THE RELATIONSHIP BETWEEN COGNITIVE AND AFFECTIVE EMPATHY AND EMOTIONAL INTELLIGENCE IN HIGH SCHOOL STUDENTS IN KOKAND, UZBEKISTAN: AN INNOVATIVE STUDY

Razhabalieva Nargizakhon Ravshanjon qizi
KSU/GrGU, Master's 01/24 PP MAG (SOP)
E-mail: razabalievan@gmail.com
Research Location: Kokand State University (Uzbekistan), in collaboration with Yanka Kupala State University of Grodno (Belarus)

INTRODUCTION

Empathy, comprising cognitive (understanding others’ emotions) and affective (sharing others’ emotional states) components, is a cornerstone of social functioning and emotional development, particularly during adolescence. Emotional intelligence (EI), defined as the ability to perceive, understand, manage, and utilize emotions effectively (Mayer & Salovey, 1997), is closely linked to empathy and plays a critical role in shaping interpersonal relationships and academic success among high school students (ages 15–18). Kokand, a historic city in Uzbekistan’s Fergana region with a population of approximately 259,700 (2022), is characterized by a blend of traditional collectivist values, Islamic cultural norms, and increasing urbanization, which influence socio-emotional development. Despite global research on empathy and EI, their interplay in the Central Asian context, particularly in urban settings like Kokand with its high birth rate (11.1% in 2024) and significant labor migration (over 10% of the population), remains underexplored.

The aim of this study is to examine the relationship between cognitive and affective empathy and emotional intelligence among high school students in Kokand, using a novel mixed-methods approach. The primary hypothesis posits that both cognitive and affective empathy positively correlate with EI, with cognitive empathy contributing more to emotion understanding and management, and affective empathy being more closely associated with emotional regulation. Additionally, it is hypothesized that sociodemographic factors (gender, socioeconomic status) and cultural influences (collectivism, patriarchal norms) moderate these relationships. This interdisciplinary study integrates psychological, educational, and cultural perspectives to advance understanding of adolescent socio-emotional development in Uzbekistan.

MATERIALS AND METHODS

Study Design

A mixed-methods approach was employed, combining quantitative (cross-sectional survey) and qualitative (semi-structured interviews and focus groups) methods. Quantitative data assessed correlations and predictive relationships, while qualitative data explored subjective experiences of empathy and EI within Kokand’s cultural context.

Sample

The study involved 180 high school students (ages 15–18) from three public schools in Kokand, selected via stratified random sampling to ensure diversity in gender and socioeconomic status. The sample comprised 55% females and 45% males, with a mean age of 16.3 years (SD = 1.1). Socioeconomic status: 50% middle-income (linked to trade, small businesses), 30% low-income, 20% high-income (education, remittances from migrant parents). Ethnic composition: 90% Uzbek, 7% Tajik, 3% other. Inclusion criteria: enrollment in grades 10–11, parental consent, and student assent.

Data Collection Methods

1. Interpersonal Reactivity Index (IRI): Used to measure cognitive empathy (perspective-taking, fantasy) and affective empathy (empathic concern, personal distress) (Davis, 1983; $\alpha = 0.86$).

2. Trait Emotional Intelligence Questionnaire (TEIQue): Assessed EI dimensions: emotionality, self-control, sociability, and well-being (Petrides & Furnham, 2003; $\alpha = 0.90$).

3. Semi-Structured Interviews: Conducted with 40 students (20 per gender) to explore experiences of empathy and emotional regulation in school, peer, and family contexts.

4. Focus Groups: Four groups (8–10 students each) discussed cultural influences on empathy and EI, particularly collectivist norms and migration impacts.

5. Sociodemographic Questionnaire: Collected data on age, gender, socioeconomic status, family structure (e.g., migrant parents), and cultural factors (e.g., religiosity, academic performance).

PROCEDURE

Data were collected from April to November 2025 in collaboration with Kokand’s school administrations and local mahallas (community organizations). Surveys were administered online via a secure platform (Google Forms with two-factor authentication) or in-person during school hours. Interviews and focus groups were conducted in Uzbek, with some in Russian, recorded with consent, and held in private school counseling rooms. Ethical considerations included informed consent, anonymity, and compliance with Uzbekistan’s educational regulations and the Helsinki Declaration. Migration-specific data: 35% of participants had at least one parent working abroad.

DATA ANALYSIS

Quantitative data were analyzed using SPSS 29.0. Pearson’s correlation assessed relationships between empathy and EI. Multiple regression examined predictive effects, controlling for gender, socioeconomic status, and migration status. Reliability was confirmed via Cronbach’s alpha (IRI: $\alpha = 0.86$; TEIQue: $\alpha = 0.90$). Qualitative data were analyzed using thematic analysis in NVivo 14.0, with double coding by two researchers for reliability. Triangulation integrated quantitative and qualitative findings, with cultural bias addressed by consulting local educators from Kokand Pedagogical College.

RESULTS

Quantitative Findings

Cognitive empathy (perspective-taking) showed a strong positive correlation with EI dimensions of emotionality ($r = 0.70$, $p < 0.001$) and sociability ($r = 0.65$, $p < 0.001$).

Affective empathy (empathic concern) correlated moderately with emotionality ($r = 0.58$, $p < 0.01$) and self-control ($r = 0.50$, $p < 0.01$). Personal distress (affective empathy) was negatively associated with self-control ($r = -0.45$, $p < 0.05$). Multiple regression indicated that cognitive and affective empathy explained 42% of the variance in EI ($R^2 = 0.42$, $F(4,175) = 28.3$, $p < 0.001$), with cognitive empathy ($\beta = 0.48$, $p < 0.01$) as a stronger predictor of emotionality than affective empathy ($\beta = 0.32$, $p < 0.05$).

Gender differences: Females scored higher on empathic concern ($t(178) = 3.12$, $p < 0.01$), while males scored higher on self-control ($t(178) = 2.67$, $p < 0.05$). Socioeconomic status: High-income students reported greater sociability ($F(2,177) = 4.8$, $p < 0.05$). Migration status: Students with migrant parents showed lower emotionality ($t(178) = 2.34$, $p < 0.05$), likely due to reduced parental emotional availability.

Qualitative Findings

Thematic analysis identified four key themes:

1. Cognitive Empathy in Social Navigation: Students emphasized perspective-taking in resolving peer conflicts. A female student noted, “I try to understand why my classmate is upset—it helps us stay friends.”

2. Affective Empathy and Emotional Overload: Students with high empathic concern reported difficulty managing intense emotions, e.g., “When my friend cries, I feel it so much I can’t focus” (male, 17).

3. Cultural Influences: Collectivist values in Kokand emphasized group harmony, with students citing family expectations to prioritize others’ emotions, e.g., “My parents say helping others comes first” (female, 16).

4. Impact of Migration: Students with migrant parents described emotional challenges, such as feeling disconnected, e.g., “My dad works in Russia, and I don’t know how to talk to him about my problems” (male, 15).

DISCUSSION

The findings confirm that cognitive and affective empathy significantly contribute to emotional intelligence in high school students in Kokand, with cognitive empathy being a stronger predictor of EI dimensions like emotionality and sociability. This aligns with Mayer and Salovey’s (1997) EI model, where understanding others’ emotions (cognitive empathy) is central to emotional competence. Affective empathy supports emotional connection but poses challenges when personal distress impairs regulation ($r = -0.45$), consistent with Eisenberg et al. (2000).

Expanded Analysis of Empathy and EI. Cognitive empathy’s stronger role ($\beta = 0.48$) reflects its importance in perspective-taking, enabling students to navigate complex social dynamics in Kokand’s urban school settings. Affective empathy, while fostering emotional bonds, can lead to emotional overload in collectivist cultures where group harmony is prioritized. The negative correlation between personal distress and self-control suggests that excessive emotional sharing hinders regulation, particularly in high-stress peer interactions. Qualitative data highlight that students with high affective empathy struggle to balance emotional involvement with self-regulation, especially in conflict situations.

Sociocultural Context. Kokand’s collectivist culture, rooted in Islamic values and mahalla structures, shapes empathy and EI. Students reported that family expectations to prioritize others’ emotions enhanced empathic concern but sometimes limited individual emotional expression, particularly among males due to patriarchal norms. Gender differences (females higher on empathic concern) align with global trends but are amplified by cultural socialization, where females are primary caregivers. Migration, affecting 35% of the sample, reduced emotionality due to parental absence, consistent with studies on social orphanhood in Central Asia (Khasanova, 2021). Socioeconomic status influenced sociability, with high-income students benefiting from access to extracurricular activities.

Limitations. The cross-sectional design limits causal inferences. Self-reports may be biased by social desirability, particularly in a collectivist context. The focus on Kokand’s urban schools may not generalize to rural areas. Future research should use longitudinal designs, incorporate physiological measures (e.g., heart rate variability), and compare urban-rural settings.

Practical Implications. The findings support the development of school-based Social-Emotional Learning (SEL) programs tailored for Uzbekistan, focusing on perspective-taking to enhance cognitive empathy and stress management to mitigate personal distress. Gender-specific interventions could address males’ lower empathic concern and females’ emotional overload. Collaboration with mahallas could integrate community values into EI training.

Novelty. This study is the first to explore the distinct contributions of cognitive and affective empathy to EI in Kokand’s high school students, incorporating migration and cultural factors through a mixed-methods approach.

CONCLUSION

Cognitive and affective empathy significantly influence emotional intelligence in high school students in Kokand, with cognitive empathy playing a stronger role in emotional understanding and sociability. Affective empathy fosters connection but poses regulation challenges when personal distress is high. Cultural factors, including collectivism, patriarchal norms, and migration, moderate these relationships. School-based interventions should target empathy and EI to enhance adolescent well-being and social competence. Future research should explore longitudinal effects and rural-urban differences to deepen understanding of socio-emotional development in Uzbekistan.

REFERENCES:

1. Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*(1), 113–126.

2. Eisenberg, N., Fabes, R. A., & Spinrad, T. L. (2000). Prosocial development. In *Handbook of Child Psychology* (Vol. 3, pp. 701–778). Wiley.

3. Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In *Emotional development and emotional intelligence: Educational implications* (pp. 3–31). Basic Books.

4. Petrides, K. V., & Furnham, A. (2003). Trait emotional intelligence: Behavioural validation in two studies of emotion recognition and reactivity to mood induction. *European Journal of Personality, 17*(1), 39–57.

5. Khasanova, K. (2021). Demographic forecasts Fergana Valley. *Journal of Geography, Geology and Environment, 30*, 491–505.