TAPATURMA
VAKUUTUS
KESKUS

RETIREMENT AGE AND OCCUPATIONAL INJURY

TAPATURMAVAKUUTUSKESKUKSEN JULKAISUJA

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Abstract

Objective: Earlier studies have shown that workers over 65 years of age are involved in occupational injuries several times more often than younger workers. The aim of this study was to examine the effect of older working age on occupational injuries.

Methods: This study was based on data concerning the compensated workplace injuries (n= 522 758) of Finnish wage earners in 2008 - 2012 and 1055 injuries occurred to employees aged 65 and over.
Results: Employees over 63 years of age had a 36 % higher injury frequency than employees aged between 50 and 55. The injuries of the oldest age group were also more often serious.

Conclusions: We concluded that a later retirement age would slightly increase the number of occupational injuries, especially serious injuries.

Keywords: older, aging, accidents, Finland, compensation claim

1. Introduction

The workforce in Western countries is graying. In order to maintain a welfare society, the retirement age has to be raised. This means new challenges for the occupational safety of older employees. For example, the fatality rate (deaths caused by machinery) among American employees over 65 years of age increased by 46 % from 2000 to 2006 (Hu & Baker, 2010).

The actual retirement age in Finland in 2013 was 60.9 (www.etk.fi), when the average in the 28 Member States of European Union was 59 years (eep.eurostat.eu/statistics explained). This takes into account the fact that some workers are forced to retire years earlier due to physical incapacity for work. The general retirement age is flexible from 63 to 68; the longer you work, the higher your pension. This is why we studied the effect of older working age on occupational injuries.

Previous reviews (Laflamme & Menckel, 1995; Salminen, 2004) have shown that older workers have a lower accident frequency than their younger colleagues, but that their fatality rate is higher. In other words, older workers had a lower accident frequency than younger ones (Jones et al., 2013).

However, only few studies have been conducted on the occupational accidents of employees approaching retirement age. American workers aged 65 and over had a workplace fatality rate two and half times higher than younger workers (Kisner & Pratt, 1997). Among American farmers, those over 64 years of age were at double the risk of fatality of younger farmers (Janicak, 2000). The mortality of victims over 65 years of age through occupational injuries was six times higher than that among younger victims in American trauma centers (Konstantinidis et al., 2001). Workers aged over 64 were involved in occupational highway transportation fatalities three times more often than workers aged 18–54 (Pratt & Rodriguez-Acosta, 2013) In the US truck industry, the fatality rate among drivers aged 65 years and over was more than four times higher than that among drivers aged 15–19 (Chen, Amandus & Wu, 2014). Based on our literature review, we can assume that the accident frequency of older employees (over 65 years of age) is lower than that of middle-aged workers, but that their accidents more often lead to fatalities. The accidents for older employees had also the highest costs per accident (Mallon & Cherry, 2015).

2. Methods

The data set of this study comes from the Federation of Accident Insurance Institutions (TVL), which collects official statistics concerning occupational accidents in Finland. When an accident occurs, the employer (usually the supervisor and/or HR personnel of the company) fills in and sends an accident notification form (compensation claim) to the insurance company. The total costs of first aid and medical treatment, for example, are compensated (the loss of wages is also compensated if the total time of incapacity for work resulting from the accident is 3 or more calendar days). This information collected from the employer via the notification form is then used in the compensation process to make the compensation decision. Accident statistics are based on these compensation decisions. As the employer is given financial incentives to make this notification to the insurance institution, the coverage and quality of statistics is generally very good. However, the occupational accidents of farm owners, entrepreneurs or their family members are not included in this study, because they have voluntary accident insurance, and it is therefore relatively difficult to accurately calculate their accident rates (reliable statistics regarding their hours worked and the exact number of working family members are not available).

This study is based on data from the compensated workplace accidents of wage earners´ (n=522 758) in 2008–2012. Of these accidents, 1055 occurred to employees aged 65 or over. In Finland, serious accidents are those that caused over 30 calendar days of incapacity for work (including holidays, weekends, etc.). We obtained the number of working hours by age group and industry from Statistics Finland (the Finnish Labor Survey). The number of working hours did not include those of pupils, students or inmates etc. (all non-salaried special groups covered in the workers' compensation insurance), so to maintain better comparability their occupational accidents were not included in the data set of this study.

3. Results

Figure 1 shows the accident frequency for all accidents, over three days of absences and over 30 days of absences (serious injuries) by age groups. The figure shows that accident frequency was highest among young workers (aged 20 to 24 years). Young workers more often had minor injuries than their older colleagues.

In the oldest age groups (over 60 years) accident frequency was higher than among middle-aged employees. Employees older than the pension age (63 years) had a higher accident frequency; 36 % higher than that of the 50–55 years age group, which had the lowest accident frequency. The accidents of the oldest age group were also more often serious.

Figure 2 shows accident frequency by industry. The figure shows that the older the workers, the longer the absences due to workplace accidents in all main industries. The highest frequency was in the over 55-year age group in the construction sector (nine serious accidents per million working hours).

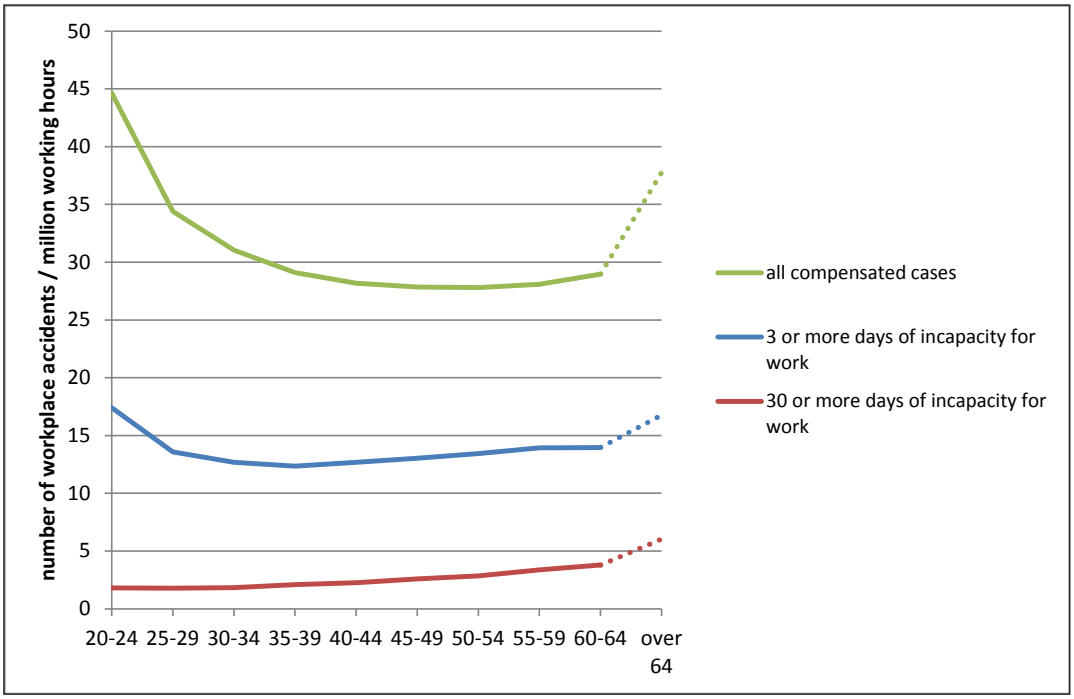

Figure 1. Accident frequency by age groups for all accidents, over three days of absence, and over 30 days of absence.

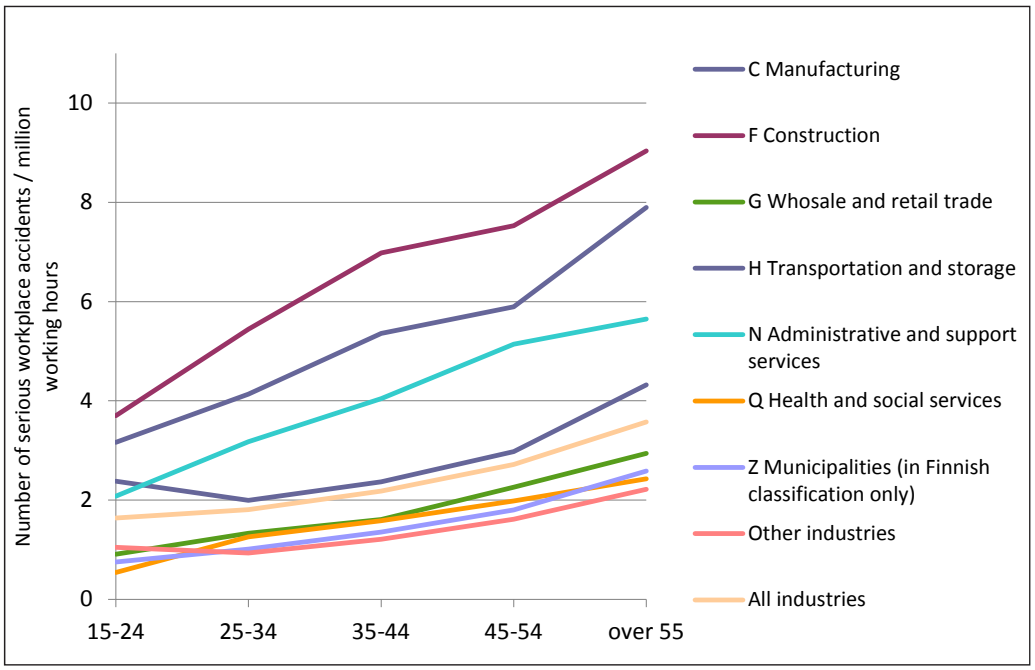

Figure 2. Accident frequency by industry in different age groups.

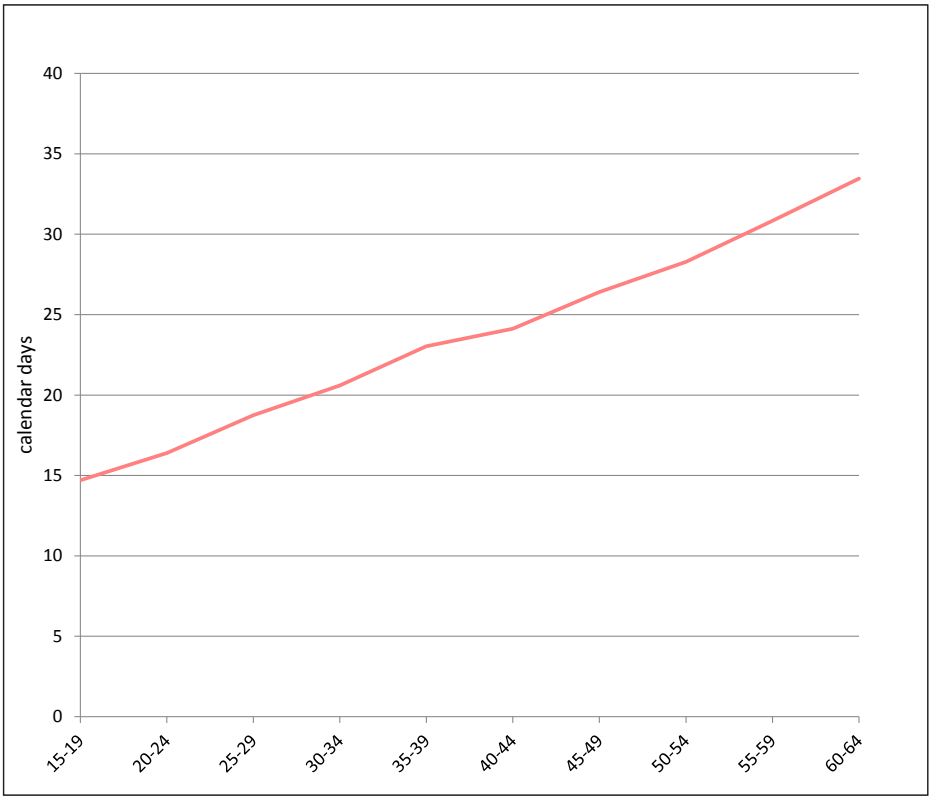

Figure 3. Average length of the incapacity for work by age group (from workplace accidents resulting with 4-360 days of incapacity for work).

4. Discussion

In line with previous studies (Laflamme & Menckel, 1995; Salminen, 2004), we found that young workers had the highest accident frequency. However, their accidents were less serious than those of older employees. Young men in particular are a risk group for occupational accidents (Salminen, 2004).

This study showed that employees over 60 years of age were at an elevated risk of occupational injury. Previous studies have shown an increased risk of fatal accidents in the same age group. This study indicated that older employees are also at a higher risk of non-fatal accidents.

The conclusion of this study is that later retirement age slightly increased the number of occupational accidents. Obviously, the number of occupational fatalities also increased. Moving older workers from the most physically burdening work tasks to other tasks is one possible way to prevent these accidents (Jebens et al., 2015). Mechanization or partial automation could also help older workers perform such tasks more safely.

One possible explanation for the higher accident frequency among older workers is illness. A Canadian study showed that older workers with coronary heart disease, diabetes, and osteoarthritis had one fifth longer sickness absences after musculoskeletal injury than basically healthy workers (Smith et al., 2014). An injured worker with a chronic illness may more easily consider retirement than a healthy worker.

A large number of severe occupational accidents among old workers are slips, trips and falls, so it seems to be important for workers themselves to exercise and for companies to provide suitable footwear for work, continuously maintain facilities (doors, stairs, lighting, etc.) and keep working areas and walking routes clean and well organized.

4.1. Limitations

The major weakness of this study is the limited number of accidents that occurred among older employees. In addition, the number of workers aged 63 or over is very small in the industries and occupations with the highest occupational accident frequencies. We suspected that experienced senior workers are more likely to work in specialist, service, planning, expert or management type occupations than in physically demanding occupations (for example construction work, stevedoring, truck driving, packaging or materials handling work, firefighting work, etc.). As one aim of this study was to anticipate the effect of the ageing of older employees on the occupational accidents, even a small number of accidents is an important data set.

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