EXPERIMENTAL STUDY ON THE EFFECT OF MAJOR MODE MUSIC ON EMOTIONS OF PT. XXX EMPLOYEES

Retika Najmamulat Asih[1], Retno Ryani Kusumawati[2] & Yudi Hafisema[3]
email : retikanajmamulatasih@gmail.com[1]
Faculty of Psychology
Program Study Masters of Psychology
Persada Indonesia University Y.A.I. Street Jakarta **INDONESIA**

ABSTRACT

This study shows that major mode music affects emotion positively, especially for the employee of PT. XXX. The employees of PT. XXX showed negative emotion, such as frustrated, annoyed, and angry, before a composition of major mode music was given. Emotional reaction itself is a combination of two dimensions, i.e. pleasure and arousal (Mehrabian & Russell, in Bakker et.al., 2014). Frustrated, annoyed, and angry are the combination of negative level of pleasure and neutral level of arousal. After a composition of major mode music was given to the employee, it showed that it has a positive effect on both dimension. According to that results, it can be concluded that major mode music has a positive effects on emotion, especially for the employee of PT. XXX.

Keywords: Major Mode Music, Employee Emotions, Experimental Study.

INTRODUCTION

PT. XXX is one of the companies that requires its employees to work based on sales targets, both services and production units, as their main competencies. Thus, PT. XXX employees work by interacting directly with consumers, both to offer services and to sell production units. However, based on the researcher's observations over the past two years, the researcher found that PT. XXX employees showed behavior that brought out the negative side of their service to consumers, thus forming less than good interactions with consumers. To explore the results of these observations, random interviews were conducted to find out the background of this behavior. Through these interviews, the researcher obtained data that 80% of employees said they often felt feelings such as frustration, annoyance and anger.

Frustration, annoyance and anger are the result of an unpleasant emotional reaction. The emotional reaction then creates an unpleasant mood from the employees, so that the unpleasant mood becomes one of the triggers for unfriendly behavior, not welcoming consumers, and so on. This is in accordance with what was expressed by Crow and Crow (1958) that emotions only last a short time, but are intense so that after the emergence of certain emotions, the next mood is created according to the emotions that arise. Then, this mood can be one of the things that determines a person's behavior. One way that can bring up a positive emotional reaction is by listening to music. Research conducted by Hevner (1937) shows that music has an emotional meaning.

Emotion itself is a unique thought and feeling where there are biological and psychological conditions, as well as a series of tendencies to act (Goleman, in Latifa, 2012). External stimuli can affect a person's emotional state through two dimensions, namely pleasure and arousal (Mehrabian and Russell, in Bakker et al, 2014). Meanwhile, music is sounds that are organized in a certain time and have a sense, and artistic value so that music can be used as a tool to express ideas and emotions (Bernstein and Picker, 1972). In accordance with the results of

research from Lewis, Dember, Schefft and Radenhausen (1995) which stated that positive music can provide a positive mood, positive music was used in this study. The positive music in question is pleasant music, where pleasant music uses major scales and chords. In addition, there are also five main elements that form a musical composition and have their respective influences on a person's condition. The five main elements include melody, harmony, rhythm, tempo and dynamics.

The melody and harmony in a musical composition determine the mode of the music itself, namely major mode or minor mode. Major mode music is music that uses major chords accompanied by a melody that follows a major scale. Research from Nugroho (2014) shows that music with a major mode can make someone have a positive perception of emotions. Similarly, the results of research from Lewis, Dember, Schefft and Radenhausen (1995) also stated that positive music also creates a positive mood. The positive music referred to here is major mode music. Therefore, major mode music is used in this study.

In addition to mode, there are elements of rhythm, tempo and dynamics that also support the musical composition itself in influencing emotions. Rhythm is often referred to as rhythm which means regular musical movements in time. Rhythm is different from tempo, but is closely related, where tempo determines the speed of the rhythm itself. In addition, there is another element called dynamics, where this element determines the softness and loudness of the melody played. These five elements are then formed into a musical composition.

There is a mechanism on how music affects emotions. This mechanism was formed by Scheirer, 1998). In this mechanism, music is received as an auditory stimulus. Then, it is recognized and separated into each element of music, especially melody, harmony, rhythm, tempo and dynamics as the main elements. After that, each element will be analyzed through the process of analysis of auditory properties and features in the part of the brain that plays a role in processing each of these elements, the results of which are then matched with past experiences, or with the context when the music is played. The combination of the results of the previous matching process is called association judgment, which will determine how this auditory stimulus is received so that an appropriate emotional response appears. In this study, emotional responses are seen through the dimensions of pleasure and arousal. From the explanation above, the question arises whether major mode music affects emotions, especially on employees of PT. XXX.

RESEARCH METHODS

Subject

The subjects in this study were 50 employees of PT. XXX with the characteristics of having an interest in music, not understanding music theory and not being able to play a musical instrument and not having hearing impairments. Subjects were selected based on employee data that matched the characteristics mentioned above.

Research Tools or Materials

The tools or materials used in this research are as follows.

1. Self-Assessment Manikin
   Self-Assessment Manikin is a measuring instrument from Peter J. Lang which was developed in 1980 based on the theory of Mehrabian and Russell (in Bakker et. al., 2014). This Self-Assessment Manikin can assess how a person's emotional response is through the dimensions of pleasure and arousal using non-verbal assessment techniques. A trial has been conducted on 30 respondents, the results of the reliability test of this measuring instrument

can be said to be reliable with a Cronbach Alpha number of 0.712. The validity test was conducted to see the construct validity with validity evidence based on response process, namely by comparing the interview results with the results of filling out the measuring instrument. After the trial, the measuring instrument can be said to be valid.

2. Major Mode Music
   The music used in this study is a composition from the researcher where the music is made based on the theory of Webster and Weir (2005) which states that there are certain criteria in musical composition that can provoke positive emotional reactions. This musical composition is made with a major mode, a tempo of 120 bpm and a simple musical texture.

Research Design

The research design used in this study is one group pre-test-post-test design. Subjects were given the Self-Assessment Manikin measuring instrument first as a form of pre-test, then played major mode music. After that, the subjects were given the Self-Assessment Manikin measuring instrument again as a form of post-test.

Research Procedure

In general, the research procedures carried out are as follows.

1. Modifying the instructions and printing the Self-Assessment Manikin measuring instrument in the form of a paper-pencil based test and conducting a trial of the measuring instrument on 30 subjects on December 22 and 23, 2016.
2. Composing major mode music and testing it on 15 subjects on December 22, 2016.
3. Collecting samples using purposive sampling techniques according to the characteristics that have been determined through employee data.
4. Determining the room that will be used for the research and conducting a research simulation on 10 subjects.
5. Conducting the data collection process on December 26-30, 2016 on 50 subjects.
6. Testing the statistics of the research data using the normality test first, then using the t-test for two paired samples if the data is normally distributed and the Wilcoxon Signed Ranks test if the data is not normally distributed.

RESULTS

From the results of the normality test, it was found that the pretest and posttest data on the pleasure and arousal dimensions were not normally distributed. Therefore, the Wilcoxon Signed Ranks test was used to test the difference between the pretest and posttest on both dimensions. On the pleasure dimension, Sig (0.000) $<\alpha$ (0.05) was obtained so that it can be concluded that there is a difference in the pleasure dimension between before and after listening to major mode music. Furthermore, on the arousal dimension, the Sig (0.025) $<\alpha$ (0.05) figure was obtained which can also be concluded that there is a difference between the pretest and posttest on the arousal dimension. Therefore, it can be said that there is a difference in employee emotions between before and after listening to major mode music.

DISCUSSION

Based on the research results that have been described above, it is proven that external stimuli can affect a person's emotional state through the dimensions of pleasure and arousal (Mehrabian and Russell, in Bakker et. al., 2014). In this study, the external stimulus used was major mode music. In addition, the numbers from each dimension can be categorized into negative, neutral and positive according to the mean numbers obtained from each dimension. The following is the categorization of these numbers.

a. Pleasure dimension

1) Scales 9, 8, and 7 are included in the negative category
2) Scales 6, 5, and 4 are included in the neutral category
3) Scales 3, 2, and 1 are included in the positive category

b. Arousal dimension
1) Scales 9, 8, and 7 are included in the negative category
2) Scales 6, 5, and 4 are included in the neutral category
3) Scales 3, 2, and 1 are included in the positive category

Therefore, the mean of each data group can be seen as follows.

Dimensions	***Pre-test/Post-test***	***Mean***
Pleasure	*Pre-test*	7.04
Pleasure	*Post-test*	2.42
Arousal	*Pre-test*	4.00
Arousal	*Post-test*	3.22

In the pleasure dimension, before listening to music, the mean was 7.04, which is in the negative category. After listening to major mode music, the number changed to 2.42, which means it is in the positive category. This shows that before listening to music, the subject had negative emotions. However, after listening to music, more pleasant emotions emerged.

Next, in the arousal dimension, before listening to major mode music, the mean was at 4.00 which means it was in the neutral category. Meanwhile, after listening to major mode music, the number moved to 3.22, which indicates a positive category. Therefore, it can be said that before listening to music, the subject did not feel aroused, but also did not get bored or sleepy. However, after listening to music, employees became more aroused.

Thus, there is a positive difference between before and after listening to major mode music in both dimensions. This result also proves that the criteria mentioned by Webster and Weir (2005), namely major mode, fast tempo and simple texture of a musical composition are able to provoke positive emotional reactions.

Previously, it has been explained how the mechanism of music influences emotions. In this study, major mode music is accepted as its auditory stimulus. Then, through the process of recognition and separation of elements in music, there is a process of analysis of auditory properties and features of the main elements, namely melody, harmony, rhythm, tempo and dynamics. The occurrence of the process of recognizing these musical elements itself is indicated by the movements of the subject when listening to music, such as tapping feet, shaking the head, tapping fingers on the table and so on. The next is the process of matching the stimulus with past experiences or the context when the music is played. The musical composition used in the study is completely new, but there is still a possibility that the melody, harmony, or musical instrument pieces used are in accordance with the individual's past experiences so that they affect the emotional reactions that arise. However, the context when played with the music itself is in the context of the study. After going through the matching process, each element is combined with the association judgment process. After that, an emotional response appears from the individual according to how the musical elements affect the individual's emotions.

If we look at each element, melody and harmony have a strong influence on pleasure because melody and harmony determine the mode used in a musical composition. As previously explained, the major mode brings positive emotions, such as happiness, joy and so on, while the minor mode brings negative emotions, such as sadness, gloom and so on. In addition, rhythm and tempo have a strong influence on arousal because rhythm and tempo affect the heart rate. The faster the tempo, the faster the heart rate and vice versa. An upbeat rhythm will also speed up the heart rate, while a downbeat rhythm tends to calm the heart so that it becomes more relaxed. Dynamics are also closely related to arousal because dynamics are a form of expression of musical composition. When music is played softly at the beginning, then gets louder at the end, then at the end of the song the listener feels more moved because it feels like the song is reaching its climax.

Basically, this major mode music has a prominent influence on the pleasure dimension. However, other main elements, such as rhythm, tempo and dynamics help bring the influence of music to the arousal dimension.

Research Limitations

The limitation of this study is the overly simple research design. In this one group pretest-posttest design, there is a possibility of testing effect, in which there is a possibility of learning effect and experimental fatigue. Both of these possibilities have been minimized by the researcher by conducting informal interviews with several subjects to see whether major mode music really affects the subject's emotions, without any learning effect. In addition, this study was completed in less than 10 minutes to reduce the possibility of experimental fatigue.

CONCLUSION

The results of the study indicate that major mode music has a positive effect on emotions in employees of PT. XXX. In accordance with the theory presented by Mehrabian and Russell (in Bakker et al, 2014), two dimensions are needed, namely pleasure and arousal to determine the type of emotion that arises. Both the dimensions of pleasure and arousal, both show significant differences. Music with a major mode music composition with a C major scale melody, major chords have full first terts, namely C major, F major and G major, a tempo of 120 bpm, simple texture, is proven to have a positive effect on emotions in employees of PT. XXX, both the dimensions of pleasure and arousal, both show significant differences. This proves the theory presented by Webster and Weir (2005).

There is a mechanism from Scheirer (1998) that explains how music can affect emotions. Major mode music is received as an auditory stimulus received by the sense of hearing, then converted into information waves carried to the auditory area in the brain, then in the brain the process of recognizing elements occurs. Therefore, certain responses appear from the listener in the form of behavior such as feet tapping to the rhythm and tempo of the music, the head swaying along with the melody being played and fingers tapping to the dynamics of the music. Then, these elements are analyzed and matched with the experience or knowledge that has been possessed, as well as with the context in which the music is heard. From this matching process, an association judgment process occurs which then gives rise to an emotional response from the listener.

SUGGESTION

Based on the research results, researchers can provide suggestions for similar research to be conducted in the future. The following are suggestions that can be provided by researchers.

1. Major mode music has been proven effective in evoking positive emotional reactions. Therefore, it is suggested that listening to major mode music can be one of the efforts to bring out positive emotional reactions in employees. This can be considered by the company in order to provide the facilities needed.
2. Because not everyone can understand what is called major mode music, the company should provide its music for employees. This can also be done by collaborating with music teachers who teach at PT. XXX.
3. Considering that major mode music can stimulate the brain to make individuals motivated and enthusiastic, major mode music can be used as a form of psychological therapy in evoking positive emotions and for self-development to improve employee competence by conducting further research.
4. The trial of the Self-Assessment Manikin measuring instrument was only carried out on 30 people. This number can be said to be relatively small so that for the next trial the number may be increased so that the results of the reliability and validity of the measuring instrument obtained are better.
5. In subsequent research, researchers should not only measure using the Self-Assessment Manikin measuring tool, but should also add physiological factors, such as heart rate, blood pressure, and so on, to support the results of the SAM measuring tool itself.

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