Perbedaan Rerata Waktu Reaksi Pada Pekerja Industri Manufaktur Alat Berat Yang Terpajan Bising 60-70 dB, 71-80dB dan 81-85 dB = The Differences of Mean Reaction Time in Heavy Equipment Manufacturing Industry Workers Exposed With 60-70dB, 71-80dB and 81-85dB

Lisa Nurhasanah, author

Abstrak

[ABSTRAK
Latar belakang : Kelelahan kerja banyak terdapat pada pekerja industri manufaktur alat berat. Bising di bawah nilai ambang batas dapat menyebabkan kelelahan kerja sebagai salah satu efek non auditorik. Kelelahan kerja dapat diperiksa dengan memeriksa waktu reaksi pekerja. Penelitian ini bertujuan mengetahui perbedaan rerata waktu reaksi pada pekerja industri manufaktur alat berat yang terpajan bising di bawah ambang batas yaitu pada kelompok terpajan bising 60-70dB, 71-80dB, dan 81-85dB.
Metode penelitian:` Cross sectional deskriptif komparatif. Dilakukan pada 149 orang pekerja laki-laki. Data dikumpulkan dengan wawancara, pemeriksaan fisik, pemeriksaan waktu reaksi dengan Lakassidaya dan kuesioner KAUPK2. Subyek penelitian mempunyai kriteria inklusi bersedia mengikuti penelitian menandatangani informed consent, usia 19-55 tahun pada saat penelitian dilaksanakan,tidak mempunyai riwayat penyakit, lama kerja 8 jam atau tidak lembur, memiliki beban kerja yang sama, kriteria eksklusinya adalah pada saat dilaksanakan penelitian dalam keadaan sakit atau baru sembuh dari sakit.
Hasil: analis dengan menggunakan uji statistik Kruskal wallis antara rerata waktu reaksi dengan kelompok pajanan bising 60-70db, 71-80dB dan 81-85dB dengan nilai p = 0,001. Untuk mengetahui bising manakah yang bermakna hasil uji Mann-Whitney diketahui bahwa antara kelompok pajanan bising 60-70 dB dan 71-80dB pada pemeriksaan waktu reaksi sebelum bekerja, sesudah bekerja dan selisih pemeriksaan sebelum dan sesudahnya didapatkan perbedaan yang bermakna terhadap kelompok pajanan bising 81-85dB. Sedangkan pada kelompok pajanan bising 60-70dB terhadap kelompok pajanan bising 71-80dB pada pemeriksaan waktu reaksi sebelum bekerja, sesudah bekerja dan selisihnya tidak didapatkan perbedaan yang bermakna dengan nilai p<0.05
Kesimpulan: Dapat disimpulkan bahwa terdapat perbedaan bermakna antara rerata waktu reaksi terhadap kelompok pajanan bising dibawah nilai ambang batas yaitu pada kelompok pajanan bising 60-70db, kelompok pajanan bising 71-80dB dan kelompok pajanan bising 81-85dB. Kelompok pajanan bising 60-70 dB dan 71-80dB pada pemeriksaan waktu reaksi sebelum bekerja, sesudah bekerja dan selisih pemeriksaan sebelum dan sesudahnya didapatkan perbedaan yang bermakna terhadap kelompok pajanan bising 81-85dB. Sedangkan pada kelompok pajanan bising 60-70dB terhadap kelompok pajanan bising 71-80dB tidak terdapat perbedaan bermakna.
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ABSTRACT
Background: Occupational fatigue commonly found in the workers of heavy equipment manufacturing industry. Noise below the threshold value may cause occupational fatigue as one of non-auditory effects. Occupational fatigue can be examined by checking the reaction time of the workers. This study aims to

know the difference of mean reaction time in heavy equipment manufacturing industry workers whom exposed with noise under the threshold value, which grouped into three exposure groups: 60-70dB, 71-80dB, and 81-85dB.
Study Method: Comparative, descriptive cross-sectional study. It is conducted to 149 male workers. Data collected by interview, physical examination, reaction time test with Lakassidaya and questionnaire of KAUPK2. The inclusion criteria for the subject are a willingness to follow the study and to sign the informed consent, age 19 ? 55 years old when the study conducted, no illness history, 8 hours working duration or without overtime, and has equal working load. The exclusion criteria is that the subject is ill when the study being conducted or recover from illness recently.
Result: Kruskal Wallis statistical test is used to analyze the mean reaction time between the three exposure groups, 60-70 dB, 71-80 dB, and 81-85 dB with p value <0,001. To acknowledge which noise is significant, the Mann-Whitney test is used. The results suggest that the reaction time examination of before work, after work and the difference between, is significantly different between the groups of 60-70 dB and 71-80 dB toward the group of 81-85 dB, whereas the reaction time examination of before work, after work and the difference between, in the group 60-70 dB toward the group of 71-80 dB is not significantly different, with p value <0.05.
Conclusion: It is concluded that there is a significant difference in the mean reaction time towards the noise exposures below the threshold value, which are the groups of 60-70 dB, 71-80 dB and 81-85 db. The reaction time examination of before work, after work and the difference between, in the groups of 60-70 dB and 71-80 dB is found to be significantly different toward the group 81-85 dB. Meanwhile, there is no significant difference in the group of 60-70 dB toward the group of 71-80 dB.;Background: Occupational fatigue commonly found in the workers of heavy equipment manufacturing industry. Noise below the threshold value may cause occupational fatigue as one of non-auditory effects. Occupational fatigue can be examined by checking the reaction time of the workers. This study aims to know the difference of mean reaction time in heavy equipment manufacturing industry workers whom exposed with noise under the threshold value, which grouped into three exposure groups: 60-70dB, 71-80dB, and 81-85dB.
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