Thesis Title Noise-Induced Hearing loss Among Electricity Generating Authority of Thailand Workers.

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## Abstract

The purpose of this research was to analyse the risk factors of noise-induced hearing loss and to construct an equation for forcasting probability to get noise-induced hearing loss from these factors. Hearing test and Interviewing were carried out to study about hearing of 2,297 workers in 5 sections which were claim to be the representative population of Electricity Generarting Authority of Thailand Workers.

The sample ramdomly selected were 900, case-control study was carried out to analyse the risk factors and to construct an equation for forcasting probability to get noise-induced hearing loss from the

factors.

The results revealed that the prevalence rate of noise-induced hearing loss by survey in 1992 was 27.12 %. Using the technique of stepwise logistic regression, the risk factors of the age above 44 years group when using less or equal 44 years as the based group showed the relative odds of 2.68, the noise-exposed group when using non-noise-exposed as the based group showed the relative odds of 104.89 for full time exposure and 29.98 for sometimes exposure. The risk factor about duration of noise-exposed work, above 5 years group when using less or equal 5 years group as the based group showed the relative odds of 3.1576, the group using ear plugs or ear muffs when using the group of no any personal protective devices as the based group showed the relative odds of 39.40 for wearing all time during work and 10.34 for wearing sometimes

The equation for forcasting probability to get noise-induecd hearing loss was

$$\log(p_i/(1-p_i)) = -9.0679+0.9877(\text{age})$$
$$+1.1498(\text{duration of noise-exposed work})$$
$$+4.6529(\text{noise-exposed all working period})$$
$$+3.4005(\text{noise-exposed sometimes})$$
$$+3.6738(\text{using ear plugs or ear muffs all working period})$$
$$+2.3361(\text{using ear plugs or ear muffs sometimes})$$