Indie Rock Assists with Relaxation

Alexa Walling, Raynald Huggins, Cassandra Domingo and David Blake

Broome Community College
State University of New York

Introduction

- A large percentage of studies on relaxation focus on music as a method for relaxation. For example, Sherri L. Robb's research titled “Music assisted progressive muscle relaxation, progressive muscle relaxation, music listening and silence: a comparison of relaxation techniques” was conducted to find the most effective relaxation technique. Robb's findings showed that music paired with progressive muscle relaxation was the most effective at relaxing the participant. The second most effective was listening to music alone (Robb, 2000). These findings show that music can be used for effective relaxation on its own and can even improve upon the effectiveness of other techniques.
- In addition, those listening to music had fewer reports of fatigue during the session. This means that listening to music falls under what Roth and Cohen (1986) would refer to as an approach strategy. Approach strategies are used by individuals to confront stressful situations. Listening to music relaxes a person while still allowing them to confront the source of their stress with a clear and alert head.
- A study conducted by Elliot, D. (1994) found that there was no significant difference between pre-selected or patient preferred music within his study of patients in coronary care. Because of this, we will select the song to ensure that the song has a tempo around 72 BPM, smooth dynamic transitions, a calm percussive quality and limited dissonance. This is to guarantee that we follow the parameters for soothing music set by Robb (2000) and focus on attaining optimum relaxation. All of these traits can be found within the song we've chosen to work with, which is “Salt” by Alex G.
- The focus for the experiment is only on listening to music. No other relaxation methods will be used, such as PMR, due to these tasks not being practical for general use. Listening to music is a simple task that can be performed on a daily basis with relative ease.

References:

Elliot, D. (1994). The effects of music and muscle relaxation on patient anxiety in a coronary care unit. Heart and Lung,23, 27-35.

Robb, S.L. (2000). Music assisted progressive muscle relaxation, progressive muscle relaxation, music listening, and silence: a comparison of relaxation techniques. Journal of Music Therapy, 37, 4-16.

Roth, S., & Cohen, L.J. (1986). Approach, avoidance, and coping with stress. American Psychologist, 41, 813-819.

Hypothesis

We believe that listening to “Salt” by Alex G, which is classified as indie rock, for approximately 4 minutes and 40 seconds will lower a person’s stress by 25%.

Method

Participant

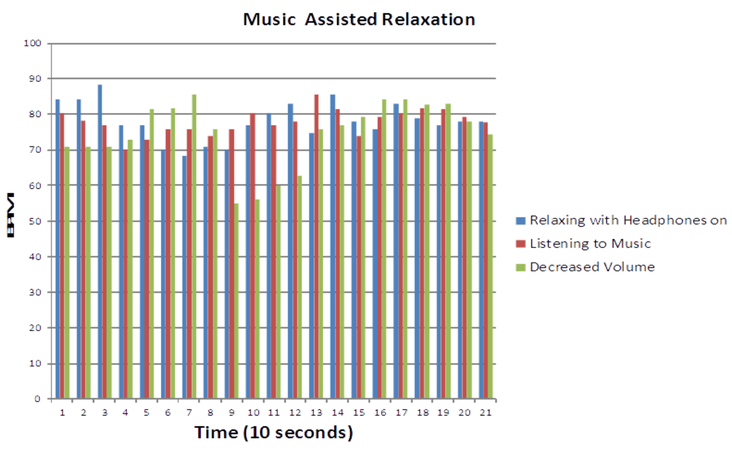
- The participant in this experiment was a student of the SUNY Broome Psychology 110 (05) course of fall, 2015. The subject was a 19 year old female.

Materials and Apparatus

- For this study we used the Biopac MP40 to monitor the participant’s heart rate. We used a chair for her to relax in. We used a music player through which we played the song “Salt” by Alex G.

Procedure

- Before the study was conducted, our group gained informed consent from the participant. We explained the experiment and received her permission before we continued. The next step was to sit the participant down and attach the Biopac MP40 to her, then record her resting heart rate with headphones on before any music was played. We played Alex G’s song “Salt” through the music player. During this, we monitored her heart rate. We recorded the information and input it into an Excel spreadsheet. After approximately 4 minutes and 40 seconds, the song ended and we had her remove the headphones and unhooked her from the Biopac MP40. The next step was to debrief the participant and ensure that she was alright. After this, the participant was dismissed.



Results

- We used the participant’s heart rate as a construct for stress reduction. We measured her BPM before she had begun to listen to music by having her relax with headphones in. In addition to this, we measured her BPM while the music was being played and after we adjusted the volume. We compared the averages for heart rate in all three scenarios
- The results showed no true decrease in BPM. There was a slight decrease in BPM, but it was negligible and not enough of a change to connect the music to any real relaxation. The results disprove our hypothesis.

BPM of subject during experiment

Relaxing with headphones in	Listening to music	Decreased Volume
84.3	80.4	71
84.3	78.2	70.9
88.4	77	70.9
77	70.1	72.9
77	72.8	81.4
70	75.9	81.7
68.3	75.9	85.6
70.9	73.9	75.9
70	75.9	55
77	80.4	56
80.5	77	59.9
83	78.1	62.7
74.8	85.6	75.9
85.6	81.4	77
78	73.9	79.3
75.9	79.4	84.3
83	80.4	84.3
79	81.7	82.9
77	81.6	83
78	79.3	78
77.77368	77.81579	74.61053

Discussion

Things that went well:

- The means of collecting data into a spreadsheet was quick, effective and simple.
- The Biopac MP40 was easy to use and gave accurate and immediate data.

Problems within the study:

- The volume was set too loud when the music began. In the middle of the experiment we had to turn it down which could have skewed the results due to the added unexpected discomfort.
- The overall tempo of the song was too fast. Additionally, the beat of the song was to strong in relation to the chord structure and timing. All these factors combined could have stressed the participant, which would prevent a decrease in the participant’s heart rate.
- The room was full of other students talking about or conducting separate experiments which could have distracted the participant or put them on edge.
- The participant did not take her part in the experiment seriously; she continuously laughed and joked around which may have interfered with the experiments results.

Improvements to be made:

- Perhaps we could expect a larger decrease in heart rate if the volume of the music had been lower to begin with.
- Additionally, if we had chosen a different song which contained a slower tempo along with a mild beat, we could anticipate a greater decrease in heart rate.
- A more controlled environment could be beneficial for conducting the experiment a second time. This could be achieved by holding the experiment in a private room.
- Explain to the participant the importance of taking their role seriously could help avoid unnecessary outbursts. The decrease in heart rate was negligible and did not indicate any connection between the music and her very slight decrease in BPM.

Conclusion

- In order to conduct a more accurate and effective experiment, you would have to monitor the volume of the music more closely, set a realistic goal, conduct the experiment in a controlled environment and explain to the participant the importance of composure.