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Whole Body Vibration Risk Among Grass Cutter Operator: A Preliminary Study

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Abstract

The grass cutting machine is a widely used agricultural machine for cutting grass by the roadside and in other areas in Malaysia. Grass cutting involves the use of a motorized cutter spinning at high speeds. A number of recent studies have shown that workers were affected by whole body vibration in agriculture field. Many researchers had published studies on whole body vibration (WBV) in agriculture field but none was done for Malaysian grass cutter recently. The objective of the study was to determine the subjective correlation variable on whole body vibration among grass cutter workers using WBV questionnaire and to investigate whole body vibration exposure action and vibration dose values at back rest of working operator. The study covered 55 workers that were maintaining landscape and grass cutter at Selangor district. The details with the various aspects such as height, weight, model of machine, various areas and experience regarding of work involved. Field measurements of WBV were measured according to the international standard ISO 2631-1:1 on the grass cutter workers. WBV was measured in 3 axes with a tri-axial seat pan accelerometer and recorded to a Larson Davis Vibration Monitor (HVM 100). The workers whom exposed to these machines have a greater chance of having lower back pain or other kind of pain in their body due to the vibration exposed to their whole body every day. This particular study will help in finding ways to minimise the health issues of the workers.

Keywords: whole body vibration, grass cutting, vibration acceleration,