

https://dspace.org/

The prevalence of self-reported and work-related risk factors associated with occupational skin disorders among cleaners of an agricultural research facility

Mokoatle, Paulus Mann

2020
https://hdl.handle.net/10539/30419

Downloaded from a DSpace repository. https://dspace.org/

THE PREVALENCE OF SELF-REPORTED AND WORK-RELATED RISK FACTORS ASSOCIATED WITH OCCUPATIONAL SKIN DISORDERS AMONG CLEANERS OF AN AGRICULTURAL RESEARCH FACILITY

Abstract

Occupational skin disorders (OSDs) are the most commonly reported category of occupational illnesses in many countries. They have a negative impact on people's quality of life and can affect people's occupational lives by causing them to miss work or be less productive. Yet, little is known about the prevalence of occupational skin disorders in South Africa. Without data, skin disorder risks to the cleaners, a high-risk group for the development of occupational skin disorders, cannot be fully quantified. A survey to determine the prevalence of self-reported and work-related risk factors associated with of occupational skin diseases (OSDs) was undertaken at the Onderstepoort Veterinary Institute (OVI), by means of a validated self-reporting questionnaire.

Design

A descriptive cross-sectional study

Setting

All cleaners employed and based at the Onderstepoort Veterinary Institute facility of the Agricultural Research Council, in Onderstepoort, Pretoria North.

Participants

All fifty-six (56) cleaners employed and based at the Onderstepoort Veterinary Institute facility of the Agricultural Research Council.

Method

An information sheet and consent letter explaining the aim and objectives of the study was sent to 50 cleaners in June and July 2018. The principal investigator then collected information regarding the worker's workplace characteristics, occupation and skin disorder history for the period 2015-2017 including prevention/mitigation measures, through a questionnaire administered by the principal investigator. A validated structured self-diagnosis Nordic Occupational Skin Questionnaire (NOSQ-2002) developed to survey work-related skin disorders and exposure to environmental factors was used to collected information regarding the cleaner's workplace characteristics, occupation, and skin disorder history.

Statistical analysis

EPI INFO Version 7.2.3.1 and STATA 13 were used for data analysis. Descriptive statistics on cleaning materials and chemical agents used by cleaners are provided. Binary variables (skin pigmentation, dermatitis and contact urticaria) are described using percentages and frequencies, and presented using Bar graphs. Data on the prevalence of self-reported skin disorders (skin pigmentation, dermatitis and contact urticaria) among cleaners is provided using proportions and percentages. Fishers' exact test was used to investigate the association between self-reported skin disorders of the hands and forearms and work-related risk factors.

Results

The response rate was 50 (89%). Of the 50 responding cleaners, 50% were over the age of 45 and the majority were women. Thirty four percent (34%) of respondents had more than 60 months' (5 years) work experience doing cleaning work at the OVI. Contact urticaria, dermatitis, and skin pigmentation were confined to the hands and forearms among cleaners. Between 2015 and 2017, the dermatitis was the prevalent (26%) self-reported skin disorder of the hands or forearms, affecting 13 cleaners. The most affected anatomical site was the hands (n=22) compared to the forearms (n=4).

Discussion

The study only focused on dermatitis, contact urticaria, and skin pigmentation over a three-year period (2015 - 2017) in order to increase the likelihood that skin symptoms were work-related. This study found that cleaning chemicals used and cleaning duties undertaken by cleaners at OVI are not different from other cleaning occupations involving wet-work. From a sample of 50, over 80% of cleaners reported the use and subsequent exposure to harmful cleaning chemicals.

The study had a higher proportion of women cleaners 86% (n=43) compared to men. Duration of cleaning service and sex did not play any significant ($p > 0.05$) role in cleaners developing any of the three skin disorders.

Conclusion and Recommendations

This study showed that work-related skin disorders were prevalent between 2015 and 2017 at OVI. Dermatitis was the most common skin disorder compared to contact urticaria and skin pigmentation. Cleaning procedures followed by some cleaners, together with chemical containers used predisposes cleaners to work-related skin disorders.

Though the sample was small, this study highlights the importance of work-related skin disorders from wet-work and cleaning chemicals, and the subsequent adverse health effects among cleaners.

This highlights the need for OVI to review current chemical handling procedures among cleaners, and possibly, the development of a cleaner-focused chemical safety induction and training programme cantered on cleaning tasks and procedures. It is recommended that the OVI occupational health clinic develop and incorporate a skincare programme on periodic medical examinations for screening of suspected skin condition in order to assess dermal absorption.