

Summary

In many occupational populations, musculoskeletal disorders constitute an important source of morbidity, sickness absence, and disability and attribute to a substantial social and economic burden for society. This is certainly applicable to scaffolders, the study population in this thesis. Although many research efforts have been undertaken, relationships between various work-related risk factors and different stages of musculoskeletal disorders still remain unclear.

Chapter 1 provides an introduction to a theoretical model which serves as a framework for studying the dynamic character of complaints over time and the impact of work-related risk factors on the occurrence of low back pain. The second aim of this thesis is to study the consequences of low back pain complaints in terms of sickness absence and disability and to identify intervention strategies to successfully enhance return to work.

Chapter 2 presents the results of a 3-year follow-up study on prevalence, incidence, and recurrence of low back pain in a group of scaffolders. This chapter demonstrates the different trajectories of low back pain within a time-window of 3 years and illustrates the difficulties of defining incidence and recurrence in an epidemiological study. It seems that having low back pain is a dynamic process characterised by high rates of incidence, recurrence, and recovery. General health and work-related physical and psychosocial factors influence both the incidence and recurrence of low back pain.

Chapter 3 describes the findings of a cross-sectional study on the interrelations among self-reported risk factors and their associations with 4 different endpoints of low back pain. The results indicate that interrelations are strong among physical risk factors but almost absent among psychosocial risk factors. Furthermore, work-related risk factors may vary according to different definitions of low back pain. All endpoints of low back pain are consistently associated with physical load whereas psychosocial aspects show a more diverse pattern.

Chapter 4 presents the results of a cross-sectional study on the reasons for medical care-seeking due to low back pain in scaffolders. A general practitioner was sought more than twice as much by the scaffolders than the occupational health physician. It seems that nature and severity of back pain determines the decision to visit the general practitioner and irradiating pain and sickness absence are the strongest predictors for being referred to a specialist or physiotherapist. Scaffolders only visit the occupational health physician in case of sickness absence because of low back pain. The results suggest that the particular definition of low back pain and the selection process of workers with low back pain may partly determine the findings on work-related risk factors and health care utilisation.

Chapter 5 presents the results of a 3-year follow-up study assessing the role of individual, physical, and psychosocial factors and different levels of severity of low back pain for short-term (≤ 14 days) and long-term (> 14 days) sickness absence because of low back pain among scaffolders. The results show that work-related physical load is a risk factor for short-term sickness absence and severe low back pain is a risk factor for sickness absence both shorter and longer than two weeks. Psychosocial work load and individual characteristics do not predict the occurrence of sickness absence because of low back pain.

Chapter 6 considers ethnic differences in disability risk between Dutch and Turkish scaffolders during a 20 year period. Except for a small difference in cardiovascular disease, no difference in disability diagnoses was found. However, Turkish scaffolders faced disability 2.48 more often than their Dutch colleagues. Possible explanations for this difference in disability risk are the older age at start of the job, lower mobility at the labour market, and less access to medical and social care. Lack of cultural understanding and poor intercultural communication may result in insufficient support for the disabled workers or in differences in reintegration aims among care providers and between these providers and disabled workers.

In Chapter 7, the findings are reported of a systematic review on the effectiveness of intervention programmes on return to work after sickness absence due to low back disorders. The review is focused on three main groups of interventions: (1) organisational and administrative interventions, (2) technical, engineering or ergonomic interventions, and (3) personal interventions (imposed on a group of workers). The results suggest that back-school type of interventions, regardless of type and contents of the programme, are effective in the subacute phase (after 60 days) of low back pain. Although the compliance with the intervention in many studies is rated as good, information about compliance sustainability and effect sustainability is often lacking. Future interventions studies should address intervention sustainability and recurrence of sickness absence due to back pain over at least 1-year follow-up period.

Chapter 8 presents two case reports of serratus anterior paralysis as an occupational injury in scaffolders. Analysis of these two case reports shows that the injuries are the result of a combined effect of pressure and stretching of the long thoracic nerve at shoulder level due to carrying heavy scaffolding materials on the shoulder. As effective means to reduce the point-pressure on the shoulder, reduction of the weight to be carried and the use of shoulder pads in the overall are suggested.

In the conclusions presented in chapter 9 proposals are made to study the variability of low back pain within a certain time window and to assess their interrelations with work-related risk factor. The recommendations also support epidemiological research on preventive strategies to successfully reduce sickness absence, disability, and occupational injuries in various occupational populations.