



European Journal of Educational Research

Volume 13, Issue 3, 1411 - 1420.

ISSN: 2165-8714

<https://www.eu-jer.com/>

Classroom Climate and Student-Teacher Relationship: A Study Among Students and Teachers in Slovenia

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Received: November 5, 2023 ▪ Revised: January 11, 2024 ▪ Accepted: March 8, 2024

Abstract: The primary objective of this study was to determine how students and teachers in primary schools view the classroom climate and its dimensions: (a) peer relationships and (b) student-teacher relationships. Additionally, the study aimed to explore the role of students' age (11-12 years old - 7th grade students vs. 14-15 years old - 9th grade primary school students) and gender on their perceptions of the school climate. Classroom climate was measured with the "Classroom Climate Questionnaire", which was completed by a total of 1,531 students (792; 51.6% female) and 348 teachers (296; 84.6% female). The findings of the study indicated that both students and teachers generally perceived the classroom climate as being relatively neutral to positive. However, teachers tended to report more positive classroom relationships compared to students. Furthermore, the study found no significant gender-based differences in how students perceived the classroom climate, peer relationships, and student-teacher interactions. However, differences were identified based on the age or grade level of the students. The results were discussed in the context of the students' psychological development characteristics and the aspects of socio-emotional learning within school environments, also considering educational policies for achieving greater school quality.

Keywords: *Classroom climate, primary school, students, teachers.*

To cite this article: Konrad, S. C., Vodopivec, J. L., & Štemberger, T. (2024). Classroom climate and student-teacher relationship: A study among students and teachers in Slovenia. *European Journal of Educational Research*, 13(3), 1411-1420. <https://doi.org/10.12973/eu-jer.13.3.1411>

Introduction

A school serves as a physical setting that imparts educational knowledge while also serving as a significant social environment where various forms of interaction and communication occur on multiple levels. These interactions encompass exchanges among students, interactions between students and teachers, communication among teachers, and connections between students and other staff members, among others. Margan (2012) emphasizes that characteristics of the school's culture are influenced by factors such as the communication style of teachers, the methods used to implement educational plan guidelines, and the school's regulations, as well as its supplementary activities. Research has shown that the school climate plays an important role in teacher performance (Dan & Ye, 2020). Specifically, empirical data reveal that the classroom climate reflects students' personal and class-shared collective perception of their educational experiences (Khalfaoui et al., 2021; Qiu, 2022). Consequently, the classroom climate indicates the general atmosphere of the classroom established by different relationships in the classroom: interactions between students and interactions between teachers and students (Gazelle, 2006). Therefore, understanding how students and teachers perceive the classroom climate is important to provide insight into the overall learning environment. Firstly, if teachers know how their methods and interactions impact the learning environment, they can adjust their approaches to create a more supportive and conducive atmosphere for learning.

Secondly, student perceptions of the classroom climate are closely tied to their emotional well-being and exploring these perceptions allow teachers to identify potential sources of stress or dissatisfaction, enabling them to implement interventions that promote mental health and a positive school experience.

Literature Review

As the school climate refers to the global patterns of individuals' experiences of school life and discloses the values, norms, goals, interpersonal relationships, teaching and learning practices, and the school's organizational structure,

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more specifically, the classroom climate reflects students' and teachers' teaching and learning experiences. Particularly, this includes students' perceptions of engagement and tasks in class, class flexibility, interactive opportunities with the teacher and other students, and the general quality of interactions in class. Despite the fact that the classroom climate can be felt as a shared sense of the class environment (Alonso–Tapia & Ruiz- Díaz, 2022; Qiu, 2022), it is comprised of individual students' and teachers' perceptions of classroom interpersonal (learning and teaching) exchange of experiences.

Herefore, the perception of the classroom climate is examined through the perception of each individual participant of classroom interactions (e.g., teacher and student), which must be grounded in their experience of the classroom environment and not solely on their attitudes (Ehrhart et al., 2013).

The literature review on the impact of classroom climate on students' academic achievements has demonstrated that creating a favorable classroom climate is an important predictor of student achievement (Berkowitz et al., 2016; Daily et al., 2019; Reynolds et al., 2017). Research results confirm that a positive school climate can stimulate the learning environment and affect student academic achievement (DeWitt & Slade, 2014). Students tend to acquire knowledge more effectively when they are in a positive and supportive environment where they feel welcomed and secure. Also, a positive classroom climate is positively correlated with the well-being of both students and teachers (Derakhshan et al., 2022) and is evident across academic, social, and emotional dimensions (Hamre et al., 2013; Pianta et al., 2003). This is reflected in the level of engagement, increased learning motivation, greater and more successful mutual cooperation (Norton, 2008), increased social competence, and higher learning results (Barr, 2016). The results of the survey carried out by Schmidt and Čagran (2005) in Slovenia also show lower dropout rates, higher class attendance, more in-depth learning, and higher grades. Students in classrooms where a positive classroom climate prevails are consequently more research-oriented and have more interactions with teachers and better academic achievements (Paleenud et al., 2024).

Based on the research presented here, we can conclude that a favorable classroom atmosphere fosters students' enthusiasm for academic tasks, nurtures intrinsic motivation, diminishes apprehension about school, enhances the depth of understanding, and ultimately contributes positively to students' academic performance. According to Mitchell (2007), the primary factor in shaping the classroom climate is the creation of a psychological setting that enhances the learning process. As the primary facilitator of classroom activities, flexibility, and interactive opportunities (Alonso–Tapia & Ruiz- Díaz, 2022; Qiu, 2022), the teacher can be seen as the pivotal figure responsible for establishing a positive learning environment (Mikušková, 2023). Marzano and Marzano (2010) highlight the areas that are important for the establishment of a good classroom climate, emphasizing the following: care for safety and orientation, confirmation and acceptance, fostering of respectful, encouraging, and open communication, provision of support and positive expectations, acceptance of diversity, care for special needs, care for justice, conflict management, and care for psychophysical well-being. The connections between the teacher and students involve ongoing interpersonal interactions and mutual communication, all directed towards achieving established objectives. Both students and teachers play vital roles in classroom instruction, actively shaping and executing the educational process. Ažman (2012) also emphasizes that the interactions between teachers and students impact the classroom atmosphere, contribute to effective communication within the class, and foster a sense of belonging.

In addition to the crucial role played by teacher-student interactions in shaping the classroom atmosphere, peer interactions are also significant contributors to fostering a positive learning environment (MacLeod et al., 2018). A socially vibrant and effective classroom environment is characterized by students engaging in supportive and empathetic interactions with their peers (Taherian et al., 2021). Peer interactions are formed through specific behaviors like expressing appreciation, smiling, and sharing thoughts and memories. These actions can have a positive impact on learning experiences and academic accomplishments (Lim et al., 2022; Vranjes & Brône, 2021). To underline the thriving nature of social interactions within a positive classroom environment, we highlight that the process of teaching and learning extends beyond interactions solely between students and their teacher; it also takes place among the students within the class. However, in these latter interactions, the teacher is rarely present and has no real insight into them (Košir, 2013). Hence, it is crucial to examine the classroom climate from both the perspectives of students and teachers. Despite a growing body of research on learning environments in social sciences in recent decades (Chionh & Fraser, 2009; Fraser, 2011), elements of classroom environments are under-researched in both ways: perception of classroom climate from students' and teachers' points of view in Slovenia. Specifically, there are only a few pieces of research discussing differences in teachers' and students' perceptions of classroom climate, nor the differences in students' perceptions of classroom climate considering their age and gender. Therefore, recognizing that the perception of classroom climate by teachers and students is influenced by a myriad of intricate factors, in this paper, we address the interconnected dynamics of complex interactions within the classroom.

Methodology

Research Goals

In this study, a quantitative research approach was used, employing descriptive and causal-nonexperimental methods of educational research methodology. The main goal of the study was to determine how students and teachers perceive

classroom climate and its dimensions, namely peer relationships and student–teacher relationships. The hypotheses were:

H1: Teachers, compared to students, hold a more positive perception of the classroom climate and its dimensions, peer relationship and student-teacher relationship.

H2: There are statistically significant differences in students' perceptions of the classroom climate, peer relationship and student–teacher relationship differ according to their age.

H3: There are statistically significant differences in students' perceptions of the classroom climate, peer relationship and student–teacher relationship differ according to their gender.

Sample and Data Collection

The survey utilized multistage random sampling for both student and teacher samples, based on the official 12 statistical regions in Slovenia. The process involved selecting the initial city and village schools in each region based on alphabetical order, as per the official list of primary schools regularly published on the Ministry of Education of the Republic of Slovenia's website. The respondent population included 1,531 students (792 or 51.6% of whom were female and 739 or 48.1% were male). The average age of the students was 13.46 years (ranging from 12 to 15 years of age). A little over half of the students attended the 7th grade of primary school (820; 53.4%), while the remaining students (716; 46.6%) attended the 9th grade of primary school. The second part of the sample included 348 primary school teachers, 296 or 84.6% of whom were female and 52 or 14.9% were male. The average age of the teachers was 45.6 years (ranging from 25 to 66 years).

The data were collected using the well-established and standardized questionnaire entitled “Classroom Climate Questionnaire” (Zabukovec, 1998). The questionnaire has two versions: one for students and one for teachers. Both questionnaires measure two dimensions (constructs) of classroom climate: student–student relationships and student–teacher relationships, using appropriately defined sets of statements.

The validity of both the student and teacher questionnaires was assessed through principal factor analysis. Prior to conducting principal component analysis, we verified the Kaiser–Meyer–Olkin Measure of Sampling Adequacy (KMO) and performed Bartlett's Test of Sphericity. The KMO for the student questionnaire was calculated as .914, exceeding the recommended threshold of 0.6 (Field, 2009), signifying the suitability of principal component analysis for this dataset. Additionally, Bartlett's Test of Sphericity ($\chi^2 = 8013.118$, $df = 153$, $p = .000$) yielded high significance, indicating that items in the scale are interrelated and suitable for PCA (Field, 2009). Similarly, for the teacher questionnaire, the calculated KMO was .827, and Bartlett's Test of Sphericity ($\chi^2 = 848.097$, $df = 45$, $p = .000$) was highly significant, suggesting the relevance of PCA for this dataset as well (Field, 2009). Both datasets underwent PCA with Varimax rotation. The student questionnaire results indicated a two-factor solution, with both factors explaining 55.25% of the variance. The first factor contributed to 34.01% of the variance, surpassing the 20.0% threshold and confirming the scale's appropriate construct validity (Field, 2009).

Similarly, the teacher questionnaire, analyzed through PCA, also revealed a two-factor solution, with both factors explaining 50.11% of the variance. The first factor accounted for 36.21% of the variance, exceeding the 20.0% threshold, affirming the scale's appropriate construct validity (Field, 2009).

The reliability of both surveys was evaluated using Cronbach's alpha coefficient. The student questionnaire consists of 11 statements. Among them, 7 statements (rated on a 5-point scale: 1-almost never, 2-rarely, 3-sometimes, 4-often, 5-very often) measure student–student relationships ($\alpha = .716$), while 4 statements focus on student-teacher relationships ($\alpha = .758$). Similarly, the teacher questionnaire comprises 11 statements. Within this set, 7 statements (using the same 5-point scale) assess student–student relationships ($\alpha = .742$), and 4 statements concentrate on student-teacher relationships ($\alpha = .662$).

Analysing of Data

We processed the data using SPSS (Statistical Package for Social Sciences) 26.0. Initially, since both concepts integral to the core concept of classroom climate—namely, the student-students' relationship and the student-teacher relationship—demonstrated satisfactory reliability, all statements within each dimension (and core concept) were amalgamated by determining the average of all corresponding statements. Subsequently, we employed descriptive statistics to determine how students and teachers perceive classroom climate, peer relationships, and student–teacher relationships.

To determine the differences between students' and teachers' perceptions regarding classroom climate, peer relationships, and student–teacher relationships, an Independent Samples t-test was utilized. The choice of this parametric test was informed by the confirmation of normal variable distribution (classroom climate, student-student relationship, and student-teacher relationship) through the Kolmogorov-Smirnov test and the validation of homogeneity of variances as per the Levene test. Additionally, to control the effect size, Cohen's d was introduced.

Furthermore, to determine the differences between the students' perceptions of the classroom climate, peer relationships, and student-teacher relationships according to their gender and grade, we applied the Independent Samples t-test. This decision was grounded in the results of the Kolmogorov-Smirnov test, affirming the normal distribution of variables (classroom climate, student-student relationship, and student-teacher relationship), and the Levene test, establishing the assumption of homogeneity of variances. As results confirmed statistically significant differences in students' perceptions of the classroom climate, peer relationships, and student-teacher relationships according to their grade, the effect size of the grade was controlled using Cohen's *d*.

Results

The main aim of the study was to determine how students and teachers perceive the classroom climate. The overall findings indicate that teachers, in comparison to students, hold a more favorable perception of the general classroom climate, peer relations, and student-teacher relationships, supporting the first hypothesis. Furthermore, the results reveal no statistically significant differences in students' perceptions of classroom climate, peer relationships, and student-teacher relationships based on gender, thereby failing to confirm the second hypothesis. However, the third hypothesis is validated as there are statistically significant differences in students' perceptions of these factors based on their grade level, with 7th-grade students exhibiting a higher level of perception regarding classroom climate, peer relationships, and student-teacher relationships when compared to their peers in the 9th grade.

Table 1. Students and Teacher Perception of the General Classroom Climate, the Peer Relationship and the Student-Teacher Relationship

Statistics	General Classroom Climate		Peer Relationship		Student-Teacher Relationship	
	Students	Teachers	Students	Teachers	Students	Teachers
N	1536	350	1474	339	1486	347
Min	1.00	2.78	1.00	2.29	1.00	2.00
Max	4.09	4.89	5.00	4.86	5.00	5.00
M	3.23	3.88	3.16	3.53	3.26	4.04
SD	0.55	0.41	0.66	0.48	0.89	0.52
Skew	-0.46	-0.10	-0.36	-0.05	-0.40	-0.52
Kurt	0.62	-0.24	0.54	0.09	-0.10	0.53
Independent Samples t-test	$t=17.577, p=.000$		$t=9.739, p=.000$		$t=15.374, p=.000$	

The results (Table 1) show a relatively neutral perception of the general classroom climate by the students ($M=3.23$, $SD=0.55$), whereby teachers ($M=3.88$, $SD=0.41$) report on significantly more positive classroom relations compared with students. Also, teachers perceive peer relations more positively ($M=3.53$, $SD=0.48$) compared to students ($M=3.16$, $SD=0.66$). Similar results were also obtained for student-teacher relationship perception: teachers tend to perceive student-teacher relationships more positively ($M=4.04$, $SD=0.52$) than students ($M=3.26$, $SD=0.89$). Also, the results of the independent sample t-test confirmed that the differences are statistically significant. The effect size, as measured by Cohen's *d*, was $d = .68$ for the peer relationship, $d = .75$ for the student-teacher relationship, and $d = .71$ for classroom climate, indicating a medium effect (Cohen, 1988).

Table 2. Differences in the Students' Perceptions of Classroom Climate, Peer Relationship and Student-Teacher Relationship Regarding the Students' Gender

Dimension	Gender	N	M	SD	t	p
Classroom climate	Female	792	2.60	0.55	.850	.395
	Male	739	2.58	0.55		
Student-student relationship	Female	761	3.17	0.66	.867	.386
	Male	709	3.14	0.66		
Student-teacher relationship	Female	768	3.24	0.90	-0.692	.489
	Male	713	3.27	0.86		

Results show (Table 2) that male and female students perceive classroom climate, interpersonal peer relationships, and the relationship with the teacher relatively similarly, as no statistically significant differences were confirmed using independent samples t-test ($p>.05$).

Table 3. Differences in Students' Perceptions of the Classroom Climate, Peer Relationship and Student-Teacher Relationship in Terms of Grade (age)

Dimension	Grade	N	M	SD	t	p
Classroom climate	7th	820	2.64	0.53	3.985	.000
	9th	716	2.52	0.56		
Student-student relationship	7th	786	3.20	0.65	2.795	.004
	9th	688	3.10	0.67		
Student-teacher relationship	7th	793	3.36	0.90	4.847	.000
	9th	693	3.14	0.85		

The results show (Table 3) that there are statistically significant differences in classroom climate perception ($p \leq .05$), peer relationships ($p \leq .05$), and student-teacher relationships ($p \leq .05$). The analysis of the differences in the perception of classroom climate subject to the students' age (students in the 7th and 9th grades) shows that 7th-grade students report a relatively unfavorable classroom climate ($M=2.64$, $SD=0.53$), whereby 9th grade students ($M=2.52$, $SD=0.56$) report a significantly less positive general classroom climate than their younger peers. We similarly find statistically significant differences in the students' self-assessment of their interpersonal peer relationship, where 7th grade students ($M=3.20$, $SD=0.65$) express significantly closer-knit and mutually friendlier relationships than 9th grade students ($M=3.10$, $SD=0.67$). We also determined differences between the perceptions of the student-teacher relationships by 7th grade students' ($M=3.36$, $SD=0.90$) and 9th grade students ($M=3.14$, $SD=0.85$). The effect size, as measured by Cohen's d , was $d = .72$ for peer relationship, $d = .79$ for student-teacher relationship and $d = .75$ for classroom climate indicating a medium effect (Cohen, 1988).

Discussion

In relation to the first hypothesis of the study, we found that teachers are significantly more inclined to perceive the general classroom climate, peer relationships, and student-teacher relationships more positively compared to students. The findings suggest differences in how teachers and students perceive interpersonal connections and the general classroom climate, aligning with similar observations made in previous studies examining different teachers' and students' perspectives (Lim et al., 2022; Vranjes & Brône, 2021). The inconsistent recognition and perception of peer relationships by teachers and students that have also been reported in earlier studies (e.g., Košir, 2013), found that even a sensitive and skilled teacher, particularly at the first-cycle elementary school level, can only recognize certain aspects of students' social behavior, as teachers have limited insight into the sociometric position of students in the classroom (Košir, 2013). They can, for example, be mistaken in their determination of who is actively rejected by classmates and who is neglected, which students have a controversial position in the classroom when some of the classmates do not like them and which student is popular due to their visibility in the classroom (Vranjes & Brône, 2021).

To underscore the dynamic nature of social interactions within a positive classroom environment, it is important to acknowledge that teaching and learning extend beyond interactions solely between students and their teacher. Rather, significant learning also takes place among students themselves within the class. However, these student-to-student interactions often occur without the teacher's direct presence or insight (Lim et al., 2022). Consequently, it becomes imperative to examine the classroom climate from both students' and teachers' perspectives. Despite the increasing focus on learning environments in the social sciences over recent decades (Chionh & Fraser, 2009; Fraser, 2011), certain aspects of classroom environments still remain underexplored, particularly in terms of understanding perceptions of classroom climate from both students' and teachers' perspectives in Slovenia. Nevertheless, it is also crucial for teachers to be able to recognize students' social situations, as students may require support and intervention from teachers (Schwab et al., 2022). A significant concern arises from the possibility of teachers implementing misguided prevention measures or interventions due to insufficient or inaccurate information about students' social involvement. Schwab et al. suggested that teachers may have varying understandings or insufficient insight into their students' formation of friendships. Therefore, teachers should acknowledge the diverse perspectives students may hold regarding the same social occurrences.

Considering the second hypothesis, the results showed no significant differences in students' perceptions of classroom climate, peer relationships, and student-teacher relationships according to their gender. However, as proposed by Vandenbroucke et al. (2017), the existing studies on classroom climate often overlook the role of gender. A limited number of studies have been done on gender differences in classroom climate in a specific context (e.g., Koul et al., 2023), but not for classroom climate in general.

For the last hypothesis, the results showed there are statistically significant differences in students' perceptions of classroom climate, peer relationships, and student-teacher relationships based on age (grade level). Specifically, 7th-grade students hold more positive perceptions of classroom climate, peer relationships, and student-teacher relationships compared to their 9th-grade peers. This can be explained by the developmental psychological characteristics of adolescents' social development (Gazelle, 2006). The dynamics of peer relationships undergo a shift

during early adolescence, with the influence of peers on an individual presumably increasing from early to middle adolescence (Steinberg & Morris, 2001). This shift suggests that adolescents become more discerning and selective in choosing friends, with their peer relationships evolving into more confidential and psychologically supportive relations. As a result, 9th-grade students, compared to their 7th-grade peers, exhibit more discernment and selectivity in their peer relationships. These relationships tend to be confined to a smaller circle of peers with whom they form tighter-knit and psychologically closer bonds. Importantly, these relationships extend beyond classmates to include peers outside the school classrooms. Moreover, earlier studies also noted changes in the nature of student-teacher relationships (Lynch & Cicchetti, 1997). It was determined that the transition to early adolescence brings qualitative changes to the student-teacher dynamic, marked by less intensive and less frequent interactions, which are more formalized and competitive.

Conclusion

Aligned with the humanistic approach to education, the educational objective extends beyond mere knowledge acquisition. It aims at fostering the holistic development of individuals, emphasizing both intellectual and emotional aspects such as self-awareness, exploration of emotions and motives, the cultivation of prosocial behavior, and the development of satisfaction, pride, and essential social communication skills. A conducive school environment, according to this approach, is characterized by mutual care among teachers and students, active engagement in diverse activities, shared decision-making, a sense of belonging, collective identification with the environment, and a shared commitment to common goals and values.

It is crucial to recognize that the school and classroom climate are influenced by various factors, including the school's objectives, leadership style, the educational system, demographic specifics, material conditions, and the local and broader social context. The primary architects of this climate are the people involved, encompassing principals, teachers, students, and other agents. Despite the multitude of factors shaping the educational environment, it is noteworthy that students and teachers significantly contribute to and shape the school and classroom climate. Importantly, individual perspectives on these conditions can vary, as people differ in their experiences and perceptions within the educational setting.

Within this theoretical framework, the article presents and interprets results pertaining to differences in students' and teachers' perceptions of classroom climate, peer relationships, and student-teacher relationships, as well as differences in students' perceptions of classroom climate, peer relationships, and student-teacher relationships according to their gender and grade. Notably, teachers report significantly more positive classroom relations than students, perceiving both the general classroom climate and peer relationships among students, as well as student-teacher relationships, more positively.

This outcome aligns with findings from earlier studies (such as Evans et al., 2009; Košir, 2013; Pianta et al., 2003). It underscores the reality that teachers possess a restricted understanding of students' sociometric position in the classroom. Teachers may inaccurately perceive who is actively rejected by peers and who is neglected. Additionally, determining which students hold controversial positions in the classroom, where some classmates may express dislike, and identifying a student's popularity based on visibility within the classroom, can be areas where teachers might misinterpret the dynamics.

Concerning students' perceptions of classroom climate, peer relationships, and their interactions with teachers, differences emerge based on grade. Overall, students generally perceive the classroom climate as neutral to unfavorable. However, notable differences surface when considering grade levels. Specifically, 9th-grade students report a significantly less positive overall classroom climate compared to their younger counterparts. Additionally, 7th-grade students express notably closer and more amicable relationships compared to their 9th-grade peers. These findings align with the earlier observations of Steinberg and Morris (2001), who identified shifts in the nature of peer relations during early adolescence, emphasizing an increased influence of peers on individuals transitioning from early to middle adolescence. Furthermore, the impact of the classroom environment on youth outcomes might also stem from variations in child attributes. For instance, as children progress into middle childhood and adolescence, the structure of schools notably differs from the primary school environment of early childhood, affecting both academic and psychological well-being (Eccles & Roeser, 2011; Vandembroucke et al., 2017).

Recommendations

In recent years, extensive research has delved into the significance of teacher support for students, revealing that a positive classroom climate and strong student-teacher relationships are not only desirable but also essential for fostering an environment conducive to learning and promoting the comprehensive development of students' potentials. Within this context, the present study serves as an initial exploration aimed at comprehending the overall classroom climate and the dynamics of interactions between teachers and students.

This consideration arises from the acknowledgment that creating positive school climates and fostering strong interpersonal relationships between students and teachers is not only aspirational but also a fundamental requirement for establishing an environment that facilitates learning and holistically nurtures students' potentials. Gregory and

Weinstein (2004) emphasize that students' perception of the connection between teachers and students plays a pivotal role in their academic progress and achievement. Consequently, future research endeavors should extend their focus to explore the correlations among classroom climate, peer relationships, student-teacher relationships, and students' academic achievements. Additionally, the results of our study are aligned with the findings of several studies (e.g., Nkhata et al., 2023) that indicate that the relationship between students and teachers is a significant predictor of academic engagement and achievement, and that supportive learner-teacher relationships positively relate to social self-concept, school adjustment, and grades.

Moreover, effective support from teachers not only establishes the foundation for student learning but also serves as a catalyst for the overall adjustment of students to the learning environment. Ryan and Patrick (2001) discovered that students perceiving support from teachers also indicated higher levels of behavioral self-regulation and lower levels of disruptive behavior in the classroom. Consequently, the support provided by teachers to students is indirectly associated with the likelihood of students developing behavioral problems.

Research findings, such as those by Hughes and Chen (2011), indicate that students exhibiting more aggressive behavior but maintaining positive relationships with teachers tend to be more accepted by their peers than those with strained relationships with teachers. Building on this insight, it can be inferred that students reporting elevated levels of teacher support, encouragement of student interactions, and the cultivation of positive relationships may perceive a learning environment that actively promotes the comprehensive development of their potential (Paleenud et al., 2024). Consequently, the results point to the practical implication for teachers' professional development, where additional training or support may be beneficial, ultimately improving the overall effectiveness of teaching practices.

Regarding further research, we see opportunities to analyze the correlation between teachers' support and students' academic and adaptive behavior, particularly in designing the role of teachers in establishing a broader socioemotional learning environment in the classroom and school context as a whole.

In addition, current research often overlooks the potential for variations in the effects of classroom climate based on factors such as children's developmental stage, grade level, race/ethnicity, and socioeconomic status (SES). Similarly, studies on classroom climate exhibit considerable variation in the methods of measurement (e.g., external observation versus self-report surveys) and research methodologies (e.g., cross-sectional versus longitudinal) employed to evaluate classroom attributes (Marsh et al., 2012; Wang & Degol, 2015; Wang et al., 2020). Consequently, it remains uncertain whether research design or measurement approaches affect the strength of the associations between classroom climate and youth outcomes.

In summary, further investigating student and teacher perceptions of classroom climate is not just about understanding the immediate experiences within the classroom; it has broader implications for educational effectiveness, students' well-being, supporting teacher professional development, and the cultivation of a positive and inclusive learning environment that contributes to long-term success in education.

Limitations

The ability to draw broader conclusions from this study is limited, given that the participants are exclusively from the Slovenian educational setting, which, like other educational systems, is ingrained in a specific socio-cultural context. Consequently, the findings cannot be directly generalized to different educational environments. Furthermore, the study's sample is confined to 7th and 9th-grade students, suggesting a future direction could involve expanding the sample to include students from other grades. Additionally, it is essential to acknowledge that the study relies solely on quantitative data; however, incorporating qualitative data could offer valuable insights into the subject under examination.

Ethics Statement

Approval was obtained from the ethics committee of University of Primorska, Faculty of Education. The procedures used in this study adhere to the tenets of the Declaration of Helsinki. Informed consent was obtained from all participants.

Acknowledgments

We would like to express our cordial thanks to all the participants who voluntarily took part in this study.

Conflict of Interests

The authors declare no conflict of interest.

Funding

This work was supported by the Slovenian Research Agency P5-0433, P5-0444 and J5-3099.

Authors Contribution Statement

Čotar Konrad: Conceptualized and designed the study, conducted literature review, conducted data analysis and interpretation, and critically reviewed the manuscript. Vodopivec: Conceptualized and designed the study, conducted literature review, and critically reviewed the manuscript. Štemberger: Conceptualized and designed the study, provided expertise in statistical analysis, conducted data analysis and interpretation, and critically reviewed the manuscript.

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