Memories and Emotions in Music: An Experimental Study

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Abstract - This study aimed to determine how music intertwined with emotions and memories. Specifically, it described the profile of the respondents in terms of age, and gender; determined how music affects the emotion and memories; compared the effects of emotion and memories on the test conducted and proposed program based on the results of the study. The participants of the study were the 38 Grade 12 STEM Medical students enrolled in MAPEH subject during Academic Year 2017-2018. Based on the results and findings on the comparison of the pre-test and post-test, memories in classical music was highly significant and pop music in emotion nor memories were not significant.

Keywords: Music and memories, Emotions in music

INTRODUCTION

Music is the voice of the soul. It can change and affect feelings and mood that neither anyone nor anything can. Music is also considered as a medium of communication, which can easily determine the love, anger, and happiness of a song, composer and singer; even the listeners can define someone's emotion based on what music he plays. It can be shared across borders, but it is more on interpretation than any one language. Music cannot be seen, touched or smelt but the impact of it on everyone is very influential.

The ultimate creation of man is music, which touches the humanity and aids man to compassionately visible unexpressed desire and humanity. It is likely a dose of medicine in daily lives. People might not see the purpose and importance of it physically or every day but in their hearts, music has a big part in their own personalities. Different background and cultural heritage break through music. It can also be the key to creativity. It is like telling a story because music is also considered as the language of the universe that has spiritual powers. But the supreme power of music is the wonderful force bonding people together, brotherhood, love and peace, aside from that it is also a form of relaxation and recreation and can be the expression of feelings that can create mood and emotion.

Since then music is able to be part of history, from time to time music evolves from its artist and genre. From generation to generation there are sounds that hook and catch up attention of every listener. Today millennial and generation Z are much involved in music, living in this world full of gadgets and everything controlled by the technology. There are lots of sources, which can easily download a particular song wanted and people easily adopt the new trend. There are applications that make music available in just one click. Social media also become a medium of bases to create music or to listen to music. Teenagers today are more engaged in music, revising old musical piece to make it more interesting, and even composing their own song for a particular reason. Music is life, which has become everyone companion regarding their feelings.

Music has many benefits for human in medication, therapy, spiritually and sports. But most importantly, music makes education more fun and interesting because it is a great tool for memorization, time management skills and focus.

Music and emotions intertwined all through the history of evolution of music. The study of music musicology, truly embraced culture of Ancient Greeks who introduced the principle, which values music for its representational function called mimesis and catharsis, the effect music has on the listeners (Stubbing, 2013). These are the bases of how different cultures apply musicality in understanding the deeper meaning of their endeavors.

There are resources dedicated to the customs in which music and emotions are entwined, and when they combine there are portions of the brain that respond, and that is why memories and emotions are so faithfully entwined.

The motivation of doing this thesis is to classify every individual difference in the interpretation of music. As youth of this modern generation, the researchers really adore and appreciate music like other millennial do. Almost all of the people listen to music every day. Everywhere people use headphones and other varieties of gadgets and application just to listen to music everywhere. Everyone already
embraces music, no ages nor gender and no limitation to the extent that it affects someone’s emotion, and memories. The purpose of this research is to identify how certain music affects one individual.

OBJECTIVES OF THE STUDY
The study aimed to determine how music intertwined with emotion and memories. Specifically, it sought to describe the profile of the respondents in terms of age, and gender; determine how music affects the emotion and memories; compare the effects of emotion and memories on the test conducted, and propose program based on the results of the study.

METHODS
Research Design
This study used the experimental research. The survey method is used to determine the connections of music to emotion and memories of Senior High School students who are taking MAPEH.
McLeod (2012) noted that this type of research is being done in a not necessarily a laboratory but well-controlled location but– and thus precise quantities are possible. The researchers choose where and at what time the experiment will take place, with which participants, use a standardized procedure in what conditions. Independent variable group of participants are aimlessly allocated.

Participants of the Study
The participants of the study were the thirty-eight Grade 12 STEM-2B students enrolled in MAPEH during the Second Semester, A.Y: 2017-2018 at Lyceum of the Philippines University- Batangas, High School Department.

Data Gathering Instruments
This study used a self-made questionnaire that was validated by the professionals in the field and was subjected to pilot testing with the Cronbach Alpha of 0.899 for the branding, 0.957 for promotion, 0.837 for products and services, 0.813 for customer experience and 0.906 for visual merchandising. The research questionnaire was divided into two parts. The first part deals with the personal profile of the business owners which includes the number of years of operation, average number of customers per day, and their location. The second part which is the survey proper explores the assessment of the owners on the creative marketing strategies namely; branding, products and services, promotion, customer experience and visual merchandising.

Instrument
The researchers modified a standardized test instrument on emotion and memories of psychology. Stanford and had validated it by experts in music and a psychologist to fit in the study. This includes Part I, the profile of the respondents, and Part II, on emotion and memory responses. A pre-test and post-test were given to the respondents after listening to a song that touches respondents’ emotions and memories.

Procedure
The researchers conceptualized the title, objectives and review of literature. A modified standardized questionnaire was used, titled Emotional Regulation Questionnaire (ERQ) from psychology.stanford.edu. The researchers administered the Pre-test to the target participants on March 5, 2018 at 3:15 pm. After a week, the researchers distributed the Post-test on March 12, 2018 at 3:15 pm in the same group of participants. Two genres of music have been used, the classical and pop with duration of every music of three minutes each. After they have collected and tallied the results, they submitted it to the university statistician and the results were analyzed.

Data Analysis
The data gathered were tallied, tabulated, analyzed and interpreted. Using weighted mean in how music affects emotional response and memory and paired sample T-test to test the hypothesis of the study.

Furthermore, all data treated were computed using statistical software known as PASW version 18 to further analyze the result of the study.

RESULTS AND DISCUSSIONS

Table 1. Percentage Distribution of the Respondents’ Profile

<table>
<thead>
<tr>
<th>Profile Variables</th>
<th>Pretest</th>
<th>Post Test Classical</th>
<th>Post Test Pop</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>F</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 and above</td>
<td>1</td>
<td>2.6</td>
<td>1</td>
</tr>
<tr>
<td>17-18</td>
<td>37</td>
<td>97.4</td>
<td>37</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>8</td>
<td>21.1</td>
<td>8</td>
</tr>
<tr>
<td>Female</td>
<td>30</td>
<td>78.9</td>
<td>30</td>
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</table>
As seen in Table 1., most of the respondents aged 17-18 had a frequency of 37 or 97.4 percent for both pre-test and post-test in classical and pop music. 19 and above got the least number of frequencies of 1 or 2.6 percent. In terms of gender, there were 30 females or 78.9 percent, and frequency of 8 for males or 21.1 percent who responded in both pre-test and post-test in classical and pop music.

Therefore, aged 19 and above had a constant frequency of 1 or 2.6. Also aged 17-18 had a consistent number of frequencies of 37 or 97.4 from pre-test to post-test in both kind of genre. While in gender, male pre-test had a frequency of 8 or 21.1 the same as post-test in classical while in post-test in pop had a frequency of 7 or 18.4. Female pre-test and post-test in classical music had the same frequency of 30 or 78.9 however in post-test in pop music the frequency is 31 or 81.6.

Among each profile who got the highest frequency, the respondents belong to the millennial group therefore their aged range in 17-18 and most of them are female.

Women and men tend to be directed towards selecting music and had diverse socially programmed selections of devices and harmonious charms, females and males incline to be directed towards choosing music. Many women outside the mainstream also tends to encourage other—and constantly very motivating—forms of imaginative expression. In addition, expressively to the numerous forms of music played nowadays and that is broadly contrasting to men (McLeod, 2012).

Table 2 shows the intertwining of emotions in music. In pre-test, it has a composite mean of 3.14, with a verbal interpretation of agree. Among the items cited, the I change what I’m thinking about to feel more positive emotion; I think about situation to keep me calm when faced with a stressful situation got the highest weighted mean of 3.42 and 3.31 with a verbal interpretation of agree.

Pre-test results ranked first had a weighted mean of 3.42 the item I change what I’m thinking about to feel more positive emotion with a verbal interpretation agree. This implies that nowadays millennials are more engaged in music because they are likely express their emotions easily through music. It can certainly determine and change an individual feeling and thought with the help of different genre of music to be played. Music can change the way of thinking because it affects the human mindset. Ranked second is the item I think about situation to keep me calm when faced with a stressful situation with a weighted mean of 3.31 with a verbal interpretation of agree.

Thus, loneliness, sorrow and personal problems of an individual can affect the way he thinks and reacts but with the help of music that is being heard it can change into a joyful and calm atmosphere. In some people, upbeat music can increase happiness and gave a personal pleasure because of the tune, rhythm and beat of the song.

Music is interpreted by the entire brain through listening that is why people feel the emotions. In the right hemisphere of the brain negative emotions are taken and in the other side which is the left hemisphere positive emotions are interpreted (Davis & Palladino, 2006). People’s feelings change because of the power of music; in fact, recently difficulties such as pressure, fretfulness, and discomfort music therapy has developed a common way of helping people deal with this kind of difficulty according to Music Therapy Makes a Difference (2004).

They agree that they keep their emotions to themselves (3.18); they change what they are thinking about to feel less negative emotion such as sadness or anger (3.07) and they are careful not to express their emotions when they feel positive (2.73) got the lowest weighted mean scores. Therefore, without music the world seems to be lonely, the emotion and feelings that a person possesses can’t easily hide maybe it can’t deliver orally but the sound of music listening to become the medium of expression.

<table>
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<th>Table 2. Intertwining of Emotions in Music</th>
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<tr>
<td>1. I change what I’m thinking about to feel more positive emotion.</td>
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<tr>
<td>2. I keep my emotions to myself.</td>
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<tr>
<td>3. I change what I’m thinking about to feel less negative emotion such as sadness or anger.</td>
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<tr>
<td>4. I am careful not to express my emotions when I feel positive.</td>
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<tr>
<td>5. I think about situation to keep me calm when faced with a stressful situation</td>
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Negative perception may affect the way people think because the idea is not clear due to the emotion what an individual feel. But on the other side, specially having a positive and uplifting feeling the emotions seems very high and uncontrollable to express. That’s why some people who feel extreme happiness tend to dance or sing, specifically when they hear a song that is matched with what they feel.

In the research of Cole (2014), emotions are more prevailing than feelings, as they can be a great motivational foundation when played with. Study showed music build definite activities in the brain and in physical that make firm emotions include happiness, sadness, fear, and anger but does not affect the means you sense. No one can deny what emotions has been feel even if it is negative nor positive.

Classical music post-test has a composite mean of 3.32, with a verbal interpretation of agree. The items who got the highest score are, I change what I’m thinking about to feel less negative emotion such as sadness or anger and I change what I’m thinking about to feel more positive emotion with the highest weighted mean of 3.60 and 3.57 with the verbal interpretation of strongly agree. This means that when the researchers try to include themselves in the experiment and experience the same method that undergone to the respondents. They found out that the classical music is a kind of genre that is composed of melodic slow and relaxing tune. Because of the tune that most likely calm. It can change negativity into positive because when hearing a song while your eyes are closed, the aura and personality change easily, the image is voluntary appearing in the mind and create a picturesque scene or view that an individual wish to see. The tension and noise in the classroom atmosphere disappear and it is seen that students calm their selves and feel the music.

Alvar (2006) cited listening to classical music emotional benefit focused directly on emotions with stress relief. Depression, anxiety, and even induce sleep or stimulate the body is believed to reduce with the help of classical music. It also helps to imagine things and calm the mind; classical music is not limited to only one place though can greatest find classical music in the opera house. Classical music can also be in recovering facilities, and in education settings.

The respondents agreed that they think about situation to keep me calm when faced with a stressful situation (3.39); they keep their emotions to themselves (3.28) and they are careful not to express their emotions when they feel positive (2.73) got the lowest weighted mean scores. On the other hand, for people who got stressed, their emotions are uncontrollable because of the feeling inside it is not easy to calm when feeling tense. The sadness and anger may lead to an extreme feeling that cannot hide to express. Even happiness and joy it is an uplifting mood that is hard to keep in self or without sharing with others. Generally, all emotions became light and easy to handle when it expresses through music or verbally.

Listening to a melodic song, will find some successful incidents popping from the mind and similarly having a playlist full of sad songs will surely to recollect some emotional stages of life. Most people use music to escape from dilemma and face it head on and succeed. Emotions cannot hide when we run out of words to describe feelings, music comes in. Music can do anything. It can make people happy then sad and vice versa in a matter of minutes (Vivek, 2016).

Post-test in pop music has a composite mean of 3.39, with a verbal interpretation of agree. Items cited I change what I’m thinking about to feel more positive emotion and I change what I’m thinking about to feel less negative emotion such as sadness or anger got the highest weighted mean of both 3.57, with a verbal interpretation of strongly agree. This implies that music that is cheerful and in demand in the generation today is pop music. Listening to this kind of music can influence perception of an individual. Happy vibes are in the air when the song played is pop because of the artist and popularity of the song that almost everyone knows. Also, when the music is bubbly, it tends to make a positive atmosphere and positive emotions. The work or task becomes easier and lighter when there is music in the work place. It makes us forget the undesirable situation and change moods. Because of the lyrics and tune that when the music plays the senses and body voluntary sing along.

Pop music fulfils three significant purposes. People listen to a song in demand to: (a) increase presentation on definite responsibilities (music aids to fight boredom, accomplish ideal stages of attention while having a long drive, reading, studying or working); (b) arouse knowledgeable interest (by thinking and analyzing the music); most essentially (c) attaining a chosen mood state, happiness, excitement, and sadness handle the goal or effect of own emotional states (Premuzie, 2014).
The items cited, I think about situation to keep me calm when faced with a stressful situation, I keep my emotions to myself and I am careful not to express my emotions when I feel positive got the lowest weighted mean of 3.47,3.28 and 2.73 with verbal interpretation of agree. Likewise, in the result of post-test in classical music. This means that any kind of genre of music doesn’t affect how people express personal emotions, because human feelings is stronger than what the ear hears but instead what the heart feels. It is healthy for the heart to express feelings no matter how loud, relaxing or joyful music it is if the emotion is strong it does not change the perception of an individual.

Music is good for the heart. In this case, assistances come not from music style, but its tempo. Researchers from Italy and Britain engaged half number of expert musicians’ both young men and women. Diverse styles of music containing pop and classical pieces, with random two-minute pauses participants listened. The experts observed breathing, heart rates and blood pressure of the participants. When listened to lively music breathing and heart rates were quicker, and when the music slow, the heart and breathing rates also slowed. It means that the human heart certainly feels the music. It did not matter in music, whether an individual liked the style but the tempo, or pace, of the music had the extreme outcome on relaxation and perception (“How Music Affects Us and Promotes Health”, 2017).

From the article Classical Music’s Effect on Mood and Brain Function (Turner, 2015) research determine that the important paying factors to effect on mood is the rhythm and tone of music. Fast beat produces pleasure however relaxation or ease of a person is sometimes caused by a slow beat produces because hearts mimic the rhythms of specific pieces. This related to increasing of heartbeat and reduce when feeling scared or elated, tired or sad. Key signature of the piece also drives the same. Happier, sprihtlier moods produce by the major keys, and minor keys produce soother, and more dark moods.

Table 3 shows that music has effects on memories. In pre-test, it has a composite mean of 3.61, with a verbal interpretation of strongly agree. Among the item cited, Familiarity to a music heard brings back memories and Listening to a piece of music can transport the time when we heard a song got the highest weighted mean of 3.71 and 3.63 with a verbal interpretation of strongly agree. Thus, people have their own favorite music, the feeling of nostalgia to a certain song that really touches the memory of the past.

It may be sad or happy music that make us remember someone or something or in a special occasion in life. When music is played repeatedly or what millennial called LSS or last song syndrome there is a memory attached in that particular song. Because there is something in the personal choice of music, it’s the singer, the band, the tune or the rhythm but one thing is for sure it is because of the lyrics that entwine in person mood and memories.

According to the study of Hyman (2011), previous events and times recall because of the power of songs. Common music from variation of times for equally university students and adults. Melodies often induced memories, sometimes a song awaken a universal reminiscence that certain someone from long ago - reminiscence for a period of life such as high school, or college, or dating. Specific recollections of particular events, songs brought to mind. The study also a song that is full of emotion is surely created for someone, the song would remind a memory. Furthermore, aroused memories frequently for the adult participants however current melodies carried memoirs to mind more regularly for the college or middle learners.

The items memories of associated events can be skillfully appreciated remembered; purposely listening to a piece of music of the past enhances and change the mood of a person both tied in rank 3.5 got the lowest weighted mean of 3.63 and attractiveness of musical piece strongly related to memory also got the lowest weighted mean of 3.55 in rank 5 with the verbal interpretation of strongly agree.

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<th>Table 3. Music Effects on Memories</th>
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<tr>
<td>Listening to a piece of music</td>
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<tr>
<td>heard a song.</td>
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<tr>
<td>Memories of associated events</td>
</tr>
<tr>
<td>can be skillfully appreciated</td>
</tr>
<tr>
<td>remembered</td>
</tr>
<tr>
<td>Familiarity to a music heard</td>
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<tr>
<td>brings back past memories.</td>
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This implies, a sound that is pleasant to human ear is attached to the memory of a person. Because when a musical piece is attractive and easily catch the listener’s attention it can easily adopt and embrace the meaning of the sound. Sometimes it affects in the opposite way because it depends on the mood and message of the song. Maybe a piece is very energetic, but the lyrics is not clear and no meaning at all.

As per Norman (2017) music can absolutely touch how people sense. Teenagers who select sound with optimistic meaning and peaceful resonances can support themselves lessen stress and to feel well. Stresses and anxieties of teen ager can be eased by including and embrace music while listening to or making music with optimistic hums and values. In the other way around music can be the stressor because of the unclear meaning of it. Mind work in a sensible way improved than any other type of music.

In post-test of classical music in Table 3 the music effects on memories, has a composite mean of 3.57 with verbal interpretation of strongly agree. The items cited, listening to a piece of music can transport the time when we heard a song and Purposely listening to a piece of music of the past enhances and change the mood of a person got the highest weighted mean of 3.68 and 3.65 with the verbal interpretation of strongly agree. Thus, a song that always plays in mind affect memories. Especially classical music that has a relaxing mood and tone there is a feeling that listening to a classical music brings back memories even if it is years ago it can easily flashback in our mind.

In the research titled Classical Music's Effect on Mood and Brain Function by Turner (2015) the key paying factors to the effect on mood is the rhythm and tone of music. Classical music has impact over mood, but it also benefits stimulate the spatial-temporal means that, pop music with a cheerful sound creates a positive aura and reminds happy scene from the past. The atmosphere and surroundings become more admiring. Because the positivity in the music, like in rhythm, and tune that captivate the memory and change the mood or sufferings of a person. Items tied in rank 2.5, listening to a piece of music can transport the time when we heard a song and attractiveness of musical piece strongly related to memory got the highest weighted mean of 3.57 with verbal presentation of the brain, mostly concluded the music of Mozart. 1993 study a phenomenon that is known as The Mozart Effect presented that subsequently paying attention to Mozart's sonatas for 3 to 10 minutes, mean spatial IQ scores were eight to nine points progressive.

The items Familiarity to a music heard brings back past memories; Attractiveness of musical piece strongly related to memory; attractiveness of musical piece strongly related to memory got the lowest weighted mean of 3.52 tied in rank 3.5 with a verbal interpretation of strongly agree. Also, item memories of associated events can be skillfully appreciated remembered got the lowest weighted mean of 3.50 with the verbal interpretation of strongly agree. This implies that, there is a specific music that really reminds of something personally like place, thing person or event. It cannot be distinguished that only slow/classical music affects memories. Because the music that touches the mind has no definite genre or beat but has a special meaning to be remembered that only the person itself can tell.

According to Taylor (2015) the left and right hemisphere of the brain has an ability to activate music. When you listen to music whether what kind of genre it is, it arouses the hippocampus that stimulates and handles long term storage in the brain. Activities which embrace music cause the brain to be more skilled of giving out information an individual’s memory quite intriguing because only one self can explain the supremacy of music.

In the previous table of pop music post-test, the items cited purposely listening to a piece of music of the past enhances and change the mood of a person got the highest weighted mean of 3.71 strongly agree. This interpretation of strongly agree. Therefore, people fascinated by music since there is something attached in a certain music like important life happenings that recaps or its just make people unwind that makes music more attractive.

In the study by Cooper (2013) forgotten special moments in life can bring back with the help of music. People who suffer from depression frequently sense as if there is a cover over their lives. Recalling numerous practices can aid them recollect the more complex
experiences through hearing music. Music can help to heal but cannot cure. It delivers a beat and rhyme and sound repetition which reliefs to expose data with indications as a help of music.

The items cited, familiarity to a music heard brings back past memories and memories of associated events can be skillfully appreciated remembered got the lowest weighted mean of 3.52 and 3.55 with verbal interpretation strongly agree. Generation to generation there is always a music. Millenial singers nowadays revive music from 80’s that they only heard once or twice but that tune, and sound is uplifting they considered it. Because of the famous singer or band old songs become one of the listener favorites. Even there is familiarity in that kind of music it doesn’t matter if there is a memory to be remembered that they can attach into the lyrics or song.

Classical music is very effective in making people relax and focus because the serenade of this genre is pleasing, melodic and activating the power of the brain to enhance thinking and learning. It also contributes emotional and memory state that the brain arouses thru classical music rather than pop music.

Listening to a classical music of Mozart, students can perform better it can broad them more quickly and advance their IQ over time. It also produces calm mind of the listeners that affects learners in all times. Hearing music has a great influence physiologically as having a massage.

In an article titled The Effects of Music on Memory by Snively (2012) explained music can bring back memories. Ones emotions can pull from a memory in the song. Whether is it one that encourages like exercising or makes someone cheerful and lessens stress the memories are transported back from a mood. Memories and emotions are all linked through the medial pre-frontal cortex and this is where having the reminiscence because music-triggered memories familiar music. Researches shown that when playing a harmony from the test subject’s childhood memory attached to the memory and they may or may not know they responded rapidly.

Table 4. predicts the comparison between the pre-test and post-test of intertwining of emotions and memories in music. It was observed that there was a statistically significant revealed on post test conducted on classical music compared to the pre-test conducted. This was observed since the obtained p-value of 0.000 was less than 0.05 alpha levels. With this, it was found out that there is an effect observed as to memories when listening to classical music.

CONCLUSIONS

Based on the findings, researchers concluded that Majority of the respondents was female, ranging from seventeen to eighteen years old. Also, the music affected emotion and memories in two genres of music, specifically classical and pop music. In comparison of the effects of emotion and memories, there was no significant in pop music while in classical music there was an effect in memories.

RECOMMENDATIONS

It was recommended that the teacher can use classical music as an effective tool to enhance learners’ focus and memory retention and music can be an effective way to change the class mood and atmosphere. Also, the future researchers may conduct an interview to further analyze the effects of music in emotion and memories.

REFERENCES


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<tr>
<th>Memories</th>
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<th>Post Test Pop</th>
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</thead>
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<tr>
<td></td>
<td>t-value</td>
<td>p-value</td>
</tr>
<tr>
<td>Emotion</td>
<td>1.596</td>
<td>.119</td>
</tr>
</tbody>
</table>

Legend - Significant at p-value < 0.05; HS – Highly Significant, S- Significant; NS- Not Significant
Stubbing J.L. (2013). Music, Mood, and Memory: An In-Depth Look at How Music Can Be Used as a Trigger to Elicit Specific Emotional Responses and Associated Memories, Academic Symposium of Undergraduate Scholarship.

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