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Musculoskeletal discomfort in veterinarians

A thesis presented in partial fulfilment of the requirements for the degree of

Master of Ergonomics

at Massey University,

Palmerston North,

New Zealand.

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2009
Abstract

This thesis comprises three chapters about musculoskeletal discomfort (MSD) in veterinarians. Two of these chapters have been submitted to peer reviewed journals and one is in preparation for submission. The first chapter describes the prevalence and risk factors associated with MSD in New Zealand veterinarians. The second chapter is a paper on the tasks considered by veterinarians to cause MSD. The third chapter is a review of published literature on musculoskeletal problems (MSP) in veterinarians.

The first chapter in this thesis describes a cross-sectional study of 867 New Zealand veterinarians. We used a modified Nordic musculoskeletal questionnaire to enquire about the presence or absence of MSD, whether this affected normal activities and if MSD necessitated absenteeism from work. Additional questions enquired about work activities, psychosocial factors and workload. The overall period prevalence of MSD was 96%. Normal activities were affected in 67% and 18% of participants reported that they had been absent from work due to MSD. Factors associated with the presence of MSD requiring time off work for clinical veterinarians included 10 year increases in age (odds ratio (OR) 1.26, 95% CI 1.05 - 1.52), work involving awkward grip and hand movements 100% of time (OR 12.91, 95% CI 3.46 – 84.21) and those who were dissatisfied with the level and difficulty of their work (OR 2.72, 95% CI 1.11 - 6.56).

In the second chapter in this thesis, veterinarians were asked to indicate tasks that they considered ‘most likely to lead to musculoskeletal aches and pains’ and ‘why these tasks were likely to be the most risky’. They were also asked to suggest ‘any solutions that they applied or knew of’ to reduce musculoskeletal aches and pains. They identified the following tasks: lifting, surgery, rectal palpations and animal handling. Their reasons were primarily related to physical risk factors. Few identified psychosocial risk factors. The most common suggested solutions involved training and selection strategies rather than redesign of tasks, activities or facilities. These findings are consistent with a participatory ergonomics approach for reducing the risk of MSD, which aims to enhance personal well-being and improved system performance.
The third chapter in this thesis - a review of the literature - focuses on the prevalence and nature (discomfort, pain, injury and disorders) of MSP amongst veterinarians. Veterinarians are exposed to a range of physical and psychosocial occupational hazards that have been well documented and associated with MSP. The range of reported prevalence estimates in this review was 50% to 96%. This range may reflect real differences among the veterinary populations studied, or more likely be due to differences in MSP definitions, study methodologies, and response rates. The magnitude of the reported prevalence justifies further research to triangulate data and determine other factors associated with MSD. Most of the studies in the review focused on physical risk factors. The lack of studies into psychosocial risk factors for MSP needs to be addressed.
Acknowledgements

I owe substantial gratitude and appreciation to a number of people who have assisted me with this thesis.

I am very much in debt to Stephen Legg, Elwyn Firth and Mark Stevenson to the commitment of time and energy that they provided as well as having the patience to work with me. I am extremely thankful for the time that Stephen spent performing various functions related to the research and the preparation of the manuscript. Elwyn’s rigorous approach to the manuscript preparation as well as the general guidance of the research is very much appreciated. I am also particularly thankful to Mark Stevenson, whose assistance with the research design, epidemiology as well as assistance with the manuscript preparation was very much appreciated.

To Simon Verschaffelt from the Epicentre of Massey University, many thanks for his excellent information technology skills, which enabled the on line questionnaire to be such a success. Thanks also to go to Gill Beaver for her technical assistance and to Frank Darby for advice on the design of the questionnaire.

I owe a great deal of gratitude to a large number of friends as well as my brother Paul. Chunky, Genevieve, Kaye, Pania, Paul, Rachel, Tracey and Vicki have all been a tower of strength for their friendship, advice, editorial assistance, support, time throughout the entire life of the project. My workmates at HBDHB also deserve thanks for their endless encouragement as well as having to listen to me rabbit on about this research project.

I would like to thank the Veterinary Council of New Zealand for supplying the contact details of veterinarians. I also wish to thank all of the participants for their time and careful and thoughtful responses. The project funding was from the Department of Labour.
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