

Minimum Masking Level is reliable as Outcome Variable for Tinnitus Patients

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Objectives: The Minimum Masking Level (MML) is the minimum intensity of a stimulus required to just totally mask the tinnitus. Some treatments are intended to reduce the magnitude of the tinnitus, and other treatments are intended to reduce the reactions to tinnitus. Treatments aimed at reducing the magnitude of tinnitus should measure the magnitude of the tinnitus. The objective of the present study is to evaluate the reliability of the minimum masking level (MML) as a measure of the magnitude of tinnitus for its potential use as outcome variable in tinnitus clinical trials. The study assesses the aspect of intra-session and inter-session test-retest reliability

Methods: We enrolled tinnitus patients from 18 years old to 70 years old. Their tinnitus must have been stable and lasted longer than 10 years. We then determined the stability by these two questions. “Does the pitch of your tinnitus always change?” and ”Is the loudness of your tinnitus always changing?” We then evaluated the tinnitus based on questionnaires and audiology measurements, such as THQ, pitch and loudness rating, as well as MML. Every participant had to visit our clinic three times. These visits were labeled the pre-test visit, the first visit and the second visit.

Results:

The relationship between MML and loudness varies across subjects. The relationship between MML and THQ also varies across subjects. However, the range of standard deviation for dB sensation level is only from 0 to 8.1 for both visits. Then we tried to understand the test-retest reliability of inter-sessions. We compared both visits and the correlation is very strong! R equals point eighty-three.

Conclusions:

When measuring the magnitude of tinnitus, MML is one option. Although the relationships to loudness and handicap varies across subjects, MML is very desirable within subject designs.

Key words:

tinnitus, minimal masking level, reliability