

THE PILOT STUDY OF HEARING LOSS IN JUNIOR HIGH SCHOOL STUDENTS USE MP3 PLAYER

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Background: Along with the technical progress, MP3 (MPEG-1 Audio Layer III) is modern person indispensable electronic product. Many studies showed that the the most noise source of recreational activities was MP3 for teenagers. Fligor et al. indicated that MP3 sound pressure levels measured volume control setting ranged from 91 to 121 dB(A) and peak sound pressure levels exceeded 130 dB(A) in 2004. It's very easy to damage the structure of ear. The study discussed that junior high school students used MP3 whether or not and it influenced hearing seriousness and relationship.

Methods: The subjects were 101 grade seven students in north Taiwan. Using MP3 were exposed subjects and disusing MP3 were non-exposed subjects. The degree of hearing loss measured was interview questionnaire which assisted pure-tone audiometry.

Results: In both groups, their left and right ears had poorer hearing thresholds at low frequency. There was a dip in 6k Hz which is included noise hearing loss primarily. And the hearing thresholds of non-exposed group were worse than exposed group in right ears. The possible reason was that the non-exposed group were used to watch TV in entertainment activities 3.03 times than exposed group. The volume of TV also affects the hearing. In blood pressure, two groups didn't have significant difference but exposed group who systolic and diastolic blood pressure were higher than non-exposed group. Noise exposed made blood pressure rising indeed and raised probability to get hypertension.

Conclusions: The volume don't surpass 60% in the loudest volume by using MP3 and continuous listening time don't exceed 60 minutes. To avoid teenagers have early hearing loss.

References:

Fligor, B. J., & Cox, L. C.. Output Levels of Commercially Available Portable Compact Disc Players and The Potential Risk to Hearing. *Ear and Hearing*, 2004; 25(6); 513-527.