Relationships of Music Preference with Perceived Intelligence, Measured Intelligence and Mood State

People listen to music on a daily basis, whether it is in the car, on the radio, on a television commercial, in an elevator, or at a concert; music is ubiquitous. Rentfrow and Gosling’s (2003) developed a theory of musical preferences. This theory includes aspects of personality, self-views, and cognitive abilities and how they can all play roles in forming a musical preference. Social and physical environments that people select reflect their personalities, and so do their musical environments and preferences (Buss, 1987).

Rentfrow and Gosling (2003) measured different aspects of personality, cognitive ability and self-views. They found that participants who preferred the same genres of music also had similar views of themselves and shared personality traits. Rentfrow and Gosling (2003) classified music into four major categories: Reflexive and Complex; Intense and Rebellious; Upbeat and Conventional; and Energetic and Rhythmic. These four headings include 14 genres of music. In the current study we focused on Intense and Rebellious music which includes alternative, rock, and heavy metal music. Previous research has found that the participants who prefer Intense and Rebellious music share specific similar traits. For example, they view themselves as having higher levels of self-perceived intelligence as well as good athletic abilities (Rentfrow & Gosling, 2003).

The purpose of the present study is to replicate and extend Rentfrow and Gosling’s (2003) findings, specifically to replicate the finding that preference for Intense and Rebellious music is related to the perception of higher self-perceived intelligence. To extend the research we also examine the relationship between music preference and scores on an actual intelligence test. A second hypothesis is that the relationships among music preference, self-perceived
intelligence, and measured intelligence will depend upon the current mood of the participant. Individuals in an upbeat mood may have good views of themselves and therefore perceive themselves as being more intelligent. By considering differences in mood states, the relationships among music preference, self-perceived intelligence, and measured intelligence can be determined more accurately.

Method

Participants

Seventy participants undergraduate students volunteered to participate in this study. They were all undergraduate students at Central Missouri State University. A total of 22 men and 48 women participated, with a mean age of 21.30 years ($SD = 5.48$) with a standard deviation of 5.48. The ages ranged from 18 to 53.

Materials & Procedure

After the participants read and completed an informed consent form, the participants responded to the four tests, which took a total of about 45 minutes to complete. The Profile of Mood States (POMS; McNair, 1992) was administered first to measure the mood state of the participant at the time of this study. Secondly, participants responded to the Short Test of Music Preferences (STOMP; Rentfrow & Gosling, 2003). The STOMP uses a Likert-type scale from 1 thru 5 with 1 indicating strongly dislike, 3 indicating neutral and 5 indicating strongly like. The STOMP was followed by a second Likert-type scale to measure level of self-perceived intelligence. This scale was from 1 thru 5 with 5 indicating strongly dislike, 3 indicating neutral and 1 indicating strongly like. Finally, the Shipley Institute of Living Scale (SILS; Zachary, 1991) was administered to determine levels of measured intelligence.

Results
Descriptive statistics (means and standard deviations) for mood states (as measured by the POMS), music preferences (as measured by the STOMP), self-perceived intelligence, and intelligence (as measured by the SILS) can be found in Table 1. Pearson correlations were calculated for each pair of variables.

The correlation between preference for intense rebellious music and self-perceived intelligence was not significant, $r (68) = .09, p = .46$. The correlation between preference for intense rebellious music and measured intelligence (as found by the total t-score on the SILS) was significant, $r (68) = .34, p = .005$. Preference for intense rebellious music was significantly correlated with the abstraction portion of the SILS, $r (68) = .37, p = .001$, but not with the vocabulary portion of the SILS, $r (68) = .12, p = .31$. The correlation between preference for reflexive complex music and self-perceived intelligence was not significant, $r (68) = .23, p = .055$. The correlation between preference for reflexive complex music and measured intelligence was significant, $r (68) = .37, p = .002$. Preference for reflexive complex music was not significantly correlated with the vocabulary portion of the SILS, $r (68) = .23, p = .052$, but was correlated with the abstraction portion of the SILS, $r (68) = .35, p = .003$. Preference for upbeat conventional music was significantly correlated with self perceived intelligence $r (68) = .24, p = .042$. Upbeat conventional music was not correlated however with measured intelligence, $r (69) = .13, p = .270$.

There was no statistically significant correlation between any of the mood state variables (POMS) and music preference variables although the mood state variables tended to be intercorrelated. Also, the POMS variables were not significantly correlated with either self perceived intelligence or with measured intelligence.

Discussion
The present study did not replicate Rentfrow and Gosling’s (2003) finding of a significant correlation between self-perceived intelligence and preference for intense rebellious music, such that individuals with a stronger preference for this type of music tended to have higher self-perceived intelligence. The correlation between preference for intense rebellious music and self-perceived intelligence was close to zero and did not approach significance. However, preference for upbeat conventional music were significantly correlated with ratings on self-perceived intelligence.

Participants with a preference for intense rebellious music tended to score higher on intelligence as measured by total score on the SILS. This correlation was mainly a result of the correlation between preference for intense rebellious music and scores on the abstraction portion of the SILS. One may wonder if this genre of music is filled with metaphors and abstract language which keeps the listener’s attention. The intense rebellious category on the STOMP includes alternative, rock and heavy metal music (Rentfrow & Gosling, 2003).

Another interesting finding was that preference for reflexive complex music was also significantly correlated with scores on the abstraction section of the SILS. The reflexive complex category includes: classical, jazz, blues and folk music. Preference for reflexive complex music was not correlated with self perceived intelligence, but was significantly correlated with measured intelligence. However, preference for upbeat conventional music was significantly correlated with self perceived intelligence but not with actual measured intelligence. A future study might examine relationships of musical preferences with specific types of intelligence. For example, ability to think abstractly may be related to a preference for music with abstract lyrics.

A second hypothesis was that self-perceived intelligence would vary depending on the participant’s mood. The present study did not support this hypothesis, as the mood state variables
were not significantly correlated with self-perceived intelligence. Further, the lack of correlation between mood state variables and music preferences does not support the idea that relationships between music preferences and self-perceived intelligence depend on mood state.

Another possible limitation with the present study was that the response scale for the self-perceived intelligence rating was reversed with respect to the Likert-type scale used on the STOMP. The participants were informed of this difference in scaling before the test was administered, making it less likely that they misunderstood the response scale. For all statistics reported, we reversed the scale on self-perceived intelligence so it would match the scale on the STOMP.

The present findings should be interpreted cautiously due to limitations with the research method. It should also be noted that Rentfrow and Gosling’s (2003) research was done at University of Texas at Austin, whereas the present study was completed in west-central rural Missouri. Differences in demographics may play a role in musical preferences and how they are related to perceived intelligence, measured intelligence, and mood states. It would be interesting to see how musical preferences vary from the East to West coast and not only in the central portion of the United States.
References


