

Traffic of Vehicles and urban noise in Itajuba, Brazil: annoyance evaluation

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Background and aims: In the urban-oriented track delimited by the BR-459 highway, in urban area of Itajuba, Brazil, there is an important traffic of vehicles. This scenario makes noise and may be a annoyance source for the neighbourhood.

Methods: This work makes a survey and analysis of noise levels in this region. Through measurements and calculations, along with questionnaires aimed to conduct a comparative analysis regarding the annoyance effect between two different regions given the importance of traffic noise from vehicles.

Results: The average values of L10, L50, L90 and LAeq were 67, 58, 51 and 63 dB (A), respectively, was observed an average flow of 99 light vehicles and 14 heavy over a period of 10 minutes. These values exceed the limits set by the NBR and the State Law 10.151/2000 10.100/1990. A questionnaire based on ISO / TS 15.666/2003 was applied in a random sample of 40 residents on the highway (exhibition area) and 40 neighboring background (non-exposure area). There was a 92.5% return of questionnaires distributed to 67.5% for exposed and unexposed, and found that 55.7% of respondents say they are bothered by traffic noise when they are home with the windows and doors; when open, the percentage of troubled reaches 68.3%.

Conclusions: Factors such as age, gender and place of residence (highway or side streets) had no significant association with the level of disturbance in the interviews.