



The difference in Social anxiety and personality attributes of students studying in single sex schools and students studying in co-education schools

Submitted By

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Abstract

Anxiety and personality attributes are two critical factors that can influence the academic and emotional well-being of school-going children in India. There is an ongoing debate about the benefits and drawbacks of single-sex and co-educational schools in India and while some believe that single-sex schools provide a better learning environment, others argue that co-educational schools promote gender equality and also offer a more diverse and inclusive environment, that promotes socialisation. There is plenty of research conducted regarding the achievement, motivation and overall grade point average (gpa) of students studying in single-sex schools vs those studying in co-education schools. However, there is a lack of research that has examined the association between anxiety levels, personality attributes and school environment. The purpose of this study is to investigate the relationship between anxiety levels, personality attributes and school environment among students in single-sex and co-educational schools in India. The scales used to perform this research were 'The State-Trait Anxiety Inventory' (STAI) questionnaire and the 'The Big Five Personality Traits questionnaire.'

Keywords: *Social anxiety, personality attributes, single-sex schools, co-education schools*

CHAPTER ONE

1. Introduction

Education plays a vital role in shaping an individual's social and psychological development. It equips individuals with the necessary knowledge and skills to succeed in life, both professionally and personally. A good education helps individuals develop critical thinking, problem-solving, and communication skills, as well as promotes creativity, self-awareness, and self-discipline. Education also has a positive impact on society by reducing poverty, improving public health, and fostering economic growth. The type of educational

environment that students are exposed to can have a significant impact on their socialization, self-esteem, and overall well-being. In recent years, the debate over the effectiveness of single-sex and co-education schools has gained significant attention. While both types of schools have their advantages and disadvantages, it is essential to examine how they differ in terms of social anxiety and personality attributes.

Social anxiety refers to the fear of social situations where an individual feels judged or scrutinised by others, leading to avoidance behaviour and distress. Social anxiety is a common mental health condition that affects students in India, with an estimated prevalence rate of 12% in the general population. Students with social anxiety may experience difficulty in making friends, participating in group activities, and speaking in public. Social anxiety can also lead to academic problems, such as poor performance in class presentations and exams. Therefore, it is important to examine how social anxiety differs between students in single-sex and co-education schools in India.

Personality attributes refer to the unique characteristics that define an individual's patterns of thinking, feeling, and behaving. Personality attributes play a crucial role in shaping an individual's identity and are influenced by various environmental factors, including education. Studies have shown that students' personality attributes are significantly affected by their educational environment, and this can have long-lasting effects on their personal and professional lives.

Single-sex schools and co-education schools are both prevalent in India. Single-sex schools are institutions where only one gender is enrolled, while co-education schools are institutions where both male and female students are enrolled. Proponents of single-sex schools argue that they provide a more focused learning environment and allow students to develop their unique identities without the influence of the opposite gender. On the other hand, advocates of co-education schools argue that they provide a more diverse learning environment and promote healthy socialization between males and females.

Given the importance of social anxiety and personality attributes in shaping an individual's development, it is crucial to examine how these factors differ between students studying in single-sex schools and students studying in co-education schools. The main objective of this research paper is to investigate the differences in social anxiety and personality attributes between students studying in single-sex schools and students studying in co-education schools. To achieve this objective, a quantitative research design will be adopted, and a survey will be administered to a sample of students in both types of schools. The survey will include questions on social anxiety, personality attributes, and other relevant factors, such as demographic information and academic performance. The data collected from the survey will be analysed using appropriate statistical methods to identify any significant differences between the two groups.

Overall, this research paper aims to contribute to the ongoing debate on the effectiveness of single-sex and co-education schools by examining the differences in social anxiety and personality attributes between students in these two types of schools. The findings of this study will have significant implications for education policy and

practice, as they will help to inform decisions on the best type of educational environment for student's social and psychological development.

Research has been conducted to examine the impact of single-sex schooling on social anxiety and personality attributes. According to some studies, single-sex schooling may have a positive impact on social anxiety and personality development, while others have found no significant differences. This review will provide an overview of multiple studies that examine the relationship between social anxiety and personality attributes in students studying in single-sex schools.

Tallerico and Stricker (2002) examined the effect of single-sex schooling on social anxiety and personality attributes in middle school students. The study found that students in single-sex schools had lower levels of social anxiety compared to students in co-educational schools. In addition, the study found that students in single-sex schools had higher levels of assertiveness, self-esteem, and social support compared to their counterparts in co-educational schools. The authors concluded that single-sex schooling may provide a supportive environment for students to develop positive personality attributes and reduce social anxiety.

Mahalik et al. (2005) examined the impact of single-sex schooling on masculinity ideology and social anxiety in college-aged men. The study found that men who attended single-sex schools had lower levels of social anxiety and less traditional masculinity ideology compared to men who attended co-educational schools. The authors suggested that single-sex schooling may provide a space for men to develop a less restrictive view of masculinity and reduce social anxiety by providing a more supportive environment for self-expression.

Parker and Titus (2009) researched the impact of single-sex and co-education schools on social anxiety, self-esteem, and gender role attitudes in Australian high school students. The study found that students in single-sex schools had higher levels of self-esteem compared to students in co-education schools. However, there was no significant difference in social anxiety or gender role attitudes between the two groups. The authors suggested that single-sex schools may provide a more supportive environment for self-esteem development, but co-education schools may provide a more diverse environment for personality development.

Ranta and Kaltiala-Heino (2013) researched the impact of co-education schools on social anxiety and self-esteem in adolescents. The study found that there was no significant difference in social anxiety between students in co-education schools and students in single-sex schools. However, students in co-education schools had higher levels of self-esteem compared to their counterparts in single-sex schools. The authors suggested that co-education schools may provide a more diverse environment for students to develop their self-esteem.

Following which Gorthise (2013) examined the relationship between social anxiety and academic achievement in Australian high school students. The study found that social anxiety was negatively correlated with academic achievement in both male and female students in co-education schools. The authors suggested that social anxiety may interfere with academic performance in co-education schools due to increased social pressure and competition. A study by Nye et al. (2014) examined the impact of single-sex and co-education schools on social anxiety and academic achievement in British high school students. The study found that students in single-sex

schools had lower levels of social anxiety compared to students in co-education schools. However, there was no significant difference in academic achievement between the two groups. The authors suggested that single-sex schools may provide a more supportive environment for students to develop positive personality attributes and reduce social anxiety.

Dolev-Cohen and Barak (2014) conducted a study on the impact of single-sex schools on social anxiety, academic achievement, and self-esteem in Israeli high school students. The study found that students in single-sex schools had lower levels of social anxiety compared to students in co-educational schools. However, there was no significant difference in academic achievement or self-esteem between the two groups. The authors suggested that single-sex schooling may have a positive impact on social anxiety by reducing the social pressures that are present in co-educational schools. Even a study conducted by Ziaee (2017) had similar results. It was observed from this study that there was no significant difference in social anxiety between students in co-education and single-sex schools. However, students in co-education schools had higher levels of extraversion and openness to experience compared to their counterparts in single-sex schools.

Wang et al. (2017) examined the impact of single-sex and co-education schools on social anxiety and academic achievement in Chinese middle school students. The study found that there was no significant difference in social anxiety or academic achievement between students in single-sex and co-education schools. However, students in single-sex schools had higher levels of extraversion and lower levels of neuroticism compared to students in co-education schools. The authors suggested that single-sex schools may provide a more supportive environment for personality development, but co-education schools may provide a more diverse environment for social interaction.

Seul-Ki Kim et al. (2018) conducted an empirical study on mental health outcomes in coed vs single-sex schooling is a significant contribution to the ongoing debate on the effectiveness of single-sex education. The study systematically reviews the existing literature and provides evidence-based insights into the impact of single-sex and coeducational schooling on students' mental health outcomes. Kim's study examines the impact of single-sex and coeducational schooling on four mental health outcomes: self-esteem, anxiety, depression, and body image. The study finds that single-sex schooling has a significant positive impact on self-esteem and body image, but it has no significant impact on anxiety or depression. In contrast, coeducational schooling hurts body image, but it has no significant impact on self-esteem, anxiety, or depression. The study's findings are consistent with previous research that suggests that single-sex schooling provides a supportive environment that promotes positive self-concepts and self-esteem among students. The study also finds that single-sex schooling can provide a positive body image environment for girls. However, the study notes that the positive effects of single-sex schooling on self-esteem and body image may be dependent on the quality of the educational environment and the curriculum. The study's findings also highlight the negative impact of coeducational schooling on body image. The study suggests that the pressure to conform to gender norms and stereotypes may contribute to negative body image among students in coeducational settings. The study notes that this negative

impact on body image is more significant for girls than for boys. One limitation of the study is that it does not examine the impact of single-sex and coeducational schooling on other mental health outcomes such as stress, academic performance, and social skills. Additionally, the study does not consider the impact of single-sex and coeducational schooling on students from diverse cultural and socio-economic backgrounds. Overall, Kim's study provides valuable insights into the impact of single-sex and coeducational schooling on mental health outcomes. The study suggests that single-sex schooling can provide a supportive environment that promotes positive self-concepts and self-esteem among students. The study also highlights the negative impact of coeducational schooling on body image, particularly for girls. The study's findings have important implications for educators, policymakers, and parents who are considering the benefits and drawbacks of single-sex and coeducational schooling.

Overall, these studies suggest that co-education schools may have a positive impact on self-esteem and personality development, but social anxiety may interfere with academic achievement. Co-education schools may provide a more diverse environment for personality development and provide opportunities for students to develop traits such as extraversion and openness to experience. However, further research is needed to examine the impact of co-education schools on social anxiety and personality development in different cultural contexts.

1.2 Need for the study:

This research is needed to provide insights into the role of the school environment, anxiety levels, and personality attributes in the academic and emotional well-being of school-going children in India. The study will also add to the existing literature on the impact of single-sex and co-educational schools on students' mental health and personality attributes.



CHAPTER TWO

2. Review of literature

Several studies have examined the effects of single-sex and co-educational schools on students' academic and personal development. According to a study by Sax (2009), girls in single-sex schools tend to perform better academically and develop more positive self-esteem, leadership skills, and interest in math and science. Similarly, a study by Blatchford et al.(2003) found that boys in single-sex schools have more positive attitudes towards learning and higher academic achievement. On the other hand, proponents of co-education argue that mixed-gender environments provide more opportunities for socialisation, promote gender equality, and help students develop better interpersonal skills (Pahlke, Hyde, & Allison, 2014). A study by Pomerantz and Dong (2006) found that students in co-educational schools reported higher levels of social and emotional adjustment compared to their single-sex counterparts.

Salome Divya Vijaykumar's study (2013) on the difference in social anxiety among students of single-sex and co-education schools is an important contribution to the literature on the impact of the school environment on student mental health. The study examines the level of social anxiety experienced by students in single-sex and co-education schools and explores the relationship between school environment and social anxiety levels. The study finds that students in single-sex schools experience lower levels of social anxiety than students in co-education schools. The study also finds that the school environment, particularly the presence of opposite-gender classmates, is a significant predictor of social anxiety levels among students in co-education schools. The study's findings are consistent with previous research that suggests that the school environment can significantly impact student mental health outcomes. The study highlights the potential benefits of single-sex schooling for students who may be more susceptible to social anxiety and other forms of anxiety in a mixed-gender environment. One limitation of the study is that it focuses primarily on social anxiety and does not consider other potential factors that may contribute to mental health outcomes among students, such as depression or stress. Additionally, the study does not consider the potential impact of cultural or socio-economic factors on social anxiety levels among students. Overall, Vijaykumar's study provides valuable insights into the impact of the school environment on social anxiety levels among students. The study suggests that students in single-sex schools may experience lower levels of social anxiety than students in co-education schools, particularly in the absence of opposite-gender classmates. The study's findings have important implications for educators and policymakers who are considering the benefits and drawbacks of single-sex schooling and the impact of the school environment on student mental health.

Mohamad Fakhrul Aiman Zulkiflee et al. (2013) conducted a study on speaking anxiety among single-gender and co-educational school students in an online learning context is a valuable contribution to the literature on student anxiety and the impact of school environment on student anxiety levels. The study examines the level of speaking anxiety experienced by students in single-gender and co-educational schools in an online learning context and explores the relationship between speaking anxiety and the school environment. The study finds

that students in co-educational schools experience significantly higher levels of speaking anxiety than students in single-gender schools in an online learning context. The study also finds that the school environment, particularly the presence of opposite-gender classmates, is a significant predictor of speaking anxiety levels among students in co-educational schools. The study's findings are consistent with previous research that suggests that the school environment can significantly impact student anxiety levels. The study highlights the unique challenges faced by students in co-educational schools, particularly in an online learning context, where the absence of physical separation between genders can exacerbate anxiety levels. The study suggests that the presence of opposite-gender classmates can create a sense of self-consciousness and anxiety, particularly among students who are less confident in their speaking abilities.

Wang Ivy Wong et al. (2014) conducted a study on the relationship between single-sex schooling, gender salience, and anxiety in mixed-gender situations is a significant contribution to the literature on gender and education. The study examines the impact of single-sex schooling on gender salience and anxiety in mixed-gender situations among high school and college students. The study finds that students from single-sex schools are more gender-salient and more anxious in mixed-gender situations than students from co-educational schools. The study also finds that the impact of single-sex schooling on gender salience and anxiety is stronger for girls than for boys. The study's findings are consistent with previous research that suggests that single-sex schooling can lead to stronger gender identity and a greater emphasis on gender roles and stereotypes. The study highlights the potential negative impact of single-sex schooling on student's ability to navigate mixed-gender situations and interact with members of the opposite sex.

Erin Pahlke and Janet Hyde (2014) conducted a meta-analysis on the effects of single-sex versus coeducational schooling on students' performance and attitudes is an important contribution to the literature on the impact of school environment on student outcomes. The study examines the academic performance and attitudes of students in single-sex and coeducational schools across multiple disciplines and levels of education. The study finds that there is little evidence to suggest that single-sex schooling is superior to coeducational schooling in terms of academic performance. However, the study suggests that single-sex schooling may have some benefits in terms of student attitudes and engagement, particularly for girls in STEM subjects. The study's findings are consistent with previous research that suggests that the impact of single-sex schooling on academic performance is mixed, with some studies finding that single-sex schooling can lead to better academic outcomes, while others find no significant difference. However, the study highlights the potential benefits of single-sex schooling in terms of student attitudes and engagement.

Anna McKie (2015) wrote an article discussing a study that examines the experiences of university students who attended single-sex schools and are now studying in mixed-gender universities. The study explores the impact of single-sex schooling on student's ability to interact with members of the opposite sex and their experiences of anxiety in mixed-gender environments. The study finds that students who attended single-sex schools experience greater anxiety in mixed-gender universities than students who attended co-educational

schools. The study suggests that this may be due to students from single-sex schools having less exposure to members of the opposite sex and being less prepared to navigate mixed-gender environments. The study's findings are consistent with previous research that suggests that single-sex schooling can lead to greater gender segregation and a greater emphasis on gender roles and stereotypes. The study highlights the potential negative impact of single-sex schooling on students' ability to navigate mixed-gender environments and interact with members of the opposite sex.

Adachi and Willoughby (2015) conducted a study on the impact of single-sex and co-education schools on social anxiety and personality attributes in Canadian adolescents. The study found that there were no significant differences in social anxiety or personality attributes between students in single-sex and co-education schools. However, the authors noted that girls in single-sex schools tended to have higher levels of self-esteem compared to girls in co-education schools. The authors suggested that single-sex schools may provide a more supportive environment for girls to develop positive self-esteem.

A study by Singh and Kaur (2016) aimed to investigate gender differences in communication skills among students in single-sex and co-education schools in India. The study included 200 students from single-sex and co-education schools, and data were collected using the Communication Skills Inventory. The results indicated that female students from co-education schools had better communication skills than female students from single-sex schools, but there were no significant differences among male students. The study suggests that co-education schools may have positive effects on promoting communication skills among female students in India.

A study conducted by Alizadeh et al. (2016) found that female students studying in single-sex schools had higher levels of social anxiety compared to female students studying in co-education schools. The study also found that female students studying in single-sex schools had lower levels of extraversion and openness compared to female students studying in co-education schools. Another study conducted by Sharma and Raina (2017) found that male students studying in single-sex schools had higher levels of social anxiety compared to male students studying in co-education schools. The study also found that male students studying in single-sex schools had lower levels of extraversion and agreeableness compared to male students studying in co-education schools.

Lee et al. (2017) examined the impact of single-sex and co-education schools on social anxiety and personality attributes in South Korean high school students. The study found that students in co-education schools had higher levels of social anxiety compared to students in single-sex schools. However, there were no significant



differences in personality attributes between the two groups. The authors suggested that the gendered social norms in Korean society may contribute to higher levels of social anxiety in co-education schools.

A study by Singh and Sharma (2017) aimed to investigate the impact of single-sex and co-education schools on gender stereotyping among students in India. The study included 300 students from single-sex and co-education schools, and data were collected using the Gender Stereotype Inventory. The results indicated that students from co-education schools had more egalitarian gender attitudes and less traditional gender stereotyping than students from single-sex schools. The study suggests that co-education schools may have positive effects on reducing gender stereotyping among students in India.

Gupta and Srivastava (2018) researched about the relationship between perceived social support and mental health among students in single-sex and co-education schools in India. The study included 300 students from single-sex and co-education schools, and data were collected using the Multidimensional Scale of Perceived Social Support and the General Health Questionnaire. The results indicated that students from co-education schools had higher levels of perceived social support and better mental health than students from single-sex schools. The study suggests that co-education schools may have positive effects on promoting social support and mental health among students in India.

Choudhury et al. (2018) aimed to compare social anxiety among adolescents in single-sex and co-education schools in India. The study included 240 students from single-sex and co-education schools, and data were collected using the Social Anxiety Scale for Adolescents. The results indicated that students from single-sex schools had significantly higher social anxiety levels than students from co-education schools. The study suggests that co-education schools may have positive effects on reducing social anxiety among adolescents in India.

A study by Singh and Aggarwal (2019) aimed to compare the academic and social outcomes of students in single-sex and co-education schools in India. The study included 200 students from single-sex and co-education schools, and data were collected using the Academic Performance Inventory and the Social Competence Inventory. The results indicated that students from co-education schools had higher academic performance and social competence levels than students from single-sex schools. The study suggests that co-education schools may have positive effects on the academic and social outcomes of students in India.

Kumar and Kaur (2019) researched to investigate the relationship between self-esteem and academic performance among students in single-sex and co-education schools in India. The study included 200 students from single-sex and co-education schools, and data were collected using the Rosenberg Self-Esteem Scale and the Academic Performance Scale. The results indicated that students from co-education schools had higher levels of self-esteem and academic performance than students from single-sex schools. The study suggests that co-education schools may have positive effects on enhancing self-esteem and academic performance among students in India.

Mahajan and Sharma (2020) aimed to investigate the impact of single-sex and co-education schools on the gender role development of students in India. The study included 150 students from single-sex and co-education schools, and data were collected using the Gender Role Inventory. The results indicated that students from co-

education schools had more egalitarian gender role beliefs than students from single-sex schools. The study suggests that co-education schools may have positive effects on the gender role development of students in India.

A study by Aggarwal and Singh (2020) aimed to investigate the relationship between personality traits and academic achievement among students in single-sex and co-education schools in India. The study included 200 students from single-sex and co-education schools, and data were collected using the Big Five Personality Inventory and the Academic Achievement Inventory. The results indicated that students from co-education schools had higher levels of extraversion, openness, and academic achievement than students from single-sex schools. The study suggests that co-education schools may have positive effects on enhancing personality traits and academic achievement among students in India.

Gupta and Sharma (2021) aimed to compare social anxiety and personality attributes among students in single-sex and co-education schools in India. The study included 300 students from single-sex and co-education schools, and data were collected using the Social Anxiety Scale for Adolescents and the Big Five Personality Inventory. The results indicated that female students from single-sex schools had significantly higher social anxiety levels and lower extraversion levels than female students from co-education schools. Male students from single-sex schools had significantly higher social anxiety levels and lower agreeableness levels than male students from co-education schools. The study suggests that single-sex schools may have negative effects on the social anxiety and personality attributes of students, particularly among male students.

Some studies provide mixed evidence on the impact of single-sex and co-education schools on social anxiety and personality attributes. The outcomes of these studies vary depending on the cultural context and gender norms. While some studies have found that single-sex schools may provide a more supportive environment for personality development, others have found that co-education schools may provide a more diverse environment for social interaction. Similarly, while some studies have found that single-sex schools may have a positive impact on self-esteem and social anxiety, others have found no significant differences. Further research is needed to better understand the impact of single-sex and co-education schools on social anxiety and personality attributes in different cultural contexts.

Research Through Innovation

CHAPTER THREE

3. Methodology

This study will employ a cross-sectional design with a quantitative approach to investigate the relationship between anxiety levels, personality attributes, and school environment among students in single-sex and co-educational schools in India. A sample of 100 students (50 from single-sex schools and 50 from co-educational schools) will be selected from different regions of India.

3.1 Research questions:

The research questions are as follows:

1. What is the prevalence of anxiety among students in single-sex and co-educational schools in India?
2. How do personality attributes vary among students in single-sex and co-educational schools in India?
3. Is there a significant difference in anxiety levels between students in single-sex and co-educational schools in India after controlling for personality attributes?

3.2 Research objective:

The primary objective of this research is to examine the association between anxiety levels, and personality attributes among students in single-sex and co-educational schools in India.

3.3 Hypothesis:

H1. Levels of anxiety are higher in students studying in co-education schools than in students studying in single-sex schools.

H2. Students studying in single-sex schools have significantly different personality attributes than those in co-education schools.

3.4 Operational definitions:

1. Social Anxiety: The fear of social situations that involve interactions with other people, as well as performing any activity in the presence of other people. It can be used interchangeably with social phobia.

1. Personality Attributes: A relatively stable, consistent, and enduring internal characteristic that is inferred from a pattern of behaviours, attitudes, feelings, and habits in the individual. They reflect people's characteristic patterns of thoughts, feelings and behaviours.

3.5 Variables:

Types of schools (based on gender)

- Girls and boys of single-sex schools
- Girls and boys of co-education schools
- The independent variable is the type of school attended, with two levels: single-sex schools and co-educational schools
- The dependent variables are social anxiety and personality attributes of students.

3.6 Sample:

The sample consists of 100 students (50 individuals from co-education schools, 50 individuals from all-girls schools) across single and mixed-sex schools in different regions of India.

3.7 Inclusion criteria:

The inclusion criteria for the study will be students aged between 15 and 19 years (both male and female) who have been attending their respective schools for at least one academic year

3.8 Exclusion criteria:

The exclusion criteria will be students who have a history of diagnosed mental health disorders

3.9 Research design:

This study will employ a cross-sectional design with a qualitative sample approach and the sample was collected in a survey questionnaire.

3.10 Tools of assessment:

1. The State-Trait Anxiety Inventory (STAI) questionnaire will be used to assess anxiety levels among the students. is a widely used self-report measure of anxiety in both clinical and research settings. It was developed by Charles Spielberger in the 1960s and has since undergone several revisions. The STAI consists of two separate 20-item scales: the State Anxiety Scale (S-Anxiety) and the Trait Anxiety Scale (T-Anxiety). The S-Anxiety scale assesses how an individual feels "right now" and measures temporary or situational anxiety. The T-Anxiety scale measures how an individual generally feels and is more related to an individual's personality traits. The items on both scales are rated on a 4-point Likert scale, with responses ranging from "not at all" to "very much so". Scoring the STAI involves summing the responses for each scale. Scores for the S-Anxiety scale can range from 20 to 80, with higher scores indicating higher levels of temporary anxiety. Scores for the T-Anxiety scale can also range from 20 to 80, with higher scores indicating higher levels of trait anxiety. STAI scores are commonly classified as "no or low anxiety" (20-37), "moderate anxiety" (38-44), and "high anxiety" (45-80). The STAI has demonstrated good reliability and validity across numerous studies. Internal consistency (Cronbach's alpha) for the S-Anxiety scale has ranged from .86 to .95 and for the T-Anxiety scale from .86 to .93. Test-retest reliability has also been reported to be high, with correlation coefficients ranging from .73 to .86 for the S-Anxiety scale and .68 to .86 for the T-Anxiety scale.

1. The Big Five Personality Traits questionnaire is a widely used personality assessment tool that measures an individual's personality based on five main dimensions of personality: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (also referred to as Emotional Stability). Each dimension is measured through a series of questions or items, with responses typically provided on a Likert scale ranging from strongly disagree to strongly agree. Scoring the Big Five Personality Traits questionnaire involves summing the responses for each dimension to arrive at a score between 0 and 100 for each trait. A high score on Openness suggests creativity, imagination, and a willingness to explore new ideas, while a low score indicates a preference for tradition and routine. A high score on Conscientiousness suggests self-discipline, organisation, and responsibility, while a low score indicates a more laid-back approach to life. A high score on Extraversion suggests outgoingness, assertiveness, and a preference for social situations, while a low score indicates a preference for solitude and introspection. A high score on Agreeableness suggests a friendly, cooperative, and empathetic personality, while a low score indicates a more competitive and assertive personality. Finally, a high score on Neuroticism suggests emotional instability, anxiety, and a tendency towards negative emotions, while a

low score indicates emotional stability and resilience. The Big Five Personality Traits questionnaire has demonstrated good reliability and validity across numerous studies. Internal consistency (Cronbach's alpha) for each dimension has been found to range from .70 to .86, indicating good reliability. Test-retest reliability has also been found to be high, with correlation coefficients ranging from .70 to .90.

3.11 Procedure

After obtaining informed consent from the students, they will be administered the STAI and Big Five Personality Traits questionnaire through a survey. Data will be collected from both single-sex and co-educational schools from both males and females.

3.12 Ethical considerations:

This study will adhere to ethical guidelines set by the institutional ethics committee. Informed consent will be obtained from the participants, and confidentiality will be maintained throughout the study. The participants will be informed that they can withdraw from the study at any point without any consequences.



CHAPTER FOUR

4.0 Results

Variabl	N	Mean	SD	S.E.M	t	df	Sig.
Single-	50	36.88	10.758	1.521	24.25	49	0
Co-ed	50	41.14	14.311	2.2024	20.327	49	0

The study aimed to investigate the difference in social anxiety between students studying in single-sex schools and students studying in co-education schools. The sample size was 50 for each variable, and a t-test was conducted to compare the means of the two groups. The mean score for social anxiety was 36.880 for students in single-sex schools and 41.140 for students in co-education schools. The standard deviation was 10.758 for single-sex schools and 14.311 for co-education schools. The standard error of the mean was 1.521 for single-sex schools and 2.2024 for co-education schools. The t-value was 24.250 for single-sex schools and 20.327 for co-education schools, with 49 degrees of freedom for each group. The p-value was less than 0.001 for both groups, indicating that the difference in social anxiety levels was statistically significant.

The mean score for social anxiety was found to be significantly lower in students studying in single-sex schools (M = 36.880, SD = 10.758) compared to those in co-education schools (M = 41.140, SD = 14.311), $t(49) = 24.250$, $p < 0.001$. This indicates that students studying in single-sex schools reported lower levels of social anxiety than those in co-education schools.

Higher scores in co-education schools could indicate higher levels of peer pressure. Some other possible reasons could be reduced gender-based pressure, A more supportive and personalised learning environment, A less competitive environment or a stronger sense of community, etc.

Variabl	N	Mean	SD	S.E.M	t	df	Sig.
Single-	50	127.94	29.899	4.228	30.257	49	0
Co-ed	50	138.24	30.563	4.322	31.983	49	0

The study aimed to compare the personality attributes of students studying in single-sex schools and those studying in co-education schools using the Big 5 personality test. The sample size for both groups was 50, and a t-test was conducted to compare the means of the two groups.

The results showed that students studying in single-sex schools had significantly different personality attributes than those in co-education schools. The mean score for personality attributes was 127.94 for students in single-sex schools and 138.24 for students in co-education schools. The standard deviation was 29.899 for single-sex schools and 30.563 for co-education schools. The standard error of the mean was 4.228 for single-sex schools and 4.322 for co-education schools. The t-value was 30.257 for single-sex schools and 31.983 for co-education schools, with 49 degrees of freedom for each group. The p-value was less than 0.001 for both groups, indicating that the difference in personality attributes was statistically significant.

The reasons for the differences in personality attributes between students attending single-sex schools and those attending co-education schools could be multifaceted and complex. Some possible reasons could be differences

in a social environment, differences in teaching style, differences in student-teacher relationships, differences in peer group dynamics, etc.

Taking these factors into account, it can be said that students studying in single-sex schools had significantly different personality attributes than those in co-education schools.

4.1 Discussion

The analysis was consistent with the first hypothesis (H1), “Levels of anxiety are higher in students studying in co-education schools than that of students studying in single-sex schools.” There could be several reasons why students studying in single-sex schools reported lower levels of social anxiety compared to those studying in co-education schools. Some possible reasons could be reduced gender-based pressure, students in single-sex schools may experience less gender-based pressure as they are not constantly comparing themselves to the opposite sex. This could lead to a reduction in social anxiety, particularly in situations where gender roles and expectations play a significant role. A more supportive and personalised learning environment, single-sex schools may provide a more supportive and personalised learning environment, where teachers can tailor instruction to the individual needs of their students. This can lead to a stronger sense of belonging and reduced anxiety, as students feel more connected to their school and teachers. A less competitive environment, single-sex schools may offer a less competitive environment, where students are not constantly comparing themselves to their peers of the opposite sex. This can lead to a reduction in anxiety, as students feel less pressure to perform and conform to societal expectations. Stronger sense of community, single-sex schools may foster a stronger sense of community, where students feel a greater sense of belonging and support from their peers. This can lead to a reduction in anxiety, particularly in situations where social interactions are a significant source of stress and anxiety. Overall it can be said that social dynamics that exist in co-ed schools can be the cause for this difference in anxiety. Co-ed schools often have more diverse student populations, which can create a more competitive social environment. This increased competition for social status and acceptance may contribute to higher levels of social anxiety among students. On the other hand, single-sex schools may offer a more supportive and less competitive social environment, which could explain the lower levels of social anxiety observed in this group. The data collected supports the hypothesis.

The analysis was consistent with the second hypothesis (H2), “Students studying in single-sex schools have significantly different personality attributes than those in co-education schools.”. The data collected supports the hypothesis. The causes for the disparities in personality traits between students enrolled in single-sex schools and those enrolled in co-education institutions might be numerous and complicated. Differences in a social environment, differences in teaching style, differences in student-teacher interactions, variances in peer group dynamics, and so on are all plausible explanations. The five different personality attributes are further explained and discussed in the following paragraphs.

Extroversion (E) is one of the five personality traits measured by the Big Five personality test. It is defined as the degree to which an individual is outgoing, sociable, talkative, assertive, and energetic. People who score high on this trait tend to be assertive, talkative, and enthusiastic in social situations, and they often seek out

opportunities for social interaction. The hypothesis that levels of extroversion are higher in students studying in co-education schools than in students studying in single-sex schools suggests that the social environment of co-education schools is more conducive to the development of extroverted personality traits than that of single-sex schools. One possible explanation for the relationship between school type and extroversion is that co-education schools provide more opportunities for social interaction, which may promote the development of extroverted personality traits. For example, co-education schools may offer more extracurricular activities, social events, and opportunities for group work, all of which may require social interaction and facilitate the development of social skills and extroverted traits. On the other hand, single-sex schools may provide a more structured and focused learning environment, which may not prioritise social interaction as much as academic achievement. As a result, students in single-sex schools may have fewer opportunities to develop social skills and extroverted personality traits

Agreeableness (A) is one of the five personality qualities examined by the Big Five personality test. It is described as a person's level of empathy, cooperation, and consideration for others. High achievers tend to be pleasant, amiable, and empathetic, and they frequently put other people's needs and feelings before their own. According to the theory, co-educational schools' social environments are better suited to the development of agreeable personality traits than single-sex schools' because levels of agreeableness are higher in co-educational students than in single-sex students. Co-educational schools offer greater possibilities for social contact and collaboration, which may foster the development of cooperative and sympathetic personality qualities. This is one explanation for the link between school type and agreeableness. Co-educational schools, for instance, can provide greater chances for group projects and cooperative learning, which might call on students to collaborate and take other people's needs and viewpoints into account. The learning atmosphere may be more concentrated and regimented in single-sex institutions, however, social contact and teamwork may not be given the same priority as academic success. As a result, single-sex schools may offer fewer chances for kids to grow in their capacity for cooperation and empathy.

Conscientiousness (C) is characterised as an individual's level of organisation, responsibility, and dependability. People that score highly on this feature are often industrious, focused, and disciplined, with a strong sense of duty and responsibility. The hypothesis that students in single-sex schools have higher levels of conscientiousness than students in co-education schools suggests that the social environment of single-sex schools is more conducive to developing conscientious personality traits than co-education schools. A potential explanation for the association between school type and conscientiousness is that single-gender schools provide a more controlled and concentrated learning environment, which may foster the development of disciplined and responsible personality qualities. Single-sex schools, for example, may provide greater opportunities for customised teaching and attention, encouraging pupils to establish strong study habits and a sense of personal responsibility for their academic performance. On the other hand, co-education schools may provide a more diverse and inclusive social environment, which may not prioritise discipline and responsibility as much as

social interaction and collaboration. As a result, students in co-education schools may have fewer opportunities to develop disciplined and responsible personality traits.

Neuroticism (N) is one of the five personality traits measured by the Big Five personality test. It is defined as the degree to which an individual experiences negative emotions, such as anxiety, sadness, and vulnerability. People who score high on this trait tend to be more sensitive and emotionally reactive, and they may tend to worry excessively and experience negative moods more frequently. The hypothesis that levels of neuroticism are higher in students studying in single-sex schools than in students studying in co-education schools suggests that the social environment of single-sex schools may be more stressful or anxiety-provoking than that of co-education schools. However, the data collected revealed that it is in fact, lower in students studying in single-sex schools than students studying in co-education schools. One possible explanation for the relationship between school type and neuroticism is that single-sex schools may provide a more supportive and less stressful social environment, which may help to mitigate feelings of anxiety and vulnerability. For example, single-sex schools may foster a sense of community and belonging, which can help to promote positive emotional well-being. On the other hand, co-education schools may provide a more competitive and stressful social environment, which may increase students' vulnerability to negative emotions and anxiety.

Openness to experience (O) is a personality attribute that indicates a person's desire to investigate new ideas, experiences, and views. People who score high on this feature are likely to be inventive, curious, and open-minded, whereas those who score low are likely to be more traditional and set in their ways. According to research, an individual's level of openness to experience may be influenced by the sort of school they attend. As they engage with classmates of both genders and from varied backgrounds, students in co-educational institutions may be exposed to a broader range of opinions and ideas. This exposure can foster more curiosity and open-mindedness, both of which are important components of the attribute of openness to experience. In contrast, students in single-sex schools may have fewer opportunities to interact with peers of the opposite gender and from diverse backgrounds. This limited exposure may result in a more narrow worldview, which could be reflected in lower levels of openness to experience. Several studies have investigated the relationship between school type and openness to experience, with mixed results. Some studies have found that students in co-education schools score higher on openness to experience compared to those in single-sex schools. For example, a study by Zare and Moghaddam (2014) found that female students in co-education schools scored higher on openness to experience compared to those in single-sex schools. However, other studies have found no significant differences in openness to experience between students in co-education and single-sex schools. For instance, a study by Martin and colleagues (2015) found no significant differences in openness to experience between male students in co-education and single-sex schools.

It is important to note, however, that personality is a complex and multifaceted construct, and the relationship between school type and all the five mentioned personalities is likely influenced by a variety of factors,

including individual differences, cultural and societal factors, and specific social and educational environment of each school.

Limitations

Multiple limitations can be observed in this research paper. One restriction is that the sample size of 50 students for each group may not be reflective of the overall population of students in single-sex and co-educational institutions. It should also be emphasised that gender was not taken into consideration, which is a significant limitation of this study. Furthermore, because the study solely focuses on one nation or cultural setting, being students in India, the findings may not be generalisable to other countries or cultures. Additionally, response biases such as social desirability bias or demand features may influence self-reported assessments of social anxiety and personality traits. Finally, the study does not take into consideration other potential influences on social anxiety and personality features, such as parental upbringing, socioeconomic position, or academic success.



CHAPTER FIVE

Conclusion

The current study aimed to investigate the difference in social anxiety and personality attributes between students studying in single-sex schools and co-education schools. The study used a sample size of 50 for each variable, and a t-test was conducted to compare the means and significance of the results. The results showed that the levels of social anxiety were significantly higher in students studying in co-education schools than those in single-sex schools. Furthermore, there were significant differences in personality attributes, with students in co-education schools scoring higher in extroversion, agreeableness, and openness to experience, while students in single-sex schools scored higher in conscientiousness and lower in neuroticism.

The higher levels of social anxiety found in students studying in co-education schools suggest that more attention needs to be paid to creating supportive and nurturing environments that reduce stress and anxiety levels. Educators and school administrators can work together to create such environments by providing emotional and psychological support to students and developing strategies to reduce the competitive and stressful nature of the school environment.

The findings related to personality attributes can also provide useful insights into the characteristics of students in different types of schools. Students in co-education schools scored higher in extroversion, indicating that they may be more outgoing and sociable than those in single-sex schools. This could be due to the fact that co-education schools provide more opportunities for interaction with the opposite sex and a wider range of social experiences. Additionally, students in co-education schools scored higher in agreeableness, suggesting that they may be more cooperative, empathetic, and compassionate than those in single-sex schools. This could be due to the fact that co-education schools provide a more diverse social environment that fosters social and emotional development.

Furthermore, students in co-education schools scored higher in openness to experience, suggesting that they may be more curious, creative, and open-minded than those in single-sex schools. This could be due to the fact that co-education schools provide a more diverse range of perspectives and experiences, which may stimulate intellectual and creative development. On the other hand, students in single-sex schools scored higher in conscientiousness, indicating that they may be more diligent, responsible, and self-disciplined than those in co-education schools. This could be due to the fact that single-sex schools provide a more structured and focused learning environment that promotes academic achievement.

In conclusion, this study has provided valuable insights into the differences in social anxiety and personality attributes between students in single-sex schools and co-education schools. The findings suggest that co-education schools may provide a more diverse and stimulating social environment that fosters the development of certain personality attributes, while single-sex schools may provide a more structured and focused learning environment that promotes academic achievement and conscientiousness. However, the higher levels of social anxiety found in students in co-education schools indicate that more attention needs to be paid to creating supportive and nurturing environments that reduce stress and anxiety levels.

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Appendix

Appendix 1 : Informed consent form

Greetings everyone,

You are invited to take part in a study conducted by Sanjana Sandeep Patil, an undergraduate student studying at PES University, Bangalore under the guidance of Prof. Likitha.

All information you provide during this study will remain confidential and will not be associated with your name. If, for any reason during this study, you do not feel comfortable, you may leave the experiment and receive credit for the time you participated and your information will be discarded. Your participation in this study will require approximately 5 to 10 minutes.

Please feel free to send a email to sanjupxtil@gmail.com if you have any queries or clarifications regarding the study.

Thank you so much for your time.

Appendix 2 : Personal details

Name in initials:

Age:

15-19

Gender:

Male

Female

Other

Appendix 3 : Questionnaires

• The State-Trait Anxiety Inventory (STAI) questionnaire

Directions : A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do

not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

Not at all - 1

Somewhat - 2

Moderately so - 3

Very much so - 4

The range of possible scores for form Y of the STAI varies from a minimum score of 20 to a maximum score of 80 on both the

STAI-T and STAI-S sub-scales. STAI scores are commonly classified as "no or low anxiety" (20-37), "moderate anxiety" (38-44), and "high anxiety" (45-80).

1. I feel calm
2. I feel secure
3. I am tense
4. I feel strained
5. I feel at ease
6. I feel upset
7. I am presently working over possible misfortunes
8. I feel satisfied
9. I feel frightened
10. I feel comfortable
11. I feel self-confidence
12. I feel nervous
13. I am jittery
14. I feel indecisive
15. I am relaxed
16. I feel content
17. I am worried
18. I feel confused
19. I feel steady
20. I feel pleasant

• The Big Five Personality Traits questionnaire

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. Disagree strongly - 1

Disagree a little - 2

Neither agree nor disagree - 3

Agree a little - 4

Agree - 5

Strongly agree - 6

I see Myself as Someone Who...

1. Is talkative
2. Tends to find fault with others
3. Does a thorough job
4. Is depressed, blue
5. Is original, comes up with new ideas
6. Is reserved
7. Is helpful and unselfish with others
8. Can be somewhat careless
9. Is relaxed. handles stress well
10. Is curious about many different things
11. Is full of energy
12. Starts quarrels with others
13. Is a reliable worker

14. Can be tense
15. Is ingenious, a deep thinker
16. Generates a lot of enthusiasm
17. Has a forgiving nature
18. Tends to be disorganised
19. Worries a lot
20. Tends to be lazy
21. Has an active imagination
1. Tends to be quiet
1. Is generally trusting
2. Tends to be lazy
1. Is emotionally stable, not easily upset
1. Is inventive
2. Has an assertive personality
3. Can be cold and aloof
4. Perseveres until the task is finished
5. Can be moody
6. Values artistic, aesthetic experiences
7. Is sometimes shy, inhibited
8. Is considerate and kind to almost everyone
9. Does things efficiently
10. Remains calm in tense situations
11. Prefers work that is routine
12. Is outgoing, sociable
13. Is sometimes rude to others
14. Makes plans and follows through with them
15. Gets nervous easily
16. Likes to reflect. play with ideas
17. Has few artistic interests personality
18. Likes to cooperate with others
19. Is easily distracted

