





exposure levels. The article includes a chart that states that the minimum level of noise was 70 dB and the maximum level was 115 dB, with a mean level of 95 dB. Nowhere in the chart was there a mention of which decibel scale was used. In one sentence in the article it does state that the study showed that the attendees were exposed to an average of 95 dB (A) so the dB values in the chart likely are A-weighted, however it was not clearly stated in the table. The questionnaires were conducted with anyone who was willing to participate, however any questionnaire that was completed by someone who appeared to be under the influence of illicit drugs or alcohol was not included in the data analysis. The questions in the survey asked about how often and for how long the patrons/employees attended the entertainment venues, any experiences of negative auditory or systemic (headache, nausea) effects due to the noise exposure, and attitudes towards and use of hearing protection. The investigators found that a significant number of respondents (64%) reported to have suffered some type of negative effect after exposure to excessive noise at the venue ( $p < .01$ ). Tinnitus was the most common negative auditory consequence with 56% reported experiencing it, and 16% reported experiencing temporary hearing loss. Some of the individuals reported headaches and nausea after exposure to the high intensity music (16% and 4% respectively) however the authors acknowledge that these symptoms could be related to many other factors including environmental stressors or consumption of alcohol or drugs. Of those who were surveyed, 17% reported wearing hearing protection which is much higher than the other studies that have been mentioned. However, when the patrons who did not wear hearing protection were asked if they would consider wearing ear plugs if they were provided, only 7% reported that they would. This is a much different result than the result of 42% that was reported in the Bogoch, House, & Kudla (2005) study. This large inconsistency could possibly be due to the wording in the questionnaire or it may reflect a large difference between motivations of earplug use amongst Canadians and Australian attendees at entertainment venues.

plugs, and one who was assigned to not wear any hearing protection. Hearing thresholds were measured before, and immediately after, and the temporary threshold shift (TTS)

### **Prospective, Randomized Control Trial**

Opperman, Reifman, Schlauch, & Levine (2006) measured the hearing of 29 volunteers immediately before and after they attended three different rock concerts. The volunteers were randomly assigned to different seats and in each location a sound level meter measured the volunteer's sound exposure. There were slight variations in the sound levels measurements across the different locations and the three different concerts, with the averages ranging from 95.12-106.84 dB(A). For each seat location there were two volunteers, one that was randomly assigned to wear ear

any of the articles whether the subject at work, or in other areas of their lives, was asked about in any of the surveys.

There are also other confounding factors that could