

Research Paper

Correlation of Family Environment with The Self-Esteem and Social Anxiety of Medical Students

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ABSTRACT

Background: Social anxiety disorder is a mental health condition in which social situations and interactions cause extreme anxiety, feelings of self-consciousness, and embarrassment. It leads to refrainment from social activities and scenarios such as making small talk with strangers or acquaintances in social events, performing in public, and even eating in public. Studies have shown that social anxiety disorder is the second most common anxiety disorder and is often co-morbid with other psychopathological disorders. It is caused by a multitude of factors such as self-esteem issues, excessive social media usage, body image issues, unresolved familial matters, and peer rejection. The family environment significantly affects the behavior and development of individuals. Self-esteem is one's sense of self-worth, value, belonging, and competence. As shown through research, in most cases, low self-esteem is an outcome of hypercritical and frequent negative feedback from family and friends. It can either build or break the self-esteem. With the rise of mental health disorders and the subsequent awareness regarding diagnosis and intervention for it, it is the need of the hour to investigate the variables that influence the onset and/or aggravation of such disorders. **Aims & Objectives:** This study was intended to examine the relationship of family environment with self-esteem and social anxiety in medical students of Gujarat. **Methodology:** A sample of 110 individuals (39 females and 71 males) participated in the study. The psychological scales used in this study were: The Leibowitz Social Anxiety Scale (1987), The Rosenberg Self-esteem Scale (1965), and The Perceived Social Support Family Scale by Procidano and Heller (1983). It followed a correlational research design and the data analysis was done through the Spearman Correlation Coefficient. **Results:** The results of the study revealed that there was a significant and positive correlation between family environment and self-esteem, as well as a significant and negative correlation between family environment and social anxiety. **Conclusion:** It can be concluded that family environment plays a crucial role in the occurrence as well as management of social anxiety disorder.

Keywords: *Social Anxiety Disorder, Self-esteem, Family Environment, Mental Health, Medical Students, Perceived Family Support, Young Adults*

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Social anxiety disorder (SAD), also known as social phobia, is a mental health condition wherein individuals face an irrational and acute fear of social situations and interactions. Individuals suffering from this disorder contain a constant fear of being scrutinized by others and of being a part of a group, as they are worried about potential embarrassment or humiliation in public. This disorder makes individuals, prone to developing chronic discomfort and apprehension, and it is different from introversion (Beidal et al 1999; Schneier 2006).

The physiological symptoms include increased heartbeat, excessive sweating, trembling of limbs, breathlessness, blushing, inability to talk, stuttering, etc. The psychological symptoms include intense worry before, during, and after social events, extreme panic, fear of humiliating oneself, fear of offending someone, fear of embarrassment in public, avoidance of all kinds of social interactions and activities (eating and drinking in public, having a conversation, asking a question, using public toilets, talking on the phone in public, engaging in performances). It is the most prevalent anxiety disorder, and the third most commonly occurring mental health disorder, after major depressive disorder and alcohol addiction (Hidalgo et al 2001; Schneier 2006). Research data has revealed that 9-12 % of young adults face this disorder. There is a higher occurrence of social anxiety disorder in women, especially in those with a lesser education, lower social standing, and lower financial background (Hidalgo et al 2001).

Multiple studies over the years have shown that one of the leading factors responsible for causing social anxiety disorder in individuals is family environment. Attributes of parenting such as excessive control, dearth of warmth, rejection, neglect, and overprotectiveness, have been found to be the risk factors for the causation of SAD. Family environment, especially in the context of Indian culture, is the key factor influencing social learning, behavior learning, as well as socio-emotional development. A supportive and warm family environment can nurture feelings of safety, security, happiness, connectedness, and confidence in individuals. On the contrary, a rejective and unsupportive family environment can lead to psychological distress, feelings of insecurity, lowered self-esteem, and aggressive behavior patterns.

A study conducted on social anxiety disorder in relation to peer pressure and family environment in 2020 found that a significant negative relationship existed between family environment and social anxiety. It revealed that these two variables were inversely related, and thus, an unsupportive and conflicting family environment can increase social anxiety and vice-versa.

Self-esteem is one's sense of self-worth, value, belonging, and competence. High self-esteem makes individuals feel confident in their skin, build healthy relationships, and are motivated and content in life. On the contrary individuals with low self-esteem face indecisiveness, insecurities, lack of motivation, feelings of unworthiness, usually have trouble maintaining balanced relationships, and look for external validation to feel better about themselves.

The primary determinants of self-esteem are the experiences of an individual's life as well as their social relationships. Studies have shown that nearly 22% of college students face low self-esteem issues, in which the number of women is higher. In most cases, low self-esteem is a consequence of hypercritical and/or frequent negative feedback from family and friends. Multiple studies conducted over the years have indicated that low self-esteem is a major causal factor of numerous mental health disorders. Low self-esteem not only affects personal life, but its effects also spill over into work life and social life. Research studies have also

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revealed that lowered self-esteem leads to the onset of social anxiety disorder in the youth population.

A significant number of these young adults may be experiencing symptoms of social anxiety disorder and/or other related psychopathological disorders, without even realizing it. These disorders often go undiagnosed and untreated, despite the advancements in the field of mental health through therapy and medication. Thus, it is of utmost importance to investigate and analyze the psychological as well as environmental variables that play a role in influencing the onset and/or aggravation of such rampant disorders in the youth population; to make necessary intervention plans.

MATERIALS AND METHODS

Research Objectives

- To investigate the correlation between family environment and self-esteem in medical students.
- To examine the correlation between family environment and social anxiety in medical students.

Research Hypotheses

1. H0: There is no significant correlation between the familial environment and self-esteem of the individuals.
H1: There is a significant correlation between the familial environment and self-esteem of the individuals.
2. H0: There is no significant correlation between the familial environment and social anxiety of medical students.
H2: There is a significant correlation between the familial environment and social anxiety of medical students.
3. H0: There is no difference in the social anxiety of males and females.
H3: Social anxiety is higher in females than in males.

Sample

This study was performed with a sample population of undergraduate medical students in Gujarat, between the ages of 18 to 24 years, i.e. the young adult population. The responses were collected from 110 students (N=110), with 71 males and 39 females who were the participants in this study. The psychological scales were sent through Google Forms and the responses were collected through an online survey.

In this research study, the inclusion criteria were:

1. Undergraduate students in the branch of medicine (MBBS).
2. Students between the age span of 18 to 24 years.

The exclusion criteria of this research study were:

1. Undergraduate college students who do not belong to the field of medicine.
2. Students below the age of 18 years and above the age of 24 years.

Tools

Three psychological scales were used in this study for the three variables.

1) The Leibowitz Social Anxiety Scale:

It is the most widely used scale to measure social anxiety symptoms in social situations, interactions, and activities. It was created by Dr. Michael Leibowitz in

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1987. The scale includes 24 items, that measure the fear/anxiety and avoidance of different social scenarios. It is a Likert scale that has 11 social situations and 13 performance situations. This scale has a high internal consistency with Cronbach's alpha value of 0.95 and a high test-retest reliability of $r=0.83$.

The responses for each question are given through the ratings from 0 to 3. The ratings of the fear/anxiety and avoidance sub-set questions is as follows:

Fear/Anxiety	Avoidance
0 = None	0 = Never
1 = Mild	1 = Occasionally
2 = Moderate	2 = Often
3 = Severe	3 = Usually

The scoring of this scale is done by adding the scores of all 48 responses (24 for the fear/anxiety sub-set and 24 for the avoidance sub-set). The results of the scale are scored as:

30-50	Mild social anxiety
50-65	Moderate social anxiety
65-80	Marked social anxiety
80-95	Severe social anxiety
Above 95	Very severe social anxiety

A score of 60 is indicative of Generalized Social Anxiety Disorder (GSAD). While a score of 30 is indicative of Non-generalized Social Anxiety Disorder (Non-GSAD), i.e. a score of 30 is the threshold above which the individuals are said to have social anxiety disorder.

2) **The Rosenberg Self-esteem Scale:**

This scale is a popular tool in psychological research, that measures the self-esteem of individuals. It was given by Morris Rosenberg in 1965. This scale has 10 items that measure how individuals perceive and value themselves. It is a Guttman scale and its scoring is done by combining ratings of direct items and negatively worded items.

The responses to this scale are given through the following ratings:

- 0 = Strongly Agree
- 1 = Agree
- 2 = Disagree
- 3 = Strongly Disagree

The scoring for this scale is complex. For items 3,5,8,9,10 the above-given scoring pattern is used with 0 being 'strongly agree' and 3 being 'strongly disagree'. For items 1,2,4,6,7 it is the opposite; i.e. 0 is strongly disagree, 1 is disagree, 2 is agree, and 3 is strongly agree. The scores range from 0 to 30. Scores between 15 and 25 are the normal range; while scores below 15 indicate low self-esteem. This scale has a coefficient of reproducibility of 0.92. Test-retest reliability over a period of 2 weeks reveals correlations of .85 and .88, while internal consistency is 0.77. It also has high concurrent, predictive, and construct validity.

3) **The Perceived Social Support – Family Scale:**

This scale was given by Procidano and Heller in 1983. It measures the extent to which individuals perceive that their needs for support and feedback are fulfilled by their family. This scale is inversely related to symptoms of distress and psychopathology.

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This scale has three options: Yes, I don't know, and No. Yes and No are scored as 1 in different questions, while 'I don't know' is scored as 0. This scale has 20 items and its scoring is as follows:

11 or above	Strong perceived family support
7 to 10	Weak perceived family support
6 or below	No perceived family support

Data Collection

- The three questionnaires for this research study namely: the Leibowitz Social Anxiety Scale (24-item Likert Scale), the Rosenberg Self-esteem Scale (10-item Guttman Scale), and the Perceived Social Support Family Scale (20-item Likert Scale), were all circulated through an online survey.
- In all the forms, informed consent was included, entailing the intention and goals behind conducting this research study. Along with that, confidentiality was also established, reassuring the participants that their responses were for research purposes only and would only be shared with the researcher and nobody else.
- All three questionnaires were circulated through Google Forms, and a total of 110 responses were collected. The responses were collected in a month. The data analysis was done through the Spearman Correlation Coefficient

Ethical Considerations

The ethical considerations for this research study are as follows:

- For the online survey questionnaires, participants were assured of the anonymity and confidentiality of their responses. Their privacy was respected.
- An informed consent was made a part of the survey, i.e., the purpose of data collection, intentions of the researcher, and goals of the study were conveyed. All the respondents were given a free choice for voluntary participation as well as withdrawal of participation at any time.
- Each questionnaire used in this research was standardized, and thus, no items in the questionnaires were directed to cause any sort of discomfort, offense, or stress to the participants.
- Respondents had the right to ask for their responses and scoring reports, alongside requesting for full information about their scores on each questionnaire. Thus, the respondent's right to information was maintained.

RESULTS AND DISCUSSIONS

Data Analysis

Table 1 Tabular representation of statistical data for all variables

Statistics	Self-esteem	Social Anxiety	Family Environment
Mean	18.83	43.63	12.07
Median	19	41	13
Standard Deviation	4.38	24.59	3.45

For the data analysis of this study, correlation has been used. The data distribution was analyzed first, and since the data is not normally distributed, the Spearman Correlation Coefficient was used for calculation and data analysis. Spearman's correlation coefficient (Spearman's ρ) is a nonparametric measure of rank correlation. It is used to assess the strength of the relationship or link between two variables or two data sets.

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Data interpretation for Hypothesis 1:

The first alternate hypothesis (H1) states that there is a significant correlation between family environment and the self-esteem of individuals.

Table 2.1 Correlation value of family environment and self-esteem

Correlation	Family Environment
Self-esteem	0.20

Table 2.2 Level of significance and p-value for Hypothesis 1

p-value	0.03
Level of significance (α)	0.1

Since the p-value is lesser than the level of significance ($p\text{-value} < \alpha$) we can infer as per the norm that: **There is a statistically significant and positive correlation between familial environment and self-esteem. Thus, we reject the null hypothesis and accept the alternate hypothesis.**

Data interpretation for Hypothesis 2:

The second alternate hypothesis (H2) states that there is a significant correlation between family environment and the social anxiety of individuals.

Table 2.3 Correlation value of family environment and social anxiety

Correlation	Family Environment
Social Anxiety	-0.33

Table 2.4 Level of significance and p-value for Hypothesis 2

p-value	0.0003
Level of significance (α)	0.1

Since the p-value is lesser than the level of significance ($p\text{-value} < \alpha$) we can infer as per the norm that: **There is a statistically significant and negative correlation between familial environment and social anxiety. Thus, we reject the null hypothesis and accept the alternate hypothesis.**

Data interpretation for Hypothesis 3:

Table 2.5 Tabular representation of average social anxiety scores of both genders

Gender	Number of participants	Average Social Anxiety
Female	39	43.17
Male	71	43.88

The third alternate hypothesis (H3) stated that social anxiety is higher in females than in males.

As seen through these scores, the average social anxiety in both male and female participants is similar.

There is no difference in social anxiety in the gender context. Therefore, we fail to reject the null hypothesis.

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As seen through the scores and values in data analysis, the results of this research study indicate that:

1. There is a statistically significant and positive correlation between the family environment and the self-esteem of the individuals (H1 accepted). This shows that family environment and self-esteem are directly correlated, which means that a supportive and warm family environment results in a stronger self-esteem; while an unsupportive and rejective family environment causes lowered self-esteem in the individuals.
2. There is a statistically significant and negative correlation between the family environment and social anxiety of medical students (H2 accepted). This shows that family environment and social anxiety are inversely correlated, which means that a warm and supportive family environment can serve as a protective factor against social anxiety; while an unsupportive family environment makes individuals more prone to developing social anxiety disorder and can cause aggravation of the already existing symptoms.
3. There is no difference in social anxiety between males and females (H0 accepted). This shows that, although literature suggests that social anxiety in females is higher, the results of this study indicate that there are no differences in the social anxiety levels of males and females.

Mahmooda Fatima et al in 2017 did a study to investigate the role of social connectedness as a mediator in the relation between self-esteem and social anxiety. It also measured gender differences for all the variables. A sample of 300 individuals (150 men and 150 women) was taken, and data was collected using the Social Connectedness Scale-Revised, the Liebowitz Social Anxiety Scale, and the Rosenberg Self-Esteem Scale. The findings of the study revealed that the level of self-esteem and social connectedness was higher in women as compared to men. In contrast, men had a higher level of social anxiety than women. Self-esteem negatively and significantly predicted social anxiety; on the other hand, Self-esteem positively and significantly predicted social connectedness. Social connectedness fully mediated self-esteem and social anxiety.

Isha Kapoor et al in 2020 did a research study on ‘Social Anxiety Disorder Among Adolescents in Relation to Peer Pressure and Family Environment’ and investigated the effect of peer pressure and family environment on social anxiety disorder in the sample group. The sample consisted of 520 adolescents from various schools in Punjab. The psychological scales in this study were the Social Anxiety Disorder Scale by Nagpal, the Peer Pressure Scale by Singh and Saini, and the Family Environment Scale by Bhatia and Chadha. The results showed that there was a positive correlation between social anxiety disorder and peer pressure and a negative correlation between social anxiety disorder and family environment in the sample group. Both the relationships were statistically significant.

Obadeji et al in 2022 did a recent study on the topic ‘Social Anxiety Disorder among Undergraduate Students: Exploring Association with Self-esteem and Personality Traits’ which was conducted to examine the burden of social anxiety disorder, its relationship with sociodemographic variables and self-esteem, and the correlation of big five personality traits with both SAD and self-esteem among undergraduate students. A sample of 440 students’ responses were recorded using the Social Phobia Inventory (SPIN), the Big Five Personality Trait Inventory (BFPI), the Rosenberg Self-Esteem Scale, and a sociodemographic questionnaire. The findings of the study showed that more than 60% of students had some degree of social phobia; while participants who were younger than 21 years of age, were

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twice more likely to experience social phobia. A lifetime history of substance abuse increases the risk of developing social anxiety disorder (SAD). The level of extraversion, conscientiousness, and agreeableness were inversely correlated to the level of social anxiety. A positive correlation was observed between neuroticism and SAD. There was a significant negative correlation between social phobia and self-esteem.

Limitations

1. Since this is a correlational study, the relationship between the variables has been established, but the extent of the causation of those effects has not been predicted here.
2. Since this study focuses on three main variables, it doesn't explore the presence or effect of other related variables on the outcomes. Some other environmental and psychological variables pertaining to these primary variables have not been studied here.
3. Since the data was collected through self-report measures, there may be some biases involved, such as compliance bias.
4. Since the questionnaires were sent out through an online survey, many more potential participants of the sample population could have been left out of this study, resulting in a limited sample size for research.

CONCLUSION

In the end, we can conclude through this study that family environment is significantly correlated with both self-esteem and social anxiety. Family environment is positively correlated with self-esteem, i.e. it is directly correlated. The increase in one causes an increase in the other and vice-versa. On the contrary, the family environment is negatively correlated with social anxiety, i.e. it is inversely correlated. An increase in one causes a decrease in the other and vice-versa.

Suggestions

1. Since this is a correlational study, the cause-and-effect aspect of the variables has not been explored. The future researchers can investigate on it.
2. The other relevant variables pertaining to these primary variables can be accounted for in future studies.
3. Since this study had a self-report data collection method, there may be some unknown biases involved. Future researchers can consider a different method of data collection and/or work towards minimizing biases.

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Conflict of Interest

The author(s) declared no conflict of interest.

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