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## MUSIC AS A TOOL FOR MOOD REGULATION: THE ROLE OF ABSORPTION VS. MINDFULNESS

The aim of this research was to determine the relationship between mindfulness, absorption in music, and mood regulation through music in people who have different tastes in music. The research started from the assumption that absorption in music means the possibility of deep “absorption” in musical experience and thus a greater possibility of mood regulation through music. In contrast to absorption, mindfulness as full awareness of the current moment or a state of consciousness in which attention is intentionally focused on one’s own experiences (bodily sensations, senses, thoughts, or emotions) could make it difficult to indulge in a musical experience. In order to test these assumptions, a study was conducted on 252 participants in late adolescence and young adulthood age who, in addition to using instruments for measuring absorption in music, mindfulness, and mood regulation through music, assessed their musical taste. The results showed a positive correlation between the preferences for different music styles and absorption in music, as well as between absorption in music and different strategies for regulating mood through music. Mindfulness, on the other hand, proved to be negatively correlated with both absorption in music and most strategies for regulating mood through music. Regression analyses showed that absorption in music is a positive predictor of all mood regulation strategies, while mindfulness is a negative predictor of discharging negative emotions and forgetting unwanted thoughts and feelings through music, after absorption is taken into account.

**Keywords:** absorption in music, mood regulation, mindfulness, musical taste

## Introduction

Music plays an important role in people's lives fulfilling a number of functions and being present throughout life in different ways. Music is considered especially important during adolescence and young adulthood (Miranda, 2013; Reić Ercegovac et al., 2017) because it can evoke as well as regulate listeners' emotional states (Eerola & Vuoskoski, 2013; Gabrielsson, 1991; Saarikallio & Erkkilä, 2007). Furthermore, mood regulation is often seen as one of the most important reasons for listening to music (Baltazar & Saarikallio, 2016, 2019; Laiho, 2004). As Halle (2003) points out, adolescence is a transitional period characterized by numerous developmental changes, which can cause emotional restlessness and increase the need for mood regulation. Thayer et al. (1994) believe that music serves to regulate emotions but that it is also useful in changing negative moods.

In order to terminologically and conceptually separate emotions and mood, it should be emphasized that despite the similarities, there are important differences that should be stressed out. Emotions are caused by a specific event or object while cause of the mood is less obvious; mood is more controllable, less visible, more stable, and lasts longer than emotions (Lane et al., 2005; Parkinson et al., 1996). The term mood regulation refers to the processes of modifying or maintaining the occurrence, duration, and intensity of both negative and positive affective states (Eisenberg & Spinrad, 2004). Mood and emotion regulation may or may not be conscious and may be directed toward various aspects of emotions, such as emotional expression, subjective experience, or physiological responses (Gross, 1998). Saarikallio and Erkkilä (2007) propose a theoretical model that describes mood regulation through music as a process of meeting personal mood-related needs through musical activities. Central to this model is an individual (personality, age, developmental needs, sex, experiences, attitudes, mood, etc.) who has needs and goals related to mood regulation. The main goals are to feel good and control mood, and the regulatory strategies are entertainment, revival, strong sensations, mental work, anger discharge, diversion, and solace. Musical activities that allow the individual to achieve all these include listening to music, playing, singing, dancing, etc., while the basic preconditions of the whole process are that such activities be voluntary and correspond to a certain mood. Regulated elements of mood refer to subjective experience (intensity, valence, etc.), physiological aspects (energy levels, movement, etc.), and behavioral aspects (emotional expression). According to the authors, external influences include place, time, presence of other people, life events, activities, etc.

The concept of absorption refers to an individual's openness to emotional and cognitive changes and experiences and intense involvement in an experience (Studerus et al., 2012; Tellegen & Atkinson, 1974). Absorption in music is a recent construct first explained by Sandstrom and Russo (2013). It refers to an individual's ability and motivation to fully indulge in a musical experi-

ence and thus in an emotional experience of music. It is similar to the experience of flow, which Csikszentmihalyi (1975) defined as a holistic sensation of an individual where she/he is fully involved in an activity for which she/he is intrinsically motivated. The experience of flow, in addition to the sports and work, is most often studied in the context of music (Chirico et al., 2015). Custodero (2002) states that music and flow are strongly connected and that the experience of flow is easiest to realize in the context of music. Here composing, performing, or listening to music can be discussed, but a recent study found that participants reported a stronger flow while listening to music than performing (Loephtien & Leipold, 2021). Similar to the flow, absorption in music also implies a commitment to the musical-emotional experience while listening to music with the possibility of ignoring all other internal and external stimuli. A higher level of absorption in music would also mean a greater possibility of mood regulation through music because absorption, in addition to listening habits and preferences, includes the ability of music to influence an individual's mood (Wild et al., 1995). Consequently, it is possible that individual differences in absorption may be predictors of differences in the depth of emotional responses to music (Sandstrom & Russo, 2013). There are many studies of emotional responses to music that focus on the musical characteristics used to convey emotions (Grewe et al., 2007), as well as the studies of the role of culture (Balkwill & Thompson, 1999) and preferences (Menon & Levitin, 2005) in understanding emotions conveyed by music. However, few studies have focused on individual differences that can affect emotional responses, thus Sandstrom and Russo (2013) suggest that absorption in music could be an important moderator of strengthening emotional responses to music.

In the Croatian context, research on these phenomena is rare. However, some research has shown that absorption is significantly, moderately, and positively correlated with emotional, cognitive, but also background use of music (Lehpamer, 2016) as well as that women, compared to men, are more prone to higher levels of absorption in music (Trupković, 2015). It is possible that this gender difference is also correlated with a generally higher preference for music in women (Crowther & Durkin, 1982; Reić Ercegovac & Dobrota, 2011), or with a wider range of preferences for music styles (Dobrota et al., 2019; Hargreaves et al., 1995). Furthermore, women usually use music for emotional or mood regulation more often than men (North et al., 2000; Upadhyay et al., 2017).

In addition to exploring the role of absorption in music in mood regulation, this study also aimed at revealing the relationship between those constructs and mindfulness due to the presumed opposite effect of mindfulness and absorption on mood regulation by music. Brown and Ryan (2003) describe the concept of mindfulness by using two aspects: attention and awareness. Awareness is the subjective experience of our thoughts, emotions, and bodily sensations at a particular moment, while attention refers to focusing the awareness toward the experiences. The notion of objective experiential awareness refers

to a state of consciousness with attention directed to one's own experiences or to the environment in the present moment and without judgment (Williams, 2008). Brown and Ryan (2003) found that mindfulness is negatively correlated with absorption as an important component of the flow. Although both mindfulness and flow are terms that refer to positive states of consciousness and are indicators of mental health, they are more likely to be opposed to each other (Weinstein et al., 2009). Namely, flow implies spontaneity, loss of self-awareness and sense of time, while mindfulness implies self-discipline, expressed self-awareness and focus on the present moment. Sheldon et al. (2014) analyzed the correlation between mindfulness and flow and found that by encouraging a person's ability to be mindful, we actually reduce their ability to be absorbed in a particular activity. Nevertheless, Thienot et al. (2014) point to the existence of a positive correlation between mindfulness and flow, saying that by encouraging mindfulness we also encourage a person's ability to experience flow. The authors state that the contradictory results related to the correlation between these concepts may be partly due to their different ways of conceptualization and measurement, and that it is necessary to further check their relationship. Consequently, the purpose of this study is to compare the relationship between absorption in music and mindfulness and their contribution to the participants' mood regulation along with the control of musical taste.

### **Research objective, problems and hypotheses**

The overall research goal was to examine the interrelationship between absorption in music, mood regulation through music, mindfulness, and musical taste. The research attempted to answer the following research problems:

1. To examine the relationship between musical taste, absorption in music, mindfulness and mood regulation through music and
2. To examine the contribution of absorption in music and mindfulness to explaining individual differences in mood regulation strategies with musical taste being controlled for.

The research started from the assumption that mindfulness and absorption in music are negatively related, while positive relationships were expected between absorption in music and mood regulation through music. It was also hypothesized that absorption in music will positively predict mood regulation through music, while mindfulness will be a negative predictor.

## Method

### Participants

The study was conducted on a sample of  $N = 252$  female students of social sciences and humanities at the University of Split, average age  $C = 21$  years (range from 18 to 49). The sample was convenience and voluntary, and participants were recruited through regular classes at the Faculty premises.

### Instruments

#### *The Musical Taste Questionnaire*

The Musical Taste Questionnaire is created for the purposes of this study, included eight popular music styles (classical music, jazz, popular music, heavy metal, rock, rap/hip-hop, electronic music, and alternative music) with several typical representatives/performers (for example, representatives for electro music were David Guetta, Tiesto, etc.; for classical music Mozart, Beethoven etc.). Degree of liking each musical style was rated on one item, on a 5-point scale (1 – “I do not like it at all”, 5 – “I really like it”).

#### *The Mindful Attention and Awareness Scale*

The Mindful Attention and Awareness Scale (MAAS, Brown & Ryan, 2003; Kalebić Jakupčević, 2014) consists of 15 items examining the tendency toward mindful behavior and experience in everyday life (e.g., “It occurs that I listen to someone “with one ear” and do something else at the same time”). Croatian translation of the scale was used (Kalebić Jakupčević, 2014). The participants’ task was to assess how often they experience what is described in the items on a six-point scale (1 – “never”, 6 – “always”). CFA suggested good fit of the data ( $RMSEA = .08$ ;  $\chi^2/df = 2.45$ ;  $CFI = .87$ ) to the one-factor model (Brown & Ryan, 2003; Brown et al., 2011). Therefore, a total score was obtained by summing up all reversed item scores. Higher score indicated a higher mindfulness (Table 1).

#### *Absorption in Music Scale (AIMS)*

The Absorption in Music Scale (AIMS; Sandstrom & Russo, 2013) is designed to test an individual’s ability and willingness to allow music to draw them into an emotional experience (e.g., “When listening to music, I sometimes for the moment forget where I am”). For the purpose of this study, Scale was translated to Croatian using the standard feedback translation procedure to ensure its comparability with the original (Van de Vijver & Hambleton, 1996). The scale contains 34 items, and the participants’ task was to assess the degree of agreement with each item on 5-point scale (1 – “I do not agree at all”; 5 – “I

*completely agree*”). CFA suggested good fit of the data to the one-factor model with lower CFI value ( $RMSEA = .08$ ;  $\chi^2/df = 2.64$ ;  $CFI = .79$ ). Still, given the other indices and high reliability, one overall result was formed with higher values indicating higher level of absorption (Table 1).

### **Brief-Music and Mood Regulation Scale (B-MMR)**

The Brief-Music and Mood Regulation Scale (B-MMR; Saarikallio, 2012) contains 21 items which examine the use of seven different music-related mood-regulation strategies: the ability to regulate mood through music using the seven strategies: entertainment (creating a good atmosphere and happiness, in order to maintain and intensify the positive mood, for example “*I usually put background music on to make the atmosphere more pleasant*”), revival (personal renewal, relaxation, and getting new energy from music when in a state of stress or fatigue, for example “*When I’m exhausted, I listen to music to perk up*”), strong sensation (inducing and strengthening intense emotional experiences, for example “*I feel fantastic putting my soul fully into the music*”), mental work (using music as a framework for mental contemplation and clarification of emotional preoccupations, for example “*Music helps me to understand different feelings in myself*”), discharge (letting go of negative emotions through music that expresses such emotions, for example “*When I’m angry with someone, I listen to music that expresses my anger*”), diversion (forgetting unwanted thoughts and feelings through pleasant music, for example “*For me, music is a way to forget about my worries*”), and solace (seeking pleasure, acceptance, and understanding when sad and in trouble, for example “*When I’m feeling sad, listening to music comforts me*”). For the purpose of this study, Scale was translated into Croatian using the standard feedback translation procedure to ensure its comparability with the original (Van de Vijver & Hambleton, 1996). The participants’ task was to assess the degree of agreement with each item on 5-point scale (1 – “*strongly disagree*”, 5 – “*strongly agree*”). CFA suggested good fit of the data to the 7-factor model ( $RMSEA = .08$ ;  $\chi^2/df = 2.90$ ;  $CFI = .93$ ). Given the satisfactory reliability of the 7 subscales, the 7-factor original structure was retained (Table 1).

Table 1  
*Psychometric characteristics of the measures*

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Cronbach α</i>	<i>Possible range</i>	<i>Observed range</i>	<i>Skewness</i>	<i>Kurtosis</i>
Classical music	1	3.63	1.09	-	1-5	1-5	-0.52	-0.29
Popular music	1	3.96	1.02	-	1-5	1-5	-0.78	-0.03
Jazz music	1	3.13	1.31	-	1-5	1-5	-0.07	-1.09
Rap/Hip-hop music	1	3.15	1.35	-	1-5	1-5	-1.14	-1.16
Heavy Metal music	1	2.06	1.30	-	1-5	1-5	0.97	-0.27
Rock music	1	3.86	1.22	-	1-5	1-5	-0.85	-0.32
Alternative music	1	2.78	1.34	-	1-5	1-5	0.19	-1.03
Electronic music	1	3.39	1.36	-	1-5	1-5	-0.40	-1.01
Mindfulness (MAAS)	15	54.13	10.82	.82	15-90	24-83	-0.07	-0.37
Absorption in Music (AIMS)	34	124.01	23.84	.95	34-170	49-170	-0.59	0.44
Entertainment	3	13.87	1.87	.83	3-15	3-15	-2.61	8.22
Revival	3	12.92	2.77	.91	3-15	3-15	-1.57	2.30
Strong sensation	3	11.86	2.89	.90	3-15	3-15	-0.84	0.21
Diversions	3	11.83	2.96	.84	3-15	3-15	-0.98	0.59
Discharge	3	8.23	3.56	.83	3-15	3-15	0.33	-0.79
Mental Work	3	11.77	2.94	.88	3-15	3-15	-1.00	0.60
Solace	3	12.12	3.13	.94	3-15	3-15	-1.12	0.64

## Procedure and Data Analyses

The research was conducted during 2019 in the faculty premises. The questionnaire was administered in groups up to 30 participants. Participation was voluntary and anonymous, at the invitation of the researcher. Filling out the questionnaires took about 30 minutes. All of the participants firstly filled out MTQ, followed by MAAS, AIMS, and B-MMR scales in half of the sample. The

other half of the sample filled out B-MMR, AIMS, and MAAS in that order. The collected data were analyzed using the STATISTICA13 software. Since most measures had skewness and kurtosis parameters within the limits of acceptability for the application of parametric procedures (Gravetter & Wallnau, 2014), except for one variable (entertainment as a means of regulating mood through music), the parametric procedures were used in the analyses.

## Results

Table 2 shows the correlation matrix of all variables in the research. Mood regulation strategies were significantly and highly interrelated. Furthermore, absorption in music was positively correlated with the preferences for all music styles and all mood regulation strategies. Negative correlation was found between absorption and mindfulness, as well as between mindfulness and preferences for alternative music. Mindfulness was negatively correlated with all mood regulation strategies, except with entertainment and strong sensation.



Table 2  
Correlation matrix of all variables in the study

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. Classical music																
2. Popular music	.12															
3. Jazz music	.36**	.02														
4. Rap/Hip-hop music	.04	.41**	.19**													
5. Heavy Metal music	.11	.05	.29**	.21**												
6. Rock music	.11	.07	.33**	.19**	.52**											
7. Alternative music	.11	.01	.29**	.27**	.46**	.40**										
8. Electronic music	.00	.38**	-.04	.44**	.01	.02	.11									
9. Mindfulness	.09	.01	-.06	-.11	-.06	-.14	-.13*	-.10								
10. Absorption	.11	.13*	.31**	.21**	.19**	.21**	.25**	.17**	-.23**							
11. Entertainment	.03	.15*	.10	.09	.01	.17**	.08	.18**	-.11	.42**						
12. Revival	.01	.19**	.07	.10	.01	.12	.10	.11	-.15*	.60**	.48**					
13. Strong Sensation	.16**	.12	.20**	.09	.18**	.17**	.19**	.07	-.11	.71**	.34**	.58**				
14. Diversion	.06	.20**	.14*	.17**	.18**	.13*	.14	.14*	-.27**	.67**	.45**	.70**	.65**			
15. Discharge	.08	.14*	.16**	.10	.30**	.22**	.24**	.10	-.26**	.38**	.24**	.29**	.35**	.47**		
16. Mental Work	.09	.17**	.21**	.12	.16**	.15*	.19**	.08	-.19**	.68**	.36**	.58**	.69**	.70**	.54**	
17. Solace	.10	.19**	.20**	.11	.12	.09	.18**	.08	-.17**	.63**	.39**	.65**	.61**	.71**	.46**	.84**

Note. \* $p < .05$ ; \*\* $p < .01$ .

In order to examine the separate contribution of absorption and mindfulness to the mood regulation, a series of HRA were performed (Table 3). In the first step, musical preferences were introduced, followed by absorption in music, and mindfulness. All predictors together explained a significant portion of the variance of the criteria, from 22% for entertainment to 53% for strong sensations, with absorption in music being the most important predictor. By introducing mindfulness in the last step of the analysis, the percentage of explained variance increased significantly for two strategies – diversion and discharge.

Table 3  
*HRA results with strategies for regulating mood through music as criteria*

	Entertainment	Revival	Strong Sensation	Diversion	Discharge	Mental Work	Solace
Step 1 – Preferences							
Classical music	-.02	-.05	.09	-.01	.01	.00	.00
Popular music	.10	.19**	.10	.16*	.12	.17*	.20**
Jazz music	.08	.06	.11	.09	.06	.15*	.17*
Rap/Hip-hop music	-.05	-.03	-.04	.02	-.08	-.03	-.05
Heavy Metal music	.12	-.10	.07	.12	.21**	.05	.02
Rock music	.19*	.11	.04	.01	.04	.02	-.04
Alternative music	.04	.09	.10	.04	.12	.12	.15*
Electronic music	.16*	.04	.04	.07	.08	.02	.01
R (R <sup>2</sup> )	.28 (.08)	.25 (.06)	.30 (.09)	.30 (.09)	.36 (.13)	.30 (.09)	.31 (.09)
F (8,243)	2.61*	2.03*	2.92**	2.86**	4.51**	3.06**	3.13**
Step 2 – Absorption							
Classical music	-.01	-.04	.10*	.01	.01	.01	.01
Popular music	.08	.15*	.06	.11*	.10	.12*	.16*
Jazz music	-.03	-.11	-.08	-.09	-.02	-.02	.01
Rap/Hip-hop music	-.06	-.05	-.06	.01	-.09	-.05	-.07

Heavy Metal music	-.14	-.12	.05	.10	.20**	.03	.00
Rock music	.17*	.08	.01	-.03	.03	-.02	-.07
Alternative music	-.01	.02	.02	-.04	.09	.04	.08
Electronic music	.11	-.04	-.05	-.02	.04	-.07	-.07
Absorption	.41**	.64**	.72**	.68**	.32**	.67**	.62**
R (R <sup>2</sup> )	.47 (.22)	.64 (.41)	.73 (.53)	.69 (.48)	.46 (.21)	.69 (.47)	.65 (.42)
$\Delta R^2$	.14 **	.35**	.44**	.39**	.08**	.38**	.33**
F (9,242)	7.58**	18.45**	30.13**	24.58**	7.36**	24.06**	19.27**
Step 3 – Mindfulness							
Classical music	-.01	-.04	.10*	.02	.04	.02	.01
Popular music	.08	.15*	.06	.12**	.12	.13*	.16*
Jazz music	-.03	-.11	-.08	-.09	-.02	-.02	.01
Rap/Hip-hop music	-.06	-.05	-.06	.00	-.10	-.05	-.07
Heavy Metal music	-.14	-.12	.05	.11	.21**	.04	.00
Rock music	.17*	.08	.01	-.04	.01	-.02	-.07
Alternative music	-.01	.02	.02	-.04	.08	.04	.08
Electronic music	.11	-.04	-.05	-.02	.03	-.07	-.07
Absorption	.41**	.64**	.73**	.66**	.28**	.66**	.61**
Mindfulness	.00	-.01	.04	-.13**	-.18**	-.05	-.04
R (R <sup>2</sup> )	.47 (.22)	.64 (.41)	.73 (.53)	.70 (.49)	.49 (.24)	.69 (.47)	.65 (.42)
$\Delta R^2$	.00	.00	.00	.01*	.03*	.00	.00
F (10,241)	6.80**	16.54**	27.15**	23.47**	7.80**	21.73**	17.37**

Note. \* $p < .05$ ; \*\* $p < .01$ .

## Discussion

The results of the research showed that absorption in music does not depend on the specific musical taste, since the musical preferences for most styles were positively correlated with absorption. The exception was classical music. It is possible that classical music, although highly preferable by the participants (after popular and rock music according to the preference means), is more difficult for listening without musical education. Although Bigand and Poulin-Charronnat (2006) deny the impact of intensive music instruction on perceiving musical-expressive elements of the Western music, such as the relationships between a theme and its variations, perceiving musical tensions and relaxations, generating musical expectancies, integrating local structures in large-scale structures, learning new compositional systems and responding to music in an emotional (affective) way, it is possible that listeners without musical background lack auditory perception of musical-expressive components within classical music which makes absorption more difficult. Still, the relationship between preferences for classical music and absorption should be further explored.

Mood regulation strategies were all significantly interrelated, with correlations ranging from .29 to .84 which is similar to correlations obtained by Saarikallio (2012) who found intercorrelations ranging from .32 to .77. These results indicate the existence of an individual's general propensity to use music for the purpose of mood regulation. Absorption in music was positively correlated with all mood regulation strategies with most coefficients suggested a high or very high correlation. Such results are not surprising since other authors also confirm that absorption in music includes the possibility of the influence of music on an individual's mood (Wild et al., 1995). These are similar constructs where the mood regulation is more specific than absorption and it is operationalized as a possibility that musical activities (most often listening, but also performing) regulate the emotions. For the purposes of this research, mood regulation was presented with seven different strategies, according to the Saarikallio's model (2012). Correlation between musical preferences and the above mood regulation strategies showed that the preferences for certain music styles were correlated with specific strategies. Individuals who prefer classical music use it as a tool to strengthen and intensify their emotional experience, while individuals who prefer rap/hip-hop music more often use music to forget unwanted thoughts and feelings. Popular music preference was related to most strategies; thus, it can be concluded that individuals who prefer pop music use it more often for all mood regulation strategies, except for intensifying emotional experiences. Previous research generally confirm that the main predictors of popular music preferences relate to the musical-expressive characteristics of this type of music, such as melody, mood, rhythm, and lyrics, rather than to listener's sociocultural characteristics (Boyle et al., 1981). Such music is usually attractive and likable to the listeners after listening to it for the

first time which is probably why they use it for regulating their mood in a variety of ways. The preferences for jazz, heavy metal, and rock music were almost equally related to mood regulation strategies, therefore people who prefer these music styles more often use music to intensify emotional experiences, clarify emotions, release negative emotions, and forget unwanted thoughts and feelings. While people preferring electronic music use it for entertainment or to forget unwanted thoughts and feelings, alternative music preference is correlated with the intensification of emotional experiences, forgetting unwanted thoughts and feelings, mental contemplation, and solace.

It is possible to conclude that certain music styles, in accordance with the preferences of individuals, can have a wide range of functions within mood regulation. The great potential of music as a means of regulating emotions was also indicated in a study by Cook et al. (2019). On the sample of 794 students, they showed that preferences for popular, rap/hip-hop, soul/funk, and electronic/dance music were positively correlated with the use of music for increasing emotional arousal. Soul/funk musical preferences were positively correlated with intensifying positive emotionality and decreasing negative emotionality while energetic-rhythmic music was positively correlated with all forms of emotion regulation, suggesting that this type of music is particularly useful in modulating emotions (Cook et al., 2019).

While the results of current research showed that absorption in music is closely related to the mood regulation, mindfulness was, as expected, negatively correlated with absorption in music, but also with most strategies for regulating mood through music. Namely, a significant negative correlation was found between mindfulness and the five strategies, while a significant correlation with entertainment and intensification of emotional experiences was missing (Table 2). The obtained relationships suggest that absorption in music and mindfulness are actually opposed in their roles, that is, while absorption implies the possibility of deep immersion in the musical experience, whereby a kind of so-called dissociation occurs (Butler, 2006, as cited in Garrido & Schubert, 2010), mindfulness, on the contrary, encourages awareness of the current moment and in a way “disables” the state of absorption. The musical experience cannot absorb us if we consciously and intentionally focus on the present moment. Since absorption is “the temporary alteration or separation of what are normally experienced as integrated mental processes” (Butler, 2006, as cited in Garrido & Schubert, 2010), or “measure of this propensity to dissociate” (Garrido & Schubert, 2010; Schubert, 2010), it is possible that individuals who are more inclined to be drawn into a musical (or other) experience are actually less mindful.

Results of HRA showed that, after musical taste is being controlled for, absorption in music, in line with expectations, positively and strongly predicts mood regulation strategies. It is obvious that absorption contributes to a stronger effect of music as a mood regulator in different ways - for encouraging good mood, relaxation, reinforcement of intense emotional experiences,

mental contemplation, for discharging negative emotions, forgetting unwanted thoughts and feelings, and for solace. This is in line with Wild et al. (1995) notion that a higher level of absorption in music means greater possibility of mood regulation. Mindfulness, on the other hand, significantly predicted diversion and discharge as mood regulation strategies, above musical preferences and absorption. Discharge means releasing negative emotions through music that expresses such emotions, while diversion is a way of forgetting unwanted thoughts and feelings through pleasant music. Given the main features of mindfulness, it is not easy for mindful individuals to distract from negative thoughts with music or release negative emotions. Discharging is a sort of “cathartic” experience of emptying or purifying from negative emotions (Saarikallio, 2012) that mindful individuals find harder to achieve because they are very aware of their emotions and thoughts. Since in mindfulness the emphasis is on the cognitive element and awareness, diversion as a strategy for mood regulation is actually conceptually opposite, and the results obtained in regression analyses confirmed these assumptions. As for other mood regulation strategies, mindfulness did not show any relevance after music preferences and absorption were introduced in the analyses and predictor coefficients for mindfulness varied around zero.

Before the conclusion it is necessary to look at the shortcomings of the conducted research. This primarily refers to the measure of absorption in music which is so far the only one that has been applied in research of this phenomenon on Croatian samples. Although the authors of the scale confirmed single-factor structure, as we did in the current research, the scale has a large number of items that cover different aspects of absorption. Absorption is operationalized in the literature as a multidimensional construct, so further research of this construct is needed to develop instruments for measuring all its dimensions. This is supported by the fact that the first translation and application of this questionnaire on Croatian sample gave rise to a multifactor solution, but given the fact that the first factor explained most of the variance and that according to scree plot the one-factor solution seemed the most acceptable (Trupković, 2015). Furthermore, the shortcoming of current research is the gender-homogeneous sample, especially if we consider that previous research in Croatian samples pointed to gender differences in absorption (Trupković, 2015; Lehpamer, 2016). Another reason is that women, compared to men, generally use music more frequently for fulfilling emotional needs (Upadhyay et al., 2017), therefore, the role of absorption in explaining mood regulation strategies by listening to music is still to be verified in gender-heterogeneous sample. In the future research, the latent structure of the Absorption in Music Scale should be tested on a more heterogeneous and larger sample, which would contribute to the validation of the instrument in our language area.

## Conclusion

Despite the mentioned shortcomings of current research, the results partially confirmed the initial assumption about the opposed roles of the concepts of mindfulness and absorption in the musical context, as evidenced by their negative correlation as well as a completely different contribution to explaining individual differences in mood regulation strategies. The results obtained in current study imply the importance of music as a supportive tool for regulation of different affective states, especially in adolescence and young adulthood.

## Conflict of interest

We have no conflicts of interest to disclose.

## Data availability statement

Data used in this paper is available at: <https://osf.io/ru928>

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## GLAZBA KAO NAČIN REGULACIJE EMOCIJA: ULOGA UŽIVLJENOSTI U GLAZBU I USREDOTOČENE SVJESNOSTI

Cilj ovoga istraživanja je bio utvrditi međudnos usredotočene svjesnosti, uživljenosti u glazbu i regulacije emocija glazbom kod ljudi različitog glazbenog ukusa. U istraživanje se krenulo od pretpostavke da uživljenost u glazbu znači mogućnost dubokog „uranjanja“ u glazbeno iskustvo te time i veću mogućnost emocionalne regulacije glazbom. Nasuprot tome, usredotočena svjesnost kao potpuna osviještenost aktualnog trenutka ili stanje svijesti u kojem se pažnja namjerno usmjerava na vlastite doživljaje (tjelesne senzacije, osjete, misli ili emocije), bi mogla otežati mogućnost prepuštanja glazbenom iskustvu. S ciljem provjere ovih pretpostavki provedeno je istraživanje na 252 sudionice kasne adolescentne i odrasle dobi koje su pored instrumenata namijenjenih ispitivanju uživljenosti u glazbu, usredotočene svjesnosti i regulacije emocija glazbom procijenile i svoj glazbeni ukus. Rezultati su pokazali pozitivnu povezanost između preferencija različitih glazbenih stilova glazbe i uživljenosti u glazbu, kao i između uživljenosti u glazbu te različitih strategija reguliranja emocija glazbom. S druge strane, usredotočena svjesnost je bila negativno povezana i s uživljenošću u glazbu i s većinom strategija reguliranja raspoloženja glazbom. Provedene regresijske analize su pokazale da je uz kontrolu glazbenog ukusa, uživljenost u glazbu pozitivan prediktor svih strategija reguliranja emocija dok je usredotočena svjesnost negativan prediktor otpuštanja negativnih emocija te zaboravljanja neželjenih misli i osjećaja pomoću glazbe.

**Ključne riječi:** uživljenost u glazbu, regulacija emocija, usredotočena svjesnost, glazbeni ukus