Association between Working in Awkward Postures, in Particular Overhead Work, and Pain in the Shoulder Region in the Context of the 2018 BIBB/BAuA Employment Survey

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Research article

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Abstract

Background: Musculoskeletal disorders are the leading cause of work-related sick leave and incur substantial socioeconomic costs. With the aging of our society and employees, the problem is exacerbating, and prevention is becoming increasingly important. According to previous studies, exposure to awkward postures, such as overhead work, is associated with musculoskeletal problems. Objective: This study aimed to determine the current prevalence of employees who work in awkward postures, specifically overhead, stratified by age, gender and occupation in the context of the 2018 BIBB/BAuA Employment Survey and to analyze associations between awkward working postures, in particular overhead work, and pain in the shoulder region.

Method: The study is based on secondary data from the German 2018 BIBB/BAuA Employment Survey . We have included 14,327 of the 20,012 employees aged between 15 and 67 who work at least 35 hours per week who took part in the survey. The classification of participants in occupational groups is based on the Blossfeld classification. The multivariate analysis was conducted by applying robust Poisson regression models adjusted block by block to obtain the relation between the self-reported frequency of working in awkward postures, in particular overhead work, and the occurrence of arm and neck/shoulder pain. Prevalence ratios (PR) are reported as effect estimates.

Results: 12.6 % of participants indicated that they are often exposed to awkward postures at work; 5 % stated they often performed overhead work. The majority of these employees work in agricultural, unskilled, and skilled manual occupations. The crude prevalence is 17.4 % for arm pain and 48.4 % for neck and shoulder pain. If subjects reported that they often performed overhead work, the risk of arm pain increased by 18 % (PR 1.18, CI 1.04 – 1.34, final model).

Conclusion: Working in awkward postures, especially overhead work, is a risk factor for musculoskeletal disorders in the arms. The development of prevention strategies should focus on the workforce in agricultural, unskilled and skilled manual occupations.

Full Text

Due to technical limitations, full-text HTML conversion of this manuscript could not be completed. However, the latest manuscript can be downloaded and [accessed as a PDF](#).

Figures

Figure 1

Relative risk of arm pain stratified by the frequency of working in awkward body postures

Figure 2

Relative risk of pain in the neck and shoulder region stratified by the frequency of working in awkward body postures

Supplementary Files

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