

# **HEALTH PERCEPTION IN WORKERS EXPOSED TO HAND-ARM VIBRATION: PREREQUISITE FOR PUTTING IN PLACE AN EFFECTIVE PREVENTIVE PROGRAM IN THE WORKPLACE**

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## **Introduction**

Knowledge of risks from exposure to hand-arm vibrations is usually presented by clinicians and researchers from a medical and engineering point of view. There is a strong need to develop innovative health promotion programs for exposed workers. Risk perceptions by vibration exposed workers and HAVS (hand-arm vibration syndrome) affected workers are less well known. In 1983, Brubaker demonstrated that 75% of studied fellers thought that whitening of the fingers was part of the job and/or an unrelated nuisance, while only 25% believed it was a disease. <sup>1</sup>Grounds also showed that even though there were a very high number of forestry workers with white fingers, none considered quitting because of their condition. <sup>2</sup> It seems that many workers hesitate to declare the illness or believe they are less affected than they really are, perhaps from fear of losing their jobs and livelihood. <sup>3</sup> Risk awareness, on the part of exposed workers and their employers, as well as knowledge and acceptance of available preventive solutions are necessary steps before installing adequate preventive measures, whether organizational, behavioral or environmental. Workers need to understand fully the hazards and risks in order to be able to make informed decisions under uncertain conditions. <sup>4</sup> Prerequisites include the following: workers knowledge about the risk, their attitude towards it, which in turn, can be influenced by values, needs and interests. Also, knowledge and attitudes towards safety behaviour, organizational or environmental barriers must be taken into account. Our research focuses on these key elements, which help bridge the gap between health promotion research and practice.

## **Methods**

A descriptive exploratory study is in progress with workers exposed to hand-arm vibrations. It uses qualitative methods that include focus group discussions with workers exposed to hand-arm vibrations, as well as individual interviews with other key informants (employers, health care professionals). An open-ended questionnaire was developed to collect qualitative data on perceived risks and solutions to prevent or reduce HAVS. Based on an integrated theoretical framework related to known determinants of behavior change, the analysis will focus on the following<sup>5</sup>:

- 1) knowledge of health effects, safety, well-being and/or quality of life
- 2) related beliefs about individual susceptibility and severity of consequences
- 3) attitude and values related to hand-arm vibration exposure
- 4) knowledge and attitudes towards exposure reduction, as well as perceptions of barriers and facilitating factors for these measures, in the workplace environment or otherwise.

## Results

Preliminary research results indicate that several obstacles exist that need to be addressed, when putting in place preventive measures in the workplace. These include obstacles from the point of view of workers, employers, and health care professionals. We will present the underlying concepts and the theoretical framework necessary for setting up HAVS preventive programs in the workplace as well as the preliminary results of the research.

## Discussion

We highlight the importance of taking into account determinants of behavioral change within a theoretical framework, while respecting the workers' and employers' perspective, when setting up HAVS preventive programs. "Health professionals must consult the people who are the intended target of health programs to determine their needs, problems, and aspirations concerning quality of life. If professionals do not take this vital step, health policies will remain sterile technocratic solutions to problems that may not exist or that hold a low priority in the minds of the people."<sup>6</sup>

## References

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<sup>3</sup> Gemne G et al., 1983, The Stockhom Workshop scale for the classification of cold-induced Raynaud's phenomenon in the hand-arm vibration syndrome ( revision of the Taylor-Pelmear scale), *Scand J Work Environ Health*, 13, 275-278.

<sup>4</sup> Nicholson PJ, ( 2000), Communicating occupational and environmental issues, *Occup.Med.* 50, 226-230.

<sup>5</sup> Committee on Communication for Behaviour Change in the 21st Century: Improving the Health of Diverse Populations, ( 2002) Board on Neuroscience and Behavioral Health, The National Academic Press, Washington, DC.

<sup>6</sup> Green Lawrence, Kreuter Marshall, (1991), *Health promotion planning, An educational and Environmental Approach.*