

Everyday music listening: The importance of individual and situational factors for musical emotions and stress reduction

Marie Helsing^{*1}

**Department of Psychology, University of Gothenburg, Sweden*

¹Marie.Helsing@psy.gu.se

ABSTRACT

Music listening primarily evokes positive emotions in listeners. Research has shown that positive emotions may be fundamental for improving both psychological and physical aspects of well-being. Besides from the music itself it is essential to consider individual and situational factors when studying emotional experiences to music. The main aim with the three papers (Study I, II and III) in the doctoral thesis was to explore the effects of everyday music listening on emotions, stress and health. The Day Reconstruction Method was used in study I and II. In study III, an experiment group who listened to their self-chosen music on mp3-players when arriving home from work every day for 30 minutes for two weeks' time was compared to a control group who relaxed without music and with a baseline week when the experiment group relaxed without music. Results from study I and II showed that music was related to more positive emotions, lower stress levels and higher health scores. Liking of the music affected the level of stress. Results from study III showed that the experiment group showed an increase in positive emotions and decrease in perceived stress and cortisol levels over time. The results from this thesis indicate that everyday music listening is an easy and effective way of improving well-being and health by its ability to evoke positive emotions and thereby reduce stress. But not just any music will do since the responses to music are influenced by individual and situational factors.

I. INTRODUCTION

Music is a big part of most people's lives and is heard in all kinds of contexts. People use music for many different purposes, for example to relax, to evoke memories, to get into a mood, to express emotions, to create an identity, or to regulate emotions. Only recently have the field of music psychology become cumulative in the understanding of how music express and induce emotions in listeners. Music listening primarily evokes positive emotions in listeners and is therefore thought to be beneficial for wellbeing and health.

Music does always occur in an interaction between the listener, the music, and the situation. It is impossible to predict emotional responses to music from the music by itself. Every listening situation is different from the next. Listeners do not react in the same way to a piece of music, and a listener may react differently to the same piece of music in different situations (Juslin, Laukka, Liljestöm, Västfjäll & Lundqvist, 2011). Listeners differ for example in terms of personality, music preference, musical training and motives for listening. Examples of motives for listening to music are to get into the mood, to relieve stress, to reduce loneliness, to change bad moods, to create a personal image, to evoke memories, to express emotions, to listen to the lyrics, and to raise energy (Juslin & Laukka, 2004; North, Hargreaves & O'Neill, 2000; Roe, 1985; Saarikallio & Erkkilä, 2007; Sloboda & O'Neill, 2001). Liking of the music have been found to influence listeners responses to music (e.g. MacDonald, Mitchell, Dillon, Serpell, Davies & Ashley, 2003). Gabriellson

(2001) found that physical state (e.g. feeling well or ill), cognitive factors (e.g. expectations or familiarity with the musical style), and emotional state affected participants' strong experiences to music. The ability to choose the music yourself affects the emotional responses to music as well (Sloboda, O'Neill & Ivaldi, 2001; Juslin, Liljestöm, Västfjäll, Barradas & Silva, 2008).

Previous research has shown that music primarily evokes positive emotions in listeners (e.g. Juslin & Zentner, 2002; Gabriellson, 2001). Some studies have shown decrease in cortisol levels following positive mood induction or in correlation with trait positive affect (Kemeny & Shestiyuk, 2010). Several studies have shown that music reduces stress and cortisol levels before, during and after medical procedures (see Koelsch, Fuermetz, Sack, Baur, Hohenadel, Wiegel, Kaisers & Heinke, 2011). Listening to preferred music may have the strongest effects on relaxation and stress reduction (Krout, 2007) which points to the importance of considering musical preferences when studying emotional responses to music listening. Subject-chosen music may be more effective in reducing stress compared to experimenter-chosen music since it give participants some control over the situation by letting them choose music that they find relaxing (Labbé, Schmidt, Babin & Pharr, 2007). Music has been thought to affect health for a long time (e.g. Hanser, 2010). Even though there are studies that suggest that music listening may improve physical health, the majority of the studies made of the relationship between music and health have been conducted in laboratory settings. Only a few studies have focused on the effects of everyday music listening on health (e.g. Mitchell, MacDonald, Knussen & Serpell 2007).

II. METHOD

Two hundred and seven participants took part in a Day Reconstruction Method (DRM) (Kahneman, Krueger, Schkade, Schwarz & Stone, 2004) study about how everyday music listening affects emotions and stress and to what extent the participants used different emotion regulation strategies in their daily lives. In the DRM the previous day is divided into episodes, in terms of activity, experienced emotions, and time of day. 41 women participated in a quasi-experimental study where the experiment group listened to their own chosen music on mp3-players for half an hour every day when arriving home from work for two weeks' time. They were compared to a baseline week when they relaxed without music for half an hour each day and to a control group who relaxed without music during all three weeks. Study I reports data based on participants' recollections of the previous day (DRM) in a total of 2297 episodes. Study II reports the 262 episodes that were reported as particularly stressful. Study III reports data from the quasi-experimental study of the impact of self-chosen music on emotions, stress levels and cortisol levels.

III. RESULTS

A. Study I

Music occurred in 30 % of all the 2297 episodes. In 67 % of the episodes that contained music (i.e. musical episodes) the participants reported that the music had affected their emotions. The majority of the emotions experienced to music were positive. The most frequently reported motives for music listening were to get energized, to relax, and to affect one's emotions. The participants chose the music themselves in 63 % of the musical episodes. An exploratory factor analysis of 25 emotion regulation strategies resulted in seven factors: 'Reappraisal', 'Suppression', 'Music specific regulation', 'Distraction by activity', 'Changing circumstances', 'Social support', and 'Other regulation'. 'Other regulation' was excluded because of its diverse nature. The most frequently used emotion regulation strategies in musical episodes were 'Reappraisal', 'Music specific regulation', and 'Social coping'. 'Music specific regulation' was significantly more often used in musical episodes than all the other regulation factors, except from 'Reappraisal'. However, Music specific regulation was used with more intensity than all the other factors in musical episodes. The results showed a significant positive correlation between how often 'Music specific regulation' was used and how intensively participants experienced positive emotions. How often 'Music specific regulation' had been used was negatively related to stress frequency and positively related to subjective well-being, but not significantly related to health. Frequency of music occurrence was negatively related to how often and how intensively stress was experienced. When the music was liked and self-chosen the effect was even stronger. Music occurrence was significantly related to the general and social health aspects of the DUKE health profile, but not to the physical and mental health. Self-chosen and liked music was related to higher social and general health scores.

B. Study II

Results of the independent-samples t tests showed that participants who listened to music during the episode after a particularly stressful episode reported lower levels of stress in both that particular episode and the next one, compared to those who did not listen to music. The same pattern was seen when music occurred in the second episode after the stress episode and in the third episode after the stress episode. Positive emotions were experienced more frequently and intensively in the episodes after the stress episode when music occurred, compared to when music did not occur. Location and feelings of control during the music listening situation seemed to affect the response to music in terms of stress. The participants' reported degree of liking of the music they were listening to in the episode after the stress episode did also contribute to the level of stress in that episode and the next one. The more they liked the music the less stress they experienced. A mediation analysis showed that the effect of music on stress, when emotions are controlled for, is less than the effect of music alone on stress.

C. Study III

Although no significant differences were found between the experiment group and the control group in either frequency or intensity of positive emotions during any week, a significant increase in intensity of positive emotions was found within the experiment group from the baseline week to both intervention weeks. No such increase was found within the control group. Although the experiment group scored significantly higher on the Perceived Stress Scale (PSS) than the control group during the baseline week, there was a significant decrease in PSS scores within the experiment group from the baseline week to the second intervention week. The control group's PSS scores did not decrease over time. The experiment group's cortisol Area Under the Curve with respect to ground (AUC) decreased significantly from the baseline week to the third week whereas the control group's cortisol AUC was relatively stable over time. No significant changes in intervention effect within the groups were found, nor were any significant differences in intervention effect between groups found. No significant changes in awakening cortisol were found between groups, however, the experiment group's awakening cortisol levels were significantly higher compared to the control group during the first intervention week.

IV. DISCUSSION

A. Emotional responses to music

Results from study I showed that music occurred in about a third of all the 2297 episodes, which is in line with previous research of everyday music listening (Juslin, et al, 2008). This shows that music listening is a big part of the people's everyday lives. The participants reported to have experienced primarily positive emotions when music occurred in both study I and study II, which has been seen in previous studies.

In study III we hypothesized that music listening would evoke more positive emotions than relaxation and this was partially true. The experiment group and the control group did not differ in the experience of either frequency or intensity of positive emotions during any of the three weeks. However, a significant increase in intensity of positive emotions was found within the experiment group from the baseline week to both intervention weeks. Most importantly, no such increase of intensity of positive emotions was found for the control group. This indicated that listening to preferred music evokes more intense positive emotions than relaxation without music over time. It is important to note that the relaxation without music was not based on any particular relaxation technique. The instructions were simply to sit down and relax for 30 minutes and not to listen to music, watch TV or play computer games during this time. The mere opportunity for the participants to take half an hour to relax, with or without music, every day for three weeks' time may have resulted in more positive emotions since it provided them with a break from everyday demands. However, since the results showed that the experiment group reported to have experienced more intense positive emotions during the weeks when they listened to their own chosen music compared to the baseline week when they relaxed without music, whereas the control group reported to have experienced positive emotions with the same intensity during all three weeks,

points to that it probably was not just the mere opportunity to get some time alone that made them experience positive emotions more intensively – it was the music.

B. Emotion regulation

In study I the most common motives for music listening were to get energized, to relax, and to affect one's emotions. Using music to get energized or relaxed has been seen as common motives in previous research (e.g. Saarikallio & Erkkilä, 2007). The motive 'to affect one's emotions' is related to intentional emotion regulation. Studies have shown that using music to regulate emotions is one of the most important reasons why people listen to music (e.g. DeNora, 2000; Juslin & Laukka, 2004; Laukka, 2007; North et al., 2000; Saarikallio & Erkkilä, 2007; Sloboda & O'Neill, 2001; Wells & Hakanen, 1991). Saarikallio and Erkkilä (2007) showed that emotion regulation through music can be made in different ways (e.g. listen to music to evoke positive emotions, listen to music to distract oneself from undesirable thoughts, or listen to music to release anger).

The emotion regulation strategy factor 'Music specific regulation' consisted of two strategies: 'I tried to enhance my emotions by listening to music' and 'I listened to music to improve my mood'. The first music-related strategy can be linked to Saarikallio and Erkkilä's (2007) music-related strategies 'discharge' and 'strong sensation', and the second one is associated with their strategies 'entertainment' and 'solace'. The results from study I showed that 'Music specific regulation' was the second most frequently used emotion regulation strategy factor in musical episodes after 'Reappraisal' (refers here to trying to see things in a different way) which indicates that music listening was a common way to regulate emotions among the participants. Interestingly, the results showed that although 'Music specific regulation' was less often used compared to 'Reappraisal' in musical episodes, it was used with more intensity compared to all the other strategies. This may be a result of misinterpretation of the instructions which made the participants to report the occurrence of music in that particular episode (i.e. that a 6 on the scale that ranged from 0-6 was interpreted as 'yes' to occurrence of music), rather than their actual degree of active use of music for regulating purposes. Further, it can be discussed whether people actually are aware of which emotion regulation strategies they use since emotion regulation strategies can be both conscious and unconscious (Gross, 1998). Saarikallio (2011) proposed that music may affect several phases of Gross's (2007) process model of emotion regulation (situation selection, situation modification, attention deployment, cognitive change, and response modulation) and that certain music-related emotion regulation strategies are related to certain phases. The two strategies included in 'Music specific regulation' occurred late in the process since they involved improving or enhancing already existing emotions. Although more research on this area is needed, it seems plausible to place music-related strategies five phases. Situation selection might be choosing to go to places where certain music is being played (e.g. going to a concert with a favourite band). Situation modification could be immediately changing the song on the music device because it did not match the listener's motive for listening. Attention

deployment might be listening to music to distract oneself from undesirable thoughts or tedious activities (e.g. listening to music while doing housework). Cognitive change could include what Saarikallio and Erkkilä (2007) called 'mental work', where music promotes insights and reappraisal of experiences. Response modulation may include listening to music to relax, to get energized or to release emotions.

How often participants in study I reported to have used "Music specific regulation" correlated positively with how often, and how intensively, they experienced positive emotions. As seen in both study I and II, and in previous research, music induces primarily positive emotions in listeners. The positive correlations between 'Music specific regulation' and positive emotions can be interpreted as the more the participants listened to music to regulate their emotions, the more positive emotions they experienced. On the other hand, there is also a possibility that it was the experience of positive emotions that influenced the preference for 'Music specific regulation' over of the other emotion regulation strategies, thus that the positive emotions resulted in a desire to keep that positive emotional state, or enhance it, by listening to music.

C. Perceived stress

The results from study I showed that music was negatively related to both frequency and intensity of perceived stress. The more often music occurred the less stress was experienced. When the music was liked and the participants' own choice, the effect of music on stress was even stronger, which is in line with previous research that has shown that it is important to consider musical preferences when studying responses to music (e.g. MacDonald, et al., 2003). Results from study II showed lower stress levels in the episodes after the stress episode when music occurred compared to when music did not occur. This means that everyday music listening may function as a stress relief after particularly stressful daily events. However, the interpretation might be affected of the use of one-tailed significant tests.

The results from study II revealed connections between music and stress, and between music and positive emotions. It is known that the experience of positive emotions have health beneficial effects (Fredrickson, 2001). The question of interest was therefore: do the positive emotions induced by the music mediate the effect of music on stress? A series of regression analysis confirmed that they did. This means that music evokes mostly positive emotions in listeners, which in turn have a positive effect on stress. Thus, it is the positive emotions experienced to music that leads to less stress.

In study III, a time change was found within the experiment group as their scores on the PSS decreased significantly from the baseline week to the second intervention week (but not to the first intervention week). And most importantly, this decrease in PSS scores was not found within the control group. This might indicate that by actively listen to one's own chosen music when arriving home from work every day for a few minutes will eventually lead to experiencing less stress. However, it is crucial to consider the possibility that the time effect is a result of regression to the mean since the experiment group's PSS scores were significantly higher compared to the control group during the baseline week.

D. Cortisol

In study III, cortisol levels were analyzed in three ways: cortisol AUC, awakening cortisol and intervention effect. The results showed that the experiment group's cortisol AUC decreased significantly from the baseline week to the second intervention week whereas the control group's cortisol AUC remained at the same level throughout the study. While there was no changes in awakening cortisol levels within the groups there was a significant difference between the groups during the first intervention week, where the experiment group's awakening cortisol level was higher than the control group. There were no significant differences in cortisol intervention effect between the groups or within groups. The experiment group's decrease of cortisol AUC may be a result of regression to the mean because of their high levels of cortisol AUC during the baseline week. However, since there was a decrease in both PSS scores and cortisol AUC from the baseline week to the second intervention week, and no such change was observed within the control group, this indicates that listening to one's preferred music is a more effective way of decreasing cortisol levels than to relax without music.

Even though the experiment group's cortisol AUC seemed to decrease over time, as well as their scores on the PSS, there was no such change over time in awakening cortisol and intervention effect. This could be explained by the fact that the association between salivary cortisol and perceived stress is not always clear. Several factors (biological, psychological and methodological) contribute to the limited covariance between psychological stress and salivary cortisol (see Hellhammer, Wüst & Kudielka, 2009). However, according to Hellhammer at al salivary cortisol is a useful measure of stress as long as the sources of variance are considered. Finally, it is worth noting that although salivary cortisol is a widely used biomarker of psychological stress there are other ways of measuring the physiological aspects of stress (e.g. blood pressure, heart rate, pulse wave velocity, respiration rate, catecholamine levels) (see Baum, Grunberg & Singer, 1982).

E. Health

In study I, music was related to higher general health scores (the sum of the physical, mental, and social health scores), and to the social aspect of the DUKE, but not to the physical and mental health aspects. General health was measured by a shortened version of the DUKE (Parkerson, Broadhead & Tse., 1990). The DUKE's general health score consists of sum of the physical, the mental, and the social health scores, which indicates that the general health score measures health as it is defined by the WHO¹. In study III, health was measured by the impact version of the Symptoms of Illness Checklist (SIC) and it was included in the daily questionnaire. The impact version of the SIC is supposed to measure to what extent different physical complaints (e.g. sore throat, back problems, abdominal pain, fever) affect the daily activities. People do not experience physical complaints in the exact same way. Even though the SIC

¹ 'a state of complete physical, mental, and social well-being and not merely the absence of disease, or infirmity'.

is not intended to be used on a daily basis, it is a good indicator of how the participants perceived their physical health each day. The results showed a decrease in SIC scores within the experiment group from the baseline week to the intervention weeks. While this is an interesting result, the same decrease was seen for the control group, which indicates that it might not have been the music in itself that caused the decreased SIC scores but the relaxation incorporated with the intervention. Not everyone is able to take half an hour to themselves after work to relax, so just the mere opportunity to escape the daily demands (e.g. housework, child care, problems with spouse, or work related stress) for a while could have led to the experience of less stress and more positive emotions and thereby having more resources for coping with physical health problems.

F. Individual and situational factors

The results from study II revealed some factors that influenced the responses to the music: location, amount of perceived feelings of control during the music listening situation, and degree of liking of the music. In terms of stress reduction, it was more effective to listen to music "somewhere else" than "at home" after the stress episode. This might seem surprising since previous research has shown that people listen to music mostly at home (e.g. North, Hargreaves & Hargreaves, 2004). It could be explained by the fact that the question of the participants' location in the episodes only had three response alternatives ('at home', 'at work', and 'somewhere else'), and therefore can 'somewhere else' involve a variety of locations. This result might also be explained by that other factors in the home environment may have interrupted the music's stress reducing effect (e.g. a fight with one's partner, or stressful preparations for the next day). However, due to the availability of portable music devices it does not seem surprising that people use music in all kinds of situation in their everyday lives (e.g. while shopping or commuting) which can result in more positive emotions and thereby less feelings of stress in situations that ordinarily would have been stressful or tedious.

The stress reduction due to high levels of control when listening to music may have been a result of the high levels of perceived control alone and had little to do with the music. Another possible explanation is that it was the positive emotions, evoked by the music, that together with the high feelings of control that lead to lower levels of stress.

The fact that the degree of liking of the music affected the level of stress after music listening was not all that surprising since previous studies have found that music preferences are of great importance when looking at responses to music (e.g. Mitchell, et al, 2007). Additionally, in study I, self-chosen and liked music was related to less stress but also to higher social and general health scores on the DUKE, which further points to the importance of being able to choose the music yourself and to listen to music that you prefer. Studies have shown that listening to preferred music gives other results than listening to music selected by the experimenter (e.g. Juslin, et al, 2008; Labbé, et al, 2007). The importance of considering musical preferences when studying emotional responses to music is the reason why the experiment group in study III got to choose their own preferred music.

V. CONCLUSION

Overall, the results from these three papers indicate that everyday music listening is an effective and easy way to improve well-being and health by its ability to evoke positive emotions and thereby reduce stress. But not just any music will do, it is more effective when the music is liked and self-chosen.

ACKNOWLEDGMENT

I would like to thank my former supervisor Prof Daniel Västfjäll, Prof Patrik Juslin and Prof Terry Hartig for including me in the Swedish project 'Music for health and well-being'.

REFERENCES

- Baum, A., Grunberg, N. E., & Singer, J. E. (1982). The use of psychological and neuroendocrinological measurements in the study of stress. *Health Psychology, 1*(3), 217-236. doi: 10.1037/0278-6133.1.3.217.
- DeNora, T. (2000). *Music in everyday life*. Cambridge: Cambridge University Press. doi: 10.1017/CBO9780511489433.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: the broaden-and build theory of positive emotions. *American Psychologist, 56*, 218- 226. doi: 10.1037/0003-066X.56.3.218.
- Gabrielsson, A. (2001). Emotions in strong experiences with music. In P. N. Juslin & J. A. Sloboda (Eds.), *Music and emotion: Theory and research* (pp. 431-449). New York: Oxford University Press.
- Gross, J. J. (2008). Emotion regulation. In M. Lewis, J. M. Haviland-Jones, & L.F. Barrett (Eds.), *Handbook of emotions* (3rd ed.) (pp. 497-512). New York: The Guilford Press.
- Hanser, S. B. (2010). Music, health and well-being. In P. N. Juslin & Sloboda, J. (Eds.), *Handbook of Music and Emotion: Theory, Research, Applications* (pp. 849-877). New York: Oxford University Press.
- Hellhammer, D. H., Wüst, S., & Kudielka, B. M. (2009). Salivary cortisol as a biomarker in stress research. *Psychoneuroendocrinology, 32*(4), 163-171.
- Juslin, P. N., & Laukka, P. (2004). Expression, perception, and induction of musical emotions: A review and a questionnaire study of everyday listening. *Journal of New Music Research, 33*, 217-238. doi: 10.1080/0929821042000317813.
- Juslin, P. N., Laukka, P., Liljeström, S., Västfjäll, D., & Lundqvist, L.-O. (2011). Emotional reactions to music in a nationally representative sample of Swedish adults: Prevalence and causal influences. *Music Scientiae, 15*(2), 174-207. doi: 10.1177/1029864911401169.
- Juslin, P. N., Liljeström, S., Västfjäll, D., Barradas, G., & Silva, A. (2008). An Experience Sampling Study of Emotional Reactions to Music: Listener, Music, and Situation. *Emotion, 8*(5), 668-683. doi: 10.1037/a0013505.
- Juslin, P. N., & Zentner, M. R. (2002). Current trends in the study of music and emotion: Overture. *Musicae Scientiae, Special Issue 2001-2002*, 3-21.
- Kahneman, D., Krueger, A. B., Schkade, D., Schwarz, N., & Stone, A. A. (2004). A Survey method for characterizing daily life experience: the day reconstruction method. *Science, 306*(5702), 1776-1780. doi: 10.1126/science.1103572.
- Kemeny, M. E., & Shestyuk, A. (2010). Emotions, the neuroendocrine and immune systems, and health. In M. Lewis, J. M. Haviland-Jones & L. Feldman Barrett (Eds.), *Handbook of Emotions* (3rd ed.) (pp. 661-675). New York: The Guilford Press.
- Koelsch, S., Fuernmetz, J., Sack, U., Baur, K., Hohenadel, M., Wiegel, M., Kaisers, U. X., & Heinke, W. (2011). Effects of music listening on cortisol levels and propofol consumption during spinal anesthesia. *Frontiers in Psychology, 58*(2). doi: 10.3389/fpsyg.2011.00058.
- Krout, R. E. (2007). Music listening to facilitate relaxation and promote wellness: integrated aspects of our neurophysiological responses to music. *The Arts in Psychotherapy, 34*, 134-141. doi: 10.1016/j.aip.2006.11.001.
- Labbé, E., Schmidt, N., Babin, J., & Pharr, M. (2007). Coping with stress: the effectiveness with different types of music. *Applied Psychophysiology and Biofeedback, 32*, 163-168. doi: 10.1007/s10484-007-9043-9.
- Laukka, P. (2007). Uses of music and psychological well-being among the elderly. *Journal of Happiness Studies, 8*, 215-241. doi: 10.1007/s10902-006-9024-3.
- MacDonald, R. A. R., Mitchell, L. A., Dillon, T., Serpell, M. G., Davies, J. B., & Ashley, E. A. (2003). An empirical investigation of the anxiolytic and pain reducing effects of music. *Psychology of Music, 31*(2), 187-203. doi: 10.1177/0305735603031002294.
- Mitchell, L. A., MacDonald, R. A. R., Knussen, C., & Serpell, M. G. (2007). A survey investigation of the effects of music listening on chronic pain. *Psychology of Music, 35*(1), 37-57. doi: 10.1177/0305735607068887.
- North, A. C., Hargreaves, D. J., & Hargreaves, J. J. (2004). Uses of music in everyday life. *Music Perception, 22*(1), 41-77. doi: 10.1525/mp.2004.22.1.41.
- North, A. C., Hargreaves, D. J., & O'Neill, S. A. (2000). The importance of music to adolescents. *British Journal of Educational Psychology, 70*, 255-272. doi: 10.1348/000709900158083.
- Parkerson, Broadhead & Tse, (1990). The Duke Health Profile: A 17-item measure of health and dysfunction. *Medical care, 28*(11), 1056 -1072. doi: 10.1097/00005650-199011000-00007.
- Roe, K. (1985). Swedish youth and music: Listening patterns and motivations. *Communication Research, 12*, 353-362. doi: 10.1177/009365085012003007.
- Saarikallio, S. (2011). Music as emotional self-regulation throughout adulthood. *Psychology of Music, 39*(3), 307-327. doi: 10.1177/0305735610374894
- Saarikallio, S., & Erkkilä, J. (2007). The role of music in adolescents' mood regulation. *Psychology of Music, 35*(1), 88-109. doi: 10.1177/0305735607068889
- Sloboda, J. A., & O'Neill, S. A. (2001). Emotions in everyday listening to music. In P. N. Juslin & J. A. Sloboda (Eds.), *Music and emotion: Theory and research* (pp. 415-430). New York: Oxford University Press.
- Sloboda, J. A., O'Neill, S. A., & Ivaldi, A. (2001). Functions of music in everyday life: an exploratory study using the Experience Sampling Method. *Musicae scientiae, 5*, 9-32.
- Wheeler, B. (1985). Relationship of personal characteristics to mood and enjoyment after hearing live and recorded music and to musical taste. *Psychology of Music, 13*, 81-92. doi: 10.1177/0305735685132002.