

Research Paper

Difference in Social Anxiety among Students of Single-sex and Co-Education Schools

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ABSTRACT

The purpose of the study was to understand how the classroom environment, in terms of student gender composition affects social anxiety among school students in an urban Indian context. The study aimed to examine the difference in levels of social anxiety, between students of single-sex and co-education schools. A comparative quantitative research design was adopted for this study. Convenient sampling technique was used to select the sample. The Liebowitz Social Anxiety Scale (Liebowitz, 1987) was administered to a total of 165 students (39 girls from co-education schools, 42 girls from all-girls schools, 38 boys from co-education schools and 46 boys from all-boys schools) of class IX and X across single-sex and co-education schools in Bangalore, Karnataka. Analysis of Variance (ANOVA) was done to identify differences in social anxiety among the four groups, which revealed that girls of co-education schools had significantly higher social anxiety than boys of single-sex schools. The difference among other student groups was not statistically significant. The findings indicate that boys are comfortable in an all-boys schools while girls in co-education school experience high social anxiety. Implications of the study, relevant to the education system are discussed.

Keywords: *Social Anxiety, Girls Of Single-Sex Schools, Boys Of Single-Sex Schools, Girls Of Co-Education Schools, Boys Of Co-Education Schools.*

Social Anxiety disorder (SAD), earlier known as Social Phobia, is the fear of social situations that involve interactions with other people, as well as performing any activity in front of other people. Social anxiety involves a heightened fear of humiliating oneself and high feelings of nervousness. This can lead to extreme isolation. Social anxiety has been associated with substance addiction (Book & Randall, 2002; Goodwin, Zvolensky & Keyes, 2008) and eating disorders (Kaye, Bulik, Thornton, Barbarich & Masters, 2004). Therefore, identification and treatment of social anxiety is very important.

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The practice of conducting education separately for male and female students is encouraged in many cultures and religions, primarily due to conservative beliefs that are against girls and boys interacting before marriage. All-girls schools have encouraged more families to educate their girl children. On the other hand, mixed-sex education, has helped achieve unbiased and universal education regardless of sex. Students of co-education are likely to experience a more realistic peer environment.

Previous studies have found many interesting factors that are associated with and influence social anxiety, single-sex and co-education schooling. Social anxiety was found to be negatively correlated with self-esteem (Izgc, Akyuz, Dogan & Kugu, 2004; Seema & Kumar, 2017). Patients with social anxiety disorder experience negative self-image (Hirsch, Meynen, & Clark, 2004) and body-image (Izgc et al., 2004). Social anxiety among school students, particularly females, has been linked with less social acceptance from classmates, fewer friendships, less intimacy, companionship and support in their close friendships (La Greca & Lopez, 1998), increased peer victimization (Erath, Flanagan, & Bierman, 2007) and impairs performance in the school domain (Brook & Willoughby, 2015; Gren-Landell et al., 2009; Stein & Kean, 2000; Strahan, 2003). Social anxiety increases the risk of developing depression (De Jong et al., 2012; Ohayon & Schatzberg, 2010).

Kaushik, Garg and Saxena (2012) found that Haryana women who chose single-sex colleges value parents' opinion for making the choice of school. Pahlke, Bigler and Patterson (2014) found that common rationale for single-sex schooling girls were gender differences in learning and interests, in-group preference, and gender discrimination. Park et al. (2013) found an association between single-sex schooling and higher language test scores. Girls in a single-sex school have a higher sense of belonging and ownership of classroom (Brutsaert & Van Houtte, 2002; Streitmatter, 2002). Drawbacks of single-sex schooling for girls include existence of "girl drama" and gossip (Hart, 2016), dissatisfaction with social life (Hoffnung, 2011) and social incapacitation in adjusting and accepting the presence of boys on exiting the single-sex environment (Sharma, 2013).

As literature suggests, social anxiety has largely negative impacts on social interactions, relationships and overall functioning. The influence of social anxiety on impairment in performance in school domain indicates the importance of finding the correct type of school that promotes healthy social interactions, which could influence mental health too. Though there have been studies about the sense of belonging, academic achievement, stereotypical beliefs and attitudes between single-sex and co-ed schools, the variable of social anxiety has not been researched upon. Moreover, research is abundant on single-sex girls schooling for girls but scarce for boys. The study attempted to fill in this research gap.

METHOD

Aim of the Research

This research aimed to identify the difference in levels of social anxiety between students of single-sex and co-education schools. Therefore, the central research question is:

Is there a difference in social anxiety of students studying in a single-sex school and students of a co-education school?

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Objectives

- To determine whether students of single-sex or co-education schools experience more social anxiety.
- To understand gender differences in social anxiety among school students.
- To determine whether there is a difference in social anxiety between the four groups i.e., girls of single-sex schools, boys of single-sex schools, girls of co-education schools or boys of co-education schools.

Hypothesis

This study had 3 null hypotheses:

1H₀: There is no significant difference between the social anxiety levels experienced by (a) girls of single-sex and girls of co-education schools (b) boys of single-sex and boys of co-education schools.

2H₀: There is no significant difference between social anxiety experienced by (a) male students and female students of single-sex schools (b) male and female students of co-education schools.

3H₀: There is no significant difference between the four groups, i.e., girls of single-sex schools, boys of single-sex schools, girls of co-education schools or boys of co-education schools, in the social anxiety they experience.

Variables

1. Social Anxiety
2. The type of school (based on gender). This variable has 4 levels:
 - Girls of a single-sex school
 - Boys of a single-sex school
 - Girls of a co-education school
 - Boys of a coeducation school

Operational Definitions

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.

Type of school (based on gender). The kind of school based on whether the students are biologically male or female. The four types are:

Girls of single-sex schools. Schools in which all the students are biologically female.

Boys of single-sex schools. Schools in which all the students are biologically male.

Girls of co-education schools. The female students in schools in which both biologically male and female students study.

Boys of co-education schools. The male students in schools in which both biologically male and female students study.

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Research Design

This quantitative study adopts a comparative research design as it compares the difference in social anxiety among the four student groups.

Sampling technique and sample characteristics

Convenient sampling technique was used. The sample consisted of 165 students (39 girls from co-education schools, 42 girls from all-girls schools, 38 boys from co-education schools and 46 boys from all-boys schools) of class IX and X across single and mixed-sex schools in Bangalore, Karnataka. The schools chosen were all of Christian religious affiliation and comparable in terms of the curricular and extracurricular exposure they provide. These commonalities were ensured to minimise influence of extraneous variables.

Tools

The study uses a single scale for measuring social anxiety, i.e., the Liebowitz Social Anxiety Scale (Liebowitz, 1987). It is a short 24 item questionnaire. The rating for fear and avoidance for each item is done on a scale of 0-3 individually. The self-report version was used for this study. Studies have found that the Liebowitz Social Anxiety Scale (LSAS) has excellent internal consistency and convergent validity (Heimberg et al., 1999) and the Self report version (LSAS-SR) has been found to be just as reliable as the clinically administered version (Fresco et al., 2001). Many previous studies conducted in the Indian context such as those by Pinjarkar, Sudhir and Math (2015) and Lakshmi, Sudhir, Sharma and Math (2016) have also used this tool.

Procedure

The LSAS scale was administered manually, as a paper-pen self-report questionnaire. The questionnaire, along with a consent form and a section to fill out participant details such as school, grade studying etc., was distributed to the allotted classes. The instructions were clearly explained to the participants. The collected data was cleaned. The questionnaires were scored manually.

RESULTS

The data was found to be normally distributed.

Table 1 Tests of Normality

	School Type	Statistic	Shapiro Wilko	
			Df	Sig.
Scores	Co-ed Boys	.969	38	.355
	Co-ed Girls	.972	39	.432
	Single-Sex Boys	.968	46	.236
	Single-Sex Girls	.972	42	.389

Analysis of Variance (ANOVA) was done to identify differences in social anxiety among the four groups, i.e., girls of single-sex schools, boys of single-sex schools, girls of co-education schools and boys of co-education schools. This was followed by Tukey HSD post-hoc analysis.

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Table 2 Descriptive Statistics for Social Anxiety Scores

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Single-Sex Boys	46	50.04	18.311	2.700	44.61	55.48	21	100
Single-Sex Girls	42	57.67	22.541	3.478	50.64	64.69	19	106
Co-ed Boys	38	54.13	19.762	3.206	47.64	60.63	16	89
Co-ed Girls	39	65.49	15.620	2.501	60.42	70.55	37	94
Total	165	56.58	19.905	1.550	53.52	59.64	16	106

Social anxiety was found to be highest among girls in co-education, followed by girls of single-sex schools, boys of co-education schools, boys of single-sex schools.

Table 3 One-Way Analysis of Variance of Social Anxiety Scores

	Sum of Squares	Df	Mean Square	F	Sig
Between Groups	5336.971	3	1778.990	4.802*	.003
Within Groups	59641.332	161	370.443		
Total	64978.303	164			

*Significant at 0.01 level

Table 4 Post-hoc Analysis of Social Anxiety among different school types

	(I) School Type	(J) School Type	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Tukey HSD	Single-Sex Boys	Single-Sex Girls	-7.623	4.108	.251	-18.29	3.04
		Co-ed Boys	-4.088	4.219	.767	-15.04	6.87
		Co-ed Girls	-15.444*	4.189	.002	-26.32	-4.57
	Single-Sex Girls	Single-Sex Boys	7.623	4.108	.251	-3.04	18.29
		Co-ed Boys	3.535	4.309	.845	-7.65	14.72
		Co-ed Girls	-7.821	4.280	.264	-18.93	3.29
	Co-ed Boys	Single-Sex Boys	4.088	4.219	.767	-6.87	15.04
		Single-Sex Girls	-3.535	4.309	.845	-14.72	7.65

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(I) School Type	(J) School Type	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
	Sex Girls					
	Co-ed	-11.356	4.387	.051	-22.74	.03
	Girls					
Co-ed	Single-	15.444*	4.189	.002	4.57	26.32
Girls	Sex Boys					
	Single-	7.821	4.280	.264	-3.29	18.93
	Sex Girls					
	Co-ed	11.356	4.387	.051	-.03	22.74
	Boys					

**The Mean Difference is significant at the 0.01 level.*

However, only the difference in social anxiety between co-education girls and single-sex boys is statistically significant ($p < 0.01$). Therefore hypothesis 1 and 2 are accepted while hypothesis 3 is partially accepted.

DISCUSSION

The mean scores of social anxieties suggest that girls in co-education schools experienced the highest social anxiety, followed by single-sex girls, co-ed boys and single-sex boys. This indicates that girls in both type of schools have higher (but not statistically significant) social anxiety than boys. Other studies such as those by Bhakla et al. (2013), Gren-Landell et al. (2009) and Kaur and Kaur (2015) have also found similar gender differences. The rationale behind girls in co-ed schools experiencing high social anxiety could be because of the feelings of high self-consciousness due to presence of the opposite sex. Sense of belonging in a mixed-sex classroom is also lower (Brutsaert & Van Houtte, 2002). Girls of the 9th and 10th grade are in a sensitive developmental age (14-16 years). Puberty and the associated hormonal changes tend to make them more conscious about how they appear to the opposite sex. Emergence of social anxiety symptoms among adolescent girls have been associated with advanced pubertal development (Deardorff et al., 2007). Boys of single-sex have the least social anxiety, and this can be attributed to the comfort of being surrounded by the people who one relates to better, that is, those of the same-sex.

From the descriptive statistics, it is clear that female students have more social anxiety than male students, and that girls and boys in co-education schools experience more social anxiety than their single-sex schooled counterparts. Therefore, the significant difference between boys of single-sex and girls of co-education may have occurred due to the additive influence of two factors- gender and type of school.

No significant difference between all the four groups of students may be due to the complex nature of the variable social anxiety which is determined by many factors such as individual life experiences, genetics, etc.,. Hence the difference in the type of school alone could not be associated with difference in social anxiety in this sample.

IMPLICATIONS

From this study, we understand that females in co-education schools are prone to experiencing high social anxiety. School counsellors must be made aware of this risk factor and be well equipped to help the students overcome this fear and not let it affect their school and personal life. It is important to understand that the results do not indicate that one kind of school is better than the other for a student in the long run as the school context is different from the adult social life context. Further research needs to be done to explore the underlying factors that may cause these differences in social anxiety among students of single-sex and co-education schools.

CONCLUSION

There is a significant difference in social anxiety only between girls of co-education schools and boys of single-sex schools. Neither the difference among other groups of single-sex and co-education students nor the gender differences were statistically significant.

A limitation of the study is that extraneous factors such as personality, genetics, life experiences, parental influence, family and cultural values etc., that influence social anxiety could not be controlled in this study. Another limiting factor is that the results cannot be generalised due to use of convenient sampling technique and limited sample size.

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Conflict of Interest

There is no conflict of interest.

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