The Effects of Music Genres on Average Heart Rate During Exercise

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ABSTRACT

[Hypothesis] Different types of music can cause a fluctuation of heart rate and intensity during exercise due to the variance in rhythm. This project evaluates heart rate and other physiological responses during exercise while being exposed to two genres of music and a control variable of no music. The two genres of music used for the study include rap and classical for a duration of fifteen minutes on a cycling machine set at the lowest resistance possible. The two genres of music chosen was rap and classical due to their distinctive differences in slow and fast pace in rhythm. [Methodology] The subjects consisted of Parkland College students between the ages of 20-22. In this cross-sectional study each participant performed two trials of classical music, rap music, and no music during their workout. The heart rate was recorded with a Polar H7 sensor through the Polar beat app for a total of six sessions per subject. [Results] Most of the participants experienced a higher average heart rate during the rap music sessions than the no music and classical music sessions. There was no significant data proposing that no music sessions increased heart rate over sessions with music. [Conclusion] Rap music will cause an increase in heart rate due to the faster pace in music while classical music will lower the average heart rate during a workout session.

METHODS

- Group members in the KIN 288 Exercise Physiology section participated in gathering research data to find the effects of music genres on average heart rate on a stationary bike exercise. The experiment was done in the morning for 15 minutes through different music variables. No music, rap music, and classical music were the three music variables. The research was done twice per variable. Average HR was combined from the data feedback and used to determine/examine which has the highest influence.

Hypothesis

- Hypothesis: Different types of music will cause fluctuation of HR (heart rate) during physical exercise.

RESULTS

The results of this experiment showed that Rap music clearly had a higher heart rate average than classical music or no music at all. Classical music compared with no music had a bit of fluctuation with each person. Since rap music is comparatively more upbeat than classical music, it was expected to have a higher heart rate average between the two sessions. There could have also been external factors affecting the heart rate values of each person such as caffeine intake, food intake, other people in the gym at the same time, external noise level, etc.

CONCLUSIONS

From this experiment, we learned that cycling to different types of music influences heart rate (HR) differently during a workout. Rap music was shown to slightly increase HR during a workout, while classical music was shown to slightly decrease HR. In addition, we observed that when listening to classical music some individuals HR was not as high as those who were listening to no music at all. We can attribute this to the slow pace of the classical music tempo. However, we discovered that listening to these different types of music during moderate to intense cycling sessions lead to minimal changes in HR. But, like most results of an experiment, the fluctuations in HR varied between individuals, but an overall pattern was observed and noted.

REFERENCES