What is the effect of construction workers' safety boots on their comfort, mobility, performance, musculoskeletal disorders, slips, and falls?

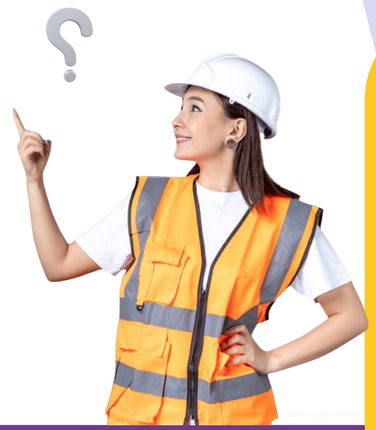
Ali Shirzadeh, Mohammad Abdoli-Eramaki, Aida Haghighi

School of Occupational and Public Health – Toronto Metropolitan University

Toronto Metropolitan University

Introduction

- Every year, over 40,000 construction workers in Canada are injured due to slips and falls.
- Well-designed footwear can prevent slips, falls, and related musculoskeletal disorders (MSD).
- Boots with less rigid soles lead to discomfort and risk of stress fractures in the second metatarsal bone.
- Safety boots are frequently created with an emphasis on safety that neglects performance and comfort.



Methods

150 construction workers will be recruited:

- Read and submit/sign the consent form
- Complete the online/paper-based survey
- Answer 33 questions in different sections related to their safety boots' comfort, performance, mobility, slips, falls, and related injuries

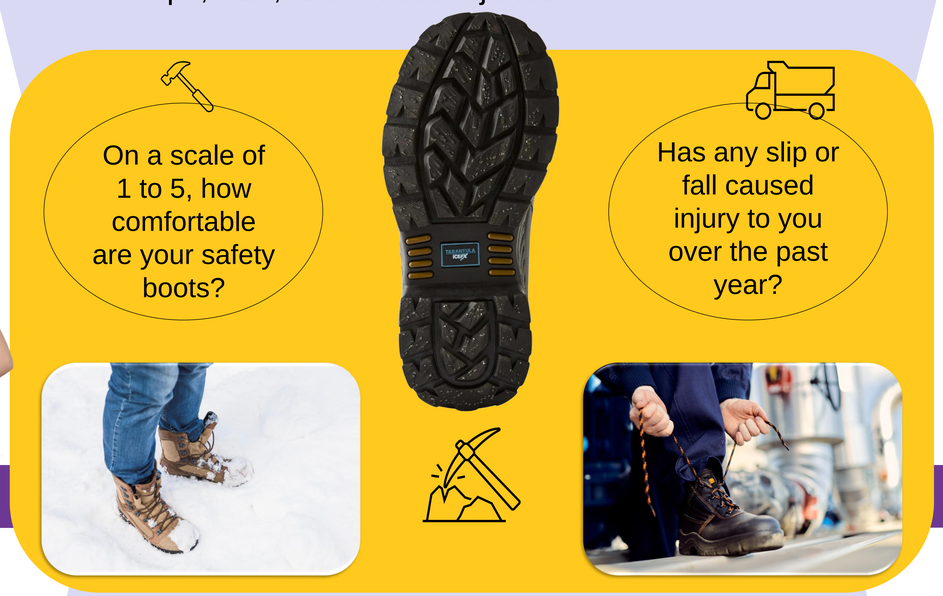


Figure 1: Sample questions related to safety boots' comfort, performance, mobility, slips, falls, and related injuries

Data Analysis:

- Descriptive analysis for demographic data and selected short-answer questions
- Regression analysis to understand the relationship between different targeted variables
- Further analysis if necessary

Expected Results

- Well-designed safety boots, positively affect workers' mobility, reducing the risk of slips and falls.
- There is a significant difference between men and women in experiencing footwear-related MSDs
- The choice of safety boots impacts workers' performance in various winter conditions, affecting their safety.
- The design of safety boots should consider gender-specific requirements to enhance well-being and safety.

What Is Novel?

This study investigates:

The impact of the footwear worn on comfort, mobility, performance, MSD, slips, and falls among construction workers.

Female and male construction workers' opinions and experiences on safety winter boots.

Future Actions

- Finish data collection
- Complete/update the literature review and methods sections
- Data analysis
- Write the remaining sections of the thesis

References:

SCAN ME

Ali.Shirzadeh@torontomu.ca