

The Effect of Loud Working Environment on Incidence of Back Pain

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Abstract : Back pain is not only the result of structural or biomechanical abnormalities of the spine but is also associated with cognitive and behavioral aspects of pain and thus represents biopsychosocial problem. Stressors are not only interpersonal conflicts, negative life events, and dangerous situations but also noise. Effects of noise on human beings are psychological (excitement, stress), sensory, and physiological. The harmful effects of noise can be seen in the 40-65 dB range and are manifested as fatigue, irritability, poor sleep and psychological discomfort of the worker. Within 65-90 dB range, body metabolism increases, oxygen consumption is higher, tachycardia and hypertension appear, and the tone of skeletal muscles increases. The purpose of the study was to determine whether the stress caused by noise at the work place increases the incidence of back pain. Measurements of noise levels were carried out in three different wards of social care institution. The measurement on each ward was repeated 3 times (total of 9 measurements) for 8 hours during the morning shift. The device was set up in the room where clients spent most of the day. The staff on the ward replied to the questionnaire consisting of closed type questions about basic demographic information and information about back pain. We find that noise levels as measured in our study had no statistically significant effect on the incidence of back pain ($p = 0.90$). We also find that health care workers who perceive their work as stressful, have more back pain than those who perceive their job as unstressful, but correlation is statistically insignificant ($p = 0.682$). With our study, we have proven findings of other authors, that noise level below 65 dB does not have a significant influence on the incidence of back pain.

Keywords : health care workers, musculoskeletal disorder, noise, sick leave

Conference Title : ICAE 2019 : International Conference on Applied Ergonomics

Conference Location : Berlin, Germany

Conference Dates : May 21-22, 2019