

SCHOOL CLIMATE AND ITS IMPACT ON STUDENT ANXIETY IN SECONDARY EDUCATION

Gjorgjina Kjimova^{1*}, Lidija Lazarevska²

¹ International Slavic University, Sveti Nikole, North Macedonia, e-mail: ginakimova@yahoo.com

² Pance Karagjov Medical School, Skopje, North Macedonia, e-mail: lidija_lazarevska@hotmail.com

Abstract: The study of school climate and its influence on students' anxiety in secondary education represents a current and significant topic within educational and social psychology. Numerous studies confirm that a positive and supportive school atmosphere is crucial for students' psychological well-being and academic progress. Anxiety is one of the most prevalent challenges among adolescents, capable of impairing cognitive performance, emotional balance, and social adaptation. Given that adolescence is a critical stage of personal and social development, anxiety may have lasting effects on mental health and life opportunities. This preliminary study aimed to examine whether, and to what extent, perceived school climate (through the four CSCI dimensions – Safety, Relationships, Teaching Practices, and Institutional Environment) affects anxiety levels (measured via the DASS Anxiety Subscale) among secondary school students. The research was conducted at a medical secondary school in Skopje with a convenience sample of 100 students (30% male, 70% female). Participants were aged 16–19: 34% aged 16, 48% aged 17, 16% aged 18, and 2% aged 19. By grade, 56% were in second, 32% in third, and 12% in fourth year. Results confirmed the general hypothesis that a more positive school climate is associated with lower anxiety levels. The four sub-hypotheses were supported: H₁: Safety was moderately negatively correlated with anxiety ($r = -0.39, p = .02$). H₂: Positive relationships showed a moderate to strong negative correlation with anxiety ($r = -0.385, p = .001$). H₃: Teaching practices were weakly but significantly related to anxiety ($r = -0.269, p = .006$). H₄: Institutional environment demonstrated a moderate negative association with anxiety ($r = -0.36, p = .008$). Additionally, H₅ showed that perceived safety and relationships jointly and significantly predicted anxiety ($R^2 = 0.863; p < .05$). Demographic analyses indicated: H₆: Female students reported significantly higher anxiety levels than males ($M=20.12$ vs. $M=10.31; p < .001$). H₇: Anxiety increased with age (from $M=11.35$ at age 16 to $M=24.68$ at age 19; $p < .001$). H₈: Fourth-year students displayed higher anxiety ($M=19.42$) than second ($M=11.67$) and third-year ($M=15.17$) peers ($p < .001$).

Qualitative insights from focus groups revealed an ambivalent perception of school – seen both as a place of friendship and as a “stressful enclosure” due to excessive testing and authoritarian teaching styles. Key stressors included oral examinations, public presentations, and perceived discrimination, while empathy from teachers and peer relationships provided moments of relief. Students' recommendations focused on more interactive teaching, reduced testing load, stronger emotional support from psychologists, improved hygiene, and an inclusive culture of equality and respect. In conclusion, school climate and demographic factors (gender, age, grade) are significantly associated with students' psychological well-being. To effectively reduce anxiety, interventions should integrate: Methodological innovations – interactive, motivating teaching practices; Emotional and social support – empathetic relationships, open communication with staff, psychologists, and peers; Institutional improvements – enhanced safety, hygiene, fair assessment, and inclusive culture.

Implementing these measures can foster a safer, more supportive, and less stressful school environment, reducing anxiety symptoms and promoting overall student well-being.

Keywords: school climate, anxiety, adolescents, emotional well-being, educational psychology.

Field: Social sciences.

1. INTRODUCTION

The school environment plays a fundamental role in the emotional and psychological development of adolescents. A positive and supportive school climate enhances both academic performance and mental well-being (Cohen et al., 2009). Conversely, negative school environments—characterized by poor relationships, unclear rules, and stressful evaluation systems—can significantly contribute to students' anxiety (Essau & Petermann, 2015; Santrock, 2019).

Anxiety disorders are among the most frequent emotional difficulties in adolescence and can affect cognitive functioning, emotional stability, and social adaptation (Barlow, 2002). Given the complexity of modern educational demands, it becomes crucial to examine how the perceived school climate impacts students' anxiety levels.

The aim of this study is to determine the relationship between the perceived school climate and anxiety among secondary school students and to identify which dimensions of the school climate serve

*Corresponding author: ginakimova@yahoo.com



as protective factors for mental well-being.

2. MATERIALS AND METHODS

The study was conducted in a secondary medical school in Skopje, North Macedonia, involving a convenience sample of 100 students. The demographic profile included 30% male and 70% female participants; 34% were 16 years old, 48% 17, 16% 18, and 2% 19 years old. Regarding grade level, 56% were in second year, 32% in third, and 12% in fourth year. The instruments used included: Comprehensive School Climate Inventory (CSCI), measuring four dimensions: Safety, Relationships, Teaching Practices, and Institutional Environment; Depression Anxiety Stress Scales (DASS-21), using the Anxiety subscale to assess levels of anxiety symptoms.

Data were analyzed using SPSS 25. Pearson correlations and multiple regression analyses were performed to assess the relationship between school climate dimensions and anxiety. Additionally, qualitative focus group discussions provided complementary insights into students' subjective experiences and emotional perceptions.

3. RESULTS

The general hypothesis—that a more positive perception of school climate is associated with lower anxiety—was confirmed. The results show:

Safety is moderately and negatively correlated with anxiety ($r = -0.39$, $p = 0.02$).

Relationships have a moderate-to-strong negative correlation with anxiety ($r = -0.385$, $p = 0.001$).

Teaching Practices show a weak but significant negative correlation ($r = -0.269$, $p = 0.006$).

Institutional Environment is moderately and negatively correlated ($r = -0.36$, $p = 0.008$).

Multiple regression analysis revealed that safety and relationships together predict 86.3% of the variance in anxiety ($R^2 = 0.863$, $p < 0.05$).

Demographic analyses indicated:

Females reported significantly higher anxiety levels ($M = 20.12$) than males ($M = 10.31$; $p < 0.001$).

Anxiety increased with age ($M = 11.35$ at age 16 to $M = 24.68$ at age 19; $p < 0.001$).

Fourth-year students showed the highest anxiety levels ($M = 19.42$; $p < 0.001$).

Qualitative focus group findings emphasized that excessive testing, public speaking, and teacher authoritarianism are major stressors, while supportive relationships, fair assessment, and empathy from teachers serve as key protective factors.

4. DISCUSSION

The findings confirm that a positive perception of school climate is a protective factor against anxiety, consistent with prior international research (Way, Reddy, & Rhodes, 2007; Shochet et al., 2006). Safety and supportive relationships emerged as the strongest predictors of reduced anxiety. These results align with Bear et al. (2014), who highlight the role of psychological safety and respectful communication in fostering mental stability.

Teaching quality and organized institutional environments also contributed significantly to lower anxiety, resonating with findings by Huang & Cornell (2016) and O'Malley & Ritchey (2015). The exceptionally high variance explained ($R^2 = 0.863$) suggests that combined emotional and environmental factors form a robust framework for predicting student well-being. Although the study sample was limited, the results underscore the importance of emotional safety, empathetic relationships, and transparent institutional policies. Future studies should replicate these findings on larger and more diverse samples and apply mixed methods for deeper validation.

5. CONCLUSIONS

This study confirms that school climate and demographic variables are significantly linked to students' psychological well-being. A safe, empathetic, and well-organized school environment contributes to lower anxiety and improved academic engagement. Key recommendations include:

Strengthening physical and emotional safety through consistent anti-bullying measures and clear behavioral rules.

Promoting empathetic teacher-student communication and peer mentoring programs;

Applying interactive, project-based learning methods and balanced test schedules;

Enhancing institutional transparency and fairness in grading and discipline;

Expanding access to school psychologists and integrating relaxation and self-regulation techniques. Such holistic interventions can transform the school from a potential source of stress into a secure and nurturing environment that fosters growth and emotional resilience.

ACKNOWLEDGEMENTS

The authors express gratitude to the students and teachers of the Pance Karagozov in Skopje Secondary Medical School for their participation and cooperation, as well as to the professional school psychologist for assistance in conducting the focus groups.

REFERENCES

- Barlow, D. H. (2002). *Anxiety and its disorders: The nature and treatment of anxiety and panic* (2nd ed.). Guilford Press.
- Bear, G. G., Yang, C., & Pell, M. (2014). Validity and reliability of the teacher and student versions of the Authoritative School Climate Survey. *Educational Psychology*, 34(1), 45–60.
- Castro, C., et al. (2025). Does school climate affect students' social and emotional skills? *Educational Psychology*. <https://doi.org/10.1007/s10212-025-01007-8>
- Cohen, J., McCabe, E. M., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers College Record*, 111(1), 180–213.
- Ellington, B. (2024). School climate and student mental health: Conceptions, measurement, and pathways. *School Psychology Review*. <https://doi.org/10.1177/2156759X241290490>
- Essau, C. A., & Petermann, F. (2015). Anxiety disorders in children and adolescents: Epidemiology, risk factors and treatment. In C. A. Essau & F. Petermann (Eds.), *Developmental psychopathology and wellness: Genetic and environmental influences* (pp. 47–74). John Wiley & Sons.
- Hinze, V., et al. (2024). The association of school-level characteristics with students' mental health over time. *Children and Youth Services Review*. <https://doi.org/10.1016/j.childyouth.2023.107678>
- Huang, F. L., & Cornell, D. G. (2016). Multilevel factor structure, concurrent validity, and test–retest reliability of the high school teacher version of the Authoritative School Climate Survey. *Journal of Psychoeducational Assessment*, 34(7), 536–551.
- O'Malley, M. D., & Ritchey, K. M. (2015). School climate, school connectedness, and academic outcomes: Differences by school level and geography. *Canadian Journal of School Psychology*, 30(4), 349–377.
- Podiya, J. K., Navaneetham, J., & Bhola, P. (2025). Influences of school climate on emotional health and academic achievement of school-going adolescents in India: A systematic review. *BMC Public Health*, 25, Article 54. <https://doi.org/10.1186/s12889-024-21268-0>
- Rustamov, E. (2023). Adaptation of the School Climate Questionnaire: reliability and validity evidence for Turkish adolescents. *Educational Sciences: Theory & Practice*.
- Santrock, J. W. (2019). *Adolescence* (17th ed.). McGraw-Hill Education.
- Shochet, I. M., Dadds, M. R., Ham, D., & Montague, R. (2006). School connectedness is an underemphasized parameter in adolescent mental health: Results of a community prediction study. *Journal of Clinical Child and Adolescent Psychology*, 35(2), 170–179.
- Way, N., Reddy, R., & Rhodes, J. E. (2007). Students' perceptions of school climate during the middle school years: Associations with trajectories of psychological and behavioral adjustment. *American Journal of Community Psychology*, 40(3–4), 194–213.

