



EMOTIONAL CREATIVITY AMONG MUSICAL ARTISTS

József RÉVÉSZ ¹, Ivett ORSOVICS ², Piroska BÉKI ³, Beatrix FARAGÓ ^{4✉}

¹*Institute of Arts and Sports Sciences, Faculty of Education, University of Sopron Benedek Elek, Sopron, Hungary*

²*Faculty of Education, Selye University, Komarno, Slovakia*

³*Institute of Health Promotion and Sport Sciences, Faculty of Education and Psychology, Eötvös Loránd University, Budapest, Hungary*

⁴*Research Centre, Faculty of Economics, University of Sopron Alexandre Lamfalussy, Sopron, Hungary*

Article History:

- received 18 August 2025
- accepted 24 February 2026

Abstract. Creativity and music are fundamental to human experience, with emotional facets of creativity being particularly critical yet underexplored, especially among professional musicians. Emotional creativity (EC) – the capacity to generate novel, effective, and authentic emotional responses – is deeply interwoven with artistic creation. This quantitative, questionnaire-based study aimed to investigate whether significant gender- or age-related differences exist in emotional creativity among musicians, and to compare their EC levels to general population norms. The study tested three main hypotheses concerning gender, age, and professional status. The study employed the Hungarian-adapted, 15-item Emotional Creativity Inventory (ECI) on a sample of 166 musicians from 24 countries. Statistical analyses included reliability assessment (Cronbach's alpha), independent samples t-tests, one-way ANOVA, and correlation analysis. The ECI showed excellent internal consistency (Cronbach's alpha = 0.884). No statistically significant differences were found between male and female musicians, leading to the rejection of H1. Similarly, no significant age differences were detected, rejecting H2. Musicians displayed moderately high total EC scores ($M = 3.62$), with particularly high values in the Effectiveness and Authenticity dimensions, partially confirming H3.

Keywords: emotional creativity, musical artists, creative performance, personality trait, gender differences, age differences, emotional creativity inventory.

✉Corresponding author. E-mail: farago.beatrix@uni-sopron.hu

1. Introduction

Creativity and music function as powerful forms of emotional communication. Although creativity research has traditionally emphasized cognitive processes, the emotional dimensions of creativity among musicians remain less explored. Emotional creativity (EC) refers to the ability to generate novel, effective, and authentic emotional responses (Averill, 2000). However, empirical research examining EC specifically among professional musicians is still limited. The present study addresses this gap by investigating emotional creativity in an international sample of musicians and examining potential gender and age differences.

International context and research gap

Recent systematic reviews show that musical participation positively influences emotion regulation and well-being (Peters et al., 2024). Meta-analyses show that emotional creativity forms a distinct construct linking creativity and emotional functioning, yet research among

musicians remains limited (Kuška et al., 2020). The present study examines EC among musicians from 24 countries and relates EC profiles to demographic and professional variables.

2. Theoretical approaches to emotional creativity

Early research linked creativity mainly to cognition but later extended it to emotional experience (Averill & Thomas-Knowles, 1991; Kőváry et al., 2014) and giftedness (Nakano et al., 2016; Renzulli & Grasser, 2015).

Averill's theory of emotional creativity (Averill & Thomas-Knowles, 1991; Averill, 2005) provides the main conceptual basis for linking emotion and artistic creativity (Tatarkiewicz, 1980). Emotional richness and variability are key components of meaningful artistic creation (Ivcevic et al., 2007).

According to Averill (2000), emotional creativity consists of the dimensions of novelty, effectiveness, and authenticity (Ghadiri & Abdi, 2010; Révész, 2021). Novelty refers to originality of emotional responses (Averill, 1999), effectiveness to personal or social usefulness, authenticity to congruence with one's inner self (Averill, 2000), and preparedness to emotional awareness (Ghadiri & Abdi, 2010). Averill (2000) distinguished three levels of EC: authentic use of existing emotions, modification of emotions to meet individual or group needs, and transformation into new emotional forms.

Emotions play a dual role in creativity as both mediators and outcomes (Averill, 2005). In the first sense, emotions facilitate metaphorical thinking and creative associations and often find symbolic expression in artistic forms such as music or language.

3. The relationship between musical and emotional creativity

Emotional creativity reflects the ability to express emotions in original, effective, authentic, and well-prepared ways. Musical creativity relies strongly on emotional expression (Strait et al., 2014). Thus, a clear link exists between musical and emotional creativity (Radford, 2004). Conceptual Framework of Productive Musical Creativity:

A composer must be emotionally prepared to explore both the world and their inner experiences. Artistic depth emerges when musicians shape emotional aspects of musical expression (Averill, 2005; Radford, 2004). Lifelong innovation involves stylistic changes and new emotional responses to personal and social contexts (Averill, 1999; Čábelková et al., 2022; Trnka et al., 2020). Conceptual Framework of Reproductive Musical Creativity:

Responsibility for conveying emotion through music lies between composer and performer. The score requires interpretation – the performer's task – where composer, performer, and audience emotions intertwine. The goal is to transmit emotion so that listeners experience genuine affect (Radford, 2004; Tatarkiewicz, 1980). Authentic performance requires expression that engages the audience emotionally (Averill & Thomas-Knowles, 1991; Kőváry et al., 2014). Authenticity relies on balancing the emotions of composer and performer without dominance. Thus, emotional preparedness is essential for a cathartic performance that integrates the feelings of both composer and audience (Averill, 2000; Burnard, 2012; Aukhadiyev et al., 2025).

4. Conceptual framework of improvisational musical creativity

From the perspective of emotional creativity, improvisation synthesizes productive and reproductive creativity because the composer and performer are the same individual. Consequently, musicians must possess core elements of emotional creativity. In improvisation, creation and interpretation occur simultaneously; however, as practicing musicians note, these two processes are not entirely synchronous but rather unfold with a slight temporal shift. During improvisation, conceptualization precedes sound production. Thus, the brain anticipates musical material before it is realized (Bruhn et al., 1994; Burnard, 2012). Thus, improvisational creativity requires a highly developed capacity for emotional awareness, cognitive flexibility, and real-time regulation, integrating compositional intent with expressive authenticity within the same creative act.

5. Presentation of the research

This study presents a quantitative, questionnaire-based analysis of emotional creativity (EC) interpreted in relation to Hungarian and international research. Averill's model defines EC through the dimensions of Novelty, Effectiveness, and Authenticity (Averill, 2000), while Hungarian validation studies confirmed three corresponding subscales: Preparedness, Novelty, and Effectiveness/Authenticity with strong reliability (Kőváry et al., 2014). The Hungarian-adapted ECI was used to assess EC among professional musicians, allowing a systematic evaluation of emotional dimensions central to artistic expression. Although the Emotional Creativity Inventory has already been adapted and validated in the Hungarian context (Kőváry et al., 2014), previous studies primarily focused on general population samples and psychometric properties of the scale. Research examining emotional creativity specifically among professional musicians remains limited, particularly in an international comparative context.

The present study therefore extends previous Hungarian research by applying the instrument to a cross-national sample of professional musicians from 24 countries. By focusing on an artistic population and examining demographic and professional differences, the study provides new insights into how emotional creativity manifests within the musical profession. This international perspective contributes to the broader literature on emotional creativity and artistic performance by highlighting the role of emotional processes in musical creativity across cultural contexts.

5.1. Research questions and hypotheses

This study investigates emotional creativity (EC) among professional musicians through three main hypotheses and related research questions.

H1 – Female musicians are expected to show higher levels of emotional creativity than male musicians, particularly in the novelty component.

RQ1: Are there gender differences in emotional creativity among musicians, and how do these differences appear across the main components of emotional creativity (emotional preparedness, novelty, effectiveness, and authenticity)?

H2 – Emotional creativity is associated with age among musicians. Specifically, the effectiveness and authenticity components of emotional creativity are expected to show a positive correlation with age.

RQ2: Is emotional creativity associated with age among musicians, and how does age relate to the main components of emotional creativity (emotional preparedness, novelty, effectiveness, and authenticity)?

H3 – Professional Status: Musicians are expected to show above-average EC, especially in effectiveness/authenticity, reflecting the emotional expressivity central to artistic work.

RQ3: Are musicians' EC scores higher than population norms, in which components are they strongest, and how are their scores distributed?

5.2. Methodology, psychometric properties and sampling

The study applied the Hungarian version of the Emotional Creativity Inventory (ECI, 15 items) to measure emotional creativity (Kőváry et al., 2014).

The questionnaire was translated from Hungarian into English and German for international respondents. The translations were prepared by a professional language expert, and the translated versions were carefully compared with the original Hungarian questionnaire to ensure semantic equivalence.

The translated English and German versions corresponded directly to the Hungarian questionnaire. Internal consistency of the instrument was assessed using Cronbach's alpha coefficient for the overall sample, which indicated excellent reliability ($\alpha = 0.884$).

A total of 166 professional musicians (82 male, 84 female) from 24 countries completed a trilingual (Hungarian, English, and German) online self-report questionnaire. Sampling followed a convenience–snowball approach via professional networks, with inclusion criteria of active musical engagement and $\geq 80\%$ completion. Data were collected through an online questionnaire. The survey was available between 10.04.2024–01.01.2025. Participation was voluntary and based on informed consent, and responses were collected anonymously.

Statistical analyses (SPSS) included reliability testing (Cronbach's α), t-tests (gender), ANOVA (age), Pearson correlations (background variables), and Mann–Whitney U tests for non-parametric validation. The ECI demonstrated excellent internal consistency (Cronbach's $\alpha = 0.884$; $M = 3.62$, $SD = 0.74$), with subscale means of Preparedness = 3.64, Novelty = 3.47, Effectiveness = 3.83, and Authenticity = 3.68. Measurement invariance by gender and age was stable ($\Delta CFI \leq 0.010$; $\Delta RMSEA \leq 0.015$). Association sizes and equivalence testing (TOST) confirmed the practical absence of demographic associations. Potential selection bias should be considered due to the network-based recruitment process.

Ethical considerations

The research was conducted in accordance with the ethical principles of the Declaration of Helsinki and the standards of academic research involving human participants. Participation was entirely voluntary. Before completing the questionnaire, participants received information about the aim of the study, the anonymous nature of data collection, and the use of the data for scientific purposes.

Informed consent was obtained electronically before participation. No personally identifiable information was collected during the survey, and responses were stored in anonymized form.

The dataset was accessible only to the research team and was handled in accordance with data protection regulations.

5.3. Demographic characteristics

The research sample comprised 166 participants ($N = 166$) from 24 countries. Descriptive statistics included frequencies. Gender distribution was balanced: 82 male (49.4%) and 84 female (50.6%), minimizing sampling bias. Age groups were as follows: 20–30 years (12.7%), 31–40 years (21.1%), 41–50 years (31.9%), 51–60 years (24.7%), 61–70 years (8.4%), and over 71 years (1.2%), indicating a predominance of middle-aged respondents. Participants represented 24 countries (Figure 1). The largest proportion of respondents came from Hungary (~33%), Austria (~25%), and Slovakia (~7%). Additional participants were recruited from several other European countries, including Germany, the Czech Republic, Poland, Italy, Spain, the Netherlands, Belgium, Switzerland, Romania, Croatia, Slovenia, and Serbia, among others. Although the sample is internationally diverse, the majority of participants originate from Central European cultural contexts. These distributions indicate that the sample reflects primarily Central European cultural contexts, where musical education traditions, institutional training, and professional career paths may shape emotional expression and artistic creativity.

Based on the country in which higher education degrees were obtained, 25.9% of the degree holders completed their studies in Hungary, while approximately 32% earned their qualifications in Austria. The frequencies and percentages of these variables reflect the diversity of educational backgrounds within the sample (Table 1).

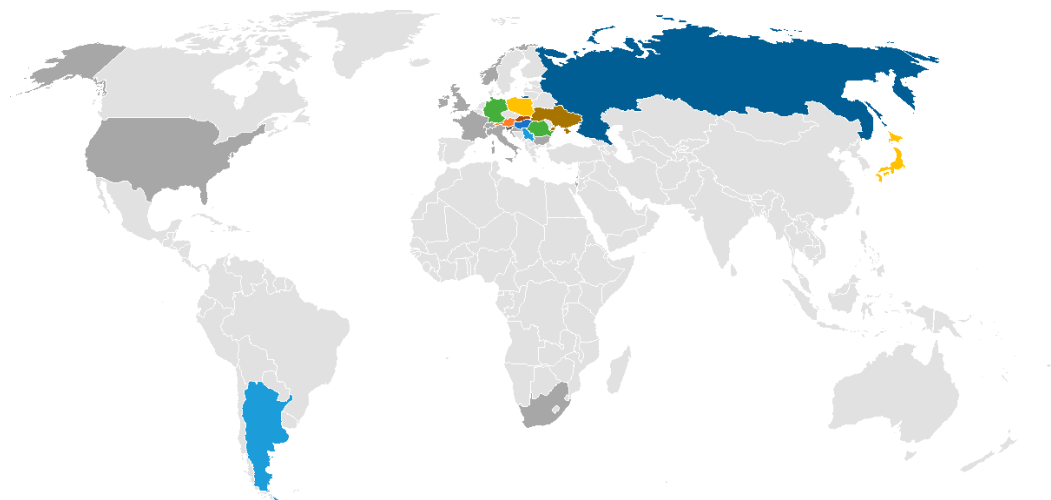


Figure 1. Country distribution of the respondent musicians (source: authors)

Table 1. Frequency distribution of demographic data (source: authors' calculation)

Variable	Category	N	%
Gender	Male	82	49.4
	Female	84	50.6
Age	20–30 years	21	12.7
	31–40 years	35	21.1
	41–50 years	53	31.9
	51–60 years	41	24.7
	61–70 years	14	8.4
	71+ years	2	1.2
Country of birth	Hungary	55	33.1
	Austria	41	24.7
	Slovakia	12	7.2
	Other	58	34.9
Country of residence	Hungary	47	28.3
	Austria	35	21.1
	Other	84	50.6
Country where higher education degree was obtained	Hungary	43	25.9
	Austria	53	31.9
	Other	70	42.2

5.4. Professional characteristics

In the following subsection, we analyze the professional background of the study participants, including years spent in the musical profession, teaching activities, and the proportion of musical performance work. A total of 25.9% of respondents have worked in the musical field for more than 21 years, whereas 33.1% report less than 10 years of experience. 61.4% of respondents are engaged in teaching activities, while 38.6% are not. The proportion of solo performers is 5.4%, with the majority performing in group settings (orchestral, chamber, choral). The frequency distribution indicates that ensemble work is more characteristic (Table 2).

Table 2. Professional data (source: authors' calculation)

Variable	Category	N	%
Years in the musical profession	0–10 years	55	33.1
	11–20 years	24	14.5
	21+ years	43	25.9
Teaching activity	Yes	102	61.4
	No	64	38.6
Type of musical performance	Solo	9	5.4
	Ensemble	157	94.6

6. Results of the research

6.1. Reliability and descriptive statistics

The questionnaire demonstrated internal reliability in the international sample, with Cronbach's $\alpha = .884$. (Table 3) The overall ECI mean was $M = 3.62$ ($SD = 0.74$, 95% $CI \approx [3.51; 3.73]$). Gender differences were minimal and not statistically significant (t-test, $p > 0.05$), indicating that emotional creativity was similar across genders, consistent with previous findings (Ivcevic et al., 2007). Age and professional experience showed weak negative correlations with ECI_total (age: $r = -0.16$, $p = 0.042$; experience: $r = -0.16$, $p = 0.034$), indicating a slight decrease in emotional creativity with age and experience. However, the one-way ANOVA did not reveal significant differences between age groups ($p = 0.432$).

Table 3. Reliability and descriptive statistics of the Emotional Creativity Inventory (ECI) (source: authors' calculation)

Scale	Items	Cronbach's α	Mean	SD
Emotional Preparedness	4	0.675	3.64	0.95
Novelty	5	0.728	3.47	1.00
Effectiveness	3	0.544	3.83	0.87
Authenticity	3	0.641	3.68	0.94
Total ECI	15	0.884	3.62	0.74

6.2. Results of the emotional creativity analysis

The following dimensions were analyzed:

Novelty/Originality – referring to unusual, nonconventional emotional responses.

Effectiveness – reflecting the value of emotional responses for the individual or community.

Authenticity – indicating congruence between emotions and one's inner experiences and values.

The *Emotional Creativity Inventory* (ECI) contains 15 items, grouped into four subscales:

Emotional Preparedness – 4 items

Novelty – 5 items

Effectiveness – 3 items

Authenticity – 3 items

Respondents rated each statement on a 5-point Likert scale (1 = *not characteristic*, 5 = *fully characteristic*).

Overall mean score: $M = 3.62$ ($SD = 0.74$; Median = 3.73), suggesting a moderately high level of emotional creativity.

Subscale means:

Emotional Preparedness: $M = 3.64$ ($SD = 0.95$)

Novelty: $M = 3.47$ ($SD = 1.00$)

Effectiveness: $M = 3.83$ ($SD = 0.87$)

Authenticity: $M = 3.68$ ($SD = 0.94$)

The histogram distribution shows that most values cluster between 3.5 and 4.0, with the typical response corresponding to "*rather true*."

6.2.1. Novelty/Originality dimension

The *Novelty* subscale measures the extent to which participants experience, express, and process unusual or unconventional emotions, reflecting their openness to emotionally original responses and creative affective patterns (Table 4).

Table 4. Novelty subscale items – descriptive statistics (source: authors' calculation)

Item	Content	Mean	SD
3	I experience new feelings.	3.50	1.00
4	I am able to manage my emotions in new ways.	3.46	0.94
7	I experience a wide variety of emotions.	3.36	1.05
9	I choose new emotional reactions.	3.63	0.91
11	I express my feelings in new ways.	3.38	1.09

Respondents rated the Novelty dimension as moderately characteristic with notable individual variability. Younger participants showed a slightly higher tendency toward new emotional experiences and creative self-expression, with a minor age-related decline that was not statistically significant. Among musicians, it typically appears at a moderately high level, which aligns with the present findings.

6.2.2. Effectiveness dimension

The *Effectiveness* subscale examines the extent to which emotional responses support the goals of the individual and the community (Table 5).

Table 5. Effectiveness subscale items – descriptive statistics (source: authors' calculation)

Item	Content	Mean	SD
5	My emotions help me in problem solving.	3.82	0.92
8	I consciously regulate my emotions.	3.85	0.85
13	My emotions give me strength in difficult situations.	3.84	0.86

Items in the Effectiveness component show high mean values, indicating that respondents can use emotions as a resource and regulate them consciously. The low standard deviations indicate a relatively homogeneous pattern. This dimension is closely related to resilience and adaptive coping, both of which are particularly important in artistic professions, where they demonstrably enhance professional performance and resistance to stress.

6.2.3. Authenticity dimension

The *Authenticity* subscale assesses the extent to which emotional responses reflect an individual's inner experiences and values, independent of external expectations (Table 6).

Table 6. Authenticity subscale items – descriptive statistics (source: authors' calculation)

Item	Content	Mean	SD
10	I express my emotions honestly.	3.73	0.97
12	I am authentic in my interactions with others.	3.69	0.91
15	I remain true to my own feelings.	3.61	0.95

The mean values in this dimension are also moderately high, with lower standard deviations compared to the Novelty dimension. This suggests that many musicians strive for self-congruent emotional expression. According to Averill (2000), authentic emotional responses represent a crucial component of creativity. The level of self-congruence appears high and may contribute to professional success.

7. Discussion and interpretation of results

The present study examined emotional creativity among professional musicians and explored potential differences related to gender, age, and professional characteristics. As the study is cross-sectional, the results indicate associations rather than causal relationships.

These results suggest that emotional creativity is relatively stable and more trait-like than age-dependent (Averill, 1999; Kőváry et al., 2014).

H1 (Gender Differences): It was hypothesized that female musicians would show higher emotional creativity than males. However, no statistically significant gender differences were observed in the total ECI scores (t -test, $p > 0.05$) or across subscales (Novelty, Effectiveness, Authenticity, Preparedness). The mean values of male and female musicians were very similar, indicating that emotional creativity levels were comparable across genders. The effect size was negligible (Hedges' $g = -0.054$, 95% CI $[-0.357; 0.249]$), indicating practically no gender difference. Thus, H1 was rejected.

H2 (Age Differences): The second hypothesis predicted an association of age on EC. One-way ANOVA revealed no significant differences between age groups ($p = 0.432$). Although a weak negative correlation was observed ($r = -0.16$, $p = 0.042$), the effect size was small and ANOVA results did not show significant differences between age groups; therefore, H2 was not supported.

H3 (Professional Status): The third hypothesis proposed that musicians exhibit higher EC than the general population. The overall mean ECI score ($M = 3.6$, $SD = 0.74$) was moderately high, with highest values in *Effectiveness* (3.83) and *Authenticity* (3.68), and more variability in *Novelty* (3.47). Comparison with reference samples partially supported H3, showing elevated EC levels particularly in the Effectiveness and Authenticity dimensions.

These findings suggest that emotional creativity may function as a relatively stable personality trait. It is also important to interpret these findings within the cultural context of the sample. Although the study involved musicians from 24 countries, the majority of participants originated from Central European countries. Musical education in this region emphasizes institutional training, ensemble performance, and long-term professional socialization. These characteristics may influence the ways in which emotional expression, authenticity, and effectiveness appear in artistic performance. Consequently, the results should be interpreted within this cultural framework while also contributing to the broader international discussion on emotional creativity in musical professions. An additional strength of the study lies in the international composition of the sample, which included professional musicians from 24 countries. This cross-national diversity increases the external validity of the findings and suggests that the observed patterns of emotional creativity may reflect broader characteristics of musical professions rather than country-specific phenomena.

Limitations

The findings of the present study should be interpreted in light of certain limitations. The sample was obtained through convenience and snowball sampling via professional networks; therefore, it cannot be considered representative of the entire population of professional musicians. Consequently, the results cannot be generalized to all musicians. Nevertheless, the inclusion of participants from 24 countries provides a diverse international sample and offers valuable insights into patterns of emotional creativity within the musical profession.

8. Conclusions

This quantitative, questionnaire-based study shows that emotional creativity is a stable and reliably measurable personality trait, effectively assessed with the Hungarian-adapted ECI. No significant gender or age differences were found, consistent with international research indicating that emotional creativity varies mainly at the individual level. Higher EC is associated with flexible coping, psychological resilience, and creative emotional responses in challenging situations (Averill, 1999; Ghadiri & Abdi, 2010). Emotional creativity has been associated in previous research with psychological well-being, creative performance, and aspects of social adaptation (Averill, 1999; Ghadiri & Abdi, 2010). While the present study did not directly examine artistic performance, it contributes to this literature by providing empirical evidence on emotional creativity among professional musicians in an international sample. At the same time, further methodological development – including deeper subscale analysis and longitudinal designs – is needed to better understand its complexity and developmental potential.

References

- Aukhadiyev, I., Dosbatyrov, D., & Einasto, H. (2025). Modern creative methods of ballet staging and their reflection in the Kazakh ballet Zhusan. *Creativity Studies*, 18(1), 208–222.
<https://doi.org/10.3846/cs.2025.20429>
- Averill, J. (2005). Emotions as mediators and products of creative activity. In J. C. Kaufman & J. Baerr (Eds.), *Creativity across domains: Faces of the muse* (pp. 225–243). Lawrence Erlbaum Associates Publishers.
- Averill, J. R. (1999). Individual differences in emotional creativity: Structure and correlates. *Journal of Personality*, 67(2), 331–371. <https://doi.org/10.1111/1467-6494.00058>
- Averill, J. R. (2000). Intelligence, emotion and creativity: From tracheotomy to trinity. In R. Bar-On & D. A. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school and in the workplace* (pp. 277–298). Jossey-Bass/Wiley.
- Averill, J. R., & Thomas-Knowles, C. (1991). Emotional creativity. In K. T. Strongman (Ed.), *International Review of Studies on Emotion* (Vol. 1, pp. 269–299). Wiley.
- Bruhn, H., Oerter, R. & Rösing, H. (Hrsg.) (1994). *Musikpsychologie. Ein Handbuch* [Music psychology: A handbook]. Reinbek bei Rowohlt.
- Burnard, P. (2012). Rethinking ‘musical creativity’ and the notion of multiple creativities in music. In O. Odena, *Musical creativity: Insights from music education research* (pp. 5–27). Ashgate.
- Čábelková, I., Dvořák, M., Smutka, L., Strielkowski, W., & Volchik, V. (2022). The predictive ability of emotional creativity in motivation for adaptive innovation among university professors under COVID-19 epidemic: An international study. *Frontiers in Psychology*, 13, Article 997213.
<https://doi.org/10.3389/fpsyg.2022.997213>

- Ghadiri, F., & Abdi, B. (2010). Factor structure of emotional creativity inventory (ECI-Averill, 1999) among Iranian undergraduate students in Tehran universities. *Procedia – Social and Behavioral Sciences*, 5, 1442–1446. <https://doi.org/10.1016/j.sbspro.2010.07.304>
- Ivcevic, Z., Brackett, M. A., & Mayer, J. D. (2007). Emotional intelligence and emotional creativity. *Journal of Personality*, 75(2), 199–236. <https://doi.org/10.1111/j.1467-6494.2007.00437.x>
- Kóváry, Z., Devecsery, Á., Jakab, K., Pusztai, B., Agócs, L., Kómár, R., & Orosz, G. (2014). Az Érzelmi Kreativitás Leltár (ECI) hazai adaptációja [The emotional creativity inventory]. *Pszichológia*, 34(4), 339–362. <https://doi.org/10.1556/Pszicho.34.2014.4.2>
- Kuška, M., Trnka, R., Mana, J., & Nikolai, T. (2020). Emotional creativity: A meta-analysis and integrative review. *Creativity Research Journal*, 32(2), 151–160. <https://doi.org/10.1080/10400419.2020.1751541>
- Nakano, T. de C., Wechsler, S. M., Campos, C. R., & Milian, Q. G. (2016). Creativity and intelligence: A study with Brazilian children and adolescents. *Psicologia: Reflexão e Crítica*, 29, 1–9.
- Peters, V., Bissonnette, J., Nadeau, D., Gauthier-Légaré, A., & Noël, M.-A. (2024). The impact of musicking on emotion regulation: A systematic review and meta-analysis. *Psychology of Music*, 52(5), 548–568. <https://doi.org/10.1177/03057356231212362>
- Radford, M. (2004). Emotion and creativity. *The Journal of Aesthetic Education*, 38(1), 53–64. <https://doi.org/10.1353/jae.2004.0007>
- Renzulli, J. S., & Grasser, M. (2015). The three-ring conception of giftedness: A developmental model for creative productivity. In S. I. Pfeiffer, M. Foley Nicpon, & S. R. Shaunessy-Dedrick (Eds.), *APA handbook of giftedness and talent* (pp. 75–87). American Psychological Association. <https://doi.org/10.1037/14643-005>
- Révész, J. (2021). *Kreatív képességek fejlesztésének lehetőségei az óvodai zenei nevelésben* [Opportunities for developing creative abilities in preschool music education]. Soproni Egyetem Kiadó.
- Strait, D. L., O'Connell, S., Parbery-Clark, A., & Kraus, N. (2014). Musicians enhanced neural differentiation of speech sounds arises early in life: Developmental evidence from ages three to thirty. *Cerebral Cortex*, 24(9), 2512–2521. <https://doi.org/10.1093/cercor/bht103>
- Tatarkiewicz, W. (1980). *A history of six ideas: An essay in aesthetics. Translated from the Polish by Christopher Kasparek*. Martinus Nijhoff.
- Trnka, R., Kuška, M., & Čábelková, I. (2020). Emotional creativity across adulthood: Age is negatively associated with emotional creativity. *Studia Psychologica*, 62(2), 164–177. <https://doi.org/10.31577/sp.2020.02.798>