

# **ASSESSMENT of the Prevalence of Symptoms of Vibration-Related Illnesses Among Agricultural Machine Operators in the Philippines**

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## **Abstract**

Studies have shown that Filipino agricultural operators are exposed to vibrations greater than the daily exposure limit values, which puts risks to the operators. Additionally, there have been various studies abroad on the effects of vibration on the human body. With that, this study investigated the whole-body musculoskeletal disorder (MSD) symptoms experienced, the mean onset and severity of symptoms, the existence of vibration-related illness specifically Hand-arm Vibration Syndrome (HAVS), and analyzed the physiological effects of vibration and effects on functions of the hands and wrist to 100 Filipino farm operators from Tarlac and Laguna through a small group discussion. The study utilized the following questionnaires: Extended Nordic Musculoskeletal Disorder Questionnaire to measure the prevalence of whole-body MSD symptoms, average years before the onset and severity of symptoms; the Cold Intolerance Symptom Severity Questionnaire to analyze cold intolerance as the basis for the existence of HAVS; and lastly the Boston Carpal Tunnel Syndrome Questionnaire to examine the physiological symptoms in the hands and wrist and the effects of vibration to the hand functions. Responses were collected and analyzed, which revealed that whole-body MSD symptoms are prevalent in all the covered body parts with a minimum prevalence of 12% in the elbows, a maximum prevalence of 38% in the lower back, and the earliest onset of MSD symptoms in the shoulders after a mean of 9.04 years of operating agricultural machines. Results further revealed that 13% of the participants have mild and severe cases of cold intolerance and that operators experience the physiological effects of vibration to hands and wrist which also manifested in the occurrence of diminished hand functions. The result of the study can be a basis for creating policies to reduce the hazards of agricultural machines to the operators.

## **Keywords**