Essay 2, W241-04

Anup Tirumala

The salutary effects of music on general health matters, such as blood pressure, aggressive behaviors, concentration has been much studied. For this class, I would like to study the effects of music on human appetite. Specifically, I would like to evaluate the impact of heavy metal music on appetite and the volume of food consumption. In this day and age of supersized eating, any advantage we can get to ward off extra pounds, especially those prone to packing it on, should help all around.

Heavy metal music takes a familiar mention in two activities – working out and while partying. It is very rarely mentioned in the context of an average or typical slow meal. Is it possible that the heavy use of electric guitars and drums can actually work towards suppressing appetite? (and thereby improving certain health outcomes).

Subjects for an experiment designed to answer the above question should seemingly be not too hard to find – the basic requirement being a large enough sample of adult music listeners, some of whom are capable of listening to heavy metal music, for an hour or so ideally before their largest meal of the day. Given the subject matter of this experiment, volunteers may not be hard to find on Mechanical Turk for example.

The treatment itself would need to involve some careful design. The definition of "heavy metal" has gray areas (for example Jethro Tull won the 1st Grammy award given for heavy metal music, but no one I know would classify Jethro Tull as a heavy metal music band). So a heavy metal playlist has to be created based on common classifications available on streaming services such as Spotify (as well as wiki pages). Such a playlist should have several hours of music selection from various different music bands so that the results may not be confounded by strong likes and dislikes of a particular subset of songs and/or bands. The treatment needs to be administered for some length of time, say 3 weeks, in order for there to be a measurable outcome. For control, we would have the participant listen to the opposite of heavy metal music – i.e. "easy listening" music such as jazz or classical.

Since the short term effects of heavy metal music may vary between the genders, a block random assignment of treatment versus control would be preferred. In terms of an outcome measure, we should plan on having a subjective one and an objective one – the subjective measure could be the participant recording their feelings of hunger on a "hunger scale" (such as the one available on diabetes.org). The ideal objective outcome

measure would have been the precise caloric intake, but that measure may be unattainable in the field - participants may over or underestimate their caloric intake significantly. Measuring body weight after 3 weeks of study may be the best bet for an objective measure assuming the weight scale has not changed its behavior over the period of the study.

As co-variates, in addition to gender, it would be useful to gather data on fitness level, initiation of a new exercise regime, any particular recently diagnosed diseased state etc in order to account for potential confounding effects on the outcome variables.