

## RELATIONSHIP BETWEEN LIFE-TIME NOISE EXPOSURE AND EXPERIENCE OF TINNITUS AMONG YOUNG ADULTS IN IIUM KUANTAN

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### ABSTRACT

**Introduction:** Since the clinical studies have shown that people suffering from tinnitus are at a high risk of developing serious psychological disturbances or serious psychological distress (Hiller and Goebel, 1998), the purpose of this study is to determine the relationship between lifetime noise exposure and tinnitus experience among young adults in IIUM Kuantan.

**Methods:** Cross sectional study was used to determine whether there is any association between tinnitus experience, life-time noise exposure and hearing threshold among 11 young adults in IIUM Kuantan from age of 18 to 35 years old who are exposed to the noise. Hearing assessment was done using otoscopy, tympanometry and pure tone audiometry. Participants were asked to fill in a questionnaire on tinnitus experience and were fitted with a noise dosimeter that measured their noise exposure during waking hours. Values collected from dosimeter were then converted into cumulated life-time noise exposure which refers to the equivalent noise exposure per year (Jokitulppo, Tolvenen & Bjork, 2005).

**Results:** Average cumulative life-time noise exposure of the participants is 72.54 dBA ± 6.9459. Fifty five percent reported of sometimes having tinnitus. No correlation was found between cumulative life-time noise exposure and tinnitus experience, and between pure tone hearing threshold and tinnitus experience.

**Conclusion:** The cumulative life-time noise exposure among young adults in IIUM Kuantan was found to be lower than the level considered as hazardous. Despite reports of tinnitus experience, there was no evidence that the tinnitus was due to noise exposure. There was also no evidence on the association between tinnitus and hearing levels.

**Keywords:** Life-time noise exposure, tinnitus, noise dosimeter

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