students.
- 5) Socio economic status; financial conditions may directly and indirectly influence the academic performances.
- 6) Support from family; this is one of the most important factors responsible for affecting family environment. Positive support from family encourages and motivates a child to perform better knowing that his family is with him in his ups and downs. Parents who motivate their children to perform better without adding burden upon them has a positive effect on the academics. Their scope for education and the facilities provided by them influences student's performance.

1.6. Relationship between Family Environment and Academic Performance

A family is the child's world. A child begins to learn new things by observing and imitating his family members and more specifically his parents. Though each family environment is different from one another. Which can be on the basis of socio-economic grounds, literacy level of family members and many other things yet each family environment affects the development of the child, therefore it is very necessary to provide a good and healthy environment to the child. Good environment helps the child in future too, it helps in creating an individual who lives a positive life physically and psychologically both. As a major part of life of an individual is spent on education therefore it is also undoubtedly influenced by the family environment.

In good circumstances adolescents acquire most of the comprehensive skills through family, peer group and neighborhood. But most of it is learnt in classrooms through systematic learning. Perceived parental involvement and psychological well-being of adolescents is standing on major two core points: 1) The social maturity of a adolescent is shaped by the parents as they have been living in the shadow of their parents .2) Later they separate from their parents in order to search for alternate reality. During this time, they seek inclusion of their peer group (Santrock & Yussen, 1984)

Major studies on family environment and academic performance conclude that there exists a positive relation between these two factors. More involvement of the parents in the academics of a child better is the academic performance.

Therefore, it can be concluded that positive support, better educational and financial facilities, encouragement & motivation provided by the family members has a great influence on the academics of a student. Parents who are educated will support education and would help understand the needs and problems of a child better with regard to education.

2. NEED AND IMPORTANCE OF THE STUDY

The purpose of this study was to compare the cognitive abilities and social experience of second year college students which leads to academic achievement. In the present scenario family becomes more mechanical in their social approaches. Parents usually go through misbelief of keeping children away from them in order to study. Whereas it is the family security which is affecting their academic performances. This study helps to find out the relation between the family environment a teenager is living in and its impact on the academic performances given. The researcher intended to investigate the cause behind all these factors.

3. LITERATURE REVIEW

Malsawmtluanga & Fanai (2018) conducted a study on a sample consisting of 210 students taken from a secondary school in Champai town of Mizoram, to figure out the relationship between home environment and academic performance of secondary school students by using a scale developed by Aliya Akhtar & Dr Sahil Bala Saxena to measure the level of home environment and examination results were considered to measure the academic achievement. The results declared that there is no co relation between academic performance and home environment.

Kumar & Lal (2014) took a sample of 200 adolescents of age group 15 to 18 years to study the relationship between academic performance and family environment. Moos (1974) family environment scale FES was used to measure the impact of family environment on the academics of adolescents whereas the results of the previous year were taken into account for determining the academic excellence. The results showed that teenagers who have a better family environment tend to do better in academics than those teenagers who have a low score on the FES.

Pappatu & Vanitha (2017) conducted a study on 300 secondary school students taken from 8 different schools of Palakkad district, Normative survey method was used for measuring the relationship between family environment and academic performance in science among secondary school children and it was concluded that there exists no such relation between family environment and academic excellence in science skills among those secondary school students.

Dadangal & Yarriswami (2017) conducted a study on secondary school students to see the relation between family environment and academic achievement. Survey method was used and questionnaire for academic performance was a self-constructed questionnaire. Statistical tests were used to find out the correlation between the two variables, the results showed that a good family environment affects the academic performance of a student in a positive way.

Paki et. al (2013-2014) conducted a research on a sample size of 237 girls from higher secondary school to study the relationship between family environment and academic performance of female high school students of Isfahan, Iran. Bloom family function questionnaire and personal details were used for evaluation of the results. The results of the descriptive correlational study showed that there exists a significant correlation between family environment (except lack of independence) and academic performance of students.

Rashmi (2016) did a study on 160 students randomly selected from government and non- government schools to study the relationship between family environment and academic performance using Family environment scale developed by Harpreet Bhatia and N. K. Chaddha. Descriptive survey method was used for the purpose of the study. The results came out to highlight that there exists a positive correlation between the family environment and the academic performance of 12th grade students.

Chawla (2012) conducted a study on a sample of 200 students arbitrarily chosen among the 9th grade which were from Marathi medium schools of Nasik city for studying the relationship between family environment and Academic achievement. They used the "Family Environment Scale of Dr. Hardeep Bhatia and Dr. N. K. Chadha" for investigation. Data was analysed the help of Pearson Correlation Coefficient. The results of this study focused on the aspect that family environment score was correlated in a positive manner with academic achievement on independence, cohesive, caring and struggle domains of the family climate.

Kazmi, Sajjid, and Pervez (2011) done a study by working on a sample of 620 people which included 300 students, 300 fathers and 20 teachers which was taken at random from urban and rural areas of district "Manshera province Khyber PakhtumKhwa" to work on parental style and Scholastic achievement. The endemically designed questionnaire was considered to gather the

necessary data. “Chi square test” and “ANOVA” were practiced to perceive the significance of results. Father’s involvement on the scholastic achievement was the favourable outcome of this study.

4. SIGNIFICANCE OF THE STUDY

From the above reviewed literature it was clear that , many researchers e not included family environment factors with the current academic performances of the newly joined engineering students. Thus, this research will help us to find significant relation between the two variables that are family environment and academic achievement of second year college scholars.

5. RESEARCH METHODOLOGY

5.1. Objective

1. To study the family environment and academic performance of engineering students.
2. To study the relationship between family environment and academic performance of engineering students.

5.2. Hypothesis

A hypothesis is a predictable statement. It is considered one of the most important instruments in research. It brings clarity, specificity and focus to a research problem. “Thus, a hypothesis can be defined as a proposition or a set of propositions set forth as an explanation for the occurrence of some specified group of phenomena either asserted merely as a provisional conjecture to guide some investigation or accepted as highly probable in the light of established facts; example automobile A is better than automobile B it can be verified and tested.”

In the context of statistical analysis, major two hypothesis are Null hypothesis & Alternative hypothesis. If the comparison is on the basis of superiority say between A &B, and if we proceed on the assumption that both methods are equally good, then this assumption is termed as null hypothesis. As against this statement if we say that method A is superior or the method B is inferior then this is known as stating alternative hypothesis.

In this research, there are three null hypotheses: -

Ho1: - There is no significant relationship between Family Environment & Academic Performance of male engineering students

Ho2: - There is no significant relationship between Family Environment & Academic Performance of female engineering students .

H3: - There will be positive relationship between Family Environment & Academic Performance of engineering students .

5.3. Sample

This study consists of 60 undergraduate engineering students purposively selected. Including 30 girls and 30 boys.

| Inclusion Criteria | Exclusion Criteria |
|---|--|
| <ul style="list-style-type: none"> • Age group 18- 22 • Engineering undergraduate students only | <ul style="list-style-type: none"> • Students not falling under the selected age group • Undergraduate students of other courses |

6. RESEARCH DESIGN

Co-relational design has been used in this study. The main purpose behind selecting this design was to find how the two variables (Family Environment and Academic Performance) are interrelated.

6.1. Variables

Independent Variable – Family Environment

Dependent Variable – Academic Performance

6.2. Tool Used

To study the family environment of the selected sample Family Environment Scale developed by Dr. Harpreet Bhatia and Dr. N.K. Chadha was used. It is a standardized tool, containing eight sub scales under three dimensions i.e. relationship dimensions,

personal dimensions & system maintenance dimensions. To study the academic performance of the sample percentage of their previous semesters were recorded.

7. RESULTS AND INTERPRETATIONS

Ho1: - There is no significant relationship between Family Environment and Academic Performance of male engineering students (see Table 1).

Table 1: Correlations among the male students for various variables

| Correlations (N=30) | | | | | | | | | | |
|---|---------------------|------------------|----------|----------------|----------|---------------------|--------------|---------------------------------|--------------|---------|
| | | Final Percentage | Cohesion | Expressiveness | Conflict | Acceptance & Caring | Independence | Active-Recreational Orientation | Organization | Control |
| final Percentage | Pearson Correlation | 1 | .23 | .25 | -.06 | .17 | .13 | .27 | .27 | -.01 |
| *. Correlation is significant at the 0.05 level (1-tailed). | | | | | | | | | | |

Table 1. shows the Pearson correlation between the two variables in context with the final percentage of academic performance and the eight sub areas under the family environment of male engineering students (see Table 1). Thus null hypothesis stands rejected. It can be stated that there exists a correlation between family environment and a **Ho2:**-There is no significant relationship between Family Environment and Academic Performance of female engineering students .

Table 2. Correlations among the female students for various variables

| Correlations (N=30) | | | | | | | | | | |
|---|---------------------|------------------|----------|----------------|----------|---------------------|--------------|---------------------------------|--------------|---------|
| | | Final Percentage | Cohesion | Expressiveness | Conflict | Acceptance & Caring | Independence | Active-Recreational Orientation | Organization | Control |
| final Percentage | Pearson Correlation | 1 | -.07 | .05 | .13 | .27 | -.14 | -.15 | .37* | .32* |
| *. Correlation is significant at the 0.05 level (1-tailed). | | | | | | | | | | |

Table 2. shows the Pearson correlation between the two variables in context with the final percentage of academic performance and the eight sub areas under the family environment of female engineering students. Thus, null hypothesis stands rejected (see Table 2). It can be stated that there exists a correlation between family environment and academic performance of female engineering students.

H3 :- There will be a positive relationship between Family Environment and Academic Performance of engineering students .

Table 3: Correlations among the engineering students for various variables

| Correlations (N=60) | | | | | | | | | | |
|---|---------------------|------------------|----------|----------------|----------|---------------------|--------------|---------------------------------|--------------|---------|
| | | Final Percentage | Cohesion | Expressiveness | Conflict | Acceptance & Caring | Independence | Active-Recreational Orientation | Organization | Control |
| final Percentage | Pearson Correlation | 1 | .30* | .28* | .23* | .37* | .14 | -.07 | .43* | .34* |
| *. Correlation is significant at the 0.05 level (1-tailed). | | | | | | | | | | |

Table 3. shows the Pearson correlation between the two variables in context with the final percentage of academic performance and the eight sub areas under the family environment of engineering students (see Table 3). The null hypothesis is accepted. It can be stated that there exists a correlation between family environment and academic performance of engineering students.

8. FINDINGS OF THE STUDY

- A positive correlation was observed between the family environment and the academic performance of the male and female engineering students. As the student receives a healthy family environment it results in an increase in the academic performance of both male and female students.
- There has been observed a positive correlation between the two variables i.e. family environment and the academic performance of the engineering students. As family environment increases, academic performance also seems to be increased.

9. DISCUSSION

In this study family environment and academic performance of the engineering students were found to be significantly correlated. Better family environment provided to a child helps the child to have better cognitive development. A happy surrounding lead to a happy mind & brain. Thus it was noted that as the family environment of a child increases (becomes more healthy and good) the academic results also increases. The results got through this study were more or less consistent with the previously viewed literature. A good family environment has a positive impact on the academic achievement of the student, a well-off family providing basic essentials to a student not only financial but also emotional support is a great motivating factor for the young students. Similarly, a student with low socio-economic status and a poor or low average background is more likely to perform less in academics than the student with a good family background. As similar in the case of gender, both male and female engineering students were observed to be performing better in academics if their family environment was good, thus a positive correlation between family environment and academic performance was noticed.

The findings of this work corroborate the work of earlier researchers who found that the factors such as low socio-economic status, geographical & political conditions influencing the environment of the family, poor family structure, anxiety, traumatic stress and other such hassles of life influence the academic performance of child (1973, Wiseman, 1986, Jagannathan, 1988, Reeta Arora,).

The results of this study were found to be similar as the work done by Rashmi (2016) in which positive correlation was observed between the family environment and academic performance of students, similarly a positive correlation was noticed among the male and female students.

10. CONCLUSION

Through the study done it can be concluded that Family environment and Academic achievement go hand in hand majority of the time. A healthy Family environment has a positive impact on academic achievement of students. Study done on undergraduate engineering scholars shows that those scholars who scored well in the Family environment scale have done significantly well in their academics than those students who secured low scores on the family environment scale. Thus, a good and healthy family climate is needed in addition to other intrinsic and extrinsic factors to increase the academic excellence chart of a student.

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