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**The Effects of Music on Blood Pressure, Pulse, and Respiration**

There are various music genres from classic rock to pop and many many more. Music can completely distract, calm, or excite someone. On Thursday September 12, 2019 four Longwood University students decided to test the effects that different music styles had on people. Previous studies on music have been done on the brain and physical performance abilities, but the students wanted to know how music effects your blood pressure, pulse, and respiration.

Six anonymous subjects were chosen at random and brought in a secluded room to test. The subjects were instructed to sit still and only focus on the song that was playing through noise canceling headphones. The subjects were then played three different songs from different genres. The students recorded blood pressure, pulse, and respiration. All three were checked before and after a song was played. The first song, *The Lamb,* which is a classical song was hypothesized to calm the subject. The second song, *Pure Water,* which is a pop song was intended to replicate music that is played at parties. It was hypothesized that this song would cause a small rise in all three areas tested. The third song, *Skull Fucked,* which is a heavy metal song was expected to cause anxiety which would then cause a spike in all three areas. The songs were played for a minute each. The students found what they expected and a few unexpected outliers (Table 1-6).

Subject 1 showed little to no change in the music genres. Their blood pressure and respiration went up gradually between all three trails. This was an expected outcome, but the subject’s pulse actually decreased. This was a surprise to the students. Subject 2 and 3 showed slight change in their blood pressure, pulse, and respiration. Subject 4 and 5 showed expected spikes in all three tested areas. Lastly, subject 6 reacted the same way as subject 1 did.

 The students concluded that music can have an impact on people’s blood pressure, pulse, and respiration. The outliers in the groups later explained that they had heard the songs before which could explain their reactions. Also subject 4 informed us that she was super nervous which explains the drastic difference between the initial three tests and the first song, If you hear a song multiple times, then your body becomes accustomed to its effects. The students also concluded that in further experiments the observers should question the subjects and their knowledge of the songs chosen before preforming the experiment.

Tables:

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| Subject 1 |  Blood Pressure | Pulse | Respiration |
| Beginning:The Lamb: | 113/61102/73 | 8281 | 1412 |
| Pure Water | 116/69 | 81 | 18 |
| Skull Fucked | 118/74 | 79 | 16 |

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| --- | --- | --- | --- |
| Subject 2 |  Blood Pressure | Pulse | Respiration |
| Beginning:The Lamb: | 124/75123/75 | 7178 | 1412 |
| Pure Water | 112/72 | 76 | 12 |
| Skull Fucked | 11/74 | 77 | 18 |

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| Subject 3 |  Blood Pressure | Pulse | Respiration |
| Beginning:The Lamb: | 132/85115/76 | 8686 | 1414 |
| Pure Water | 123/84 | 88 | 16 |
| Skull Fucked | 127/90 | 87 | 14 |

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| Subject 4 |  Blood Pressure | Pulse | Respiration |
| Beginning:The Lamb: | 150/91116/86 | 9988 | 1212 |
| Pure Water | 162/137 | 98 | 14 |
| Skull Fucked | 131/97 | 98 | 18 |

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| Subject 5 |  Blood Pressure | Pulse | Respiration |
| Beginning:The Lamb: | 105/7487/37 | 8150 | 1212 |
| Pure Water | 115/77 | 89 | 16 |
| Skull Fucked | 120/74 | 92 | 16 |

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| Subject 6 |  Blood Pressure | Pulse | Respiration |
| Beginning:The Lamb: | 127/86125/79 | 6972 | 1412 |
| Pure Water | 129/80 | 68 | 16 |
| Skull Fucked | 132/75 | 63 | 14 |