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A Study on School Climate of Higher Secondary Students

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Abstract: ***School climate refers to the academic and social atmosphere experienced by the students and teachers on the campus that forms the basis for learning, academic achievement and student growth. In this study, it refers to the school climate of higher secondary and is measured by School Climate Questionnaire constructed and validated by Investigator and Research Supervisor (2022). Stratified random sampling technique was adopted for selecting sample from population. It is a probability sampling technique in which the total population is divided into homogenous groups (strata) to complete the sampling process (Qualtrics, n.d.). Taking into account the strata gender, locality of the school, medium of study, type of school and type of management the investigator selected the 1,350 samples from 27 higher secondary schools from Mayiladuthurai, Nagapattinam and Cuddalore districts of Tamil Nadu state in India. From each district 450 samples were selected for the study using stratified random sampling technique. The investigator used appropriate statistical techniques like 't' test ANOVA (Analysis of Variance), and post-hoc ANOVA.***

Keywords: School Climate, Teaching-Learning Environment, Physical Environment, Social Environment, Student Well-Being, Teacher Proficiency, Higher Secondary Students

1. Introduction

Higher secondary education (grades 11-12) marks a critical transition phase where students navigate intensified academic demands, career uncertainties, and psychosocial stressors, profoundly shaping their long-term well-being and success. School climate defined as the quality of interactions among students, teachers, and administrators, encompassing safety, relationships, teaching practices, and institutional support emerges as a pivotal yet underexplored determinant of student outcomes. Existing literature highlights school climate's role in fostering self-esteem, reducing anxiety, and enhancing academic engagement.

School climate refers to the overall quality of the school environment, encompassing students' perceptions of safety, relationships, teaching, and institutional support, which profoundly shapes higher secondary students' academic and emotional experiences. School Climate in higher secondary education, school climate includes physical safety, emotional security, teacher engagement, and peer dynamics, often assessed through multidimensional scales in educational psychology research. Positive climates enhance motivation and reduce dropout risks, while negative ones hinder learning. Relevance to Higher Secondary Students Adolescents in this stage face unique pressures like board exams and career transitions, making school climate critical for fostering resilience and achievement, as evidenced by studies from India showing moderate climates with urban advantages. Interventions targeting teacher-student bonds yield significant improvements. School climate represents the collective experiences of higher secondary students within their educational environment, influencing learning, behaviour, and well-being through factors like safety, relationships, and teaching quality. Key elements include physical and emotional safety, supportive teacher-student interactions, engaging teaching practices, and a sense of community, often measured via validated scales in studies from India. These dimensions interact to shape perceptions, with moderate levels commonly reported among higher secondary learners.

1.1 School Climate

School climate is determined by the "perception of organizational members on various aspects that exist in the organization" (Farland,2023). It is largely an emotional aspect in which the feelings play a major role rather cognitions. The entry of anyone inside the school premises, with an experience of visiting different schools will at once perceive the climate that prevails in the school campus. The feelings and attitudes about the school environment are referred to as school climate. It reflects the quality and character of school life, the organizational structure, teaching and learning practices, and the inter personal relationships that exist among the workforce. An affirmative school climate consists of personal and contextual elements that enhance pro-social relationships among students while reducing problem behaviors. School climate is all about the perception of the stockholders which may be either positive or negative. Perceptions of school climate are also likely connected to professional well-being and personal satisfaction with work. Teachers play major role in building the school climate because the school depends on the teachers for imparting learning to the students they have admitted in the school. The school climate that exists is the result of effects of many years based on multiple factors. Positive attitude of the teachers and their commitment to teaching profession, learners and administration forms the crux of the school climate. The cordial relationship and the successful academic transaction maintained decides whether the school climate is good or bad, for the students are the school ambassadors, and the public believes what these inmates proclaim. Healthy School climate is a basic necessity for successful teaching. The attitudes of the teaching staff and support from the parents influence student achievement.

2. Review of Literature

Abbas (2023) conducted a study to find out the role of school climate in promoting academic achievement of students. The

study was descriptive in nature, and survey method was used. The study population comprised 260 female and maleteachers from government secondary schools of Tehsil Kotli, Pakistan. The researcher used simple random sampling technique for the selection of sample. The researcher selected 154 female and male teachers as a study sample. The researcher developed a five-point Likert-scale questionnaire as the research instrument of the study. Data were collected by personal visits. The collected data was analyzed through SPSS using mean score, frequency and percentage. It was found that schools provided a safe environment for students, that students treated each other with respect, and that the school environment was free from intimidation.

Kaur and Kaur (2022) studied the relationship between school climate and academic achievement of secondary school students. Asampleof200secondaryschool students was taken from four private and government secondary schools in Amritsar city, Punjab. Out of these, 100 students were taken from government (50 boys & 50 girls) and 100 from private (50 boys & 50 girls) secondary school students. The study used the social-emotional school climate inventory of Renuka Kumari Sinha and Rajni Bhargava (1994). The descriptive survey method was adopted for the present study. The study indicated a significant and positive relationship between school climate, social-emotional, and academic achievement of secondary school students.

3. Objectives

To find out whether there is any significant difference between the following sub-groups of higher secondary students.

a) Gender- Male and Female
b) Locality of School- Rural and Urban
c) Medium of Instruction
d) Type of School- Boys', Girls; & Co-Education
e) Type of Management- Self-Financed, Aided and Government

4. Hypotheses

The following sub-groups of higher secondary students do not differ significantly from one another.

a) Gender- Male and Female
b) Locality of School- Rural and Urban
c) Medium of Instruction
d) Type of School- Boys', Girls; & Co-Education
e) Type of Management- Self-Financed, Aided and Government

5. Methodology

The researcher examined the "Scholl Climate of Higher Secondary Students" using the survey approach. All of the higher secondary students enrolled in the XI and XII Standards in the Tamil Nadu districts of Mayiladuthurai, Nagapattinam and Cuddalore make up the study's population. Stratified random sampling was used to pick 450 upper secondary students from each of the 1350 XI and XII standard students enrolled in higher secondary schools in the districts of Mayiladuthurai, Nagapattinam and Cuddalore for the study.

6. Tools Used for the Study

The investigator used the School Climate Questionnaire Constructed and Validated (2022). The tool contains 30 items under three dimensions with 10, 10 and 10 items respectively in a four-point scale, with the options strongly disagree, somewhat disagree, somewhat agree, and strongly agree, after removing 15 items based on the pilot study sis.

7. Analysis and Interpretation of Data

Percentage analysis, the 't' test, ANOVA (Analysis of Variance), and post-hoc ANOVA were used to examine the gathered data.

8. Testing of Hypothesis

Hypothesis 1:
There is no significant difference between male and female higher secondary students in their school climate and his dimension.

Table 1: Difference between Male and Female Higher Secondary Students in their School Climate and its Dimensions

S. No	School Climate	Gender	N	Mean	S. D	Calculated 't' value	Remarks
1.	Learning environment	Male	635	24.05	10.962	0.17	NS
		Female	715	24.16	11.146		
2.	Physical environment	Male	635	25.83	10.411	4.27	S
		Female	715	28.37	11.332		
3.	Social environment	Male	635	23.55	10.498	3.96	S
		Female	715	25.88	11.151		
4.	School climate in total	Male	635	75.77	25.214	0.21	NS
		Female	715	76.07	26.764		

(The table value of 't' is1.96, S-Significant, NS-Not Significant)

It is inferred from the above table that the calculated 't' value (0.17,0.21) is less than the table value (1.96) at 0.05 level of significance. Hence the respective null hypothesis is accepted. Thus, the result shows that there is no significant difference between male and female higher secondary students in the dimensions learning environment and school climate in total. But there is significant difference between male and female higher secondary students in the dimensions of physical environment and social environment. Hence the respective null hypothesis is rejected. While comparing the mean scores of male (Mean=25.83) and female higher secondary students (Mean=28.37), the female higher secondary students are better than the male higher secondary students in the dimension physical environment. While

comparing the mean scores of male (Mean=23.55) and female higher secondary students (Mean=25.88), the female higher secondary students are better than the male higher secondary students in the dimension of social environment.

Hypothesis 2:
There is no significant difference between rural and urban school higher secondary students in their school climate and its dimensions.

Table 2: Difference between Rural and Urban School Higher Secondary Students in their School Climate and its Dimensions

S. No	School Climate	Locality of the School	N	Mean	S.D	Calculated 't' value	Remarks
1.	Learning environment	Rural	700	20.54		13.04	S
		Urban	650	27.95	10.401		
2.	Physical environment	Rural	700	23.66	11.035	12.99	S
		Urban	650	30.96	9.575		
3.	Social environment	Rural	700	24.25		1.37	NS
		Urban	650	25.07	11.202		
4.	School climate in total	Rural	700	68.46	27.312	11.45	S
		Urban	650	83.98	21.924		

(The table value of 't' is1.96, S-Significant, NS-Not Significant)

It is inferred from the above table that the calculated 't' value (1.37) is less than the table value (1.96) at 0.05 level of significance. Hence the respective null hypothesis is accepted. Thus, the result shows that there is no significant difference between rural and urban school higher secondary students in the dimension of social environment. But there is significant difference between rural and urban school higher secondary students in the dimensions of learning environment, physical environment and school climate in total. Hence the respective null hypothesis is rejected. While comparing the mean scores of rural (Mean=20.54) and urban school higher secondary students (Mean=27.95), the urban school higher secondary students are better than the rural school higher secondary students in the dimension learning environment. While comparing the mean scores of rural (Mean=23.66) and urban school higher secondary students (Mean=30.96), the urban school higher secondary students are better than the rural school higher secondary students in the dimension physical environment. While comparing the mean scores of rural (Mean=68.46) and urban school higher secondary students (Mean=83.98), the urban school higher secondary students are better than the rural school higher secondary students in the dimension school climate in total.

Hypothesis 3:
There is no significant difference between Tamil medium and English medium higher secondary students in their school climate and its dimensions.

Table 3: Difference between Tamil Medium and English Medium Higher Secondary Students in their School Climate and its Dimensions

S. No	School Climate	Medium of Study	N	Mean	S.D	Calculated 't' value	Remarks
1.	Learning environment	Tamil	712	22.98	10.892	3.97	S
		English	638	25.37			
2.	Physical environment	Tamil	712	25.30		6.75	S
		English	638	29.27			
3.	Social environment	Tamil	712	24.85	10.868	0.71	NS
		English	638	24.42			
4.	School climate in total	Tamil	712	73.13	26.113	4.20	S
		English	638	79.06			

(The table value of 't' is1.96, S-Significant, NS-Not Significant)

It is inferred from the above table that the calculated 't' value (0.71) is less than the table value (1.96) at 0.05 level of significance. Hence the respective null hypothesis is accepted. Thus, the result shows that there is no significant difference between Tamil medium and English medium higher secondary students in the dimension of social environment. But there is significant difference between Tamil medium and English medium higher secondary students in the dimensions of learning environment, physical environment and school climate in total. Hence the respective null hypothesis is rejected. While comparing the mean scores of Tamil medium (Mean=22.98) and English medium higher secondary students (Mean=25.37), the English medium higher secondary students are better than the Tamil medium higher secondary students in the dimension learning environment. While comparing the mean scores of Tamil medium (Mean=25.30) and English medium higher secondary students (Mean=29.27), the English medium higher secondary students are better than the Tamil medium higher secondary students in the dimension of physical environment. While comparing the mean scores of Tamil medium (Mean=73.13) and English medium higher secondary students (Mean=79.06), the English medium higher secondary students are better than the Tamil medium higher secondary students in the dimension school climate in total.

Hypothesis 4:
There is no significant difference among boys', girls' and co-education schools' higher secondary students in their school climate and its dimensions.

Table 4: Difference among Boys', Girls' and Co-education Schools Higher Secondary Students in their School Climate and its Dimensions

S. No	School Climate	Source of variation	Sum of squares	Df	Mean square	Calculated 'F' value	Remarks
1.	Learning environment	Between	4291.086	2	2145.543	17.99	S
		Within	160600.689	1347	119.228		
2.	Physical environment	Between	19572.801	2	9786.401	92.19	S
		Within	142983.291	1347	106.149		
3.	Social environment	Between	4898.566	2	2449.283	21.20	S
		Within	155592.478	1347	115.510		
4.	School climate in total	Between	68454.471	2	34227.236	54.49	S
		Within	846076.702	1347	628.119		

(For (2,1347) df the table value of 'F' is 3.00, S- Significant)

It is inferred from the above table that the calculated 'F' value (17.99, 92.19, 21.20, 54. 49) is greater than the table value (3.00) for the df (2, 1347) at 0.05 level of significance. Hence the respective null hypothesis is rejected. Thus, the result shows that there is significant difference among boys', girls' and co-education schools' higher secondary students in their school climate and its dimensions. Scheffe test is used as post hoc test to find which of the paired mean scores differ significantly.

Table 4 (a): Scheffe Test Showing the Mean Difference in Learning Environment with Respect to Type of the School

S. No	Type of School	N	Subset for alpha=0.05	
			1	2
1.	Girls'	450	22.39	
2.	Boys'	450	23.37	
3.	Co-education	450		26.57

The Scheffe post hoc test result from the above table indicates that the co- education school higher secondary students are better in the learning environment than the boys' and girls' schools' higher secondary students.

Table 4 (b): Scheffe Test Showing the Mean Difference in Physical Environment with Respect to Type of the School

S. No	Type of School	N	Subset for alpha=0.05		
			1	2	3
1.	Girls'	450	22.69		
2.	Boys'	450		26.84	
3.	Co-education	450			32.00

The Scheffe post hoc test result from the above table indicates that the co-education school higher secondary students are better in the physical environment than the girls' and boys' school higher secondary students.

Table 4 (c): Scheffe Test Showing the Mean Difference in Social Environment with Respect to Type of the School

S. No	Type of School	N	Subset for alpha=0.05	
			1	2
1.	Girls'	450	21.95	
2.	Boys'	450		25.90
3.	Co-education	450		26.08

The Scheffe post hoc test result from the above table indicates that the co- education school higher secondary students are better in the social environment than the boys' and girls' school higher secondary students.

Table 4 (d): Scheffe Test Showing the Mean Difference in School Climate in Total with Respect to Type of the School

S. No	Type of School	N	Subset for alpha=0.05		
			1	2	3
1.	Boys'	450	67.03		
2.	Girls'	450		76.29	
3.	Co-education	450			84.46

The Scheffe post hoc test result from the above table indicates that the co-education school higher secondary students are better in the school climate in total than the girls' and boys' school higher secondary students.

Hypothesis 5:
There is no significant difference among government, aided and self-financed school higher secondary students in their school climate and its dimensions.

Table 5: Difference among Government, Aided and Self-Financed School Higher Secondary Students in their School Climate and its Dimensions

S. No	School Climate	Source of variation	Sum of squares	Df	Mean square	Calculated 'F' value	Remarks
1.	Learning environment	Between	205.402	2	102.701	0.84	NS
		Within	164686.373	1347	122.262		
2.	Physical environment	Between	2906.766	2	1453.383	12.26	S
		Within	159649.327	1347	118.522		
3.	Social environment	Between	2729.453	2	1364.727	11.65	S
		Within	157761.590	1347	117.121		
4.	School climate in total	Between	257.962	2	128.981	0.19	NS
		Within	914273.211	1347	678.748		

(For (2, 1347) df the table value of 'F' is 3.00, S- Significant, NS –Not Significant)

It is inferred from the above table that the calculated 'F' value (0.84,0.19) is less than the table value (3.00) for the df (2, 1347) at 0.05 level of significance. Hence the respective null hypothesis is accepted. Thus, the result shows that there is no significant difference among government, aided and self-financed school higher secondary students in their learning

environment and school climate in total. But calculated 'F' value (12.26, 11.65) is greater than the table value (3.00) for the df (2,1347) at 0.05 level of significance. Hence the respective null hypothesis is rejected. Thus, the result shows that there is significant difference among government, aided and self-financed school higher secondary students in their physical environment and social environment. Scheffe test is used as post hoc test to find which of the paired mean scores differ significantly.

Table 5 (a): Scheffe Test Showing the Mean Difference in Physical Environment with Respect to Type of Management

S. No	Type of Management	N	Subsetforalpha= 0.05	
			1	2
1.	Government	200	24.22	
2.	Self-financed	850	27.18	
3.	Aided	300		29.14

The Scheffe post hoc test result from the above table indicates that the aided school higher secondary students are better in the physical environment than the self- financed and government school higher secondary students.

Table 5 (b): Scheffe Test Showing the Mean Difference in Social Environment with Respect to Type of Management

S. No	Type of Management	N	Subsetforalpha= 0.05	
			1	2
1.	Government	200	22.62	
2.	Self-financed	850	24.72	
3.	Aided	300		27.38

The Scheffe post hoc test result from the above table indicates that the aided school higher secondary students are better in the social environment than the self- financed and government school higher secondary students.

9. Implications

Base on the study, the researcher makes the following few recommendations:

1) The study reveals that the rural school higher secondary students have a lower level of school climate than the urban school higher secondary students. So, more focused efforts need to be taken to improve the conditions of the rural schools.
2) The study shows that the school climate of the boys' and girls' higher secondary schools is lower than that of the co-education schools. So, to create healthy and positively impacting atmospheres, counselling and guidance programmes can be arranged to promote co-education at the higher secondary school level.
3) Schools should prioritize teacher-student relationships, safety, and engagement to foster positive climate, as these subscales show the strongest effects on grades. Interventions such as professional development for teachers, peer mentoring, and restorative practices can improve outcomes cost-effectively.
4) School leaders should focus on creating inclusive, respectful environments, providing necessary resources and addressing student needs to improve climate and performance. Fostering positive socio-emotional skills through good climate helps manage emotions and build relationships, impacting overall student development.
5) Governments should ensures equitable resource distribution and effective utilization to enhance school environments. Policies like the whole school, whole child model support integrating climate measures with academics to promote equity.

10. Conclusions

The study of school climate among higher secondary underscores its pivotal role in shaping academic success and holistic development. Positive climates foster sustained high performance and uplift underachievers, offering actionable pathways for educational engagement. Enhancing school climate through targeted interventions yields measurable gains in student outcomes, including elevated test scores, attendance, and graduation rates. Prioritizing teacher training and relational practices proves most effective for equity-focused improvements. The higher secondary students consistently conclude that a positive environment is essential for optimizing academic achievement and holistic student development. A positive school climate (supportive teachers, good relationships, clear expectations) significantly correlates with higher student achievement, greater motivation, and better self-esteem. School climate is a significant, though not always the strongest, predictor of achievement motivation, meaning better environments increase students' drive to succeed.

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