Health, psychosocial factors and retirement intentions among Finnish physicians

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Introduction

The documented willingness of physicians to retire earlier than their expected retirement age is an important public health problem because of the high expenses of training and the shortage of qualified physicians in most Western countries. In Scotland, >70% of general practitioners aged >54 years are planning to retire at or before the age of 60 [1]. In a cohort study of physicians who qualified in the UK in 1974, over half of the respondents intended probably not to practise up to the normal retirement age and intended to retire ~5 years before their normal retirement age [2]. From the cohort that had qualified in 1977 in the UK, almost a quarter of respondents in 1995 reported that they planned to retire early [3].

Previous studies on various occupational groups suggest that self-rated poor health and positive attitudes towards retirement are among the most significant predictors of early retirement [4,5]. Poor work ability rating and increased sickness absence also contribute to retirement intentions [6] and premature departure from working life [7]. Work ability is related to sickness absence and refers to the ability of an employee to perform his/her job, taking into account the specific job demands, individual health condition and mental resources [8]. Indeed, promoting work ability has been considered as an important means with which to decrease early retirement [8].

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In addition to problems in health and work ability, work-related factors may push employees towards early retirement. Both low job control and organizational injustice were found to independently increase the likelihood of retirement intentions among hospital physicians [9] and municipal employees [10]. Other reports suggest that these factors may intensify the effects of poor health and health risks on various outcomes. According to Elovainio et al. [11], organizational injustice increased the effects of psychosocial health risks on sickness absence. In employees who had carpal tunnel surgery, low job control was associated with not returning to work or functioning poorly upon return to work [12]. It is unclear whether such an effect pattern also applies for specific occupational groups, such as physicians.

The present study examined whether organizational injustice and low job control could modify the association between deteriorating health and retirement intentions among Finnish physicians aged 45–65 years. Self-rated health, work ability and having sickness absence spells within 12 months were used as measures of health status. We assumed that low job control and organizational injustice strengthened the effect of poor health on retirement intentions.

**Methods**

A random sample of 5000 physicians in Finland (30% of the whole physician population) were selected from the 2006 database of physicians maintained by the Finnish Medical Association (register covers all licensed physicians in Finland), as a part of the Finnish Health Care Professionals Study. The ethics committee of the National Research and Development Centre for Welfare and Health has approved the study. Questionnaires were posted in autumn 2006. Non-respondents were reminded and sent the questionnaire up to two more times.

We excluded 189 respondents who provided incomplete information. Moreover, we excluded the respondents under 45 years of age since our aim was to examine retirement intentions only in ageing employees.

Retirement intentions were measured by combining two questions asking (i) intention to continue to work or retire and (ii) intention to apply for a pension. The formation of retirement intentions variable is explained in Figure 1. A three-level ordinal retirement intentions variable was used in the analyses.

Organizational injustice was assessed with a scale developed by Colquitt [13]. Overall organizational injustice consisted of four dimensions: (i) procedural justice (seven items, Cronbach’s alpha for this sample α = 0.92, e.g. ‘Have you been able to express your views and feelings during procedures used to arrive at your outcome?’); (ii) interpersonal justice (four items, α = 0.94, e.g. ‘Has the authority figure who enacted the procedure treated you with dignity?’); (iii) informational justice (five items, α = 0.93, e.g. ‘Has the authority figure who enacted the procedure explained the procedures thoroughly?’) and (iv) distributive justice (four items, α = 0.97, e.g. ‘Does your outcome reflect the effort you have put into your work?’). The items were rated on a five-point Likert scale, ranging from 1 (I totally agree) to 5 (I totally disagree), bigger values indicating higher injustice. The items were all summed and averaged.

Low job control was measured by combining the two scales of skill discretion (six items) and decision authority (three items) derived from Karasek’s Job Content Questionnaire [14]. Skill discretion measures how much the job requires skill, creativity, task variety and learning of new skills (e.g. ‘My job requires that I learn new things’). Decision authority measures the freedom to make independent decisions and possibilities to choose how to perform work (e.g. ‘I have a lot of say about what happens in my job’). The items were rated on a five-point Likert scale, ranging from 1 (I totally agree) to 5 (I totally disagree), larger values indicating lower control. The reliability alpha coefficient for this sample was 0.77.

Health indicators used in this study included self-rated health, work ability and sickness absence. Self-rated health was assessed with the following question: ‘How would you estimate your current state of health compared to other ones of your age?’ There were five response alternatives which were coded, 0 = poor, fairly poor or moderate and 1 = fairly good or good. It has been shown that single-item self-rated health is a valid measure of health [15] and a robust predictor of mortality [16]. Work ability

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**Figure 1.** The formation of retirement intentions variable.
was assessed with an item from work ability index [17] asking 'Assume that your work ability at its best has a value of 10 and 0 would mean that you could not work at all. How many points would you give to your current work ability (range 0–10)?' Responses were coded 0 = low (0–8) and 1 = high (9 and 10). This single-item work ability has previously been associated with health among Finnish anaesthesiologists [18]. Sickness absence was asked with a question requesting whether participant took sickness absence during the past 12 months (yes/no). Self-rated sickness absence has been shown to have good agreement with register information on sickness absence and to predict health status well [19].

Other variables measured were age, sex and employment sector (1 = health centre, 2 = hospital and 3 = other).

Because retirement intentions were modelled as a three-level ordinal variable (none, some and many), we applied ordinal logistic regression analysis method. Compared to the traditional logistic regression, coefficients of this analysis take into account the two transitions from no retirement intentions to many retirement intentions instead of one transition, although the parallel assumption of the odds holds. In the models, odds ratios (ORs) indicate the likelihood of passing from no intentions to some intentions and from some to many intentions.

First, we studied the univariate associations of study variables (self-rated health, work ability, sickness absence, low job control, organizational injustice, sex, age and employment sector) with retirement intentions. For continuous variables, such as injustice and age, the parameter estimate gives the mean odds per unit increase. Second, we analysed the effects of two-way interactions of health indicators (self-rated health, work ability and sickness absence) with organizational injustice and job control for retirement intentions in separate analyses adjusted for sex, age, employment sector and main effects. For the interactional analyses, continuous variables were centred to reduce possible multicollinearity. A Wald’s $\chi^2$ test statistic was used to test the significance of the interactions. For the interactions with alpha level $<0.05$, graphs showing regression lines are presented. All analyses were performed using the SPSS software version 14.0.

Results

Responses were received from 2841 (57%) physicians. The final sample included 1383 physicians (682 women and 701 men) aged 45–65 years (mean = 53.0, SD = 5.2). The sample is representative of the population from which it was drawn in terms of age, sex and employment sector [20].

The characteristics of the sample are shown in Table 1. Thirty-six per cent of respondents had no retirement intentions, 36% had some retirement intentions and 28% had many retirement intentions. Twenty-one per cent of participants worked in health centres and 39% worked in hospitals. Seventy-five per cent rated their health as good and 57% rated their work ability as 9 or 10 of 10. Sixty-three per cent had had sickness absence spells during the past 12 months. Mean level of low job control was 1.98 (range 1–5) and mean level of organizational injustice was 2.30 (range 1–5).

The results of the univariate ordinal logistic regression analyses are shown in Table 2. Those who rated their health as poor, fairly poor or moderate had higher odds (OR 2.17, 95% CI 1.84–2.56) for retirement intentions than those who rated their health as fairly good or good. Low work ability (OR 2.18, 95% CI 1.90–2.49) and taking sickness absence (OR 1.28, 95% CI 1.12–1.46) were also associated with higher odds for retirement intentions. Those who worked outside of health centres or hospitals were less likely to have retirement intentions than those working in health centres or hospitals (OR 0.82, 95% CI 0.69–0.97). Low job control (OR 1.71, 95% CI 1.50–1.95) and organizational injustice (OR 1.27, 95% CI 1.17–1.39) were both associated with higher odds for retirement intentions. Older physicians were more likely to have retirement intentions than younger physicians (OR 1.06, 95% CI 1.05–1.08). There was no difference in retirement intentions between female and male physicians.

| Table 1. Characteristics of the study sample of Finnish physicians ($N = 1383$) |
|---------------------------------|-----------------|
| Retirement intentions          | n (%)           |
| No intentions at all           | 498 (36)        |
| Some intentions                | 492 (36)        |
| Retirement intentions          | 393 (28)        |
| Self-rated health              |                 |
| Good                            | 1027 (75)       |
| Moderate or poor               | 352 (26)        |
| Work ability (1–10)            |                 |
| High (9–10)                    | 781 (57)        |
| Low (1–8)                      | 599 (43)        |
| Sickness absence within 12 months |             |
| No                              | 519 (38)        |
| Yes                             | 864 (63)        |
| Gender                          |                 |
| Female                          | 682 (49)        |
| Male                            | 701 (51)        |
| Employment sector              |                 |
| Health centre                  | 292 (21)        |
| Hospital                        | 528 (39)        |
| Other                           | 547 (40)        |
| Mean (SD)                      |                  |
| Age (range 45–65)              | 53.0 (5.18)     |
| Low job control (1–5)           | 1.98 (0.50)     |
| Organizational injustice (1–5) | 2.30 (0.76)     |


Interaction of health indicators with low job control and organizational injustice (in separate analyses) for retirement intentions was examined with ordinal logistic regression analyses adjusted for age, sex, employment sector and main effects. The interaction between self-rated health and low job control was significant ($\chi^2 = 8.39, P < 0.01$). Figure 2 shows that the low job control strengthened the association between poor self-rated health and retirement intentions. Similarly, low job control strengthened the association between work ability and retirement intentions ($\chi^2 = 4.97, P < 0.05$) (Figure 2). The interaction of sickness absence and low job control was not significant.

There was a significant interaction between self-rated health and organizational injustice ($\chi^2 = 7.06, P < 0.01$). Organizational injustice strengthened the association between poor self-rated health and retirement intentions (Figure 3). In addition, as Figure 3 shows, organizational injustice strengthened the association between sickness absence and retirement intentions ($\chi^2 = 6.05, P < 0.05$). In contrast, there was no interaction between work ability and organizational injustice.

**Discussion**

This survey on a random sample of Finnish physicians aged 45–65 years found that low job control and organizational injustice intensified the association between health problems and retirement intentions even after adjustment for age, sex and employment sector. More specifically, low job control strengthened the associations between poor self-rated health and retirement intentions and between low work ability and retirement intentions, whereas organizational injustice strengthened the associations between poor self-rated health and retirement intentions and between existence of sickness absence spells and retirement intentions. If causal, these findings suggest that problems with health push older physicians away from work and towards retirement and this is
intensified when they perceive control over their job low and the organization or management unfair. In addition, poor self-rated health, low work ability, having sickness absence spells within the past year, organizational injustice and low job control all independently contributed to increased levels of retirement intentions.

Because the present study was cross-sectional, we cannot draw any causal inferences. A possible weakness of our study was that health and sickness absence were self-reported. However, in large cohorts of British Whitehall II and French Gazel, it has been found that self-rated health is a valid measure of health and is mostly predicted by measures of current health status, health over the past year, longer term health problems and minor psychiatric mor-

Figure 3. The association between organizational injustice and retirement intentions among (i) subjects with poor health and good health and (ii) subjects with sickness absences and without sickness absences.

bidity [15]. Besides, self-rated sickness absence has been strongly associated with actual register-based sickness absence [19]. Sickness absence rate among physicians has been found to be low and working while ill common [21] which may indicate that threshold for non-attendance is relatively high and that the existence of sickness absence spells among physicians might be an indicator of relatively serious health problems. Moreover, although we controlled for age, sex and employment sector, we cannot rule out the possibility of residual confounding.

When interpreting our results, it is important to keep in mind that physician’s intentions to retire do not necessarily translate into action. However, among municipal employees’ intentions to retire early predicted the subsequent risk of disability retirement [22]. Also other previous studies support the association between retirement intentions and actual early retirement [23,24].

Our results are in line with previous studies which have highlighted the importance of organizational justice and job control for the well-being of employees. A recent study in Finnish anaesthetists concluded that job control and organizational justice are the most important work-related factors in relation to work-related well-being [18]. Injustice and low control opportunities have been associated with retirement and turnover intentions [7,9,25,26] as well as with poor physical and psychological employee health [27].

Adjustments of working conditions to promote justice and improve job control may be helpful in encouraging physicians’ to continue working into older age. For example, organizations could invest in supervisor training, particularly because previous studies have shown that leaders can be trained to act in a more just manner and this in turn improves subordinates’ attitudes and behaviour [28]. Furthermore, organizations could make efforts to ensure that staff feel organizational processes are fair and just. Job control could be improved by involving older physicians more in decisions and providing them with opportunities to fully use and develop their skills. Such interventions may allow ageing physicians to feel more able to cope with their health problems and decreasing work capacity. They may not therefore see retirement as the only option open to them.

Organizations also need to consider the health of older physicians. An occupational health intervention programme has been found to prevent early retirement and increase work ability in a large company which manufactures electronic equipment [29]. However, physicians may be a difficult target group for these kinds of interventions. Previous studies show that physicians typically self-treat their diseases and work despite being sick [21,30]. In addition, physicians seem to be unwilling to use occupational health services and follow guidelines on looking after their own health [30]. Therefore, how to take care of older physicians health is a big challenge and a matter of interest for future studies.
Key points

- Health problems push older physicians away from work and towards retirement and this process is intensified when physicians perceive a low level of job control and feel organizational injustice.
- If causal, observed associations highlight the importance of offering job control opportunities for ageing physicians and promoting justice in organizations.
- Older physicians would benefit from sufficient variety in tasks, flexibility in job and a strong voice in decisions.

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Conflicts of interest

None declared.

References


