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Employment security and health

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Objective: To study the relation of contractual and perceived employment security to employee health.
Design: Cross sectional survey.
Setting: Municipal sector employees in eight Finnish towns.
Participants: 5981 employees with a permanent contract and 2786 employees with a non-permanent contract (2194 fixed term contract, 682 government subsidised contract).
Outcome measures: Poor self rated health, chronic disease, and psychological distress.
Results: Compared with permanent employees, fixed term men and women had better self rated health (men odds ratio 0.70; 95% confidence intervals 0.50 to 0.98, women 0.70 (0.60 to 0.82) and less chronic disease (men 0.69; 0.52 to 0.91; women 0.89; 0.79 to 1.02), but women had more psychological distress (1.26; 1.09 to 1.45). The only difference between subsidised employees and permanent employees was the high level of psychological distress in women (1.35; 1.09 to 1.68). Low perceived employment security was associated with poor health across all three indicators. The association of low perceived security with psychological distress was significantly stronger in permanent employees than among fixed term and subsidised employees, indicating that perceived security is more important for mental health among employees with a permanent contract.
Conclusions: Contractual security and perceived security of employment are differently associated with health. It is therefore important to distinguish between these aspects of employment security in studies of labour market status and health. Such studies will also need to control for health selection, which is unlikely to operate in the same way among permanent and non-permanent employees.

Atypical employment is no longer a transitory phenomenon but has become an integral feature of European labour markets.[1 2] Employees with various fixed term contracts perceive their employment security to be low more often than permanent employees, but the unpredictable nature of post-industrial working life has also increased perceptions of poor employment security in permanent jobs. According to a survey in 15 European Union countries in 1995–96, 15% of employees work in precarious jobs.[3]

Studies of employment security and health can be divided into those that have examined self perceived security and those in which security has been externally attributed to labour market status. However, the potential health effects of both types of employment security in combination are poorly understood.

Security of employment may be seen as a component of the more global notion of security of work, which has traditionally been studied under the concept of "job insecurity".[4] In addition to the threat to continued employment, job insecurity is assumed to be generated by other factors such as actual or anticipated organisational changes. It has been shown that factory closures,[5] threat of redundancy,[5–7] outsourcing,[8] downsizing,[9 10] and re-engineering [11] all increase the risk of health problems among employees. In these studies non-permanent employees are either mixed with permanent employees, or excluded from the analyses.

Only a few cross sectional surveys have explicitly investigated the association between contractual employment security and health. In a Swedish study carried out in a hospital undergoing organisational change, somatic complaints were less frequent among non-permanent than among permanent employees, but no association was found between contractual employment status and mental distress.[12] In a survey of a random sample of employees from 15 European countries, Benavides *et al*[3] found that non-permanent employees despite their poorer psychosocial and ergonomic working conditions reported less stress and absenteeism than permanent employees. Work related fatigue and musculoskeletal symptoms were more common in non-permanent than permanent employees.

The above studies have a number of limitations, including the use of non-standard and crude health outcomes,[3] failure to take account of potential differences between sexes and socioeconomic groups, as well as the role of perceived security of employment,[3 12] and a small sample size comprising only a few occupations.[12] To overcome some of these limitations, we examined the association between contractual employment security and health in a large sample of Finnish employees using established measures of health and taking into account differences in occupational status and in perceived security of employment.

METHODS

Participants

The "Eight Town Study" was set up in 1997 to explore the relations between psychosocial factors and health in the personnel of eight Finnish municipalities from different parts of the country. As part of the study a postal questionnaire survey was carried out in 1997–1998. Using lists provided by the employers, we constructed samples of permanent and non-permanent employees. A total of 5981 (67%) permanent employees and 2876 (57%) non-permanent (2194 fixed term and 682 subsidised) employees responded to the survey (table 1). The true response rate is probably higher, however, because many non-permanent employees on the lists had moved before the study and were therefore not eligible for inclusion. Respondents' age (mean 45 years for permanent and 36 years for non-permanent employees) did not differ from that of the eligible population (46 and 36 years, respectively), but the proportion of men was slightly lower (24% and 20% among permanent and non-permanent respondents compared with 28% and 25% in the eligible population). The gender distribution of the participants corresponds closely to that found in Finnish municipalities.[13]

Table 1 Descriptive statistics for the participants

	Contractual employment security*			Perceived employment security	
	High n=5681	Intermediate n=2194	Low n=682	High n=6634	Low n=2084
Perceived employment security high (%)	88.9	60.1	16.3	–	–
Contractual employment security*					
High	–	–	–	78.6	31.1
Intermediate	–	–	–	19.7	41.7
Low	–	–	–	1.7	27.2
Men (%)	23.6	18.4	22.9	22.5	21.9
Mean age (SD)	45.4 (8.3)	35.2 (9.7)	38.2 (11.4)	42.9 (9.6)	40.1 (10.7)
Married (%)	91.5	80.2	73.0	89.1	81.0
Occupational status (%)					
Professionals	38.0	42.0	8.4	41.3	23.0
Associate professionals	21.3	22.0	14.6	22.0	18.3
Clerks	9.3	9.7	26.6	9.4	14.8
Manual workers	31.4	26.3	55.3	27.3	44.0

*High = permanent employees, intermediate = fixed term employees, low = subsidised employees.

Measures

Contractual employment security was defined as high in permanent employees because it is extremely rare that a municipal employer discontinues a permanent contract. Non-permanent employees with fixed term contracts were defined as having intermediate contractual employment security because it is known they have fairly good chances of renewing their contracts. Security was considered to be low in non-permanent employees with a subsidised contract: their employment is based on a state subsidy granted to the municipal employer under a scheme to re-employ long term unemployed job seekers. The subsidy is only paid for a period of six months, after which the employee is very rarely given a new contract.

Perceived employment security was assessed with items developed for the Finnish Quality of Work Life Survey.[14] Permanent employees rated the degree of threat of long term unemployment ("very much", "rather much" versus "to some degree", "a little", "very little"). Non-permanent employees responded to a multi-choice question concerning the most likely situation after the end of their current job contract ("unemployment", "do not know what will happen" versus "renewal of fixed term contract", "will get a permanent job in the current work place", "will get a new job elsewhere" or "do not want a new job, for example, for family reasons").

Three dichotomous health outcomes were used: self rated health (poor, rather poor, or average versus good or excellent), chronic disease diagnosed by a doctor (yes versus no) from a list of 14 diseases (for example, asthma, rheumatoid arthritis, diabetes, cardiovascular disease), and psychological distress (cut off point 3/4 in the 12-item version of the General Health Questionnaire [15]).

Occupational status was determined on the basis of the international standard classification of occupations.[16] Data on respondents' occupations (979 different titles) were derived from employers' records and grouped into four categories: professionals (ISCO-88 COM titles 1–2), associate professionals (3), clerks (4), and manual workers (5–9) (table 1). The mean incomes for each occupation, separately for men and women, were obtained from Statistics Finland.

Statistical analysis

The associations of contractual and perceived employment security with health outcomes were analysed using logistic regression and expressed as odds ratios with 95% confidence intervals. Adjustments were made for age, marital status, occupational status, and income. The results were presented separately for men and women and also broken down by occupational status. We tested whether associations between employment security and health were independent of sex, and whether associations between the two types of employment security and health were independent of each other, by applying interaction terms. The SAS program package was used.

RESULTS

Permanent employment was associated with high mean age, high probability of being married, and high perceived employment security (table 1). There were no differences in the distribution of permanent and fixed term employees by occupational status, but subsidised employees were more often employed in manual jobs. Those who perceived their employment security to be high were older, more likely to be married, and have higher occupational status than others. The two measures of employment security correlated moderately (r=0.49): among permanent employees low perceived employment security was relatively rare (11%), while almost 40% of fixed term and over 80% of subsidised employees reported low perceived employment security.

Contractual employment security and health

Fixed term male and female employees reported better self rated health and had less chronic disease than permanent employees (tables 2 and 3). These associations remained unchanged after controlling for perceived employment security. In contrast, the level of psychological distress was high among fixed term employees, especially women. This association disappeared after adjustment for perceived employment security. There were no significant interactions between contractual employment security and sex on any health outcome.

In subsidised employees the findings in relation to perceived health and chronic disease did not significantly differ from those for permanent employees (tables 2 and 3). After controlling for perceived employment security, these associations were in the same direction as those for fixed term employees; that is, subsidised employees also had slightly better self rated health and less chronic disease than permanent employees. Female subsidised employees had a higher risk psychological distress than permanent employees, a difference totally explained by low perceived security.

Separate analyses for occupational groups showed that fixed term men had better health than permanent male employees in the highest and the lowest occupational categories (professionals, p=0.002 and p=0.006 for self rated health and chronic disease, respectively, manual workers, p=0.013 for chronic disease) (not shown in table). In women, fixed term clerical workers had better self rated health (p=0.042), manual workers had better self rated health (p<0.001) and less chronic disease (p=0.02),

Table 2 Odds ratios and 95% confidence intervals for health problems by different types of employment security in men

	Separately*		Together†		p for interaction with types of security
	OR (95% CI)	p value	OR (95% CI)	p value	
Poor self rated health					0.970
Contractual employment security‡					
High	1.00	0.114	1.00	0.005	
Intermediate	0.70 (0.50 to 0.98)		0.58 (0.41 to 0.83)		
Low	0.92 (0.60 to 1.41)		0.63 (0.39 to 1.01)		
Perceived employment security					
High	1.00	0.002	1.00	<0.001	
Low	1.50 (1.16 to 1.94)		1.75 (1.32 to 2.33)		
Chronic disease					0.368
Contractual employment security					
High	1.00	0.019	1.00	0.010	
Intermediate	0.69 (0.52 to 0.91)		0.66 (0.49 to 0.88)		
Low	0.74 (0.50 to 1.10)		0.67 (0.44 to 1.04)		
Perceived employment security					
High	1.00	0.817	1.00	0.228	
Low	1.03 (0.81 to 1.31)		1.17 (0.90 to 1.53)		
Psychological distress					0.067
Contractual employment security					
High	1.00	0.731	1.00	0.762	
Intermediate	1.12 (0.82 to 1.53)		1.00 (0.73 to 1.39)		
Low	1.11 (0.71 to 1.74)		0.84 (0.52 to 1.37)		
Perceived employment security					
High	1.00	0.002	1.00	0.002	
Low	1.51 (1.16 to 1.96)		1.56 (1.17 to 2.06)		

*Adjusted for age, income, marital status and occupational status. †Adjusted for other type of employment security, age, income, marital status and occupational status. ‡High = permanent employees, intermediate = fixed term employees, low = subsidised employees.

Table 3 Odds ratios and 95% confidence intervals for health problems by different types of employment security in women

	Separately*		Together†		p for interaction with types of security
	OR (95% CI)	p value	OR (95% CI)	p value	
Poor self rated health					0.120
Contractual employment security‡					
High	1.00	<0.001	1.00	<0.001	
Intermediate	0.70 (0.60 to 0.82)		0.62 (0.52 to 0.73)		
Low	1.06 (0.85 to 1.33)		0.81 (0.63 to 1.04)		
Perceived employment security					
High	1.00	0.007	1.00	<0.001	
Low	1.21 (1.05 to 1.38)		1.41 (1.20 to 1.65)		
Chronic disease					0.334
Contractual employment security					
High	1.00	0.147	1.00	0.015	
Intermediate	0.89 (0.79 to 1.02)		0.81 (0.71 to 0.94)		
Low	1.06 (0.87 to 1.31)		0.87 (0.69 to 1.10)		
Perceived employment security					
High	1.00	0.005	1.00	<0.001	
Low	1.19 (1.05 to 1.35)		1.29 (1.12 to 1.48)		
Psychological distress					0.002
Contractual employment security					
High	1.00	<0.001	1.00	0.510	
Intermediate	1.26 (1.09 to 1.45)		1.08 (0.93 to 1.25)		
Low	1.35 (1.09 to 1.68)		0.98 (0.77 to 1.24)		
Perceived employment security					
High	1.00	<0.001	1.00	<0.001	
Low	1.55 (1.36 to 1.76)		1.53 (1.32 to 1.78)		

*Adjusted for age, income, marital status, and occupational status. †Adjusted for other type of employment security, age, income, marital status, and occupational status. ‡High = permanent employees, intermediate = fixed term employees, low = subsidised employees.

and professionals had more psychological distress (p=0.006) than their colleagues with a permanent job contract. As regards the occupational status of subsidised employees associations were significant in male manual workers (p=0.01 for better self rated health and for less chronic disease), in female professionals (p=0.03 for psychological distress), and in female associate professionals (p=0.02 for better self rated health). There was an inverse linear association between poor self rated health and occupational status (that is, the lower the status, the higher the morbidity) in permanent (p<0.001) but not in fixed term

Key points

- Self perceived secure employment is associated with good self rated health, low psychological distress and less chronic disease.
- Contractually secure—that is, permanent employment—is associated with poorer self rated health and more chronic disease, but—at least in women—lower psychological distress than less secure—that is, fixed term—employment.
- These findings indicate that health dependent selection may be stronger in non-permanent than in permanent employees.
- In studies of labour market status and health it is important to consider selection and to distinguish between types of employment security.

Policy implications

- Actions should be taken to strengthen perceived security both among permanent and among non-permanent employees.
- Occupational health and safety professionals should consider planning and implementing practices to promote the wellbeing of employees with low security.
- The low prevalence of health problems among fixed term employees should not be used to justify this type of employment as this favourable association seems to be the result of health related selection.
- Policy changes should aim to reduce health related inequalities in obtaining and maintaining employment. Future programmes aimed at returning the long term unemployed to work should give greater priority to people in poor health.

(p=0.96) or subsidised (p=0.58) employees. High psychological distress was related to higher occupational status in permanent (p=0.008) and fixed term employees (p=0.01). No trends were observed between occupational status and chronic disease.

Perceived employment security and health

Low perceived employment security was associated with poor self rated health and high levels of psychological distress in both genders and with chronic disease in women (tables 2 and 3). These associations remained unchanged after controlling for contractual employment security. There were no significant interactions between perceived security and sex on any health outcome.

Contractual and perceived employment security and health

The effect of contractual security on health only depended on perceived security in one instance: there was a significant interaction between the two types of security and psychological distress in women (see tables 2 and 3). As shown in table 4, the association of low perceived security with distress was significantly stronger in employees with high contractual security than among fixed term and subsidised employees.

DISCUSSION

This study has clarified the role of self perceived employment security and security attributed to labour market status in relation to health. Most employees with a permanent contract perceived a high level of employment security, while there were great differences in perceived employment security among those with moderate (fixed term) and low (subsidised) contractual employment security.

We found opposing associations between employment security and health depending on the type of security. Contractually secure—that is, permanent—employment was associated with poor self rated health and more chronic disease compared with contractually less secure—that is, fixed term employment. With one exception, these differences were not attributable to differences in perceived security. Perceptually secure employment was associated with good self rated health and less chronic disease. A high level of psychological distress was associated with low perceived security in both sexes and low contractual security in women.

The relations between perceived employment security and self rated health, or chronic disease, did not differ by type of work contract. For permanent employees poor health may give rise to fear of dismissal, while non-permanent employees in poor health may be afraid they will not be re-employed. However, with respect to psychological distress the association of low perceived security and a high level of distress was significantly stronger in employees with high contractual security than among fixed term and subsidised employees. For non-permanent employees employment security is not part of the psychological contract [17 18] and therefore the consequences for their mental wellbeing may be less serious than for permanent employees.

The relation between perceived security and health is well known [4–7 9–11] while ambiguous and inconsistent findings have been reported in relation to contractual security and health.[3 12] We expected to find that employee health is positively associated with stability of employment, and that this difference could be attributed to perceived employment security. However, our assumption was corroborated only with respect to psychological distress. The main findings contradicted our hypotheses.

The authors of the EU survey [3] suspect their results could be attributable to methodological artefacts, however, it seems unlikely that this explanation applies to the present findings for four reasons. Firstly, the sample for our study was drawn from the public sector where employment structures and practices are more uniform than those in the private sector. On this basis it may be argued that ours is an unbiased setting for comparing the different types of contractual arrangement. Secondly, the sample was large and drawn from a number of municipalities in different parts of the country. Thirdly, the

Table 4 Odds ratios and 95% confidence intervals for the association between perceived employment security and psychological distress by contractual employment security*

Contractual employment security†	Men: Perceived employment security		Women: Perceived employment security	
	High	Low	High	Low
High	1.00	1.94 (1.36 to 2.76)	1.00	1.96 (1.59 to 2.41)
Intermediate	1.00	1.12 (0.66 to 1.88)	1.00	1.20 (0.97 to 1.49)
Low	1.00	1.01 (0.33 to 3.08)	1.00	1.39 (0.77 to 2.50)

*Adjusted for age, income, marital status and occupational status. †High = permanent employees, intermediate = fixed term employees, low = subsidised employees.

tasks and work environments in the municipal sector are similar for all employees in the same occupation regardless of their type of employment contract, and lastly, the response rate (63%) was satisfactory.

A different set of questions on perceived employment security for permanent and for non-permanent employees was used to accommodate differences in career prospects between the groups in a relevant manner. This use of different measures may be considered one of the limitations of the study, however, although the two measures are not exactly commensurable, the dichotomous indicators used were valid as a measure of perceived employment security within each group.

It might be assumed that our findings could be attributable to information bias. Labour market status may affect individuals' everyday perceptions of illness, for example, low absenteeism in non-permanent employees [3] may in fact indicate "sickness presence".[19] Moreover, the context and aims of the questionnaires may affect respondents' assessments of their own health: for example non-permanent employees may be more reluctant to report problems of physical health despite being assured confidentiality. However, the measures applied in our questionnaires have proved to be valid both in longitudinal and cross sectional studies of the effects of different jobs and labour market situations on health.[6 8 20 21]

The cross sectional nature of our study means we cannot draw any conclusions about possible selective or causal mechanisms that could explain the health differences observed between the groups. Increased psychological distress among those with poor employment security was an expected result, in line with findings from longitudinal studies of the association between poor mental health and the threat of unemployment.[5 6 20] However, it is more difficult to interpret the findings for self rated health and chronic disease. Unlike psychological distress, they are relatively stable indicators of a person's health, and differences cannot be attributed only to current contractual status and working conditions but also to factors in the person's labour market history. In our case this would imply that long term exposure to work related hazards has been less detrimental to the health of non-permanent employees the than to that of permanent employees. The research evidence, however, contradicts this explanation: burn out is not more common in permanent employees,[22] and both the physical and ergonomic working conditions of permanent employees are often better than those of temporary staff.[2 12] Furthermore, although any job is not always better than no job,[23] it is unlikely that non-permanent employees' good health could be attributable to past unemployment or other episodes of non-employment.

The most plausible explanation for the relatively good health found in non-permanent employees is health based selection, which probably has worn off among permanent personnel. Several studies show the prospects for re-entry into work among the unemployed partly depend on health.[21 24 25] Although the health of the eligible long term unemployed population has been shown to be poor [26] it is probable that those with health problems would be less likely to participate in subsidised re-employment programmes. The absence of a health gradient between socioeconomic groups among non-permanent employees further suggests that selection increases in the lower socioeconomic groups.

In the late 20th century all industrial societies saw their rigid employment structures give way to more diverse employment patterns. Combined with an increase in unemployment (Finland's unemployment rate at the time of this study was 11%), this profound re-structuring of the labour markets has adversely affected job security. At the same time, employers are expecting personnel to show greater flexibility, innovation and willingness to commit to the values and goals of the organisation.[27] Success in the competition for jobs in these new labour markets requires not only a wide range of skills and knowledge, but also good health. In the recruitment of ordinary fixed term employees this may fairly be the prevailing practice. However, the aim of subsidised re-employment is to help the long term unemployed to return to work. Our results indicate that it was those with relatively good health who succeeded best in obtaining subsidised employment, an end result completely at odds with the aim of the programme.

Conclusions

Our results suggest that it is important to consider both the perceptual and contractual aspects of employment security in studies of labour market status and health; and that attempts to study the health effects of new labour markets may be biased without careful control for health dependent selection, which seems to operate differently in non-permanent and permanent employees.

More effective policy is needed to reduce health-related inequalities in obtaining and maintaining employment. Future re-employment programmes should give better support to people in poor health.

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