

ABSTRACT

Suoniemi, Kari

An empirical investigation of emotional intensity linked to perception abilities, interest in music, age, gender and musical style preferences

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This empirical study is based on self-reports of daily listening experiences and the musical ability test by A. Bentley. Three groups were tested: students (n = 201), choir-singers (n = 120) and a control-group (70), which made it possible to investigate several factors believed to be connected to emotional intensity factors such as musical perception abilities, musical activities, age, gender and musical taste preferences. The musical ability test is able to measure perceptual abilities directly related to musical structure including how well one can discriminate between pitches of sounds, and remember and discriminate between melodic contours, the number of tones in a chord or rhythmic differences.

The theory of emotional experiences of music is usually explained as an assimilation process and quality of expectation activating the amygdala and the autonomic nervous system. The present investigation tries to demonstrate whether perception accuracy of music structure could be a factor linked to emotional intensities. The main questions of the present research were as follows: 1) Does a significant connection exist between perceptual discrimination abilities and emotional intensities? 2) Are there significant differences in musical ability or emotional intensity between the three testgroups: students, choir-singers and the control group? 3) Are there significant emotional intensity differences between men and women? 4) Are there marked emotional intensity differences between people listening to different types of music? Calculations and tables were executed with (SPSS) data-analysis program.

The results revealed significant ($p < .001$) intensity differences between the three most general primary emotions joy, sorrow and interest and the musical ability test scores. There were also several secondary emotions for example, a sense of beauty, drama and togetherness that were significantly connected to the musical ability test scores. It is likely that perception accuracy of music structure is an intensifying factor in assimilation processes. However, emotional intensity differed significantly between males and females, too. Females were significantly more emotional with regard to several pleasant emotions such as joy, sorrow, sense of beauty, love, pleasure and longing than males. Males experienced more active stimulating emotions, such as aggression, amazement, horror or irony. In addition, females seemed more often to experience psychosocial and physiological sensations than males. Females can benefit from their musical sensitivity on account of stress decreasing and depression healing effects.

Different musical style preferences revealed several intensity variations of primary and secondary emotions between rock/pop, classical, rap, techno, popular hits and jazz-music listeners. Joy, sorrow and interest were experienced with lower intensity among rap and techno listeners than among rock/pop, classical or jazz-music listeners. Emotional intensity differences may interact with details in contours and harmonies of the different musical styles. Rap and techno generally have quite simple contours, which means they do not have ornamentation, new or unprepared harmonies or repeated syncopations, which have been demonstrated to have physiological effects on listeners. However, age could be a low emotional intensity factor, too, because the rap and techno listeners were mainly 15-year-olds students.

Keywords: high emotional intensity, expectation, perception accuracy, assimilation, amygdala, self-report, musical ability, musical style preference.