

How music effects emotions on people psychology essay



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I made a decision to pick up music on the day that I found out how amazing music was. I sat into a band practice where they played a piece called ' Fire Dance'. Ironically, when the band started playing, I had a brief scene of a calm ocean, with ripples of waves coming towards me. As the band continued, and as the music got louder, faster and more intense, I ' experienced' fierce and powerful ocean waves crashing down on each other. This is possibly due to the clashing of cymbals that always happen right after the band reaches the peak of its crescendo. I use the term ' experienced' because I not only had an image of it, but I also became engulfed by emotions that had so suddenly sprung out from nowhere. The most expressive words that I can use for the emotions I had felt from the music and image are grace, power and majesty. I was so overwhelmed by the majesty of the music that I cried a few tears and I had slight breathing difficulties because my chest had felt tight. This was all new to me. I had no prior music training and neither did the music trigger any past memories. I had finally understood why people become musicians. I glanced around after the band finished playing, and realised that I was the only one who was affected by the music. I was somewhat embarrassed by my reaction. So far, this is my most vivid and interesting experience brought to me by music.

There are two positions on how music effects emotions on us. One is the cognitivist view which supports music as appearing to evoke emotions, the brain acknowledges the emotions in the music, but the listener does not experience any actual emotions (Thompson, 2009). The other is the emotivist view which supports the idea of emotions being induced by music,

and these emotions are 'felt', which is observed by physiological arousals (Storr, 1992).

Music presents emotions through the characteristics of music (such as musical contour, tempo and modality). These characteristics mould the type of emotions experienced by the listener (Kivy, 1980, Thompson). One theory suggests music as a language, where various emotions are brought across by different types of musical intervals. For example, an augmented fourth expresses distress, while a major third can express happiness (Cooke, 1959)/(Thompson, 2009).

Upon hearing the sounds, the brain interprets it as music, and evaluates or appraises the music to create physiological responses (Zajonc, 1980, Thompson). The arousal of the autonomic nervous system is the response of an animal to an environmental stimulus. This includes changes in breathing rate, heart rate and blood pressure. Since this similar response may also be observed after an exercise, they do not necessarily represent an emotional response. Therefore, cognitive processing is required to link arousal with music, in order to form an emotional experience (Mandler, 1984, Thompson). It is to be noted that this point of view incorporates cognitive reasoning into the emotivist position, but do not support the cognitivist position.

Humans have an innate arousal response to unexpected occurrence of events. According to Mandler, composers have the ability to generate increases in arousal by manipulating the expectancy of the listeners, and this ability differentiates music from other stimuli (Mandler, in Thompson, 2009). The expectancy theory explains that deviation of music from the

expectations of the listener creates tension/arousal, which is, as discussed above, emotion. Music preference is related to the degree of arousal. It is found that a balanced/moderate degree of incongruity is most preferred, as high incongruity makes the music confusing and unpleasant, and no incongruity makes the music predictable and boring. In other words, deviation from expectancy is directly correlated to degree of arousal, and music of moderate levels of incongruity is considered most pleasant (Berlyne, in Thompson, 2009). These perceived sound patterns (music characteristics/incongruity) of music are experienced by emotions (Meyer, 1956).

Experiments have proven emotions are induced by music. Sloboda (1991) conducted a survey on music and physical responses. The results show that many people experience emotions when they listen to music, and some of the emotions experienced include shivers, laughter, tears, racing heart, sweating (Thompson, 2009).

A blind experiment was conducted by Rickard, Nikki (2004) to investigate the presence of a difference in physiological arousal between more and less emotionally powerful music (EPM). 21 healthy participants (12 males, 9 females) with varying ages (mean of 25.5 years, standard deviation of 8.48) were given music treatments of 3 experimenter-chosen music treatments, and 1 EPM of the individual's choice. The individual's EPM was open to any music genre, but was standardised to a limited duration of 5 to 10 minutes. The other 3 fixed music treatments were: relaxing music, arousing music and a non-musical film scene that will induce intense emotions. Each individual's gender, personality and level of musical experience was noted, but was <https://assignbuster.com/how-music-effects-emotions-on-people-psychology-essay/>

found that none of these factors produced any significant contribution that can change the level of physiological arousal (Rickard, 2004).

Tests were done before and after administering each music treatment, by using saliva sampling, questionnaires, event recorder and sensor electrodes attached to the body to measure various physiological responses. This was to test for hormone (cortisol) production levels, skin temperature and conductance, heart rate, chills and muscle tension (Rickard, 2004).

The results taken from the skin conductance and number of chills per minute displayed a very significant increase in arousal for the EPM. It also shows that EPM produces very high levels of physiological arousal, and less EPM produced less arousal. No meaningful conclusions could be found from the other recorded data due to the presence of high variability of results (Rickard, 2004).

Studies of Music on Heart Rate

Other studies have also found that heart rate, breathing rate, skin conductance are all affected by musical stimulus. Heart rate increases when people are exposed to music with fast tempos and rhythm, loud volume, or any other type of music that stimulates the auditory nerves; and slow tempos and rhythm, smooth melodic harmonies, depressing, sedative and relaxing music will decrease heart rate (Bartlett, 1996).

Studies of Music on Skin Conductance

Producing similar results to Rickard's experiment, 4 studies on skin

conductance have produced a positive relationship between the change of <https://assignbuster.com/how-music-effects-emotions-on-people-psychology-essay/>

skin conductivity, and enjoyment (liking) of the music (Bartlett, 1996).

However, one experiment found no change in skin conductivity when the subject was indifferent to the type of musical stimulus administered (Davis, 1934).

Studies of Music on Respiration Rate

One study found an increase in breathing depth/amplitude when there is a greater liking for the music as well as an increase of the music volume (Ries, 1969). Another study tested on pre-mature infants showed an increase in respiration rate with stimulative music, and decrease with sedative music (Lorch et al, 1994).

The majority of these studies shows support for the emotivist position.

Rickard's experiment should be showing positive relationships in all tested areas. A larger group of subjects should be tested on in order to reduce the variability of results.

In relation to Rickard's experiment and my experience, my EPM would be the ' Fire Dance' piece, and i stand to support the emotivist position as i had exhibited high levels of physiological arousals. Although Rickard's experiment was unable to conclude the results of respiratory rate, other studies of respiratory rate (by Ries and Lorch et al) have shown a positive correlation with stimulative music. Although tears were not one of the arousal tested in Rickard's experiment, Sloboda's survey explains that it is also a type of physiological arousal from EPM.

Rickard's 4th treatment of administering the subject's own EPM, the study on respiration rate (Ries) and studies on skin conductance all show positive influence of subjective music on the extent of physiological arousal. A common example of the subjectivity of music preference is an event where one individual is highly aroused by a piece of music, but another who had listened to the same music is unaffected (Addis, 1999). However, the skin conductance test (by Davis, 1934) done with subjects who had no particular liking or dislike for the music that was played to them (not stimulating enough), did not produce any significant changes in physiological arousal (related to expectancy theory). This can help explain the reason I found myself the only one affected in the band room that day.

To extend our understanding of why in my experience, the music was able to induce beyond emotions, we can first investigate on how common/rare that this kind of experience takes place by conducting surveys on the public. Some interesting survey questions would be: 'Have you ever experience images coming into your mind when you listen to music?', 'Are these images related to your past experiences or do they have no relation at all?', one would think that it would be more common and easier for music to access into our episodic memory and draw out a past experience, but what if random images that come purely from the music itself are actually more common? Is one even more common than another?

Another idea would be to conduct an experiment that has 2 aims. The first is to observe any relationship between the extent of how emotionally powerful the music is, and images that are brought to them by the music (if any). The second aim is to investigate if music training actually conforms the types of <https://assignbuster.com/how-music-effects-emotions-on-people-psychology-essay/>

images 'seen' because of the characteristics of music, and this is done by comparing if those with no musical training would experience images that are not related to what the composer is trying to create, more often than their musically trained counterparts. I suggest that this experiment to be done on two separate groups of participants, the musically trained and those with no musical training.

The experiment could be done by choosing subjects who have the same character (e. g. introvert or extrovert) so that the music played to them would be emotionally powerful. It has been found that people of similar character like similar music. Subjects chosen should also come from a range of ages (e. g. from 20-60 years old) so that any relationship found would not be limited to one type of generation.

Since we have already chosen the subjects according to a certain character, the music that we chose should have different complexities, to cater to different individual EPM (between each individual, and also for those with musical training background) according to Berlyne's inverted U shaped preference-complexity graph (Thompson, 2009). In order for us to find out which music played is the most emotionally powerful to each individual, we can test for the extent of physiological arousal (similar to Rickard's experiment). The more emotionally powerful the music is, the greater the physiological arousal.

For example, the experiment is done on subjects who are introverts whose favourite genre is classical music. The treatment would be a range of classical music from different composers, and with different complexities.

The first treatment given should be the least complex and progresses as the next music is played. The experiment conducted must be a blind experiment, i. e. subjects do not have prior knowledge to the aim of the experiment. After presenting each music, subjects would have to answer questions such as ' How much do you like the music (selecting from a range of 0-10)?', ' How did you feel when you listen to the music?' and ' Did any images come to your mind? What images did you see? '. We can declare the experiment successful, if the results are able to show a pattern where the more emotionally powerful the music, the higher chances of ' seeing' images. Or if we discover that music training do limit musicians' ability to experience a variety of images (or even emotions) created as a result of certain characteristics of music that had been taught to create a certain scene. This experiment would probably need to be done on a great number of subjects since it is not common for music to produce images in our minds.

In a nutshell, music is interpreted in the brain, and the evaluation and appraisal creates emotions by physiological arousals. Different emotions are induced by the discernment of varying sound patterns. The emotivist position is being supported by results from the various research as well as my experience. However, my experience went beyond mere emotions into images produced by music. Future research could be done to better understand how this is caused.