

DISPARITIES IN THE EMOTIONAL DEVELOPMENT OF MIDDLE SCHOOL STUDENTS: THE ROLE OF GENDER AND ENVIRONMENT

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Abstract: *This study analyses the emotional development of middle school students, differentiated by gender (735 girls and 593 boys) and environment (567 rural and 761 urban), using the test developed by Mihaela Roco. The results indicate that girls generally exhibit higher levels of emotional intelligence than boys, and students from urban areas score higher than those from rural areas. Additionally, emotional intelligence scores progressively decrease as students' advance in age, highlighting the growing challenges of school transitions. Promoting emotional intelligence can thus help reduce educational disparities and improve school performance.*

Key words: *emotional development, middle school, gender, rural environment, urban environment.*

1. Introduction

The emotional development of middle school students brings numerous benefits, both in the short and long term, contributing to the formation of balanced individuals capable of managing emotions and interpersonal relationships. Emotional development is closely linked to brain development, with both being the result of the child's and adolescent's personal life experiences. Thus, the emotional well-being of children, adolescents, and adults is strongly connected to the social and emotional characteristics of the environment in which they live [14].

From the perspective of life success,

emotional development is a key component of students' success in school, society, and life. Social and emotional competencies play an essential role in the lives of students, parents, teachers, and schools. Students' well-being, their interest in school, and their perception of the school climate and the role they play in it are all part of their socio-emotional development [11].

In the educational context, emotional abilities form the foundation of the learning process. Beyond knowing how to read and count, every student needs to understand how to manage their emotions in different situations, collaborate effectively in teams, trust that

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they can achieve their goals, be autonomous, and develop empathy. School provides the environment where these abilities can be cultivated. We aim to raise children and young people who are not controlled by external factors, who think critically and independently, according to their own values and principles, and take responsibility for their decisions. We want to raise children who demonstrate compassion and empathy for others, trust in themselves, dream, and have the courage to pursue their dreams. Socio-emotional skills are becoming increasingly important in adapting to the rapid changes in society, in the context of globalization and technological development [7]. They are even more relevant in vulnerable environments where social and educational gaps are significant.

In an OECD report [11], which demonstrates the impact of socio-emotional skills on what it calls "life outcomes," it is mentioned that: "Socio-emotional skills determine how well people adapt to their living environment and how much they achieve in life. But the development of these skills is important not only for the well-being of individuals but also for communities at large and for society as a whole." (...) "Socio-emotional skills do not just influence life trajectories directly (for example, good social skills help people successfully negotiate job interviews), but also their persistent and cumulative effects on other attributes, including cognitive skills." (...) "Cognitive skills, such as verbal and numerical competencies, remain the most important predictor of academic performance. However, school outcomes are also dependent on several socio-emotional skills, such as perseverance, self-control,

responsibility, curiosity, and emotional stability. Certain social and emotional skills are a crucial prerequisite for effective participation and performance in the school environment. In other words, low socio-emotional skills may hinder the effective use of cognitive abilities."

The analytical report *Strengthening Social and Emotional Education as a Core Curricular Area Across the EU* [8], which conducted a comprehensive review of international research, identified clear and consistent evidence of the positive impact of socio-emotional education on social, emotional, and cognitive outcomes. From a social perspective, emotional development is associated with improved social and emotional competencies, prosocial behaviors, positive attitudes, and better mental health. It also contributes to reducing anxiety, depression, substance abuse, and antisocial behaviors. Furthermore, emotional development positively influences attitudes and school outcomes, increasing long-term academic performance. These effects are observed regardless of geographical, cultural, socio-economic, or ethnic backgrounds. Additionally, socio-emotional education programs are cost-effective, with a cost-benefit ratio of up to 11:1, meaning significant financial benefits for every amount invested.

The literature provides evidence-based data demonstrating the benefits of developing socio-emotional competencies among students, such as ensuring well-being and achieving better school outcomes. Evidence-based research [1], [6], [12] shows that emotional and social learning has positive effects on middle school students, including reducing dropout rates, improving graduation rates,

and increasing higher education admission rates.

Recent international studies by the OECD [11] highlight the importance of social and emotional competencies for students and their future development as adults. They emphasize that teachers and quality schools have the mission to improve students' academic performance, as measured by PISA tests or other international assessments, but also to provide an emotionally supportive environment that contributes to their social and emotional development [2], [13].

A series of longitudinal studies have shown that self-control, emotional stability, persistence, and motivation developed during childhood have long-term effects on individual health and labor market outcomes in adulthood [3], [5], [10]. Other studies have demonstrated that these attitudes and behaviors are stronger predictors of long-term indicators, such as higher education, earnings, home ownership, and retirement savings, compared to test results [5].

Chernyshenko, Kankaraš, and Drasgow [4], in another OECD study, explore the nature and structure of social and emotional skills, their development, malleability, influencing factors, intercultural comparability, and relevance for a wide range of educational, economic, and life outcomes. Key findings of this study concerning the role of different social and emotional skills as predictors of important life outcomes consider the interaction between: social and emotional skills and the level of education; the total number of years of schooling, the highest academic degree/diploma obtained, and educational success (measured by average

results); social and emotional skills and labor market outcomes, such as income and job performance; social and emotional skills and life quality outcomes, such as life satisfaction, happiness, and health; and social and emotional skills and societal relevance, including social cohesion, civic participation, crime and safety, and environmental awareness [10].

2. Methodology of Research

The purpose of this research is to investigate the differences in the emotional development of middle school students based on a questionnaire evaluating emotional competencies, according to gender and environment (urban vs. rural). The study will analyse how these factors influence emotional self-regulation, emotional expression, and the management of emotions, as well as students' interpersonal relationships. The following hypotheses were proposed to achieve this objective:

Hypothesis 1: Students from urban areas will achieve higher scores on the emotional development questionnaire, indicating more advanced emotional development compared to students from rural areas, due to broader access to educational resources and psychological support.

Hypothesis 2: Girls will record higher scores than boys in the sections related to empathy and emotional self-regulation on the questionnaire, considering the different social norms and expectations regarding emotional expression based on gender.

3. Material and Methods

To analyse and interpret the data,

arithmetic means were calculated for each category of subjects. The test used was developed by Daniel Goleman (1995) and later translated and adapted by Mihaela Roco [9]. The test consists of 10 questions aimed at evaluating individuals' emotional abilities, including the perception and management of their own emotions and those of others. The maximum possible score is 200 points, with the following levels: below 100 points indicates a below-average level, between 100 and 150 points indicates a medium level, between 150 and 199 points indicates an above-average level, and 200 points represent an exceptional score.

The questionnaire was distributed via the Google Forms platform, collecting data on respondents' gender, environment, and grade level. It was

distributed between November and December 2024 across multiple middle schools in the counties of Galaţi, Tulcea, Vrancea, Buzău, Brăila, Călăraşi, and others. A total of 1,328 responses were collected, including 735 females (334 from rural areas and 401 from urban areas) and 593 males (223 from rural areas and 360 from urban areas). Based on the respondents' environment, 567 were from rural areas, and 761 were from urban areas.

4. Results and Discussions

Table 1 presents the average scores obtained by respondents, classified according to gender, environment, and grade level.

Table 1

Summary table of scores obtained on the emotional intelligence test

No.	Gender	Environment	Grade				Middle School Average
			V	VI	VII	VIII	
1	Male	Urban	97,33	87,02	85,3	79,34	87,43
		Rural	86,25	86,51	83,27	70,69	81,91
		Mixt	93,92	86,83	84,32	76,11	85,26
2	Female	Urban	99,01	92,32	88,13	94,57	93,52
		Rural	88,30	87,47	94,47	88,05	89,75
		Mixt	95,20	90,18	91,42	91,40	91,80
3	Mixed	Urban	98,20	89,91	86,75	87,34	90,64
		Rural	87,42	87,10	89,42	81,65	86,53

As shown in Table 1 and the four graphs, students, regardless of grade level, do not achieve a score higher than 100 points, indicating a below-average level of emotional development. At the same time, regardless of gender and environment, fifth-grade students have the highest scores, which decrease as they grow older.

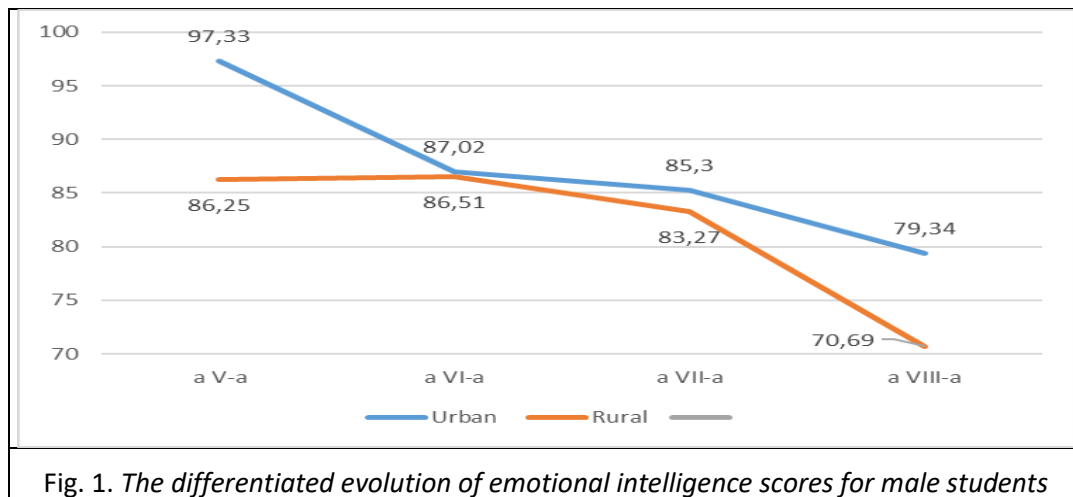
As illustrated in Figure 1, students from urban areas score higher in all grades compared to those from rural areas. For example, in the fifth grade, students from urban areas have a score of 97.33, while those from rural areas score 86.25. In both environments (urban and rural), emotional intelligence scores decrease as students' advance in age (from the fifth to

the eighth grade). For urban students, the score drops from 97.33 in the fifth grade to 79.34 in the eighth grade. The same trend is observed for rural students, where the score decreases from 86.25 in the fifth grade to 70.69 in the eighth grade. This decline may indicate a reduction in the ability to manage emotions as students grow older, possibly due to a more complex curriculum, stress, or other psychosocial factors.

The most significant decline for urban students occurs between the fifth and sixth grades, with a decrease of 10.61%, while the largest decrease for rural students is between the seventh and eighth grades, with a drop of 15.13%. Although the difference between urban and rural environments is already significant in the fifth grade, this gap

becomes even more pronounced as students' progress to higher grades. For example, in the eighth grade, the difference between the scores of urban students (79.34) and rural students (70.69) is 8.65 points, larger than the differences in the sixth and seventh grades.

The large differences between urban and rural environments may be influenced by various factors, such as access to educational resources, social and family support, and differences in personal development opportunities. The urban environment may provide more educational programs or extracurricular activities that contribute to emotional intelligence development, while students in rural areas may have fewer such opportunities.



In the case of female subjects (Figure 2), girls from urban areas start with higher scores but face a significant initial decline, followed by an improvement throughout the middle school period. Girls from rural areas exhibit a more fluctuating trend, with a significant increase in the middle of the period but also a significant decline

toward the end of middle school. This may indicate that limited access to resources and lower emotional support affect them during the final period.

In urban areas, girls experience a significant drop between the fifth and sixth grades (6.73%) and a moderate decline between the sixth and seventh

grades (4.54%), but they show a significant increase between the seventh and eighth grades (7.34%). This suggests a regression in the early middle school years, followed by recovery in the later years as girls better adapt emotionally.

In rural areas, there is a slight decrease between the fifth and sixth grades (0.94%) and a significant increase between the sixth and seventh grades (7.99%), followed by a notable decline between the seventh and eighth grades (6.83%). Thus,

in rural areas, girls seem to experience a period of positive emotional adaptation during the transition to the seventh grade, followed by a significant decline in the final year of middle school. The significant increase between the sixth and seventh grades may be linked to a more stable balance between social and educational life in rural areas, but the challenges of the final middle school years and the lack of resources may contribute to the subsequent significant decline.

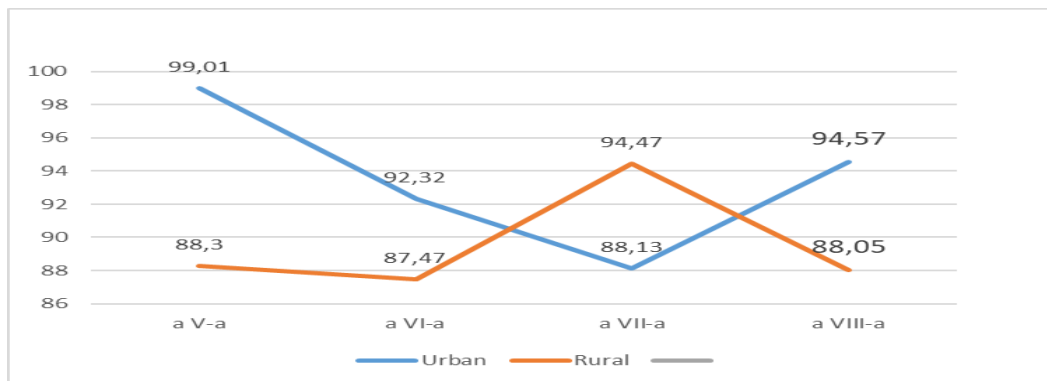


Fig. 2. *The differentiated evolution of emotional intelligence scores for female students*

If we analyse the differentiated evolution of emotional intelligence in students from urban environments (Figure 3), we observe that girls in urban areas seem to benefit from a more efficient

emotional adaptation process in the long term, compared to boys, who face greater difficulties in the early stages of middle school.

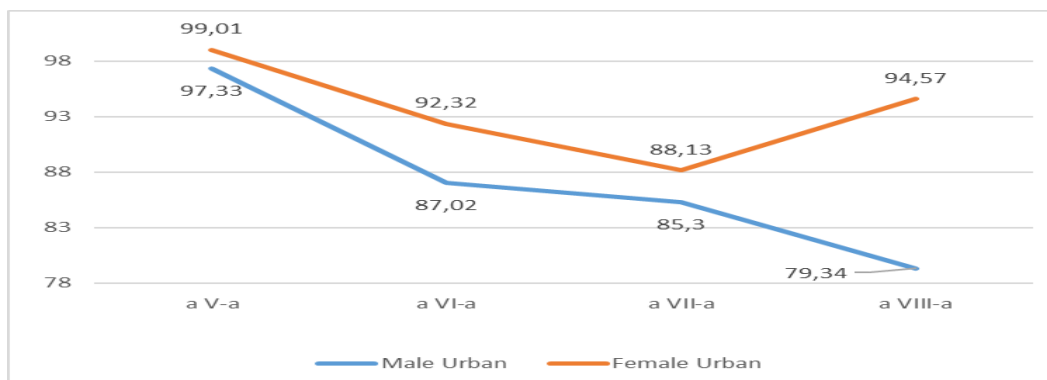


Fig. 3. *Differentiated evolution of emotional intelligence scores in urban environment*

Thus, boys from urban environments experience a significant decrease in emotional intelligence scores in the first years of middle school: 10.63% between grades 5 and 6 and 7.02% between grades 7 and 8. These fluctuations suggest a more difficult adaptation regarding emotional management, possibly due to increased academic and social pressures. Girls from urban environments show a more consistent evolution, with a smaller decrease in the early years (6.73% and 4.54% at the beginning of the cycle), followed by a 7.34% increase by the end of middle school. These results suggest that girls in urban areas manage to develop better emotional management skills as they progress in school, and that emotional maturation helps them improve their scores in the final years of middle school. Boys from urban environments may experience more stress during the transition from lower to higher grades,

which could affect their emotional management. The pressure to conform to social norms may negatively influence their emotional development. Girls may develop better coping skills during adolescence and benefit from more effective support networks (family, teachers, friends), which helps them adapt better during the final years of middle school.

Analysing the rural environment, as we can observe (Figure 4), in the first two grades (V-VI), boys show a slight 0.3% increase in emotional intelligence scores, which may reflect better adaptation to the educational structure and higher academic demands. After the sixth grade, the scores begin to decline significantly, especially in the eighth grade. The sharp 15.14% drop suggests emotional instability during adolescence and preparation for the final cycle exam, which can cause stress and anxiety.

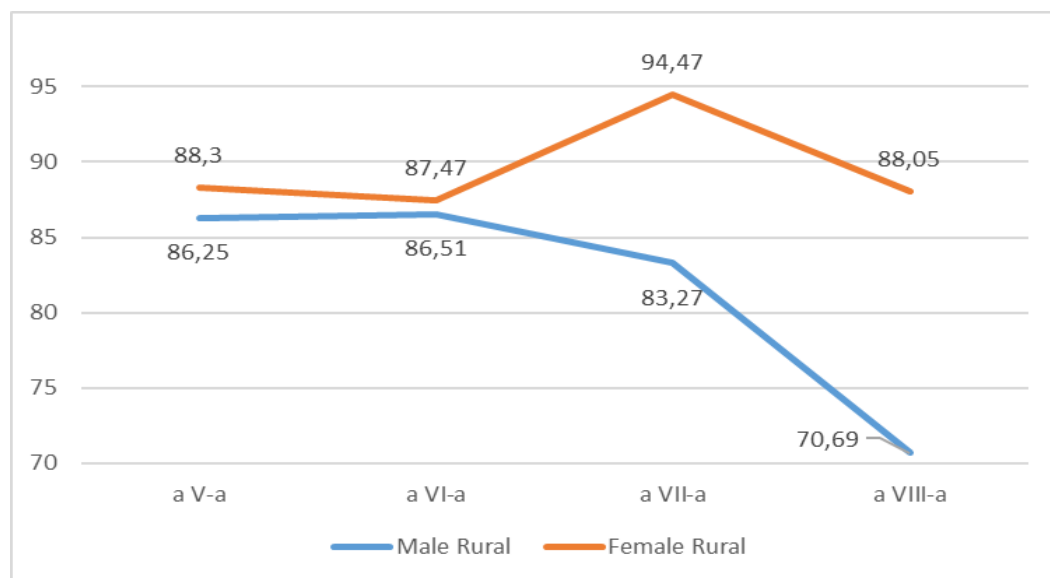


Fig. 4. *Differentiated evolution of emotional intelligence scores in rural environment*

Girls score higher than boys in all grades and start with an advantage at the beginning of the cycle. In the sixth grade, their scores drop slightly (0.94%), but this is not a significant change, suggesting a period of adaptation. The 8.0% increase in the seventh grade indicates significant development of emotional skills, likely due to cognitive and emotional changes specific to this age. The 6.8% decline in the eighth grade may be explained by the stress and pressure of preparing for the National Evaluation exam. It may also reflect negative self-perception or fear of failure that affects emotional intelligence.

Girls may develop better strategies for managing emotions and conflicts, helping them adapt more easily to the school environment and interpersonal relationships.

5. Conclusions

The results of this study highlight significant differences in the emotional development of middle school students based on gender and environment (urban vs. rural). The findings confirm that students from urban areas consistently achieve higher emotional intelligence scores compared to their rural counterparts across all grades, suggesting that access to diverse educational resources and psychological support significantly impacts emotional development. Similarly, female students score higher overall, particularly in aspects related to empathy and emotional self-regulation, reflecting the influence of social and cultural expectations.

The most pronounced declines in emotional intelligence scores occur as

students' advance through middle school, particularly between the fifth and eighth grades. This trend is observed in both urban and rural environments, though the rate of decline is steeper in rural areas, with a notable 15.13% drop between the seventh and eighth grades. The decline suggests that students face increasing challenges, including academic pressures, limited coping mechanisms, and reduced emotional support, especially in rural settings.

From a gender perspective, male students in both environments experience a steady decline, reflecting potential difficulties in emotional regulation. In contrast, female students exhibit a recovery phase during the later years of middle school, particularly in urban settings, where social and educational support systems may be more robust.

These findings have several practical implications. Educational policymakers should prioritize targeted socio-emotional development programs, especially in rural schools, to address the limited resources and support systems available. Schools should also implement gender-sensitive interventions that encourage the development of emotional competencies in boys, particularly in empathy and emotional regulation. Finally, integrating emotional intelligence training into the curriculum, coupled with extracurricular activities, could mitigate the overall decline in emotional development and foster long-term academic and personal success.

Further research is recommended to explore the underlying causes of the observed declines and to evaluate the

effectiveness of proposed interventions in enhancing emotional development among middle school students.

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