



ANNA SIUKOLA

Sickness Absence and Working Conditions in the Food Industry



ACADEMIC DISSERTATION

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Abstract

Sickness absence has been studied a lot, but not so much in the food industry which, however, has extremely high rates of sickness absence. On the other hand, notwithstanding extensive studies, sickness absence is still a big issue for companies' human resource management as well as for individuals, who are the smallest subjects in the phenomena.

This study aimed to explore the association between sickness absence and absence culture, physical and psychosocial working conditions and work arrangements. It included four sub-studies. Both qualitative and quantitative methods were used. The participants consisted of blue-collar workers and white-collar workers at a large food industry company (employing more than 2,000 persons) in Finland. Depending on the design of the sub-study, the number of the subjects ranged from 58 employees (Study I) to 1198 employees (Study II).

Data were collected by 1) surveys from the years 2005 and 2009 mainly including questions about working atmosphere, working conditions and work arrangements, 2) retrieving the company's personnel register – including sickness absence – from the years between 2003 and 2008 and calculating variables for sickness absence days and different lengths of spells, and 3) nine group interviews. The data were analysed with appropriate statistical and qualitative methods. The study also included a part combining these methods, an approach which has not been very common in sickness absence research.

According to the sub-studies working atmosphere and team spirit were important factors among the psychosocial working conditions related to sickness absence. The physical working conditions, in turn, had a weak association with sickness absence (only working postures), as well as the nature of food industry work among blue-collar workers. In the interviews appreciation of work, close relationship with supervisor, working atmosphere and the individual threshold to take a sick leave were mentioned many times. According to the interviews and the survey, sickness absence culture may be related to increased sickness absence. It is possible that the result revealing increased risk for sickness absence (days and spells of 1–7 days)

among the blue-collar workers, who took it for granted that someone is always absent, reflected a certain, perhaps permissive, sickness absence culture.

Of the work arrangements, the work left undone during absences (jobs awaiting the worker's return to work) was related to short (1–7 days) and long (> 7 days) sickness absence spells. If the work waits until a worker's return, the risk for absence spells decreased. The risk for long sickness absence spells (> 7 days) and for days decreased if an employee assessed that she or he would have to work harder or longer after returning to work. Both these results related to the arrangements were found in both occupational groups (among blue and white-collar workers). The senior programme intended for older employees included some dispensations and opportunities for work arrangements. The programme was found to be associated with increased risk for short-term but decreased risk for long-term sickness absence spells.

All in all, there are several other factors than working conditions affecting sickness absence. However, some determinants of physical and psychosocial working conditions and work arrangements were significant, which should be noted in the human resource management of workplaces. Also, the analysis of an intervention supporting the work ability of older employees (a senior programme), showed encouraging results: it decreased the risk for long-term sickness absence, which is known to increase the risk for early retirement. The absence culture seemed to be significant in the employees' talk about sickness absence and in their reflections on whether or not to take a sick leave. However, the final decision is determined by an individual threshold, which has a major role in the employees' sickness absence decisions despite situations where disability is total. From the point of view of the employer, affecting an individual threshold may appear challenging, but because it is shaped by the working environment, individual resources and cultural factors (also including the sickness absence culture), the challenge needs to be met.

Tiivistelmä

Sairauspoissaoloja on tutkittu yleisesti ottaen hyvinkin laajasti, mutta ei elintarviketeollisuudessa, joka on kuitenkin kaikista teollisuudenaloista sairauspoissaolotilastoja johtava ala Suomessa. Sairauspoissaoloilmiön yleisestä tietämyksestä huolimatta sairauspoissaolot ovat edelleen iso asia yritysten henkilöstöhallinnon ja ilmiön pienimmän subjektin, työntekijän, itsensä kannalta.

Väitöskirjatyö sisältää neljä osatutkimusta ja niistä kootun yhteenvedon. Tutkimuksen tavoitteena oli selvittää sairauspoissaolojen yhteyttä sairauspoissaolokulttuuriin, fyysisiin ja psykososiaalisiin työolosuhteisiin sekä työjärjestelyihin. Tässä tutkimuksessa käytettiin sekä laadullista että määrällistä tutkimusmenetelmää. Lisäksi tutkimukseen sisältyi osio, jossa yhdistettiin kumpaakin käytettyä tutkimusmenetelmää.

Tutkimukseen osallistui yhden suurehkon suomalaisen elintarvikekonsernin (työllistää noin 2000 henkilöä) työntekijöitä ja toimihenkilöitä. Osatutkimuksesta riippuen osallistujien määrä vaihteli 58:sta (tutkimus I) 1198 henkilöön (tutkimus II).

Käytetyt tutkimusaineistot olivat 1) kyselylomake vuosilta 2005 ja 2009 sisältäen kysymyksiä työilmapiiristä, työolosuhteista ja -järjestelyistä, 2) konsernilta saatujen tietojen pohjalta tutkimuskäyttöön muokattu sairauspoissaolorekisteri vuosilta 2003 vuoteen 2008 (sairauslomapäivät ja eripituiset sairauslomajaksot) sekä 3) yhdeksän ryhmähaastattelua vuodelta 2006. Aineistoja analysoitiin kullekin osatutkimukselle sopivalla tavalla. Lisäksi tähän yhteenvedoon sisällytettiin osio, jossa yhdistettiin laadullisten ja määrällisten menetelmien kautta saatuja tuloksia.

Tämän tutkimuksen perusteella työilmapiiri ja ryhmähenki olivat sairauspoissaolojen kannalta merkityksellisiä psykososiaalisia työolosuhdetekijöitä. Fyysisillä työolosuhteilla oli melko kapea yhteys sairauspoissaoloihin. Ainoastaan epämuکavat työasennot osoittautuivat merkityksellisiksi, eikä työnluonne hygieniavaatimuksineen vaikuttanut olevan tärkeä tekijä työntekijöiden haastattelupuheissa. Sen sijaan haastattelujen mukaan työn arvostus, läsnä oleva esimies, ilmapiiri ja yksilöllinen kynnys jäädä sairauslomalle olivat tärkeitä sairauspoissaolojen kannalta. Sekä haastattelut että kysely antoivat viitettä siitä, että sairauspoissaolokulttuurilla oli

yhteys sairauspoissaoloihin. Työtoverin poissaoloa tavallisena pitävien työntekijöiden oma kohonnut riski sairauspoissaoloihin (lyhyisiin sairauslomiin 1–7 päivää ja sairauslomapäiviin) tulkittiin viestiksi sallivasta sairauspoissaolokulttuurista.

Sairauspoissaoloihin liittyvistä työjärjestelyistä se, onko työt tehty poissaolon aikana vai odottavatko ne työhön paluuta, oli merkityksellinen tekijä lyhyisiin sairauspoissaoloihin (1–7 päivää). Jos töiden arvioitiin odottavan työhön paluuta, väheni riski sairauspoissaoloihin. Riskiä pitkiin (yli 7 päivää) sairauslomiin ja sairauslomapäiviin vähensi seikka, jos koettiin että poissaolon jälkeen työtahtia tarvitsee kiristää tai työpäivän pituutta lisätä. Nämä molemmat työjärjestelyihin liittyvät tulokset ilmenivät kummassakin ammattiryhmässä (työntekijät ja toimihenkilöt). Ikääntyville työntekijöille suunnattu senioriohjelma sisälsi mahdollisuuden yksilöllisiin työjärjestelyihin. Tämän interventiona tutkitun senioriohjelman todettiin olevan yhteydessä lisääntyneeseen riskiin lyhyisiin, mutta alentuneeseen riskiin pitkiin sairauspoissaoloihin.

Kaiken kaikkiaan sairauspoissaoloja selittää monet muutkin kuin työolosuhteisiin liittyvät tekijät. Kuitenkin ne fyysiset ja psykososiaaliset työolosuhdetekijät ja työjärjestelyt, jotka olivat merkityksellisiä, ansaitsevat huomiota työpaikkojen henkilöstöhallinnoissa. Lisäksi ikääntyvien työntekijöiden työkykyä tukeva interventio-ohjelma antoi kannustavia tuloksia pitkien sairauspoissaolojen riskin vähentäjänä. Tätä tietoa pidettiin arvokkaana, koska pitkien sairauslomajaksojen tiedetään lisäävän riskiä ennenaikaiseen eläköitymiseen. Sairauspoissaolokulttuuri näytti olevan merkityksellinen sairauspoissaolojen kannalta työntekijöiden puheissa ja tulkinnoissa, silloin kun he miettivät jäädäkö vai ei sairauslomalle. Kuitenkin lopullista päätöstä ohjannee yksilöllinen sairauslomalle jäämisen kynnys, jolla on iso rooli työntekijöiden sairauspoissaoloihin liittyvissä päätöksissä lukuun ottamatta tilannetta, jossa vallitsee täysi työkyvyttömyys. Työnantajan näkökulmasta henkilökohtaiseen kynnyskseen vaikuttaminen voi näyttäytyä haasteena, mutta koska se muotoutuu työympäristön, yksilön voimavarojen ja kulttuuristen tekijöiden, (sairauspoissaolokulttuuri mukaan lukien) kautta, haasteeseen voi suositella tartuttavan.

List of Original Publications

The dissertation consists of the following original publications, which are referred to in the text by Roman numerals I–IV.

- I Siukola A, Lumme-Sandt K, Virtanen P, Nygård CH (2008): Sairauspoissaolo elintarviketyöstä; tutkimus työntekijöiden kokemuksista ja toimintakäytännöistä [Sickness absence in food industry; a qualitative study about sick leave experiences and prevailing practices among blue-collar workers]. *Sosiaalilääketieteellinen Aikakauslehti* 45 (3), 175–186.
- II Siukola A, Nygård C-H, Virtanen P. Attitudes and arrangements at the workplace and sickness absence among blue- and white-collar workers (submitted to the *International Journal of Workplace Health Management*, on 7th May 2012).
- III Siukola A, Virtanen P, Luukkaala T, Nygård CH (2011): Perceived working conditions and sickness absence – a four-year follow-up in the food industry. *Safety and Health at Work* 4 (2), 313–320.
- IV Siukola A, Virtanen P, Huhtala H, Nygård CH (2011): Absenteeism following a workplace intervention for older food industry workers. *Occupational Medicine* 61(8), 583–585.

1 Introduction

Sickness absence is generally used as a measure of health or a measure of economic costs in working life. From the employers' perspective, an often desired result is reduced sickness absence rates because of their economic effects. However, being sick may not be a desired status for anyone. If the equation were so simple, reducing sickness absence would be a shared aim of employees and employers. The main problem may not be the aim itself, but rather the means by which to achieve it. This process requires investments from each member of the organization. In addition, it requires work done not only on home- and work-related factors, but also a contribution from occupational health care. (Kremer & Steenbeek 2010.)

In Finland, according to the Social Insurance Institution, average absence days due to sickness per employed person have varied in the 2000s between 7.9 (2001) and 10.1 (2008). Even if absence rates have decreased in recent years, the rate is currently higher than in 2000. (Seppänen 2010, Statistical Yearbook of the Social Insurance Institution 2010.) A similar trend can be perceived among other European countries (Edwards & Greasley 2010, Eurofound 2010).

This study was conducted in the food industry, which can be seen as an understudied branch, at least in view of its high sickness absence rates. In Finland sickness absence studies have been published on the municipal sector (e.g. Kivimäki, Elovainio & Vahtera 2000, Vahtera et al. 2000), on the forest industry (e.g. Väänänen et al. 2004), on the construction industry (e.g. Taimela et al. 2010) and based on the national data from Statistics Finland and the Social Insurance Institution of Finland (e.g. Böckerman & Ilmakunnas 2008). Outside Finland very few sickness absence studies have been presented on the food industry (e.g. Kristensen 1991, Messing et al. 1998, Pålsson et al. 1998, Campbell 1999, Cohidon et al. 2009).

The food industry is the fourth largest industry in Finland. It employs 32,500 people in 1900 units. (Finnish Food and Drink Industries' Federation 2012.) The proportion of accidents at the workplace adjusted for the number of wage earners is almost two-fold compared to the mean of all other work branches. Food industry workers have a six-fold risk of sustaining a repetitive strain injury compared to the average for all other jobs. (Sillanpää 2010.) Given this description of the food industry

as a workplace it is not hard to believe that it has higher sickness absence rates than other industries. For example, in Finland food industry workers had 19 absence days due to sickness or accident, whereas among workers from all industries the rate was 15 days in 2010. (Työaikakatsaus 2012.) One reason for this has often been assumed to be the physically demanding characteristics of the work. The work may include biomechanical exposures (lifting and carrying of heavy loads, repetitive and monotonous movements, awkward working postures) and physical environmental exposures (heat, cold, noise, draft, slipperiness and humidity) (Campbell 1999). In addition, the pace of work is intense (Messing et al. 1998, Pålsson et al. 1998, Campbell 1999, Savinainen, Nygård & Arola 2004, Sormunen 2009). Moreover working in the food industry often entails shift work, which is known to be related to increased absence (Dionne & Dostie 1997, Tüchsen et al. 2008, Foss et al. 2011).

However, there are in general numerous other determinants and aspects than physical working conditions which are related to sickness absence, such as psychosocial working conditions, health, work ability, behaviour, work community, family, local community, absence culture, economy, decision-making of society, legislation and collective bargaining agreements (Allebeck & Mastekaasa 2004). Individuals' own attitudes to and experiences of illness may also affect the decisions to report sick (absence threshold) (Kuijter et al. 2006). These factors related to sickness absence can also be discussed in relation to structural factors, for instance: at the national level (sickness insurance) (Voss, Floderus & Diderichsen 2001a, Henrekson & Persson 2004), and at the local level (Virtanen, P. et al. 2000, Virtanen, P., Vahtera & Nygård 2010), or in relation to cultural, social and organizational dimensions (Grinyer & Singleton 2000) and at individual level (e.g. Marmot et al. 1995, Alexanderson 1998).

The present study was based on a perspective on sickness absence which takes note of the effects of the surrounding community (at the workplace), but focuses on the employee as an individual. An actual aim was to explore associations between sickness absence and perceived working conditions, arrangements at work (during absence and for ageing employees) and absence culture among employees working in the food industry. In addition, working conditions and work arrangements were regarded from the perspective of ageing. These factors were studied using various methods and types of data (questionnaires, interviews, register data and intervention) using mainly with a follow-up research design.

2 Review of the literature

2.1 Theoretical aspects of sickness absence

2.1.1 *Absence theory*

Theories about employee attendance and absenteeism in work organizations have existed for many decades (e.g. Ås 1962, Steers & Rhodes 1978). These theories have usually regarded absenteeism widely and taken account of various reasons for absence. Sickness has been seen as one reason, but has not merited special attention. In light of the history of absence theory it is understandable that the studies on absenteeism published before the 1980s were rare in regard to health. The studies have contemplated absenteeism mostly from two angles. The functionalistic approach regarded absenteeism as a deviant behavior attributable to poor working conditions, whereas the analytical approach regarded it as a social conflict between workers and employers. (Chevalier et al. 1987.) Later on absence from work was separated into absence due to illness and voluntary absence (Sagie 1998, Ose 2005). In this chapter two historical models (a push-pull model and a process model) for scrutinizing absenteeism will be presented (models of absenteeism), followed by models which consider the dimension of health as a crucial determinant of sickness absence (models of sickness absenteeism).

Models of absenteeism

Even if the starting point in this study is sickness absence, it is reasonable to attain a more extensive understanding of the phenomenon to take a brief look at the history of absence theory. Ås (1962) proposed the “push-pull” model of absenteeism. This rested on the thinking about situations in terms of satisfaction with the company in general and satisfaction with the immediate work situation in four-field categories (1–4).

- (1) If satisfaction is high with the company and the immediate work situation, → there is a low rate of absenteeism.
- (2) If the satisfaction is high with company, but low with the work situation, → there is a high rate of absenteeism.
- (3) If satisfaction is low with company, but high with the work situation, → there is a high rate of absenteeism.
- (4) If satisfaction is low with the company and with the work situation, → the rate of absenteeism is lower than in the previous situation (3).

This theory assumes that in categories 1 and 2 the employees have oriented to the company, but in category 2 the employees might express their dissatisfaction with the work situation as avoidance or as an active protest. If the satisfaction with the company is low, the employees may feel that their general low job insecurity is poor. This means that only the employees with a high degree of satisfaction with the immediate work situation (category 3) will dare to take the “risk” of being absent while the employees with low satisfaction with both the company and the work situation will not dare to do so.

Steers and Rhodes (1978) have presented another theory of absenteeism. The process model of employee attendance in work organizations is based on the model of a review of 104 empirical studies. The model attempts to take into account both voluntary and involuntary absenteeism. It argues against earlier statements that job dissatisfaction is the main cause for absenteeism. The model is crystallized into two factors, which were assumed to directly affect sickness absence: 1) attendance motivation and 2) the ability to come to work. Behind these two points there are personal characteristics like age, gender and education. They may affect the ability to attend work, but also they have connections to the employee's values and job expectations which, furthermore, affect how satisfied the employee is with her/his job situation. In addition, the situation at the job (job scope, role stress, leadership style, co-worker relations) itself is significant in this assessment process. After weighing two aspects; perceived satisfaction and pressure to attend work (economic conditions, incentive system, work group norms, personal work ethic, organizational commitment), the employee's attendance motivation is formed. Motivation and ability are in a dialogue which determines attendance at work. If the model is carefully scrutinized, it assumes that the ability to attend affects the employee's attendance after the formation of attendance motivation.

Models of sickness absenteeism

In this chapter different absenteeism models linked to the health aspect are briefly presented; a) categorization of three models, b) a dynamic model of absenteeism and presenteeism and c) an illness flexibility model.

Steensma (2011) presented a categorization for the three most popular general models of sickness absence. He pointed to the decision model and the organization models presented in this chapter, and to the occupational stress model (see Chapter 2.1.4).

According to the decision model of absenteeism, an employee can to some extent decide whether or not she/he will take a sick leave. The decision is affected by the subjective probabilities (expectancies) of possible costs and rewards connected to absenteeism in relation to the subjective values (utilities) of these perceived costs and rewards. If the costs of absenteeism are expected to be high, there may be a high threshold against reporting sick. This model assumes that reporting sick is often connected with person-bound factors, such as the needs of the employees and their objective opportunities to behave in the way they prefer. Furthermore, these factors may influence the subjective expectancies and utilities of cost and rewards. (Steensma 2011.)

The organization model pays attention to aspects of the organization, such as the rewarding properties of working in the organization. This model may be suitable when the features of organizations and jobs are viewed in relation to the behaviour of employees working in these organizations. Important factors in this model are, for instance, interesting job content, autonomy, social support, fair pay and the status of the occupation in society. These may lead to high satisfaction, high motivation and higher general well-being. Furthermore, these will be favorable factors for health and low sickness absenteeism. (Steensma 2011.)

Johns (2010) outlined a dynamic model of presenteeism and absenteeism. Johns takes the view that there is a health event (acute, episodic or chronic) which interrupts fully productive regular attendance. The nature of the health event determines to some extent whether absenteeism or presenteeism ensues. This means that in less extreme medical cases the context (job demands, absence/presence culture, teamwork, ease of replacement etc.) have a greater effect on the outcome. All in all, this model proposes that after the nature of the health event has been accounted for, contextual factors and on the other side personal factors (work attitudes, personality, stress, gender etc.) influence the choice between absenteeism and presenteeism.

Johansson (2007) introduced the model of illness flexibility, which is based on the same two core concepts as the process model by Steers and Rhodes (1978) presented above, i.e. the ability to work and motivation to work. Johansson described different

ways in which ability to work and motivation to work can be related. According to Johansson the models by Steers and Rhodes (1978) and Ås (1962) suggested that there is first attendance motivation, which after ability resolves the situation (whether or not to be absent from work). In the illness flexibility model ability and motivation have reversed positions. The model includes health and skills affecting capacity, which is related to work assignment. These aspects affect work ability. In this illness flexibility model work ability is defined by individual factors (health/capacity and knowledge/skills) and the work conditions (adjustment latitude). When work ability is defined, a person's internal discussion with motivational aspects determines the final outcome (absenteeism, presenteeism, returning to work or withdrawal from work). This internal motivation debate includes thoughts between what an employee wants to do (attendance and absence incentives) and what an employee thinks she/he ought to do (attendance and absence requirements). An example of attendance incentive can be a supportive and friendly working atmosphere, and conversely, an example of an absence incentive can be some inducement in leisure time e.g. having a pet. An example of attendance requirements is that an employee is aware of the negative consequences of absenteeism, for instance, workmates will have to shoulder an extra burden. Absence requirements are related to the negative consequences of attending the workplace, for instance, having an infectious disease or signals from colleagues or management indicating that the worker is not wanted at the workplace. (Johansson 2007.)

In this study 'sickness absence' was mainly used as a term to refer to the entire sickness absence phenomenon. The term 'sick leave' also occurred in the study, being nearly synonymous with sickness absence, even if in general it may reflect more the individual view of the phenomenon or on the other hand an economic view with social insurance compensations. In addition, the term 'absenteeism' was used to refer to absenteeism due to sickness unless otherwise specified.

2.1.2 Being a sick employee

The main subject 'sickness absence', interpreted literally, includes the notion of 'absence' from work due to a 'sickness'. In other words, it can be assumed that a disease leads to impaired work ability, which leads to sickness absence. A disease and impaired work ability may therefore be related to each other, but the impaired work ability may also be the result of a reason other than a disease. An employee does not have to be sick, even if she or he is not able to work. Nevertheless the reason may be health-related, even if it cannot be described as a disease or a diagnosis.

(Hensing 2004.) The phenomenon is not simple, because work ability, as well as health, is a continuum, whereas from the perspective of managing sickness absence, it is a dichotomized concept: an employee is either absent or present. Furthermore, in light of these considerations, sickness absence might rather be called disability absence.

It should also be noted that the term 'sickness' is not used haphazardly. Sickness refers to the social role of an individual with a disease or an illness defined by the view of society (Parsons 1951). Parsons' concept of the sick role implies four institutionalized expectations; two of them are rights and the second two are obligations. The rights are that the sick person 1) has an exemption from the responsibilities of his/her normal social role and 2) has been exempted from responsibility due to his/her condition. The first obligation is that 3) the sick person is obligated to see her/his role as undesirable and she/he must be motivated to become well. The second obligation is that 4) the sick person should seek help for her/his condition and co-operate with helping personnel, usually with health care staff, to become well. This sick role view in studies of sickness absence may mean that the target is to measure the social consequences of ill health for the individual (Wikman, Marklund & Alexanderson 2005).

2.1.3 *Absence culture and the individual*

The definition of absence culture draws on sociological theories about the logic of being sick in society (Parsons 1951, Gerhardt 1989). Absence culture can be defined as the shared view of absence in a certain work community (Allebeck & Mastekaasa 2004) or as a cultural construction varying across communities (Nicholson & Johns 1985). This socially constructed behavioural practice in the work community can be expressed as 'sickness absence habitus' (Bourdieu 1977, Virtanen, P. et al. 2000). This means that an employee's own attitudes to sickness absence practice and decisions to take sick leave are adjusted to the interaction with the culture and behaviour in the surrounding communities (work community, local community and society). Employees' norms about attendance are supposed to reflect the absence culture of an organization or a work community (Nicholson & Johns 1985). These may shape or affect sickness absence behaviour, especially short absence spells (Laaksonen et al. 2012).

A threshold of sickness absence can be thought to be related to a person's inner debate on whether or not to take a sick leave. Simply put, this aspect supposes that a person is sick and she/he decides whether to be absent / on a sick leave or attend

the workplace (presenteeism). It is also possible that an employee does not visit the occupational health care or other health service to get a certificate about the need for a sick leave even if the situation would require it. This view is not in line with the view that sickness absence can be seen as an involuntary absence (vs. voluntary absence due, for example to holidays, non-certified sickness) (Sagie 1998).

Different mechanisms exist to encourage employees to take a sick leave when their perceived workload is low. If the main reason is a low workload, it may encourage taking a sick leave (encouragement mechanism). Low workload may cause an employee to be less satisfied with her/his work (satisfaction mechanism) or then an employee assesses the situation at work to be tantamount to being absent because there is not so much to do (flexibility mechanism). (Hultin et al. 2012.)

Presenteeism (working when sick) is linked in the cultures of the workplaces culminating in the decision of an employee to go or not to go to work. Presenteeism, like sickness absence, is affected by economic and social constraints. In the same company there are often different occupations and tasks (social structures) and employees are aware of the pressures on each group. However, the decision to be absent or not, is made by an employee. This may explain why an employee may sometimes be blamed for presenteeism or absenteeism instead of focusing attention on the possible social structures behind them. (Dew, Keefe & Small 2005.) Presenteeism may also be associated with the degree of health or illness and working conditions (Hansson, Bostrom & Harms-Ringdahl 2006, Gustafsson & Marklund 2011).

From the individual's point of view sickness absence and presenteeism can be viewed as alternatives. From the perspective of public health, they are not mutually exclusive alternatives for each other, because it has been shown that the same employees who exhibited sickness presenteeism also had the highest rates of sickness absence (Leineweber et al. 2012). Presenteeism should not be a situation which employees want to achieve. Presenteeism may be struggling at work, because after a while sickness presence leads to sickness absence. The converse is not true; absence does not predict presenteeism, but they both predict low work ability. (Gustafsson & Marklund 2011.)

2.1.4 Stress factors at work

The work stress model by Cooper (Sutherland & Cooper 1990) is presented here as a view to structure the determinants used in the present study. Cooper's model of stress includes the idea that there may be various sources of stress in the environment, which, together with the individual's personal characteristics, lead to stress related

outcomes (symptoms of occupational ill health, and moreover possible disease). The environmental sources of stress may be present at work or in the home-work interface. The model also proposes individual symptoms besides organizational symptoms (for instance high absenteeism), which are thought to affect the individual. There are two aims in the background of this model for understanding stress at work. The first is to identify potential adverse work conditions and improve the quality of working life. The second is to identify individuals best fitted to the job and its working conditions.

Sources of stress at work include factors intrinsic to the job, the role in the organization, career development, relationships at work and organizational structure and atmosphere. Such factors intrinsic to the job include the physical demands and the task required in the job. They may entail poor physical working conditions, work overload, time pressures or responsibility for others' lives. More specifically, physical demands and distress can be caused by noise, vibration, extremes of temperature, lighting, hygiene factors, shift work, workload (quantitative or qualitative over- or underload) working overtime, new technology, repetitiveness and monotony, travelling and the experience of risk and hazard as potential stress agents. (Sutherland & Cooper 1990.)

An individual's role in the organization may be a source of stress in case of role ambiguity or role conflicts (the demands on the individual and other members of the workplace do not coincide). Too little or too much responsibility may also be among the sources of stress caused by the role in the organization. Career stress, for example, refers to over- or under-promotion, lack of job security or thwarted ambition. Relationships at work may be a source of stress, for example, if there are poor relations with the line manager, subordinates or colleagues. Organizational structure or atmosphere as a source of stress may include aspects of restrictions on behaviour, office politics, lack of effective consultation or little opportunity to participate in decision-making. (Sutherland & Cooper 1990.)

Together with sources of stress at work, the individual is subject to home-work interface sources of stress. There may be family problems, life crises or dual-career marriages which cause stress. These, as well as other stressors, may constitute different sources of stress depending on the stage of an individual's life cycle. (Sutherland & Cooper 1990.)

According to this model the outcomes of the sources of stress at work may manifest as various physical (e.g. diastolic blood pressure, cholesterol level), psychological (depressive mood, job dissatisfaction) or behavioural (smoking, escapist drinking) symptoms. Even if stress has a role in the health-ill-health dimension, relationships between exposure to stress and the development of the disease may be circular.

Absenteeism can be seen as an organizational effect, which may also affect the individual, but which may be a consequence of the interaction of behavioural, cognitive, health, subjective or physiological symptoms of stress. (Sutherland & Cooper 1990.)

Overall, the occupational stress model focuses on the modifying effects of the work environment (for instance, objective and subjective stressors) on the individual. Its focus is on the negative effects of the characteristics of the objective (objective stressors) and the subjective psychological (perceived subjective stressors) work environment and on the responses (e.g. the mental and physical health) of the employees. (Sutherland & Cooper 1990.)

According to the stress model the relations between the abovementioned factors are moderated by the coping abilities of individuals and social support. Individuals' personal attributes have an effect on what kinds of tolerance of stress they have. Several studies have claimed that there is a direct relationship between perceived stressors and absenteeism. The association between dissatisfaction and sickness absence is believed to exist both directly and indirectly. According to the stress model absenteeism reduction can be achieved by reducing stressors and strengthening of coping abilities. (Steensma 2011.)

2.1.5 Work ability

2.1.5.1 Work ability model

The work ability models developed since the 1980s were originally intended to stratify employees according to permanently impaired work ability (Tuomi et al. 2001). Because sickness absence can be seen as some kind of disability due to an imbalance between demands and individual capacity (personal resources) to work, it is possible to identify the same elements underlying them. Despite the association between work ability and sickness absence, their determinants may not be completely congruent (Karlsson, Skargren & Kristenson 2010). The idea of differing determinants refers to a study by Lindberg et al. (2006) suggesting that there are differences in the determinants of promoting excellent work ability and preventing poor work ability. For example, promoting excellent work ability was related to physical factors, clear work tasks and positive feedback, whereas preventing poor work ability was more related to recuperation, organizational and psychosocial factors.

Depending on the point of view work ability can be defined in different ways. The perspectives may differ if work ability is contemplated, for instance, from the perspective of occupational health or social insurance. Currently the work ability

model is quite often illustrated as a work ability house; see Figure 1 (Ilmarinen 2006a). It is based on the view of occupational health, well-being, work ability and coping. The model presents work ability as a building with four floors: 1) health and functional capacity, 2) professional competence, 3) values (includes attitudes and motivation) and 4) work (conditions, content and demands, community / organization and management). At the top of the building is the work ability, which reflects the balance between work demands and personal resources. In addition, work ability balance is related to the surrounding environment (e.g. occupational health care, family, society) with a balcony on the third floor. Family, local community and hobbies among other things influence work ability through lifestyle and values. The relationship with these aspects of personal life and work is formed via the balcony on the floor of values.

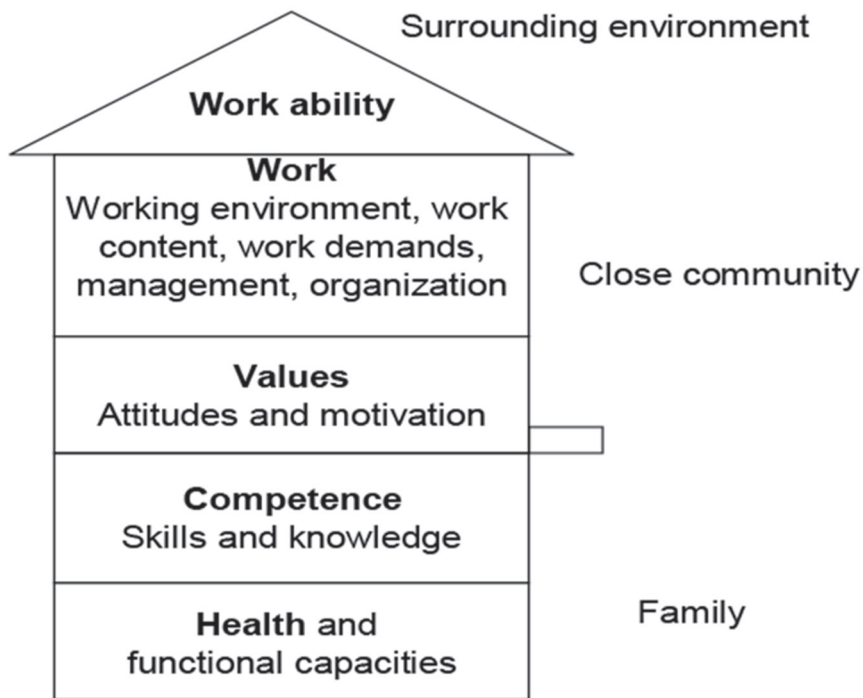


Figure 1. Work ability house (Ilmarinen 2006a)

The personal resources consist of floors 1–3, and the work of floor 4. The foundation of the building rests on the ground floor. Deterioration of health is seen as a threat to work ability and, on the other hand, improved health or capacity can enable

the enhancement of work ability. Knowledge and competence (floor 2) and their continuous development are seen as an important resource to meet the demands of work life. The third floor illustrates the balance between work and personal resources, but also between work and personal life. This floor of values, attitudes and motivation is open to influences. The reflection of changes in society or legislation is also accommodated on this floor. The fourth floor with work and its related factors is the largest floor of the work ability house, and the floors below support it. According to the work ability model people are seeking their optimal balance through their work life, because changes in work or personal resources are inevitable, which means variation in the factors or the extent to which they affect the balance. (Ilmarinen 2006a.)

Johansson (2007) discussed and criticized the structure of Ilmarinen's model of work ability, where motivation as well as values and attitudes are included in the concept. According to Johansson, this would mean that it is questionable to distinguish them as separate components. Moreover, she criticized the model for fixing the work demands in defining the work ability, because work demands may differ widely when an employee is ill, depending on the opportunities for adjustment.

In this study the work ability model was a basis for understanding the sickness absence phenomenon. This view included the idea that sickness absence reveals something not only about an employee's ability to work, but also about the job and its demands (Wikman, Marklund & Alexanderson 2005).

2.1.5.2 Age related work ability

Sickness absence is related to work ability (Reiso et al. 2001, Strijk et al. 2011), which is known to decline with age (Tuomi et al. 1991, Gamperiene et al. 2008). Ageing workers have often defined to be those aged of 45 or 50 years and above, because a peak of work ability achieved before the age of 50 is followed by a decline in work ability (Ilmarinen 2006a, Gould & Polvinen 2008). Age and physical health are known to be strong predictors of a decline in perceived work ability, but opportunities for learning, problems at work and stereotypes about ageing (for example underestimating the performance of ageing workers) may also affect the subjective changes in work ability (Solem 2008). Furthermore, a self-reported decline in work ability has been shown to be associated with long-term sickness absence and early retirement from the labour market after adjusting for socio-demographic and lifestyle variables (Sell 2009). On the other hand, an increased rate of sickness absence was found to be a risk factor for early retirement (Szubert & Sobala 2005). Long-term sickness absence spells and the number of sick days have been shown

to be predictors of disability pension under the age of 55 (Kivimäki et al. 2004, Wallman et al. 2009).

2.2 Determinants of sickness absence

This chapter reviews the role of individual factors, in particular occupational class, health and age, in sickness absence. Working conditions are divided into physical (e.g. lifting, awkward postures, draughts) and psychosocial (e.g. support, atmosphere) conditions. In this study working conditions also included work arrangements related to sickness absence.

2.2.1 *Individual aspects*

Occupational class

Sickness absence is more common in blue-collar occupations (North et al. 1993, Alexanderson et al. 1994, Feeney et al. 1998, Allebeck & Mastekaasa 2004) than in white-collar occupations. The differences in health and working conditions may partly explain this (Johansson & Lundberg 2009, Laaksonen et al. 2010a, Burr, Pedersen & Hansen 2011), likewise stress-related and physical work factors among manual workers and clerical workers (Melchior et al. 2005). Moreover, manual workers may have harder or impossible working conditions to work when they are ill, which is not the case for non-manual workers (Johansson & Lundberg 2009). This could mean that manual workers have a different motivation to go to work than do non-manual workers. In addition, psychosocial work environment matters. For example, high demands of work and low control have been shown to be risk factors for an increase in short spells of absence in lower socioeconomic status groups (North et al. 1996). High job strain, in turn, has predicted sickness absence among employees in high, but not in low socioeconomic positions (Virtanen, M. et al. 2007). The association of socioeconomic status and sickness absence has also been found to differ depending on the length of absence spells (Kristensen et al. 2010, Xiaoshu et al. 2011).

However, occupational status has not been a significant factor in all studies. For instance, employees with over 30 absence days over a period of three years had a twofold risk for poor health compared to employees with no absences over the 14-year follow-up period regardless of occupational position (Ferrie et al. 2011). On the other hand, occupational class is not always seen as a clear separator for sickness absence between the class groups. For example, an Italian study stated that lower

education increased the risk of sickness absence only in men and manual work only in women (d'Errico & Costa 2012).

Health

Sickness absence is often used as a measure of health and the association between health status and sickness absence has been demonstrated in several studies (Marmot et al. 1995, Kivimäki et al. 2003a, Vahtera, Pentti & Kivimäki 2004). Perceived health is a measure strongly associated with sickness absence (Hanebuth, Meinel & Fischer 2006). On the other hand, sickness absence has also been shown to predict long-term poor/suboptimal self-rated health (Vahtera et al. 2010) and mortality (Vahtera, Pentti & Kivimäki 2004, Gjesdal et al. 2008, Head et al. 2008, Ferrie et al. 2009). This being so, it would be appropriate to bear in mind in sickness absence studies that the sickness absence period itself could also have negative or positive consequences for health (Staland Nyman et al. 2009). Chronic illness has also been shown to be associated with sickness absence (Andrea et al. 2003). This may be one factor behind the finding that an employee's history of sickness absence has been found to be a predictor for future sickness absence (Breaugh 1981, Dekkers-Sanchez et al. 2008, Roelen & Groothoff 2010).

A study on the determinants of health functioning as predictors of sickness absence found that the determinants of physical health functioning were more important predictors for sickness absence spells over two weeks than determinants of mental health. (Laaksonen et al. 2011.)

Wynne-Jones et al. (2009) found that poor health was associated more with performance at work than with absence from work. They concluded that using sickness absence as a marker of health-related embodiment at work may cause inferences which underestimate the impact of health at work.

Age

Many studies have shown an association between age and sickness absence. Among young employees short absence spells have been found to be more common than among older ones, whereas older employees have more likely longer absence spells (Blank & Diderichsen 1995, Knutsson & Goine 1998, Thomson, Griffiths & Davison 2000, Dekkers-Sanchez et al. 2008). This could lead to a situation in which sickness absence days commonly increase with age (Isacsson et al. 1992). However, contradictory results have also been reported. Taimela et al. (2008) found that health problems and poor work ability were associated with higher rates of sickness absence regardless of age, gender and occupational status.

2.2.2 *Working conditions*

2.2.2.1 *Physical factors*

Burr, Pedersen and Hansen (2011) studied long-term sickness absence in which the work environment was perceived as a risk factor. They concluded that a quarter of long-term sickness absence spells might have been due to the physical work environment. However, physical factors may not be related only to long spells. For example, in the study by Hanebuth, Meinel and Fischer (2006), adverse physical working conditions were related to short, one-day absence spells.

Voss, Floderus and Diderichsen (2001b) reported that among Swedish postal workers in three regional organisations heavy lifting and monotonous movements were associated with increased risk of high sickness absence rates. Furthermore, Foss et al. (2011) stated that heavy physical work was associated with an increased risk for long-term sickness absence due to musculoskeletal diagnoses. Roelen et al. (2007) concluded that physical job demands correlated with perceived health, and further that poor health was related to long-term sickness absence. The subjects of this study were from an insurance company and from the cheese-making industry. A recent study from the Netherlands (Vlasveld et al. 2012) showed that high physical demands of work were risk factors for delayed return to work after a long sickness absence spell (more than 4 weeks) as also were older age, severe depressive symptoms and contacts with medical specialists.

Work entailing extreme bending of the neck/back, lifting the arms/twisting hands, mainly standing/squatting or repetitive monotonous movements were risk factors for high sickness absence in a Danish prospective study (Labriola, Lund & Burr 2006). In this study the association of physical work environment and long-term sickness absence was analysed. In addition to all the factors mentioned above lifting or carrying loads and pushing or pulling loads increased the risk for long-term sickness absence for both female and male employees. Among female employees the factors related to psychosocial work environment showed some interaction with physical factors, which increased the risk for long-term sickness absence. Interactions were found between extreme bending or twisting of the neck or back and high emotional demands, between working mainly standing or squatting and role conflicts, and between lifting or carrying and role conflicts. (Lund et al. 2006.)

In addition to this, there are also other studies where the physical work determinants of sickness absence have been observed to be dependent on the effect of psychosocial determinants. For instance, Boedeker (2001) showed in his study conducted in companies in the metal processing industry and retail trade in Germany that workload had a strong association with sickness absence. Sickness

absence rates were especially high if an employee had heavy physical workload and low job control.

Laaksonen et al. (2010b) stated that heavy physical workload and hazardous exposures (including e.g. dirt and dust, dampness, noise, irritating substances, problems with lighting or temperature) were associated with increased sickness absence measured in all lengths of spells. The study subjects were municipal employees in both blue-collar and white-collar jobs in Finland. This study concluded that despite the recent attention paid to psychosocial working conditions, physical working conditions were the most important determinants of sickness absence. This confirmed the findings of a study by Christensen et al. (2007a), who likewise found physical work environment factors, like uncomfortable work positions (extreme bending or twisting of the neck or back, working mainly standing or squatting) and physical workload (lifting, carrying, pushing or pulling loads), to account for a larger proportion of long-term sickness absence than psychosocial work environmental factors.

2.2.2.2 Psychosocial factors

Several studies have reported an association between the adverse psychosocial aspects of work and an increased risk of sickness absence. Low social support has been found to be associated with sickness absence in several studies (North et al. 1996, Niedhammer et al. 1998, Melchior et al. 2003, Väänänen et al. 2003, Christensen et al. 2005, Hanebuth, Meinel & Fischer 2006, Head et al. 2006, Ishizaki et al. 2006, Nielsen et al. 2006, dos Santos et al. 2011, Foss et al. 2011). In some studies social support is divided into that received from supervisors and from co-workers. For example, in a study by Väänänen et al (2003) conducted in a private forest industry corporation, sickness absence increased among men if there was lack of support from coworkers and among women if there was lack of support from supervisors.

Another extensively studied dimension of the psychosocial work environment is related to decision-making. Low level of decision latitude (Niedhammer et al. 1998, Andrea et al. 2003, Melchior et al. 2003, Duijts et al. 2007, Hultin et al. 2010) and low decision authority (Labriola, Lund & Burr 2006, Nielsen et al. 2006) have been found to be strong predictors for sickness absence. In a study by Christensen et al. (2005) low decision authority was the strongest and the most consistent psychosocial determinant of sickness absence. Väänänen et al. (2003) found that low job complexity and autonomy predicted long-term spells of sickness absence.

Organizational justice has been shown to predict employees' health measured by sickness absence. This Finnish study concluded that low justice in decision making procedures is a high risk for increased sickness absence, especially for men.

(Kivimäki et al. 2003b.) A workplace with high organizational justice was associated with a decreased risk for a long-term negative effect on employees' health due to stressful events outside work (Elovainio et al. 2010).

Work demands and control have been found to be associated with sickness absence spells (North et al. 1996). These results were confirmed in a Dutch study (Smulders & Nijhuis 1999) which stated that high job control and high job demands were related to a low level of absence. Boedeker's (2001) study also reported that when psychological demands increased, risk for sickness absence decreased. This was speculated to be related to pressure to attend work or as an expression of work commitment. In a study by Gimeno et al. (2004) high psychological job demands and low job control were associated with high rates of sickness absence. In addition, there are many other studies demonstrating an association between low job control and sickness absence (Ishizaki et al. 2006, Duijts et al. 2007, Laaksonen et al. 2010b). By contrast, Hanebuth, Meinel & Fisher (2006) and Roelen et al. (2008) found no connection between job demands or job control and sickness absence, likewise Labriola, Lund and Burr (2006) between psychological job demands and sickness absence.

There are only a few studies on changes in the psychosocial work environment and sickness absence. Vahtera et al. (2000) studied changes in the psychosocial work environment among Finnish municipal employees during the economic recession and found that negative changes in job control, job demands and social support increased the risk for sickness absence. Another study conducted among municipal employees reported that adverse changes in the psychosocial work environment (decision latitude and increasing levels of job demands) were associated with long spells of sickness absence, but not with short spells. Improvements in social support at work reduced the risk of long spells. (Head et al. 2006.)

Satisfaction with working conditions

The prevalence of harms at the workplace has been shown to be associated with job dissatisfaction, which is further associated with sickness absence (Böckerman & Ilmakunnas 2008). Laaksonen et al. (2010b) found that low job satisfaction among men was one factor among the psychosocial working conditions which was associated with any length of sickness absence spells. Satisfaction with psychosocial working conditions has also been found to have an independent impact on lower level of sickness absence (Munch-Hansen et al. 2009). On the other hand, global satisfaction with psychosocial working conditions has been found to be associated more with sickness absence than specific satisfaction with single factors of working conditions (Munch-Hansen et al. 2008). Satisfaction has long been in the focus of

sickness absence research. Satisfaction was already in an essential role in the theory of Ås (1962) regarding absenteeism.

Absence culture

Even if studies on organization culture and behaviour related to absence can be found, they rarely specifically discuss sickness absence (Allebeck & Mastekaasa 2004, Bamberger & Biron 2007). A Finnish follow-up study (Väänänen et al. 2008a) included sickness absence and integrated views of occupational health and organizational management. The study targeted the social components of work (group absence norms and group cohesion) and analysed their associations with sickness absence both at the individual and at the group level. The researchers found that sickness absence was affected by group characteristics and individual attitudes not directly, but indirectly. Among employees working in the group where absence norms were tolerant and the group cohesion weak, the individual attitudes towards work attendance influenced the absence behaviour. (Väänänen et al. 2008a.)

Low adjustment latitude and high attendance requirements have been found to be related to the decision to take a sick leave (Johansson & Lundberg 2004). Another study reported that attendance requirements are affected by factors related to health care, work and labour market and the self-image of an employee and her/his responsibility to work (Hansson, Bostrom & Harms-Ringdahl 2006).

2.2.2.3 Work arrangements

Work arrangements have multiple meanings and include multiple modes of action which vary across situations and contexts. In the present study the work arrangements refer primarily to 1) the arrangements made to adjust an employee's impaired work ability to the work demands and work environment (senior programme) or 2) the arrangements at the workplace related to sickness absence.

Workplace interventions are often planned to produce such work arrangements which it would be useful to maintain in practice. There are numerous reports on workplace interventions including differing actions and arrangements, such as interventions to prevent work disability (van Oostrom et al. 2009) to promote health (Anderzen & Arnetz 2005, Hughes et al. 2011, Osilla et al. 2012), and to manage sickness absence (Fleten & Johnsen 2006, van Oostrom et al. 2009, Higgins, O'Halloran & Porter 2012, Palmer et al. 2012). On the other hand, the impacts of worksite wellness programmes have not been extensively studied (Osilla et al. 2012).

Arrangements such as health promotion at workplaces focusing on ergonomics have been shown to reduce sickness absence as well as to promote a healthy lifestyle (Kuoppala, Lamminpää & Husman 2008), even if there is a study reporting that

the effectiveness of interventions to manage sickness absence is slight and dubious (Palmer et al. 2012) and other studies reporting that reducing sickness absence may be easier to implement than improving health outcomes (van Oostrom et al. 2009, Aas, Ellingsen & Gibson 2010). On the other hand, education and psychological methods have been found not to affect sickness absence (Kuoppala, Lamminpää & Husman 2008).

Human resource management with organizational policies and practices has also a prominent role in sickness absence management (Roelen & Groothoff 2010). Important contextual factors of the interventions for managing long-term absence have been suggested. These include support from top management, the size and structure of the organization, the level of investment and the quality of relationships between managers and staff (Higgins, O'Halloran & Porter 2012). Bakker et al. (2003) suggested that human resource managers should take account of the different aspects in the working environment depending on whether they try to reduce absence duration or absence frequency. To affect the duration, job demands (e.g. workload and problems with reorganization) have to be optimized, whereas in order to affect the frequency attention should be paid to the availability of job resources (e.g. job control and participation in decision-making). Another study on absenteeism (not exactly sickness absence) found that using flexible job design and problem-solving teams, reduced absenteeism (Dionne & Dostie 2007). In addition, the arrangements matching actual and desired working time were shown to reduce sickness absence and presenteeism among employees with poor health (Böckerman & Laukkanen 2010).

Only few studies have been presented on the arrangements at the workplace related to the situation when someone is absent. It could be assumed that having a substitute (replaceability) when an employee is absent, might influence the prevalence of sickness absence. Contrary to this, Böckerman and Laukkanen (2010) could not confirm any association between replacement and increased sickness absence rates, which was found to be a minor part of their results.

Only few intervention studies related to older workers' work ability have been reported. An age management intervention intended to promote the health and work ability of the ageing workforce was conducted in the company Vattenfall Nordic AB in Sweden in the 2000s. This intervention programme focused on both individual and organizational attributes. The 80-90-100 schedule allowed the participants to do 80 percent of their jobs while receiving 90 percent of the salary and earning 100 percent pension points. This programme succeeded in raising the average retirement age from 58 years to 62.5 years over six years and in decreasing

sick leave rates of employees participating in the programme compared to the company average. (Mykletun & Furunes 2009.)

2.3 Starting points of the present study

This summary of the dissertation was built from different theoretical aspects related to sickness absence. Work conditions have been scrutinized through a stress model (Sutherland & Cooper 1990), meaning that factors of physical working conditions (e.g. draught, noise, and repetitive movements), factors of psychosocial working conditions (e.g. leadership, team spirit) and factors of work arrangements (e.g. substitution during absence) were seen as sources of stress (stressors) at work. These might cause an individual symptom of occupational ill health (e.g. sickness absence).

However, to broaden the approach and to introduce absence culture into the framework, it is useful to take a generic absence theory as a tool (Steers & Rhodes 1978, Johansson 2007). It pointed out the meaning of the individual. The threshold for an individual to take sick leave depends on motivational factors; the incentives and requirements to be either present or absent. The assumption is that in such cases the individual contemplates his/her threshold with respect to the ability to work.

It is possible to locate occupational stressors in the work ability house model (Ilmarinen 2006a). In the present study physical and psychosocial factors and work arrangements can be found on the fourth floor (work). Sickness absence culture may be located on both the third and fourth floors. Absence culture consists in the work community and organization, which are on the fourth floor. However, attitudes and motivation to work from the third floor influenced how an employee shapes absence culture at the workplace. Furthermore, absence culture affects an individual's internal discussion on the threshold for taking a sick leave.

Underlying the present study is the notion that an employee has a work ability which already takes into account the work demands – human resources aspect in a certain sickness absence culture. After that an employee weighs up the motivational reasons to take or not to take a sick leave. This thought allows the motivation to appear in two places; inside the work ability (motivation to work) and after that in the situation where sickness absence is considered.

The main concepts used in the study were working conditions and sickness absence. Working conditions were here perceived as physical and psychosocial environmental factors of work broadening into the work arrangements (including a senior programme intervention and arrangements at work during absence), which are related to organizational aspects. Sickness absence in the study refers to absence

legitimated by a medical certificate or self-reported sickness absence (among white-collar workers about one to three days) and registered in the payroll of the human resource management.

3 Aims

The main aim of the study was to investigate the association between sickness absence and absence culture, working conditions and work arrangements among employees working in the food industry in Finland. More specifically, working conditions and work arrangements were regarded from the perspective of ageing.

The specific research questions were

1. What attitudes (meanings attached) to sickness absence and culture are to be found at workplaces and how are they associated with sickness absence?
2. How are physical and psychosocial working conditions associated with sickness absence?
3. How do work arrangements affect sickness absence?

4 Material and methods

4.1 Study context

This study was concerned with the food industry. The data came from employees working in a large food industry company in Finland. The company employed about 2,000 workers, mostly blue-collar workers (about 80%) and women (about 60%). The company has production facilities in four localities in Finland. There is a factory for processing raw meat and another factory for processing canned foods, producing like potato salads, porridges, desserts and jams. One factory produces bakery products like pizzas, meat pies and cooked meat products. In the same locality there is a dispatch department. The last factory produces convenience foods and has a chicken slaughterhouse. In addition there is an administration unit housing management, sales and marketing, finance, purchasing, export and communications.

This study was a part of a larger project funded by the Finnish Work Environment Fund. The project, entitled ‘Sickness Absence and the Food Industry’, covered four factories of the company and the central administration unit. It was conducted during the years 2003 to 2010 in the School of Health Sciences at the University of Tampere. The data included four surveys (2003, 2005, 2007 and 2009), sickness absence register 2003–2008 and interviews in 2006. The study project was targeted at sickness absence and its determinants (physical and psychosocial working conditions, atmosphere, work ability, health, workload, occupational safety and job insecurity). The study was approved by the ethics committee of the Pirkanmaa Hospital District.

4.2 Participants

The participants of this study consisted of blue-collar and white-collar food industry workers. More specifically, Study I addressed blue-collar workers from three of the company’s factories. Altogether 58 employees participated in the group interviews.

Study II included both blue-collar and white-collar workers who responded to a survey in 2005 (N=1,453) and who had given their written consent to participate in the study (N=1,201). The response rate was 60%.

In Study III the subjects included both blue-collar and white-collar workers, who had given their consent to the survey, namely the employees (N=734) responding to the two surveys 2005 (N=1,201) and 2009 (N=1,398). The response rate in 2005 was 60% and in 2009 72%.

In Study IV the subjects were blue-collar workers defined by age. Only those aged 55 years and older were included. There were 129 employees who participated in the senior programme (intervention group) and 229 employees who did not participate in it (control group).

4.3 Study design

The data of the qualitative study (I) consisted of nine group interviews. Three interviews were conducted in three different factories in autumn 2006. Group size ranged from five to eight interviewees. In all, 58 volunteer blue-collar workers (food processing employees, not white-collar workers or managers) participated. The majority were women (44 women, 76%). In two of the nine groups all the participants were women. All the interviewees were on permanent employment contracts. The interviews were conducted during working hours.

In the second study (II) the survey was conducted in 2005 and sickness absence rates summed from the period 2003 to 2005 were used. Eight survey propositions related to attitudes and arrangements at the workplace during sickness absence were examined with short absence spells (1–7 days), long absence spells (>7 days) and sickness absence days. The study was conducted on those subjects who had “time at risk” (described in the Chapter 4.4.2) of being on sick leave for at least six months during these three years (N=1,198). The mean age of the sample was 41 years (range 20–66). Most of the subjects were women (63%, n=756) and blue-collar workers (75%, n=898).

The sample for Study III was formed of those employees who responded to two surveys (2005 and 2009). After those with less than six months’ employment had been excluded and those with sickness absence data from both 2004 and 2008 had been included, the number of subjects was 679. Most of these were women (64%, n=433) and blue-collar workers (70%, n=475). The mean age of the sample was 41 years (SD 9.7), ranging from 20 to 62 years. In Study III sickness absence days were reviewed from the year preceding the survey, the reason being the assumption that

the responses given in the surveys conducted at the beginning of the year reflected the past experiences of the employees rather than their future expectations. Changes in the working conditions from 2005 to 2009 were analysed with changes in the data on sickness absence from the years 2004 and 2008. In Study III the results were presented for two age groups (< 50 years vs. ≥ 50 years), on the assumption that the changes in working conditions would affect different age groups differently. For instance, there was an unwritten hypothesis that physical factors might be more significant in sickness absence in the older group than in the younger group.

The fourth study (IV) was based on the sickness absence register data (Figure 2). Information about the participants of the senior programme intended for employees aged 55 years or above was obtained from a human resource management unit of the company. After that it was possible to identify the participants of the senior programme (intervention group, $n=129$) and subjects of the same age who did not participate in the senior programme (control group, $n=229$) but worked in the same company. Gender distribution was similar in both groups and the majority of the participants were women. The follow-up time ranged from one to five years and was on average three years. In this study participation in programme was offered from 2004 to 2008. The number of sickness absence spells and days as well as person-years (described in the Chapter 4.4.2) were summed up for each individual during the follow-up time. Sickness absence was measured by the total number of days and by spells of different durations (1–3 days, 4–7 days, 8–21 days and over 21 days) in relation to person-years. In the intervention group these variables were calculated for the year preceding entry to the programme (which was the baseline) and for the years in the programme (follow-up). In the control group the baseline was the year before a participant reached the age (55 years) for inclusion in the programme.

Year of inclusion and number of participants per group			Year of baseline and follow-up years					
	Interv. Group N=129	Control group N=229	2003	2004	2005	2006	2007	2008
2004	35	129	baseline	follow-up				
2005	17	21	----	baseline	follow-up			
2006	27	27	----	----	baseline	follow-up		
2007	30	28	----	----	----	baseline	follow-up	
2008	20	24	----	----	----	----	baseline	follow-up

Figure 2. Study (IV) design

4.4 Methods

4.4.1 Questionnaire

Questionnaire surveys on physical and psychosocial working conditions and work arrangements were distributed to all employees in spring 2005 and in 2009. The employees were allowed to fill the questionnaires during their working hours. Personal information (name and social security number) was elicited to enable combining survey and register data individually. This information was deleted after allocating each participant an identification code. The survey in 2005 was used in Study II, in which the statements about the attitudes and arrangements during the absence were explored (see Chapter 4.4.1.3). The statements used in Study III (see Chapters 4.4.1.1 and 4.4.1.2) were the questions and the statements on physical and psychosocial working conditions drawn from the surveys of 2005 and 2009.

4.4.1.1 *Physical working conditions*

In Study III physical working conditions were elicited with questions adopted from the quality of Work Life Survey of Statistics Finland (Lehto & Sutela 2009). The questions were presented in the questionnaire as follows: “Do the following factors cause inconvenience or strain in your work?”. Response alternatives used in this study addressed environmental exposure (draught, noise, heat, cold, poor indoor climate and poor lighting) and biomechanical exposure (repetitive movements and poor work postures). These single questions were scaled by a Likert response scale, from 1 = very, very little inconvenience to 5 = very, very much inconvenience.

4.4.1.2 *Psychosocial working conditions*

Various elements of psychosocial working conditions have been found to be associated with sickness absence as described in Chapter 2.2.2.2 entitled Psychosocial factors. In this dissertation, especially in Study III, psychosocial aspects of work were measured by using the seven adjusted sum variables developed by Ruohotie (1993). The sum variables comprised organizational factors (1. incentive system and 2. task and goal system), skills of a supervisor (3. incentive and participative leadership), the factors describing the group process (4. team spirit and reactivity) and the factors of the work process (5. task value, 6. extrinsic incentives and 7. opportunities to influence one's work). The single replies were scaled on a 5-point Likert scale from 1 = “totally disagree/very probably not” to 5 = “totally agree/very probably”. In Study III mean scores of the sum variables ranging from 1.00 to 5.00 were used. The

statements included in the sum variables ranged from three to six propositions. The Cronbach's alphas of the sum variables in 2009 were as follows: 0.83, 0.77, 0.89, 0.82, 0.74, 0.71 and 0.71 respectively.

Incentive system includes five statements:

1. The personnel have an opportunity to develop their own and the work environment in this company.
2. My team engages in co-operation with other departments and gets information on what is happening in other departments.
3. In this company personnel are trained to increase the professionalism.
4. This company is interested in the well-being and satisfaction of the employees.
5. When decisions are made, note is taken of the opinions of the people whom who these decisions concern.

Task and goal system includes four statements:

1. This company has clear and logical/realistic goals.
2. In this company tasks are rationally organized.
3. In this company the decisions are made on the levels where sufficient and specific knowledge is currently available.
4. The personnel of the company have high-quality targets.

Incentive and participative leadership includes six statements:

1. My supervisor pays attention to my suggestions and wishes.
2. If necessary, I get advice and guidance from my supervisor.
3. My supervisor tells me what she/he thinks about my work performance.
4. My supervisor encourages her/his subordinates to participate and commit to the function.
5. My supervisor is interested in and takes responsibility for the advancement of her/his subordinates.
6. My supervisor trusts her/his subordinates and allows them to work independently.

Team spirit and reactivity includes six statements:

1. I can discuss my problems with colleagues.
2. In my department there is team spirit and a desire to pursue common goals together.
3. My colleagues discuss improvements in the work and/or the work environment.
4. My team makes good decisions and solves work related problems.
5. I have opportunities to discuss and influence what is happening in my team.
6. My team is effective.

Task value includes three statements:

1. My job includes different and varied tasks.
2. I can use my knowledge and skills in my work.
3. I must learn something new in my work.

Extrinsic incentives include five statements:

1. I believe that changing the tasks gives me opportunities to progress.
2. Doing my work well affects my salary and other benefits/rewards.
3. My colleagues' appreciation has encouraged me.
4. I feel that my work is appreciated.
5. I get encouraging feedback on my work.

Opportunities to exert influence include five statements:

1. I can influence to the decisions dealing with my work or work environment.
2. I can work independently and freely.
3. I participate to targeting the goals of my work.
4. I know what I need to achieve in my work.
5. I can see the bigger picture of which my work forms a part.

4.4.1.3 Attitudes and arrangements at the workplace during absence

Study II also used the 2005 survey. This survey included a set of the statements (presented below) intended to elicit the employee's conception of the following situation; what occurs at the workplace when someone is absent? Five statements concerned the work arrangements (arrangement statements 1–5) and two statements reflected the attitudes of the work community and one statement estimated the likely individual behaviour but is included here in the statements on attitude (6–8). (Virtanen, P., Vahtera & Nygård 2010.) All these eight single statements were scored on a Likert scale from 1 (totally disagree) to 5 (totally agree). The responses were classified into a dichotomous variable (1–2 disagree and 3–5 agree).

Imagine that you have to be on sick leave for a week. What do you think would be going on at your workplace?

1. The employer will take a substitute.
2. My co-workers will have to do my tasks.
3. My tasks will wait until I return to work.
4. After returning to work will I have to work harder or longer due to the accumulated work.
5. My tasks will be done well despite my absence.
6. My absence will strain the atmosphere in my work community.
7. I feel worried about my work during my absence.
8. In my work community it is regarded as a matter of course that there is someone on sick leave most of the time.

4.4.2 *Sickness absence register*

The data on sickness absence from 2003 to 2008 was obtained from the human resource management unit of the company. Information from the personnel register (for example data on age, gender and occupational status) were also included. Sickness absence was measured as number of days and number of spells (with various classifications of length of spells). Absence measures were used related to the “time at risk” of being on sick leave. This was done by subtracting from the duration of the employment contract the time absent from work for reasons other than sickness and holidays during the years / time frame studied (in Study II the years 2003, 2004 and 2005, in Study III the years 2004 and 2008 and in Study IV the years 2003, 2004, 2005, 2006, 2007 and 2008). The measure of “time at risk” is a person-year, which receives a value 1.0 if a person has been at work for a whole year. Person-year related absence is obtained by making a division (absence rate / person-year) for each employee.

In the company in which the study was conducted, a medical certificate is required for every sickness absence. Blue-collar workers must present a certificate from a nurse or a physician for each day they are on sick leave, whereas white-collar workers are allowed to self-report sickness absence for about one to three days. All employees need to present a physician’s certificate for sick leaves lasting four days or more.

4.4.3 *Group interviews*

Group interviews were selected as a means of gathering data on employees’ sick leave experiences and the prevailing practices. Moreover, sickness absence related culture and socially approved practices of the workplace were of interest. Group interview was selected as the method rather than individual interviews because discussions in groups more likely follow the same structure and pursue social acceptance in the same way as does action in workplaces compared to individual interviews. (Kitzinger 1994, Barbour 2007.)

Prior to participating in the interview letters were sent to participants informing them about the study. In each interview there were two interviewers. A. Siukola (the present author) was present at all nine interviews. The roles of the interviewers differed. A. Siukola was the main interviewer and a colleague the observer. The name of the participating employee and the department where she/he worked were elicited. The nine interviews were conducted in the respective meeting rooms of the

three factories. Participation in the interviews, lasting from one and a half to two hours, was voluntary. At the beginning of the interview the researchers described the background and the purpose of the study and the interviews. The interviewers encouraged the participants to discuss the subject freely, but at the same time they were responsible for covering all the study themes during the interviews. The discussions were active and fluent in all groups. The interviews were recorded and transcribed. The interviewees' names and other identification were deleted by replacing them with identification codes.

A thematic frame for the group interviews was created on the basis of the earlier studies (e.g. Hoverstad & Kjolstad 1991, Siukola et al. 2005). The target was to learn about the characteristics and practices of the work, the action of the employees and the meaning the employees attached to sick leaves, which might be impossible to reach with surveys alone. The group interviews were planned to cover seven themes: 1) the nature/characteristics of food industry work from the sickness absence point of view, 2) progress of a working day if a workmate is absent, 3) progress of a working day if a workmate is sick at work (presenteeism), 4) a supervisor's role related to sickness absence, 5) the effect of family situation on sickness absence, 6) the meaning of age relative to sickness absence and 7) reasons for differences in sickness absence rates between factories.

A preliminary analysis of the interview data led to the regular study questions set in Study I. They were

- What are the characteristics of food industry work and what is their meaning for sickness absence?
- How are psychosocial working conditions related to employees' sickness absence?
- What are the acceptable ways for an employee to act in a situation of absence due to illness?

4.4.4 *Senior programme*

The senior programme was implemented in the company in 2004 and was intended for employees aged 55 years and over who had been employed in the company for at least five years. Participation was based on an employee's own initiative. The participating employees had an appraisal with their supervisor. Depending on the supervisor's recommendation the production manager made the final decision on the employees' inclusion in the programme. The programme was a part of the company's own development activities and did not utilize external consultants.

The declared aim of the senior programme was to maintain and promote work wellbeing and work ability among ageing employees. This enterprise level aim was assumed to increase ageing employees' willingness to work until age-based retirement. In addition, with the programme the company aimed to prevent age discrimination, thereby enhancing appreciation of the long work experience of the older workers. From an individual perspective the programme offered options to exemptions and for work arrangements adjusted to the employee's work ability. The content of the programme is described in Figure 3.

- discussion with the supervisor (about the work demands, work ability, prospects for changing the content of work, need for rehabilitation or training)
- wage security (wage is not reduced even if the work is changed to be less demanding)
- option to be exempted from night work or three-shift work
- reduction of work task rotation
- option to exchange bonus in salary for extra time off
- option for free or subsidized physiotherapy on the company physician's referral

Figure 3. The content of the senior program

4.5 Data analysis (for Studies I–IV)

4.5.1 *Group interviews (I)*

On the basis of these research questions the interview data was analysed in detail using content analysis (Tuomi & Sarajärvi 2003, Barbour 2007). Statements in response to the study questions were picked up. Responses to the first two questions having the same content were combined and expressions were simplified for the categories, which had one, shared subcategory (Tables 1 and 2 from the original publication of Study I). The third study question was answered by analysing approved and non-approved sickness absence related actions from the food industry workers' talk and statements. In this phase the data was conceptualized. During analysis the ordinary data was reread several times. This was done to ensure that the connection to the ordinary data was not lost.

4.5.2 *Sickness absence and working conditions (II–IV)*

Sickness absence data were used in Studies II and III combined with the questionnaire. Study IV was based on absence register data only. In Studies II–IV sickness absence rates such as spells and days were described by medians and ranges due to the non-normal distribution of the variables. In addition in Study II mean values per person-year were presented in order to facilitate general comparability. Sickness absence phenomena has many dependent factors (e.g. age, gender, occupational status), which can be confounding if not taken into account. In this dissertation different distributions (d) or adjusting (a) were used in analysing the data; by age in Studies IV (sample based on age) and III (a,d), by gender in studies II–IV (a) and by occupational status in Studies II (d), III (a) and IV (targeted only at blue-collar workers). The baseline level of sickness absence (III, IV) and of the working conditions (III) was also adjusted in the studies.

In Studies III and IV changes in sickness absence rates between the years were compared. These were analysed by Wilcoxon Rank Sum test within groups. In Study III changes in working conditions were also analysed, but using paired samples t-test.

In Study II a generalized linear model (negative binomial) was used to analyse the sickness absence variables and the survey propositions. The number of sickness absences is a form of count data and thus Poisson regression model is usually fitted to the data (McCullagh & Nelder 1989). However, in the data of Study II the analysis with the assumption of a Poisson distribution showed the variable to be over-dispersed. After this rate ratios for the accumulation of sickness absence variables were defined on the assumption of negative binomial distribution of the variable (Gardner, Mulvey & Shaw 1995). In Study II each survey proposition was analysed separately. In Study IV sickness absence of the groups was compared during follow-up using generalized linear models (McCullagh & Nelder 1989), assuming Poisson distribution for absence spells (because the dispersion in the spells follows the model's assumptions) and negative binomial distribution for absence days.

In Study III the interest was in the changes in the working conditions, which was calculated by subtracting the survey values for 2005 from the values for 2009. The change in sickness absence was calculated similarly; the absence rate for 2004 was subtracted from the rate for 2008. The changes in the working conditions and the changes in sickness absence were analysed as a multifactor model by linear regressions with Enter method. Analyses were done by pooling variables of working conditions in the same model and by separate analyses for the set of psychosocial factors and the set of physical factors.

Statistical analyses were performed by SPSS for Windows, in Study IV with version 15.0 and in Studies II and III with version 19.0.

4.5.3 *Combining results of attitudes to sickness absence and arrangements (I and II)*

The studies (I–IV) included in this dissertation were all conducted using one, either qualitative (I) or quantitative (II–IV) method. Summarizing the sub-studies meant that elements of qualitative and quantitative methods had to be combined in the dissertation. Combining the data could be done on the basis of the importance attached to the qualitative and quantitative approaches and on the other hand according to the chronological ordering of the approaches (Brannen 2004, 314). This study did not attempt to use qualitative or quantitative data for testing another dataset; rather complementary aspects of using both methods were relied on. This means that qualitative data was used to understand social processes and quantitative data to examine statistical associations and generalizability (Onwuegbuzie et al. 2007). The design of the present study may be close to the convergence model of a mixed methods triangulation design, where quantitative and qualitative data on the same phenomena are collected and analysed separately, after which the results are combined by comparing the results during the interpretation (Creswell & Clark 2007).

Regarding the dissertation as one large study may allow the use of the term mixed methods, which means using different combinations of qualitative and quantitative methods in a single study (O’Cathain & Thomas 2006, Tashakkori & Creswell 2007). Mixed methods research is not research including only quantitative and qualitative approaches. It necessitates integration of the methods, analyses or reporting of the results. (Niglas 2009, Mertens 2011.)

In the present study qualitative and quantitative methods were combined to obtain results on the sickness absence related attitudes and arrangements at the workplace based on Studies I and II (Figure 4). Study I was a qualitative study with group interviews and Study II was a quantitative study combining the survey and the register data.

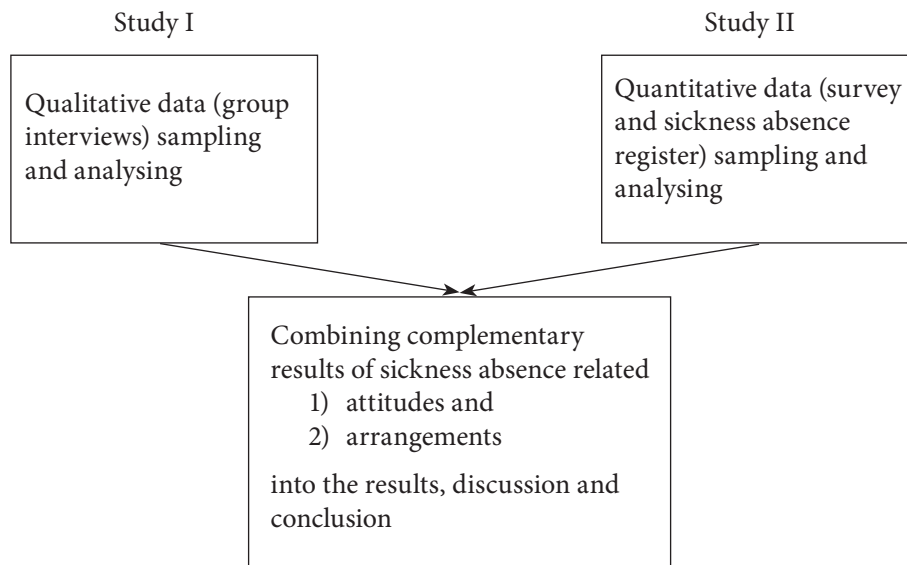


Figure 4. Combining of different methods and analysis in the same aspects in the dissertation study

5 Results

5.1 Attitudes to sickness absence and culture at the workplace (I and II)

In Study I the employees talked about their work and perceived sickness absence practice, the attitudes and the culture in their work community. The talk of the employees described the characteristics of their own work in the food industry compared to other jobs from the point of view of sickness absence. Three main categories emerged: work demands, appreciation of work and risks in working while sick. Simplified expressions about the nature of the work meant that work demands were related to monotonous work tasks and pace of work. Physically demanding work with exposures (draughts, cold, heat, humidity, and slipperiness) was also mentioned.

W3: Well, this food industry is heavy work, all that lifting.

M3: and draught

W3: Sometimes it's hot as hell and sometimes cold, and all that, of course it increases sickness absence. GROUP 8

Appreciation of the work was simplified as the low level of appreciation of the work in the interviewees' own eyes and the eyes of others.

W5: I don't consider this like a special kind of work. This is work and you get paid, and that's the reason we are here, well (-) this is the kind of business that (-) there is a lot of people without any training for this field. This doesn't require any special training, anybody could get a job here. This ain't no dream job. Nobody dreams about this as a child, when asked at the age of three. You don't want to be a food packer, no one has a dream job like that. But I don't know, if a person adopts a high work moral, it won't have anything to do with absences. GROUP 2

Simplified expressions about the risks related to working while sick were the impact on the risk of infecting colleagues and the foodstuffs, but also the increased risk of accidents. However, the work characteristics did not explain sick leaves in employees' conversations.

M1: The employer at least doesn't put on any pressure that if you have a flu, you have to take a sick leave.

W5: Yeah, or an infected wound on a hand or an eye infection

W4: Having a high temperature is the only one that allows you to have a sick leave.
GROUP 2

Preferably the meanings of the psychosocial working conditions were meaningful aspects for sickness absence according to the group interviews (Study I). It was possible to categorise them for 1) the appreciation of work and taking care of employees, and 2) working atmosphere. In the interviews the employees described situations and feelings, which were presented as simplified demonstrations, for example; lack of present supervisors, lack of information, inadequate technical maintenance and inactive showing the ropes for novice employees. These all may cause the employees frustration and they may interpret it as a sign of the employer's failure to take care of the employees.

W2: Sometimes half of the shift you collect some stuff, like on a meat pie line, the women collected meat pies for three hours, when a handyman had the time and fixed it in 15 minutes. And they had to be re-packed again, the pies.

W3: Well, I don't (-)

W3: Sometimes it is really frustrating

W3: So could this also be a reason for sick leaves somehow

W: Pretty sure, I think so. GROUP 6

Working atmosphere was a meaningful aspect when a worker was considering whether or not to take sick leave (in this dissertation referred to as a threshold for taking sick leave).

W2: It lowers it (the threshold), if the atmosphere is poor, it lowers the threshold so it can be other way round so in the morning, is there anything wrong with me or not, so that I wouldn't have to go there, and it shows, if there have been major things in the atmosphere, it shows immediately in the sickness absences. GROUP 5

Approved and not-approved action in case of sickness absence was articulated in the interviews (Study I). This aspect was not directly elicited, but could be identified in the talk. The employees deprecated if an employee had a low-threshold for taking sick leave or if there was a suspicion that the reason for the sick leave was not a matter of health. The interviewees disapproved of an employee using sick leave as a personal weapon against the supervisor. However when an absent employee is known to share the same feelings with the employees from the same work community, the absence can be seen as acceptable action. On the other hand, it was not approved if an employee was working too conscientiously and having a high threshold for taking sick leave, which may mean that she/he would come to work even if she/he were sick. Employees behaving like this were referred to as “eager beavers”. According to the food industry workers these “culturally” approved practices at the workplace affected sickness absence due to an individual threshold of taking sick leave.

In Study II the attitudes towards absence were measured by three statements drawn from the survey of 2005. They were analysed separately for blue-collar and white-collar workers. Almost one third of the blue-collar workers and less than half of the white-collar workers agreed that their absence would put a strain on the atmosphere in their work community. Among the blue-collar workers 31.0% felt worried about their work during their absence, but among white-collar workers the corresponding rate was 81.7%. The third statement concerned how commonly it was regarded as a matter of course that most of the time there was someone on sick leave. This was more commonly agreed among blue-collar workers (79.3%) than among white-collar workers (36.7%). This statement on attitude was statistically significant regarding sickness absence. Those blue-collar workers who took it for granted that there was always someone on sick leave had increased risk for sickness absence; for short spells (RR 1.27 [1.05–1.52]) and for days (RR 1.25 [1.05–1.48]).

Attitudes related to sickness absence were explored in group interviews (Study I) and in a survey (Study II). The results of these studies were combined, leading to the conclusion that among blue-collar workers it is quite common for someone to be on sick leave. In addition, according to the interviews (Study I) there was a slight suspicion in the employees’ minds that someone was sometimes on sick leave even if it might not be necessary. These aspects, absence as habitual behaviour and a suspicion of misuse of sick leaves, may be indicative of a culture of absenteeism in which absences are very common and even if some of them are deemed unnecessary (i.e. abuses) the large number of absences serves to mitigate the significance of social “disapprobation” when the frequency of absences renders them an “acceptable” way to act.

5.2 Working conditions and sickness absence

5.2.1 *Physical factors in the follow-up study (III)*

Changes in physical factors (environmental and biomechanical exposure) of working conditions during the follow-up (2004–2008) were analysed in Study III. All changes were positive with the exception of poor lighting, which remained at the same level. Statistically significant positive change means that the perceived strain due to exposures to environmental (draughts, noise, cold working conditions) and biomechanical (repetitive and monotonous movements and poor working postures) indicators had diminished. On the other hand, sickness absence increased significantly ($p < 0.001$).

The changes in the age groups were also positive or there was no change with the exception of increased exposure to poor lighting in the older employees' group (≥ 50 years). The only significant change in the older group was a decrease in perceived noise, whereas in the younger group there were improvements in exposures to draughts, cold, repetitive and monotonous movements and poor working postures.

The changes in physical working conditions associated with the change in sickness absence days were few. An increase in poor working postures was accompanied by an increase in sickness absence (separately $p = 0.004$ or pooled $p = 0.029$). Nor did age stratified analysis increase the significant results. Analysis of pooled physical and psychosocial factors revealed no new associations, despite the finding that if exposure of cold increased, so did sickness absence ($p = 0.041$) in the younger age group. However, the association between poor working postures and sickness absence disappeared among older employees.

5.2.2 *Psychosocial factors in the follow-up study (III)*

In Study III the changes of the psychosocial factors of the working conditions were found to improve significantly according to all seven indicators used (presented in Chapter 4.4.1.2). In the age stratified analysis (groups of employees < 50 years and ≥ 50 years) the results differed from the analysis for all subjects only in the following indicators: the change of task and goal system was no longer significant in either of the groups, whereas team spirit and reactivity revealed significant among younger employees.

The only change in psychosocial factors to be significantly associated with the change in sickness absence days was team spirit and reactivity. It was only indicative

($p=0.084$) regarding all study subjects, but in the age stratified analysis statistically significant among the younger workers (physical and psychosocial separately $p=0.027$, pooled $p=0.047$). This meant that a deterioration in team spirit and reactivity signalled an increase in sickness absence.

5.2.3 *Arrangements (I, II and IV)*

5.2.3.1 *Absence related arrangements at the workplace (I and II)*

The main results of Study I were reported above (Chapter 5.1), but because they were also related to arrangements, to them are reverted here. Study I showed that food industry workers have experiences of poor arrangements at the workplace. For instance, inadequate technical maintenance and inactive initiation into the work for new employees were found to be the reasons for sickness absence. These arrangements were indirectly associated with sickness absence, by creating feelings of frustration and not being taken care of.

More directly the arrangements at the workplace during absence were explored in Study II. Arrangements were scrutinized by means of five statements (presented in Chapter 4.4.1.3). Work arrangements during absence differed in blue-collar workers' and white-collar workers' responses. An exception to this was the perception that co-workers had to do the work of an employee during her/his absence (73.5% blue-collar workers and 69.0% white-collar workers). Otherwise, differences in the arrangements were clearly discernible. For example, 7.5% of blue-collar workers and 78.7% of white-collar workers had to work harder or longer after returning to work from a sick leave.

Three of the five work arrangements studied related to a situation involving absence from work (substitution, jobs waiting, have to work harder after returning to work) were associated with sickness absence. All these were associated with short sickness absence spells (1–7 days). Substitution during absence increased the risk of absence among white-collar workers (RR 1.58 [1.10–2.29]). If blue-collar workers had to work harder after being absent they were at decreased risk for short spells (RR 0.60 [0.45–0.80]). If jobs could wait until the return to work, decreased risk for short spells of absence was found in both occupational status groups (blue-collar workers RR 0.73 [0.56–0.96] and white-collar workers RR 0.63 [0.45–0.87]).

These same arrangements were similarly significant for long spells (>7 days). However, working harder after absence decreased the risk for long spells of absence in both occupational status groups. This statement retained its significance for absence days in both groups, meaning that if it is likely that an employee must work

harder after a sick leave, she/he was less likely to take sick leave. Substitution was a significant factor for white-collar workers regardless of the length of absence. If the employer took on substitutes for white-collar workers, they were more likely to take short and long sickness absence spells and days.

5.2.3.2 Arrangements for ageing employees (IV) – the senior programme

The senior programme described in this study was targeted at voluntary ageing employees (55 years or older) with individual arrangements and exemptions at the workplace. The association between the senior programme and sickness absence was studied by comparing the sickness absences of employees participating in the senior programme (intervention group) to the sickness absences of non-participating employees of the same age (control group).

In all 19% (n=25) of the intervention group had no sickness absence days year before the follow-up. In the control group (n=229) the share was 31% (n=70). During the follow-up the corresponding figures were 8% (n=10) and 15% (n=35). Except for spells over 21 days, the sickness absence rates of the intervention group were already higher at the baseline.

Sickness absence days increased significantly in both groups during follow-up. Sickness absence spells also increased, except for spells over 21 days in both groups and spells of 1–3 days in the control group.

The intervention group (participants in the senior programme) had a statistically significantly decreased risk (RR 0.68 [0.53–0.88]) for over 21-day sickness absence spells compared to the control group. By contrast, in the intervention group the risk was increased for spells of 1–3 days (RR 1.34 [1.21–1.48]) and 4–7 days (RR 1.23 [1.07–1.41]). The differences between the groups in 8 to 21 day spells and in absence days were statistically non-significant.

6 Discussion

Working atmosphere and team spirit among the psychosocial working conditions and working postures among the physical working conditions were related to sickness absence. Physical conditions seemed to have only a slight association with sickness absence according to the results of this study. In the talk of the blue-collar workers working in the food factory, the nature of food industry work was of no significance in relation to sickness absence, whereas appreciation of work, close relationship with supervisor, atmosphere and individual threshold for taking a sick leave were mentioned frequently. The results of the interviews and the survey showed that sickness absence culture may be related to increased sickness absence. Work arrangements during absence were found to be associated with sickness absence, especially if the jobs were waiting until the worker's return to work, if the absence meant working harder after returning or if the employer took a substitute to replace an absent worker. The work arrangement for older workers (a senior programme) was found to be associated with increased risk for short-term, but decreased risk for long-term sickness absence spells.

The results of the present study are discussed in this chapter, dividing them into a section on attitudes and cultural factors and a section on working conditions. The discussion also includes sections on theoretical and methodological factors and makes recommendations for future studies.

6.1 Attitudes to sickness absence and culture at the workplace

This dissertation is intended in part to be a response to the need for studies relating sickness absence to attitudes and 'absence culture' (Alexanderson & Norlund 2004). This topic was approached by group interviews (Study I) and by a survey (Study II). The threshold for taking sick leave was one of the main aspects articulated by the employees (Study I). This individual decision is made in interaction with the surrounding environment and culture. Employees must weigh up their own values and cultural aspects. The debating is a matter of assessing what is acceptable behaviour

(‘habitus’) in a certain situation and social conditions and what individuals wanted to do. There are different incentives and requirements for absence from work, and on the other hand for attendance at work (Nicholson 1977, Steers & Rhodes 1978). According to this study the threshold was influenced by psychosocial and physical elements in the working conditions. Adverse conditions lowered the threshold to go on a sick leave. There was no option to study what kind of mechanisms are included in a threshold (motivational aspects), which have been regarded as a meaningful aspect in the absence theories (Nicholson 1977, Steers & Rhodes 1978, Johansson 2007).

There has been much general discussion about the misuse of sickness absence. A study claiming that employees felt that their absence could be shortened or prevented (Kremer & Steenbeek 2010) has indeed been published, but studies about the misuse or abuse of sickness absence are not readily available. On the contrary, a study on employees with musculoskeletal complaints concluded that the decision to call in sick is made with caution (Hooftman et al. 2008) while another study stated that nurses were on a sick leave only due to real health problems, but not due to negative work attitudes (Schalk 2011). These findings confirmed that only individual debate on the absence-or-not dimension may not suffice to identify explanations for absence. Methods to study the organizational culture may be helpful here (Schein 1990).

Difference in cultures between white-collar and blue-collar employees may occur at workplaces. In Study II these groups were examined separately because of their different sickness absence practices (blue-collar workers need a health professional’s certificate from the first day of absence, whereas white-collar workers can themselves report their absence for up to three days). This practice may constitute and maintain the absence cultures of these groups. Another view could be that white-collar and blue-collar workers influence human resource management practices through their own actions. This, in turn, constitutes and maintains the practices of human resource management in sickness absence situations.

All in all, combining Studies I and II, it is possible to discuss if the blue-collar workers have a permissive absence culture. According to Study II four fifths of the blue-collar workers agreed that it is very common situation for someone to be absent. On the other hand, in Study I it was claimed that employees may have a fairly low individual threshold for taking to sick leave. This talk occurred in the interviews, and it is possible that it actually constructs a justification for varying thresholds.

6.2 Working conditions and sickness absence

In many studies, the present study among them, an association between sickness absence and working conditions was found. On the other hand, contrary results have also been reported (Roelen et al. 2006) or results with not more than a weak association between sickness absence and characteristics of working conditions (Wynne-Jones et al. 2009). In this study, even if an association was found among only a few factors of working conditions, these factors (atmosphere, team spirit, working postures) could be deemed especially important in the food industry.

A high rate of sickness absence is often explained by the sector-specific features of the food industry (such as hygiene regulations and changing physical working conditions). The experiences of the employees interviewed in Study I permit the conclusion that this explanation did not emerge in the talk of the food industry employees interviewed. It is open to discussion whether the employees took these characteristics of their work for granted and thus did not mention them in the interviews or if they did not really consider these facts important from the point of view of sickness absence.

From an individual perspective sickness absence may serve as a way to recover from stressful situations due to a high quantitative workload (Otsuka et al. 2007). It may be well to remember that if employees are stressed, they can cope with the situation if they have sufficient opportunities to manage and control situations by themselves. For instance, a study by Ala-Mursula et al. (2005) showed that if employees had opportunities to control their working hours it reduced the adverse effect of work stress on sickness absence, especially among women. In any case the work in food factories is scarcely amenable to such self-managed control. This according to the occupational stress model (Cooper 1986 by Sutherland & Cooper 1990) may mean that individual characteristics are more significant in a situation where the work conditions are easier to adjust to an employee's resources. This idea leads further to the work ability house model (Ilmarinen 2006a), which points out the balance between work demands and human resources. If the work demands are high (as in food factory work), it is possible that good physical capacity may compensate the situation, at least for a while. This balance may falter when the compensating element (capacity) diminishes. Then work ability decreases, which may have an effect on the sickness absence. According to the understanding of this dissertation, different motivational aspects (Steers & Rhodes 1978, Johansson 2007) may affect the decision to be on sickness absence take sick leave after the work ability has declined. This place of weighing up the incentives and requirements

of attendance and absence was revealed in the present study and was named as a threshold for taking sick leave.

Referring to the process described above, work arrangements may influence work ability. In such cases human resource management (HRM) plays an important role. For example, work arrangements during absence may have an association with sickness absence. The present study indicated that if jobs wait during the absence both white-collar and blue-collar employees were less likely to take a sick leave. The same was found if employees had to work harder after the absence. This is quite understandable, because the absence increases an employee's own workload after returning to work. The finding that having a substitute during the absence increased likelihood of sickness absence among white-collar workers is more complicated to interpret if it is presented as an opposite; not having a substitute during absence decreased the risk for sickness absence. One explanation could be that these workers are working while sick (presenteeism), but this was not studied here. Because this aspect was only significant for white-collar workers, it is open to discussion if blue-collar workers have such working conditions which make it difficult or impossible to work when sick. Laukkanen and Böckerman (2010) found no association between replaceability and presenteeism, but their study was conducted predominantly among blue-collar workers.

Adjustment latitude and attendance requirements have been shown to be associated with behaviour related to illness and sickness absence. This kind of illness flexibility means that strict attendance requirements may lead to less absenteeism, but more likely to presenteeism (being sick at work). (Johansson & Lundberg 2004.) The other side of the coin is that there may be more presenteeism if sickness absence rates decrease. In contrast to this, it is well to recognize that presenteeism may be more common in the group with high sickness absence rates. (Voss, Floderus & Diderichsen 2001b.) The present study offers no answer to this, even if, as the results of Study II suggest, presenteeism may indeed occur, as seen in the fact that there is a decreased risk for sickness absence if jobs are left to await the employee's return to work.

Even minor work arrangements, such as the promptness of technical maintenance at the workplace affected sickness absence. Prolonging the replacement of the broken lamp may affect the ergonomics or affect the mental work well-being by causing employees frustration. This was taken to be associated with recognition of work. In the surrounding work life, where work has been become increasingly individualized and hardly separated from the employees themselves, employees need more and more recognition of their work. Why does this "trend" not extend to traditional factory work in the food factory? Indeed, work in the factory is not in a vacuum.

Maybe the same paradox can be found in many jobs; even if the employees' most important aim is to do their work well, they feel that the work arrangements do not allow it. (Julkunen 2008.)

Age was taken into consideration in two of the studies included in this dissertation. In Study III it was assumed that age influenced perceived changes in the working environment. However, age did not play a special role in sickness absence in this study. In Study IV age was included as a perspective because the intervention targeted older workers (55+). The interest in conducting the study from the perspective of age arises from a wider discussion in Finnish society as a whole, for instance the debate about encouraging ageing workers to prolong their careers. This is an issue which is related to the national construction of the pension system. Ageing may mean challenges to occupational health care but also to employers. It is recommended that working conditions for ageing employees should be adjusted according to their work ability. (Ilmarinen 2006b.) Modifying working conditions and organizing the work to better accommodate ageing workers can be seen as methods by which enable workers to continue longer in working life (Härmä 2011).

Individually tailored arrangements in working conditions for ageing workers seemed to be rewarding according to the results of the senior programme intervention study (Study IV). Participation in the programme was voluntary. Because participants had more sickness absence than non-participants, this may indicate that the participants were more motivated to this kind of programme than their "healthier" peers. However, this difference in the baseline situations was taken into account in the statistical analysis by adjusting follow-up absence rates for the baseline sickness absence. The results of the intervention study showed a decrease in long-term absence among those who participated in the programme. Even if short-term absence increased, the result was important because lengthening of sickness absence is known to reduce the probability of returning to work (Lund et al. 2008). It may also lead to early retirement (Kivimäki et al. 2004). Moreover, the result may be important not least because it has been shown that long-term sickness absence among ageing workers is becoming more common (Lidwall et al. 2009).

On the other hand, it is possible to criticize programmes proclaiming social identity as an 'older worker'. It has been stated that when age is not used as a criterion for distinguishing between workers, the attitudes towards work may be more positive in the organization. (Desmette & Gaillard 2008.) In addition, age-orientated criticism points out differences between age groups (e.g. in terms of health, well-being, overall performance, personal initiative), which may be much smaller than the differences between individuals belonging to the age groups (Schalk et al. 2010). Could this criticism be the reason why only few programmes or interventions have

been reported in scientific studies? Be that as it may, it may always be unfair to target a programme or an intervention at selected groups. Opinions on the senior programme among employees were not studied here, but its explicit aim announced by the human resources management unit was to enhance the appreciation of ageing workers in the work community. Even if the first aim of the intervention was not to reduce the number of sickness absences, it might be justified to expect that the intervention would also affect sickness absence among older workers (Steenstra et al. 2009), as was indeed the case according to the present study (Study IV).

From the individual point of view, the motivation of ageing employees needs to be pursued in working life (Helin 2010). In addition to motivation, it has been found that the working environment is meaningful for those ageing workers, who thought that they “could work” until the age of 65 years or beyond. (Nilsson, Hydbom & Rylander 2011) The factors over which an employer can exert influence and which were associated with the statement “want to work” until age 65 years or beyond were management attitude and working hours. In both groups, the determinants of “want” and “can” work, were health, economic incentives and retirement decisions of close relatives and friends. (Nilsson, Hydbom, Rylander 2011.) Thus it seemed that dimensions influencing the decision to extend working life or to retire are not so closely related to the work itself. In addition, in a qualitative study older workers identified supporting factors for continuing at work. These included maintaining a healthy lifestyle, having a passion for work and education (Fraser et al. 2009). Given this background it is debatable if interventions like the senior programme (Study IV) are meaningful only for those employees who want to work regardless of increasing age. Moreover, it is also debatable if the motivation to work is an especially important factor for the successful implementation of different work arrangements among (older) employees. In this case, should methods be sought by which to enhance such motivation?

Even if positive results about the prevention of early retirement have been reported (de Boer et al. 2004), it should be remembered that recommendations for health promotion at the workplace can be troublesome due to the characteristics of the work. This may mean that improvements in working conditions cannot be managed due to the fact that some jobs or tasks will always be unpleasant. (Böckerman & Ilmakunnas 2008.) Furthermore, the employers’ interest in retaining older workers varies with the economic situation of the company or business cycle (Midtsundstad 2011).

In Study III age was not seen to be a significant factor in the association between working conditions and sickness absence. One possible reason for this could be that in the company the ageing workers have been treated extremely well, as witnessed

by the senior programme. In general there were a few determinants of working conditions which had a statistically significant association with sickness absence (team spirit from the psychosocial factors among employees less than 50 years old and poor working postures from the physical factors among employees of all ages), which could be considered even more intensely at the workplace.

All in all, one of the tasks of human resource management (HRM) is managing sickness absence and attendance. This means that HRM needs successful practices to promote health behaviour at workplace in targeting 'optimal' sick leaves. At the European level two trend have been observed to be in use in managing sickness absence at workplaces; either controlling or improving employees' health and well-being (Eurofound 2010). According to this study, it could be recommended that aspects such as arrangements during absence, team spirit, working atmosphere, working postures and absence culture, should be take into account in managing sickness absence.

6.3 Theoretical and methodological considerations

Theoretical understanding

The study contemplates sickness absence from the viewpoint of the individual, being simultaneously aware of the importance to human resource management, the surrounding community and society (Figure 5). Including the elements of the work ability house (Ilmarinen 2006a) in the understanding of sickness absence supposed that there are partly similar elements underlying sickness absence and work ability. On the other hand, in this study the elements of the stress model (Sutherland & Cooper 1990) were discernible through the concept of work ability.

Thus there is work ability, which already takes into account the balance between the work and the individual (adjustment). From the third floor there is the exit to the surrounding societies affecting the sickness absence phenomenon. Absence culture is modified by factors of work and attitudes. When the work ability is defined and the absence culture is what it is, an individual threshold determines when an employee ends up on a sick leave. The threshold is the place where motivational aspects in favour of attendance and absence are weighed up (Johansson 2007). Often the situation has both requirements and incentives favouring both absence and attendance. What aspects are stressed and when the final decision is made varies in different situations and between employees.

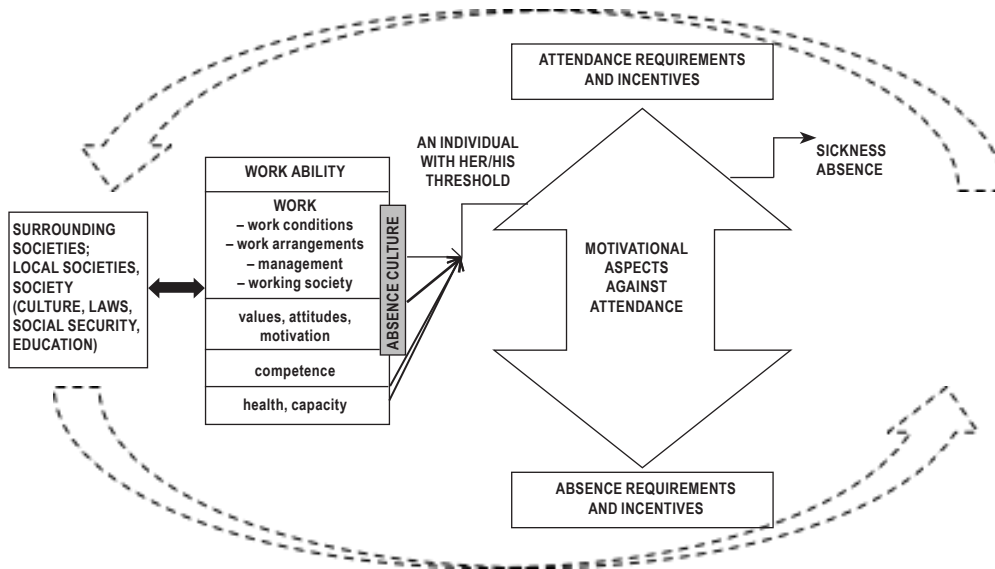


Figure 5. The understanding of the sickness absence phenomenon adopted in the present study

The understanding of sickness absence described in Figure 5 relies quite heavily on an individual's threshold for making decisions on whether or not to take a sick leave. This means that in the present study the theoretical understanding of sickness absence has similarities with the decision model of absenteeism (Steensma 2011). Such similarities can be seen in particular in Studies I and II, which concern the attitudes, culture and threshold for taking sick leave. Aspects of the organizational model (Steensma 2011) with attention to the rewarding properties of working in the organization are present in the dissertation (for instance the senior programme, Study IV). In addition, the occupational stress model (Sutherland & Cooper 1990, Steensma 2011) was adjusted in this study to include the effects of the work environment (objective stressors and subjective, perceived stressors) and the responses and workers' health (perceived working conditions, Study III). These meant in Study III that perceived physical and psychosocial working conditions were regarded as stressors and that the response in workers' health was regarded sickness absence.

According to the theory of sickness absence adopted in this study and the conclusions drawn from the results, it can be stated that sickness absence is close to absenteeism. They may not be clearly different in all cases. This may be due to the present social insurance system, and the cultural practices adopted. In this context the sick leave certificate issued by a health professional, represents to society

a commitment fee and to the employer impaired work ability due to an objective medical condition which is difficult to challenge. To the employee it is also a formal document granting the right to be absent without breaking the terms of the employment contract.

Measures and methods

Von Thiele, Lindfors and Lundberg (2006) have concluded that sickness absence should be measured in different ways depending on the aim of the study. For example, frequency of sickness absence is consistently related to work characteristics, but the relationship between short spells and its determinants are more manifold and variable. In the present study both sickness absence days and different lengths of spells were used in order to identify all possible associations.

This dissertation applied both qualitative and quantitative study methods. Quantitative methods were used widely (in three of the four studies included in the dissertation), but qualitative methods also had a significant role. Using diverse study methods is an attempt to respond to the need for more comprehensive assessments of the psychosocial work environment with combined methods. (Rugulies 2012.) The present study did not develop a method for this purpose, but tried for its part to combine different methods; questionnaires, register data and group interviews to explore attitudes, practices and arrangements related to situations in which where an employee is on sick leave. In addition, the intervention (senior programme) offered a more practical view. It explored the effects of 'actions' possibly intended to reduce sickness absence. The interviews offered a fresh opportunity to learn about employees' attitudes about sickness absence situations and to explore the reasons for them.

In the summary of this dissertation data drawn from Studies I and II were combined using mixed methods. It is rather more than only using diverse methods to attain an optimal understanding of the topic. On the other hand, mixed methods do not necessarily guarantee better quality or better objectivity. It is always desirable for a study to have some additional analysis or some additional perspective, be this a different method or different data. (Bergman 2011.) In this study using mixed methods for analysing some of the results might offer added value, because Study I and Study II were intended to complement each other. For instance, the threshold of sickness absence was a meaningful factor resulting from this study, but it might not have been found without the interviews, because the proposition of the survey (how usual it is that someone is absent in the workplace) gave only a chance to discuss the possibility of a permissive sickness absence culture.

Strengths

The strength of the present study was the target area. The rates of sickness absence in the food industry are extremely high, but only few studies have been presented on this. The longitudinal design, which has been quite often missing in sickness absence studies (Alexanderson & Norlund 2004), can be regarded as an advantage of this study. The follow-up time might also be long enough (three years in Study II and six years in Study IV) as far as the study concluding that two years suffices to identify employees at risk for sickness absence is concerned (Roelen et al. 2011).

The methods combined with the longitudinal design are quite rare in absence studies. The aforementioned comprehensive methods provide various views on sickness absence. Mixed methods were used as a part of this dissertation, which is not a very common solution in sickness absence research. Combining qualitative (interviews) and quantitative (survey, register) methods to study attitudes enabled an enriched discussion between perceived and registered factors and given meanings for the employees. The follow-up of the intervention gave an additional viewpoint on action in practice.

It is known that comparing different data on a national level (Karjalainen & Vainio 2010), as well as between countries (Gimeno et al. 2004, Eurofound 2010, Heymann et al. 2010), is challenging due to the lack of coherent calculating methods in the institutions responsible for documenting sickness absence. However, the absence rates of the present study were comparable to those reported in studies Finnish studies by Vahtera et al. 2000 in the municipal sector, because the same methods to quantify the sickness absence rates were used. Using the register data on sickness absence can also be seen as strength, even if their objectivity is open to discussion. Self-reported working conditions have been widely and successfully used in other studies (e.g. Ferrie et al. 2005), but they also have their limitations. Subjective response bias in the sense that memory may influence the number of sickness absences did not occur in this study.

The common method variance could be one limitation of the present study if not taken into account. This refers to 'variance that is attributable to the measurement method rather than to the constructs the measures represent' (Podsakoff et al. 2003). This type of bias is common in behavioural research. It was partly eliminated by using sum variables, which includes the propositions where the direction of the response (very, very little inconvenience – very, very much inconvenience) varied. The fact that sickness absence rates were obtained as separate data, not from the same questionnaires eliciting in which physical and psychosocial working conditions and arrangements may serve to reduce the risk of bias. (Podsakoff et al. 2003, Chang, van Witteloostuijn & Eden 2010.)

Limitations

Some limitations are also to be conceded. One may be that health was not regarded in relation to sickness absence. If sickness absence is thought of only from the medical point of view, sickness absence would reflect health. From this and earlier studies we know that this is quite a narrow view. On the other hand, it may underestimate the impact of health on work (Wynne-Jones et al. 2009). In addition health behaviour, which is known to have associations with sickness absence (Christensen et al. 2007b, Laaksonen et al. 2009, Salonsalmi et al. 2009), was not included in this study. It is conceded that many other factors not studied here are associated with sickness absence. Gender (e.g. Feeney et al. 1998, Mastekaasa & Olsen 1998, Väänänen 2005, Bekker, Rutte & van Rijswijk 2009), gender segregation, integration or equality at the workplace (Alexanderson et al. 1994, Bryngelson, Bacchus Hertzman & Fritzell 2011, Sörlin, Ohman & Lindholm 2011, Laaksonen et al. 2012) are some examples of these. Other aspects of work that have been found to be associated with sickness absence, but that were not studied here, are, for example job strain and commuting time (Magee et al. 2011), expected stressful event at work (Hultin et al. 2011), work-related stress (Holmgren 2009a), bullying at work (Kivimäki, Elovainio & Vahtera 2000, Ortega et al. 2011) and job insecurity (Virtanen, M. et al. 2003), whereas the burden of childcare (Bekker, Croon & Bressers 2005) and the amount of housework or a work-family conflict (Krantz & Ostergren 2001, Väänänen et al. 2004, Jansen et al. 2006, Väänänen et al. 2008b, Clays et al. 2009, Lidwall et al. 2009, Sabbath et al. 2012) are factors outside of work life. However, in general it is hardly feasible to include all possible associations in a single study.

Studies implemented with questionnaire surveys have always some reliability issues. This is also worth noting when interpreting the results of the study, even if some biases have been taken into account (see Strengths above). In addition, more reliable knowledge would have been achieved if randomization had been possible in the intervention study.

A single question could be a simple indicator for assessing the particular status of an employee (Bowling 2005). For instance, a question about work ability (“current work ability compared with the life-time best”) has shown to be a justified indicator. Thus, for example, it is not always necessary to invoke the whole work ability index. (Ahlstrom et al. 2010.) In the same way work ability-in-2-years has been shown to be a good indicator, for example in predicting sickness absence (Lindberg et al. 2009). A single question on self-rated health has also been found to be a high quality and cost-effective procedure for predicting sickness absence in occupational health services (Falkenberg et al. 2009, Lindberg et al. 2009). Taimela et al. (2008) have shown that a questionnaire survey is a simple way to collect information from employees and

therefore a useful method to identify the employees at high risk of sickness absence. In this dissertation (Study II) single statements about attitudes and arrangements during absence were used partly to examine if they gave some indication of the association with sickness absence. These statements had not been used before, which may be a limitation of the dissertation. On the other hand, without new experiments new findings may not be reached.

The sum variables of atmosphere at the workplace by Ruohotie (1993) were used in the study, but they have not been in extensive international use. However, these variables have been used a great deal nationally (e.g. Kautto-Koivula 1993, Manka 1999, Antikainen 2005).

Statistical aspects

In this dissertation Poisson regression or negative binomial regression were used for analysing the sickness absence data (Studies II and IV). These are generally used, but other adaptations have also been proposed (e.g. Xiaoshu et al. 2011). This study adopted the sickness absence measures from a large Finnish sickness absence study (Vahtera et al. 2000, Kivimäki et al. 2004), which partly determined the measures and methods used.

Study III addressed changes in working conditions associated with changes in sickness absence. This may not be the easiest way to analyse or at least to explain the results. This may explain why this kind of a design is not widely used. However, there is a study with a quite similar design and determinants studied as in Study III. It reported that changes in organizational practices were strongly associated with changes in employee well-being (Tuomi et al. 2004).

Generalizability

This study was conducted in one country, in one industry sector and in one company. These aspects imply restrictions on generalizing the results. The results related to working conditions may be generalized cautiously to other industries in Finland. However, it should be remembered that attitudes and sickness absence culture may be bound to the workplace. To find more generalizability in these aspects more research is required.

6.4 Recommendations for further research

Management of sickness absence with a positive view on health can be recommended for workplaces. Focusing on health at the workplace (with health

promotion programmes) have been suggested to increase health and productivity of employees (Goetzel & Ozminkowski 2008, Tveito & Eriksen 2009), and further to reduce sickness absence (Michie, Wren & Williams 2004, Ybema, Evers & van Scheppingen 2011). The participation of all stakeholders (e.g. employees, employers and occupational health care professionals) is needed in order to achieve optimal effectiveness in workplace interventions (Carroll et al. 2010).

Roelen and Groothoff (2010) have called for future studies assessing the impact of organizational policies and practices on sickness absence and the manager's role in managing sickness absence. They thought that too rigorous management of sickness absence might lead to sickness presenteeism. Such management is challenging and will call for diplomacy on the part of managers. For example, excessive workload may increase the risk for sickness absence, but also inadequate workload may cause an employee to take a sick leave (Hultin et al. 2012). In light of the present study (Studies I and II) it would be interesting to research practices of human resource management from the point of view of both managers and employees, which have been found to differ from each other (Wynne-Jones et al. 2011).

Screening instruments to predict sickness absence have been presented (Duijts et al. 2006, Taimela et al. 2008). The positive results of encouraging employers and occupational health care to take preventive measures to sustain the work ability of employees at high risk of sickness absence have been presented (Dahle & Petersen 2005, Taimela et al. 2008, Vahtera & Kivimäki 2008, Holmgren 2009b, Steenstra et al. 2009, Taimela et al. 2010). It would be interesting to study if there is a need and use for a simple screening method for employers to perceive their management style of sickness absence by using the propositions about arrangements during absenteeism used in this dissertation (Study II). This would partly answer the need for studies assessing working conditions related to sickness absence at the individual and the workplace level (Roelen et al. 2008).

Because it is known that long-term sickness absence is a risk for early retirement (Kivimäki et al. 2004), prevention should be targeted specifically at long-term sickness absence, especially for ageing employees. The senior programme (Study IV) could be one feasible prevention method. It would be interesting to study whether the programme also influenced later retirement. Negative ageism and employer-sponsored programmes targeted at older workers have been found to yield good results in organizational commitment (Yamada et al. 2005). The important factor to determine occupational commitment is individuals' interest in their work (Hult 2005). Furthermore, it might be interesting to explore whether there are similar mechanisms underlying the decisions to apply for one's pension and taking a sick leave. One might ask whether we should be more interested in the motivation to

work than in the ability to work when we try to prevent sickness absence (Dahle & Petersen 2005) or early retirement.

Even if age was not a discriminating determinant for sickness absence in this dissertation (Study III), it would be interesting to study if younger and older employees have different attitudes towards sickness absence behaviour. Some indication of a difference between the groups is available (Taimela et al. 2007). Another age-related question could be; does the absence behaviour among young employees predict their absence behaviour in later life? (Cf. Henderson (2009), where people with frequent aches and pains and frequent absence from school in childhood were prone to be permanently or temporarily disabled for work in later life.)

Working life is continuously changing. One example of this is presented in a study which explored the association between shared and open-plan offices (which have recently become more common) and sickness absence (Pejtersen et al. 2011). Sickness absence lives in changing surroundings, suggesting that the study of sickness absence can never be claimed to be complete. Sickness and work will still exist in the world.

7 Conclusions

The present study found that some determinants of the physical and psychosocial working environment, work arrangements and sickness absence culture were associated with sickness absence among employees working in the food industry. Differences between occupational status – blue-collar workers and white-collar workers – were revealed, but not in every determinant studied. Age was not a particularly significant factor in the analysis based on age groups. On the other hand, encouraging results related to reducing long-term sickness absence were reported from the senior programme, which was targeted at ageing employees with individually tailor-made working conditions and arrangements.

Overall, the results and summary of this study permit the conclusion that there are many other determinants than working conditions or work itself affecting sickness absence. However, this does not mean that nothing can be done at workplaces. The statistically significant factors found in the present study may indeed merit consideration in human resource management practices at workplaces. These factors are, for example, working atmosphere, team spirit, working postures, an employee's work done during the absence and the sickness absence culture (e.g. is it considered commonplace that always someone is on sick leave). Reviewing the results of the four studies composing the dissertation through the theoretical framework adapted from the theories of absence, work stress and work ability, it is possible to conclude that after the determinants affecting work ability in the context (in surrounding societies) of the moment are defined, the individual threshold to take a sick leave may be highly significant for sickness absence. It determines whether or not an employee takes a sick leave despite situations where there is a total disability to work.

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Original publications

Sairauspoissaolo elintarviketyöstä; tutkimus työntekijöiden kokemuksista ja toimintakäytännöistä

Artikkelissa tarkastellaan elintarviketyöntekijöiden käsityksiä työn luonteen ja psykososiaalisten työolojen merkityksestä sairauspoissaoloihin. Lisäksi selvitetään työntekijöiden käsityksiä hyväksytyistä toimintatavoista sairauspoissaolotilanteissa. Aineisto kerättiin tekemällä yhdeksän ryhmähaastattelua elintarvikekonsernin kolmella tehtaalla. Analyysimenetelmänä käytettiin sisällönanalyysiä. Työn luonne hygieniavaatimuksineen ei saanut elintarviketyöntekijöiden puheissa erityistä merkitystä sairauspoissaolojen selittäjänä. Sen sijaan keskeisiksi tekijöiksi osoittautuivat työn arvostus, työntekijästä välittäminen, läsnä oleva esimies ja hyvä työilmapiiri. Näillä tekijöillä on ratkaiseva merkitys, kun työntekijä harkitsee sairauslomalle jäämistä. Lisäksi tähän harkintaan vaikuttaa työntekijän yksilöllinen sairauslomalle jäämisen kynnys.

ANNA SIUKOLA, KIRSI LUMME-SANDT, PEKKA VIRTANEN, CLAS-HÅKAN NYGÅRD

JOHDANTO

Sairauspoissaoloista kiinnostuneella tutkijalla on valittavana ainakin neljä teoreettista lähtökohtaa. Ensiksi sairausloma on – sananmukaisesti – merkki terveysongelmasta. Sairauspoissaololuvut välittävät siten suoran kliinis-lääketieteellis-epidemiologisen kuvan työssäkäyvän ihmisen ja väestön ohimenevistä terveysongelmista, ja ne ennustavat vahvasti myös pysyvää työkyvyn menetystä ja jopa kuolemaa (Vahtera ym. 2004). Toiseksi voidaan kysyä mitkä tekijät ennustavat sairauspoissaoloa. Kvantitatiiviset tutkimukset ovat paljastaneet, että terveysongelmien lisäksi sairauspoissaolojen määrä riippuu monenlaisista determinanteista, esimerkiksi sukupuolesta, iästä, työsuhdemuodosta, taloudellisista tekijöistä ja tietenkin työtehtävästä. Kolmas näkökulma on yritys- ja tuotantotaloudellinen. Sairauspoissaolo merkitsee menetettyä työpanosta ja tuotantoa, mutta myös sen vaihtoehtoon, 'sairauslänälöön', voi liittyä tuotannonmenetyksiä ja laaturiskejä (Brouwer ym. 1999). Neljänneksi sairauspoissa- ja länälöihin liittyviä toimintalogiikkoja voidaan tutkia sairauden ilmenemis- ja ilmai-

semismuotoja käsittelevien sosiologisten teorioiden pohjalta (Gerhardt 1989). Tällöin sairauspoissaolo ymmärretään sosiaalisesti konstruoiduksi tapahtumaksi, jonka foorumina on työpaikka, työmarkkinat, ylipäättensä työelämä (Dodier 1985, Bellaby 1990, Virtanen 1995). Toisin sanoen yksilön sairauspoissaolo ajatellaan tulokseksi vuorovaikutuksesta, jonka kautta siihen heijastuvat yhteisöjen sairastamiskulttuurit ja -käytännöt. Toisaalta myös jokainen sairauspoissaolo rakentaa ja uusintaa näitä kulttuureja ja käytäntöjä.

Tämän tutkimuksen teoreettinen tausta on lähinnä viimeksi mainittu. Analysoimme miten työntekijät suhtautuvat omiin ja toistensa sairauspoissaoloihin. Aineisto on kerätty elintarviketeollisuudesta, jossa tilastojen mukaan on sairauspoissaoloja enemmän kuin millään muulla teollisuudenalalla. Elintarvikealan työntekijöillä on sairaudesta tai tapaturmasta johtuvia poissaoloja 19 työpäivää, kun teollisuuden keskimääräinen taso on 16 päivää vuodessa (Työaikaakatsaus 2006). Korkeat luvut eivät kuitenkaan ole johtaneet elintarviketeollisuuden sairauspoissaoloja

koskeviin tutkimuksiin. Yleensäkin teollisuuden sairauspoissaoloja on tutkittu Suomessa vähän, päinvastoin kuin julkisen sektorin poissaoloja (Vahtera ym. 2002).

Syitä sairauspoissaolojen yleisyyteen elintarvikealalla voidaan etsiä monelta eri taholta. Työ on fyysisesti raskasta ja työolosuhteet ovat haasteelliset. Kuten muillakin aloilla, myös yksilöllisillä ja työyhteisöllisillä tekijöillä on merkitystä (Hanebuth ym. 2006). Onkin ilmeistä, että elintarvikealan erityispiirteiden ymmärtämiseksi sairauspoissaoloja on tutkittava sekä määrällisin että laadullisin menetelmin. Kvantitatiivisella sairauspoissaolotutkimuksella on pitkät ja laajat perinteet sekä kansallisesti että kansainvälisesti. Sen sijaan kvalitatiivisia työpaikkatason tutkimuksia on tehty vain joitakin (Dodier 1985, Hovérstad ja Kjolstad 1991, Holmgren ja Dahlin Ivanoff 2004).

Kvantitatiivisten tutkimusten perusteella tiedämme, että työn ja työympäristön fyysinen raskavuus on yhteydessä korkeaan sairauspoissaolotasoon (Alexanderson ym. 1994, Boedeker 2001, Voss ym. 2001, Labriola ym. 2006, Lund ym. 2006). Elintarviketyön fyysinen raskaus muodostuu muun muassa toistuvista ja yksipuolisista liikkeistä, painavien taakkojen siirroista ja nostoista. Työtahti on kiivas ja työympäristölle ovat tyypillistä kylmyys, vaihtelevat lämpötilat, veto, melu, liukkaus, kosteus ja hajut (Messing ym. 1998, Pålsson ym. 1998, Savinainen ym. 2004). Työn piirteillä ei voida kuitenkaan yksinään selittää sairauspoissaoloja. Yksilöllisten tekijöiden, kuten iän, sukupuolen ja terveydentilan, yhteydet sairauspoissaoloihin on osoitettu lukuisissa tutkimuksissa (Isacsson ym. 1992, Marmot ym. 1995, Feeney ym. 1998). Myös psykososiaalisilla tekijöillä on yhteyksiä sairauspoissaoloihin. Tutkimuksissa on todettu päättäväisyyden, työn vaatimusten sekä esimieheltä ja työtovereilta saadun sosiaalisen tuen vähäisyyden lisäävän sairauspoissaolon riskiä (North ym. 1996, Väänänen ym. 2003, Christensen ym. 2005, Hanebuth ym. 2006, Nielsen ym. 2006). Samoin vaikuttavat työyhteisön epäoikeudenmukaisuus (Kivimäki ym. 2003), työn vähäinen itsenäisyys ja yksinkertaisuus (Väänänen ym. 2003) sekä jännittyneisyys ja ennakkoluuloja sisältävä ilmapiiri (Piirainen ym. 2003). Pitkittäistutkimusten mukaan myös epäsuotuisat muutokset työn psykososiaalisissa tekijöissä lisäävät sairauspoissaoloja (Vahtera ym. 2000, Head ym. 2006).

Vaikka sairauspoissaolo näyttäytyy usein yk-

silötason käytöksenä, se ei ole irrotettavissa organisaation rakenteista ja kulttuureista (Nicholson ja Johns 1985, Virtanen ym. 2000). Tätä todistavat myös edellä mainitun työn psykososiaalisiin tekijöihin ja sairauspoissaoloihin liittyvät tutkimustulokset. Työntekijä arvioi sairausloman oikeutusta ja tekee päätöksensä sairauslomalle jäämisestä työyhteisön jäsenen jakamassa yhteisessä todellisuudessa. Poissaolopäätös voi olla itsestään selvä, esimerkiksi kun työntekijälle on sattunut jokin täydellisesti työnteon estävä tapaturma. Usein kuitenkin tilanne on sellainen, että työntekijä pohtii jäädäkö vai eikö jäädä sairauslomalle. Tätä pohdintaa käytäneen riippumatta siitä, vaatiiko työnantaja terveydenhuollosta kirjoitetun todistuksen sairauslomasta vasta neljännestä vai jo ensimmäisestä poissaolopäivästä, joista jälkimmäinen on käytäntönä tämän tutkimuksen kohteena olevassa yrityksessä.

Sairastavuuden ja sairauspoissaolon välistä suhdetta monimutkaistaa se, että tilanteeseen vaikuttavat monet sosiaaliset, kulttuuriset ja organisaationaaliset seikat (Grinyer ja Singleton 2000, Virtanen ym. 2000). Esimerkiksi työpaikan vähäiset joustomahdollisuudet ja korkeat läsnäolovaatimukset tiukkoine kontrollikeinoineen sairauspoissaolotilanteissa ovat yhteydessä päätökseen jäädä sairauslomalle. Lisäksi päätökseen vaikuttaa työntekijän käsitys itsestään työntekijänä ja velvollisuudestaan tehdä työtä (Johansson ja Lundberg 2004, Hansson ym. 2006). Myös sairausloman kesto, toisin sanoen työhön paluu, riippuu usein samoista tekijöistä kuin lomalle jääminen. Esimerkiksi työtovereilta ja esimieheltä saatu sosiaalinen tuki ja palaute ovat saaneet tärkeän merkityksen kummassakin tilanteessa (Holmgren ja Dahlin Ivanoff 2004).

Vuonna 2003 käynnistettiin suuren elintarvikekonsernin sairauspoissaoloihin kohdistuva tutkimushanke (Siukola ym. 2005), jossa sovelletaan sekä määrällisiä (Virtanen ym. 2008) että laadullisia menetelmiä. Tässä artikkelissa esitetään tuloksia laadullisesta osatutkimuksesta, jonka aineisto kerättiin ryhmähaastattelumenetelmällä. Tavoitteena oli tilastollisia analyysejä täydentävä ja syventävä ymmärrys siitä, millaisia merkityksiä, käsityksiä ja käytäntöjä työntekijät liittävät sairauspoissaoloihin ja niiden taustalla oleviin syihin. Tavoitteena ei siis ollut tutkia poissaolojen niin sanottuja todellisia syitä, vaan työntekijöiden käsityksiä poissaolojen syistä ja työpaikkakulttuurin merkitystä näiden suhteen. Erityisesti taroituksena oli analysoida elintarviketyön luon-

teen, psykososiaalisten työolojen sekä työntekijän toimintatapojen merkitystä sairauspoissaolotilanteissa.

AINEISTO JA MENETELMÄT

Aineistokeruun muodoksi valittiin ryhmähaastattelut, koska erityisenä kiinnostuksen kohteena olivat työntekijöiden sairauspoissaolokäsitykset ja niiden taustalla työpaikkakulttuuri sekä kyseisen työpaikan sosiaalisesti hyväksytyt toimintatavat sairauspoissaolojen suhteen. Ryhmähaastattelujen vahvuus yksilöhaastatteluihin verrattuna on se, että keskustelu ryhmässä tavoittelee samalla tavalla sosiaalista hyväksyntää kuin esimerkiksi toiminta työpaikalla (Kitzinger 1994, Barbour 2007).

Tutkimusaineisto koottiin suuren elintarvikekonsernin kolmelta eri tehtaalta. Jokaisessa tehtaassa tehtiin syksyllä 2006 kolme ryhmähaastattelua. Ryhmien koko vaihteli viidestä kahdeksaan henkilöön. Yhteensä yhdeksään haastatteluun osallistui 58 elintarviketyöntekijää, joista 14 oli miehiä (25 %). Kahdessa ryhmässä kaikki osallistujat olivat naisia.

Tutkijat sopivat tehtaiden johdon kanssa, että ryhmiin rekrytoidaan vakituisessa työsuhteessa olevia molempia sukupuolia edustavia elintarviketyöntekijöitä (ei toimihenkilöitä eikä työnjohtajia). Haastattavien rekrytointi tehtaalta käsin oli työn organisoinnin, etenkin työvuorojen sovitelun, kannalta oleellista. Haastattelut tehtiin työajalla, mutta niihin osallistuminen oli vapaaehtoista. Osallistujille jaettiin etukäteen tiedotuskirje, jossa selvitettiin tutkimuksen tarkoitus ja luonne. Jokaiseen tapaamiseen osallistui kaksi haastattelijaa, joista toinen oli mukana jokaisessa yhdeksässä haastattelussa. Haastattelijoiden pääasiallinen roolijako meni niin, että toinen tarkkaili ja toinen kantoi päävastuun tilanteesta. Haastatelluilta kysyttiin etunimi ja osasto, jolla he työskentelevät. Haastattelut tapahtuivat tehtaiden kokoustiloissa. Haastattelut olivat kiireettömiä tilanteita, joihin oli varattu aikaa 1.5–2 tuntia. Haastattelijat kertoivat haastattelutilanteiden aluksi tutkimuksen tarkoituksen ja taustan. He myös kannustivat osallistujia vapaaseen mielipiteiden ja näkemysten ilmaisuun sekä painottivat, että osallistujat itse ovat aihealueen parhaita asiantuntijoita. Keskustelun kulku oli kaikissa ryhmissä vilkasta ja vapaasti etenevää. Haastattelijat pyrkivät puuttumaan keskustelun kulkuun mahdollisimman vähän, mutta huolehtivat, että kaikki haastatteluteemat tulivat käsitellyiksi kai-

kissa ryhmissä. Haastattelutilanteita voikin paremmin kuvata ryhmäkeskusteluiksi (ks. Valtonen 2005). Haastattelut nauhoitettiin ja litteroitiin, jolloin henkilöiden etunimet ja muut tunnistetiedot poistettiin käyttämällä tunnistekoodia. Tutkimukseen on saatu Pirkanmaan sairaanhoitopiirin eettisen toimikunnan antama puoltava lausunto.

Aikaisemmin aihealueesta tehtyjen tutkimusten (esim. Hoverstad ja Kjolstad 1991, Siukola ym. 2005) pohjalta kirjoittajat laativat teemarungon ryhmähaastatteluihin. Tavoitteena oli päästä käsiksi juuri niihin työn ominaispiirteisiin sekä elintarviketyöntekijöiden omaan toimintaan että heidän sairauspoissaoloille antamiin merkityksiin, joita ei ole mahdollista saavuttaa tilastollisilla tutkimusotteilla. Sairauspoissaoloihin yhteydessä olevat tekijät elintarviketyöntekijöiden näkökulmasta jäsennettiin seuraaviksi seitsemäksi teemaksi: 1) elintarviketyön ominaispiirteet sairauspoissaolojen kannalta, 2) työpäivän kulku/eteneminen, kun työtoveri on poissa, 3) työpäivän kulku, kun työtoveri on töissä puolikuntoisena (sairauslänäolo), 4) esimiehen rooli sairauspoissaoloissa, 5) perhetilanteen vaikutus sairauspoissaoloihin, 6) iän merkitys sairauspoissaoloihin ja 7) syyt tehtaiden välillä havaittuihin sairauspoissaoloeroihin.

Aineiston alustavan analyysin pohjalta työstettiin tätä artikkelia varten kolme varsinaista tutkimuskysymystä. Tutkimuksella pyrittiin ymmärtämään:

- Millaisia ja millaisen merkityksen saavia sairauspoissaoloihin liittyviä ominaispiirteitä on elintarviketyöllä?
- Mikä merkitys työn psykososiaalisilla oloilla on työntekijöiden sairauspoissaoloihin?
- Millaiset ovat työntekijän hyväksytyt toimintatavat sairauspoissaolotilanteissa?

Näiden tutkimuskysymysten pohjalta aineisto analysoitiin yksityiskohtaisesti sisällönanalyysin avulla (Tuomi ja Sarajärvi 2003, Barbour 2007). Analyysissä etsittiin aineistosta lausumia, jotka vastasivat esittämiimme tutkimuskysymyksiin. Kahden ensimmäisen kysymyksen kohdalla yhdistettiin samansisältöisiä vastauksia toisiinsa ja ilmaukset pelkistettiin. Niistä muodostettiin kategorioita, jotka molemmat päätyivät yhteen yläkategoriaan (taulukot 1 ja 2). Kolmannen tutkimuskysymyksen kohdalla toimittiin niin, että etsittiin elintarviketyöntekijöiden puheista hyväksyttyjä ja ei-suotavia toimintatapoja sairauspois-

saolojen suhteen. Tässä analysoinnin vaiheessa käsitteellistettiin eli abstrahoitettiin aineistoa. Analysoinnin aikana palattiin useasti alkuperäiseen aineistoon, jota luettiin toistuvasti. Näin varmistettiin, ettei yhteys alkuperäiseen haastatteluaineistoon katoa.

TULOKSET

ELINTARVIKETYÖN OMINAISPIIRTEET SAIRAUSSPOISSAOLAJEN NÄKÖKULMASTA

Haastattelupuheissa elintarviketyön ominaispiirteet verrattuna muuhun työhön kiteytyivät kolmeen pääkategoriaan: työn asettamat vaatimukset, sairaana työskentelyyn liittyvät riskit ja työn arvostus (Taulukko 1).

Elintarviketyöntekijöiden puheissa ilmeni, että työ asettaa omat vaatimuksensa työntekijälle pakkotahtisuuden, yksitoikkoisuuden ja fyysisen raskauden vuoksi. Nämä työn piirteet aiheuttavat elimistölle yksipuolista kuormitusta, mikä saattaa ilmetä ajan kuluessa sairauslomaa vaativana fyysisenä väsymyksenä tai vaivana. Työntekijät toivat esille, että huonojen työasentojen seurauksena niska- ja hartia- sekä käsivaivojen vuoksi ollaan paljon sairauslomalla. Asian toinen puoli on työn yksitoikkoisuuden henkiset vaikutukset työssä jaksamiseen ja työmotivaatioon.

M1: Kone määrää tosiaan tahdin siinä, että se on aina se sama tahti jatkuvalla syötöllä. Se ei hellitä kone yhtään sitä vauhtia sitten, vaikka vähän rupeais väsymäänkin. RYHMÄ 1

Lisäksi työskentely elintarviketehtaassa sisältää usein altistumista saman työpäivän aikana vedolle, kylmyydelle, kuumuudelle, kosteudelle ja liukaudelle. Tämä työolosuhteiden vaihtelu ja erilaisille altisteille altistuminen tekee elintarvikealasta poikkeuksellisen muuhun tehdastyöhön nähden.

Altisteiden vaihtelun nähtiin aiheuttavan lähinnä fyysisiä vaivoja, joiden vuoksi joudutaan jäämään sairauslomalle. Altisteet olivat selkeä ja perusteltu sairausloman aiheuttaja elintarviketyöntekijöiden mielestä.

N3: Kyl tää elintarvikeala on aika raskasta työntekoa, sillai nostelemista.

M3: Ja veto.

N3: Välillä on jumalattoman kuuma ja välillä kylmää käsittelet, kaikkee tämmöstä näin, niin ilman muuta se varmaan lissää niitä sairaspöissaoloja. RYHMÄ 8

Sairaana työskentelyyn liittyvät riskit ja niiden pohdinta on elintarviketyölle ominaista. Pohdintoihin liittyi tartuttamisvaaran arviointi ja lisääntynyt tapaturmariski. Työntekijöiden mielestä tartuntatautia sairastava ei saisi tulla töihin tartuttamaan muita työntekijöitä ja elintarvikkeita. Sairasta työntekijää ei pidetty täysin työkykyisenä. Hänellä nähtiin olevan sairaudesta johtuva suurentunut tapaturmariski, jonka vuoksi poissaoloa pidettiin aiheellisenä.

N5: Mut kuumeisenakaan ei auttas tulla töihin, koska sitten ollaan koneitten kans tekemisissä ja päähän ei oo sillon ihan kondiksessa, jos oot kipee. Niin kyllä sit tapaturmiakin tulee. Tai jotain muuta sitten vähän semmosta mottipäistä tekee sielä. RYHMÄ 3

Lisäksi edellä kuvattuun riskipohdintaan vaikuttavat lisäksi myös hygieniavaatimukset, vaikka niiden sisällöstä ja noudattamisesta ei löytynyt yhtenevää käsitystä kaikkien haastateltujen keskuudesta. Toisissa ryhmissä oltiin samaa mieltä hyvän hygienian edellyttämistä poissaoloista.

N1: No ainakin flunssa on semmonen, että yks joka aiheuttaa sen, että ei täällä oikein flunssasena voi olla töissä. Jos nenä vuotaa jatkuvasti niin ei siinä oikein hygieenistä ole sitten.

K: Saadaanko sen perusteella sairauslomaa, sitten sen että nenä (–)

N1: No kyllä sitä pitäis periaatteessa saada.

N5: Niin ei sinne sais mennäkään flunssasena töihin. RYHMÄ 3

Taulukko 1.
Elintarviketyön ominaispiirteet sairauspoissaolajen näkökulmasta.

Pelkistetty ilmaus	Alakategoria	Yläkategoria
– työn pakkotahtinen ja yksitoikkoinen luonne	Työn asettamat vaatimukset	Elintarviketyöntekijöiden näkemykset työn ominaispiirteistä sairauspoissaolajen näkökulmasta
– työn fyysinen raskaus rasitusta aiheuttavine altisteineen (veto, kylmyys, kuumuus, kosteus, liukkaus)		
– tartuttamisriskin vaikutus sairauspoissaoloihin	Sairaana työskentelyn riskit	
– sairaana työskentelevän suurentunut tapaturmariski		
– työn vähäinen arvostus omasta ja muiden mielestä	Työn arvostus	

Kun taas toisissa ryhmissä oltiin hämmentyneitä hygieniavaatimusten ja työnantajan odotusten välisessä tilanteessa. Tällöin ristiriitaisuutta työntekijälle aiheutti esimiesten taholta ymmärretty viesti olla välittämättä hygieniavaatimuksista.

M1: Työnantaja ei ainakaan painosta, että jos sulla on flunssa, niin sun täytyy jäädä.

N5: Niin, tai tulehtunut haava kädessä tai silmätulehdus.

N4: Kuume on ainoa, mistä saat sairaslomaa. RYHMÄ 2

Elintarviketyön arvostus nousi kolmantena seikkana esiin työn ominaispiirteistä ja sairauspoissaoloista keskusteltaessa. Arvostusta ei kysytty suoraan, mutta haastateltavat nostivat sen esille erityisesti elintarviketyön erityislaatuisuudesta puhuttaessa. Lisäksi työn arvostus tuli esille myös muista teema-aiheista keskusteltaessa. Elintarviketyöntekijät eivät koe työtään erityisen arvostettuna ja ihailtuna ammattina. Työhön suhtaudutaan elannon antajana ja työyhteisön tarjoajana. Puheista välittyi tutkijoille kuva, että työntekijät liittivät työn heikon arvostuksen ja sairauslomalle jäämisen helpouden toisiinsa. Henkilötasolla kuitenkin asiaan vaikuttaa merkitsevästi työntekijän oma työmoraali.

N5: En mä ainakaan pidä erityislaatuksena työnä pidä. Tää on työtä ja tästä saa rahaa ja sen takia täällä ollaan, että tuota (–) tää on semmonen ala, että tuota (–) täällä tosi paljon on semmosia ihmisiä, jotka ei oo alalle kouluttautunut. Tää ei vaadi mitään erityistä kouluttautumista, tänne pääsee kuka vaan töihin. Ei tää oo mitenkään unelma-ammatti. Tähän ei varmaan kukaan välttämättä haaveile pienenä, kun kysytään 3-vuotiaana. Et sä halua elintarvikepakkaajaks, ei siellä oo kellään semmosta unelma-ammattia. Mutta en mä tiedä, jos ihminen omaksuu korkean työmoraalin, niin se ei vaikuta silloin sairauspoissaoloihin. RYHMÄ 2

Jos työntekijät eivät kokeneet itse arvostavansa työtään erityisesti, eivät he sitä olleet saaneet kokea myöskään muilta tahoilta. Työnantajan osoittama vähäinen arvostus ilmeni monissa eri yhteyksissä, esimerkiksi vähäisenä panostuksena työhön opastukseen.

N7: Työn opastukseen ei kiinnitetä todellakaan huomiota.

N4: Ja sitten jos sä oot kerta tuota kotona paistanu jauhelihaa, niin kyllä sä täälläkin osaat paistaa. Ja kyllä jos sä oot kotona keittäny makaroneja, niin kyllä sä osaat täälläkin keittää. Ei se oo sen kummosempaa. RYHMÄ 2

Lisäksi työyhteisön ulkopuolisilta tahoilta saatu arvostus oli vähäistä. Ennemminkin kokemuksia löytyi elintarviketyön vähäisestä arvostuksesta ja vähättelystä. Esimerkiksi alla olevassa sitaatissa koettiin työn henkistä vaativuutta vähäteltävän terveydenhuollon taholta.

N4: ..Niin ja eiks lääkärikin sanonu, ettei päätä tarvita, kun joku nainen kaatus viemäriin ja neulottiin päähän tikkejä ja sitten vartos, että saa sairaslomaa, niin lääkäri meinas vaan, et töihin vaan, ei x elintarviketehtaassa päätä tarvita kun kädet liikkuu. RYHMÄ 9

PSYKOSOSIAALISTEN TYÖOLOJEN MERKITYS SAIRAUSPOISSAOLOIHIN

Edellä on kuvattu työntekijöiden elintarviketyöhön ja sairauspoissaoloihin yleisellä tasolla liittämiä piirteitä (mm. altisteet). Tässä kappaleessa lähestytään sairauspoissaoloja enemmän työyhteisöllisestä näkökulmasta. Haastatteluissa välittyi työn psykososiaalisten olojen merkitys sairauspoissaoloihin monien seikkojen kautta (taulukko 2). Elintarviketyöntekijät kuvasivat turhautumistaan siihen, ettei työntekijää kuunnella ja vaikutusmahdollisuudet ovat pienet. Lisäksi koettiin,

Taulukko 2.

Elintarviketyöntekijöiden sairauspoissaoloille antamat työn psykososiaalisiin oloihin liittyvät merkitykset.

Pelkistetty ilmaus	Alakategoria	Yläkategoria
– työntekijän kuuleminen – läsnäolevan esimiehen puute/kaipuu – puutteellinen tiedonkulku ja epätietoisuus – ergonomiasta huolehtiminen – kunnossapidon toimimattomuus – taloudelliset seikat työntekijän edelle – työhön opastus heikkoa → tuuraajalle epämiellyttävä tilanne ja tapaturmariskin kasvu → tuuraajan työparille lisääntynyt työtaakka	Työn arvostus ja elintarviketyöntekijästä välittäminen (turhautuminen)	Elintarviketyöntekijän sairauspoissaoloille antamat työn psykososiaalisiin oloihin liittyvät merkitykset
– työyhteisön ilmapiirin merkitys sairauslomalle jäämisen kynnökseen	Ilmapiiri	

että ergonomiasta ei huolehdita tarpeeksi ja ennen kaikkea kunnossapitoa pidettiin toimimattomana. Rikki menneen laitteen korjaamista joudutaan usein odottamaan liian pitkään. Työympäristön kunnossapito sai puheissa ison merkityksen fyysisenä, mutta erityisesti henkisenä sairauspoissaoloihin liittyvänä tekijänä. Monet turhautumista aiheuttavat tekijät liitettiin puutteelliseen työn organisointiin.

N2: Saatetaan puoli vuoroo kerätä jotain tavaraa, siis esimerkiksi se remppamies lihapiirakalla niin muijat keräs kolme tuntia lihapiirakoita, kun se remonttimies kerkis ja se korjas sen 15 minuutissa. Ja ne, sitten ne täytyy viä pakata siitä laatikosta uudestaan ne piirakat.

N3: En mä en (–)

N2: Väliällä on todella turhauttavaa.

N3: Että olisko tämmönen myös, joka tekis niitä sairasloman alkuja sitten jollakin lailla.

N: Varmaan. Mä oon sitä mieltä. RYHMÄ 6

Työntekijät puhuivat myös tilanteista, jossa työn fyysiset vaatimukset ja työntekijän fyysinen työkyky ovat epätasapainossa. Tällöin voi sairausloma olla edessä herkemmin ja sitä pidetään oikeutettuna.

N4: No kato x joutui viime viikolla jäämään sairauslomalle. Se on 150 cm ja painaa 50 kiloo, niin sano, että hän kolmen päivän aikana tyhjensi 10 kilon makaronisäkkejä neljä ja puoli tuhatta kiloa. Niin tuota jos ei siinä nyt itteensä kipeeks saa, niin ei sitten missään. Että 1500 kiloo päivää. RYHMÄ 2

Tiedonkulun puutteellisuus ja työntekijöiden eläminen epätietoisuudessa koettiin tietynlaisena viestinä välittämättömyydestä, arvostuksen puutteesta työntekijää kohtaan.

M2: Ja yks asia, mikä tuli ilmi oli just tää epätietoisuus, mikä vaikuttaa työviihtyvyyteen. Semmonen kun ei tiää kaikki informaatio on jonkun (–) varassa. Todettiin hyväksiksi se, että pitää pitää osastopalavereita, että pystys pitää, ei tarvi olla mitään semmosia puolen päivän mittasia juttuja vaan ihan semmosia kymmenen minuutin (–) infotilaisuuksia, ei ne oo mitään semmosia yleisiä huutotilaisuuksia. Ja sekään ei vaadi rahallista panostusta. RYHMÄ 3

Samaa viestiä kuvasti elintarviketyöntekijöiden kokemus taloudellisten seikkojen asettamisesta työntekijöiden edelle.

N3: Niin. Se on tärkein, sitten tuli mitä tahansa sitten. Pääasia, että iskuluku on kauheen kova, että hirveesti menny piirakkaa tai pitsaa, vaikka ne on menny sika-saaviin sitten puolet siitä niin kun se vaan näyttää hyviä numeroita, niin (–) RYHMÄ 6

Taloudelliset seikat olivat työntekijöiden mielestä työnantajan perustelu myös liian vähäiselle työhön opastukselle. Puutteellinen työhön opastus

aiheuttaa tuuraajalle itselleen epämiellyttävän, henkisesti raskaan tilanteen sekä kasvattaa tapaturmariskiä. Tuuraajan työparille, työtovereille kokematon tuuraaja aiheuttaa lisääntyneen työtaakan.

N5: Ja sitten varmaan just se, kun kiristyy koko ajan, jos joku on pois, ei oo tuuraria ja sit kun joutuu tekeen kovalla kiireellä, niin ei kerkee tehdä hyvissä asennoissa niitä hommia, kun saa äkkiämpää jonkun jutun, kun kyykistyy vähän vääränlaisesti, niin kyllähän se selkään siinä tulee vähän kipeeks.

M3: Kyllä tapaturmavaarakin nousee, kun tahti nousee.

N2: Ja sitten kun teet montaa lajia hommaa ja viet lappuja jonkun kylkeen ja katot, mites nää kuuluu, niin siinä tulee niitä virheitäkin, että sitten saat myöhemmin, myöhemmin niitä sitten taas miettii, että millai tää nyt menikään ja millai näitä korjataan.

N5: Kyllä. RYHMÄ 8

Nämä edellä kuvatut työn psykososiaalisiin oloihin liittyvät seikat sisälsivät työntekijän tulkintana viestin työntekijästä välittämisen vähyydestä. Haastattelupuheissa yhdeksi ratkaisuksi ongelmaan nähtiin läsnä oleva esimies, joka tuntisi sekä työn että työntekijät paremmin.

N3: Meil oli semmonen (–) mikä tää nyt olikaan päällikkö, joka oli semmonen joka hirveesti oli läsnä koko ajan, kävi joka päivä suunnilleen tehtaalla ja koko ajan sillä oli langat käsissä, että se tiesi mitä missäkin tapahtuu ja puuttu asioihin, jos oli jotain ongelmia. Ja sitten koko ajan oli semmonen niin sanottu turva, että joka välittää meistä, nyt meillä ei oo semmosta henkilöä enää niin sillä se tulee tämmönen olo, että ollaan niinku lapset hiekkalaatikolla, et saadaan tapella ihan keskenämme. RYHMÄ 3

Työyhteisön ilmapiiri oli merkityksellinen sairauslomalle jäännin kannalta. Sairauslomalle jäännin yhteydessä elintarviketyöntekijät puhuivat yleisesti henkilökohtaisesta kynnyksestä. Toisilla on matalampi kynnyks jään sairauslomalle pienestäkin vaivasta kuin toisilla. Puheissa välittyi se, että tähän kynnykseen vaikuttaa oleellisesti työympäristö, erityisesti ilmapiiri. Ilmapiirin merkitys sairauslomalle jäämisen kynnykseen korostuu etenkin silloin, kun kyse ei ole selkeästä työkyvyttömyystilanteesta.

N2: Se laskee sitä, jos on huono ilmapiiri, niin se laskee sitä kynnystä että voikin olla päinvastoin niin aamulla, että enks mä nyt oo mistään kipee, että mun ei tarttis mennä sinne, ja kyllähän ne näkyy, että jos on ollut jotain isoja juttuja ilmapiirissä, niin kyllä se heti näkyy sairaspoissaoloissa. RYHMÄ 5

HYVÄKSYTTY TOIMINTATAVAT SAIRAUSSPOISSAOLOTILANTEISSA

Haastateltavien puheissa määriteltiin usein hyväksytyjä ja ei suotavia toimintatapoja sairastu-

miseen ja poissaoloihin liittyvissä tilanteissa. Tätä asiaa ei kysytty suoraan, mutta työntekijät ottivat esille useissa eri tilanteissa sairauslomakäyttämiseen liittyviä piirteitä niin hyväksyvässä kuin paheksuvassakin sävyssä. Yleisesti ei pidetty suotavana sellaista toimintatapaa, jossa työntekijällä on matala kynnyks jättää sairauslomalle. Tällöin sairauslomalle jäädyään liian herkästi tilanteessa, missä voisi vielä työskennellä. Esimerkiksi ensimmäinen yskäisy ei vielä oikeuta sairauslomalle jäämiseen.

Muuten vain sairauslomalla oleminen kuin todellisesta sairaudesta johtuen ei ollut työtovereiden mielestä hyväksyttyä eikä sille nähty oikeutusta työyhteisön taholta (vs. esim. huonon työilmapiiirin vuoksi koettiin oikeutus olla sairauslomalla). Tällä tavalla toimimista pidettiin henkilökohtaisena toimintatapana, mikä koettiin sairausloman väärinkäytöksi. Tällöin sairauslomaa käytetään vastauksena vapaa-ajan viettoon tarvittavaan lisäaikaan tai lomaan.

N6: Oikein kun osaat puhuen ruikuttaa, niin kyllä saa sairasloman. Ja jos joskus on semmonenkin tapaus ollut, että jos minut laitetaan siihen, niin minä käyn ottamassa sairasloman, ja niinhän tämä naisihminen kävi ja sai.

N4: Niin kun niitä on semmosiakin, ketkä tietää jo viikkoa aikaisemmin, ja ne aika hyvin tietää, että kaikista paras, minkä mä tiedän (–) yhtenä syksynä työnjohtaja sanoi, että herra X on nyt seittemännän kerran peräkkäin syksyllä sairaslomalla, kun alkaa hirvestys.

N6: Joo, se on ihan normaalia. RYHMÄ 2

Sairausloman käyttöä aseena, vallankäyttömahdollisuutena työnantajaa kohtaan ei pidetty suotavana, eikä oikeutettuna elintarviketyöntekijän toimintatapana. Tällöin sairausloma on vastareaktio johonkin henkilökohtaisesti koettuun epäkohtaan, mutta keinona se on ei-hyväksytty huolimatta siitä, että muut keinot olisivat vähissä.

N6: Sitten on semmosia tapauksia, että jos tulee pomon kanssa sanomista, niin tavallaan kiukutellaan sillä, että jättädyään sairaslomalle. Sellaista löytyy. RYHMÄ 7

Edellä kuvattu tilanne on siis eri kuin tilanne, jonka työntekijät kokevat yhteisesti turhauttavana. Työntekijöiden yhteisesti työyhteisössä jakamat kokemukset epäkohdista ymmärrettiin sairausloman aiheuttajina, kuten edellä psykososiaalisista työoloista todettiin. Toki niissäkin suuri merkitys koettiin työntekijän henkilökohtaisella kynnyksellä jättää sairauslomalle. Työtoverit ymmärsivät siis yhteisön jaetun todellisuuden mukaisen, turhautumisen aiheuttaman sairausloman, vaikka eivät välttämättä pitäneetkään sitä suotavana toimintatapana.

Elintarviketyöntekijöiden puheissa ilmeni myös, että joillain työntekijöillä on usein tapaturmaan perustuva sairausloma. Tätä liiallista tapaturma-alttiutta ei pidetty hyvänä eikä suotavana. Jos tapaturmat sattuvat tietyille henkilöille toistamiseen, herää työtovereiden epäily tahallista tapaturmista tai sitten saatetaan tapaturma-altis työntekijä syyllistää huolimattomana, taidottomana työntekijänä.

Vaikka vähäisen vaivan vuoksi sairauslomalla oleminen ei ollut hyväksytty toimintatapa, ei myöskään liian tunnollisesti käyttäytyvä tai itsensä korvaamattomana kokeva työtoveri ollut toivottu. Tällainen ylitunnollinen, itsensä muiden yläpuolelle asettava työtoveri mainittiin usein ”kirkkaan kruunun tavoittelijaksi”. Hän ei välttämättä ymmärrä tai halua lähteä kotiin sairanaakaan, kun pelkää tällöin menettävän ”kruununsa”.

N5: Niin ja varsinkin jos on jotain, siis kyllähän tommosessa nuhassa, jos sulla on tommonen lievä flunssa -tyylinen, siinä nyt siis pärjää, mutta jos on jotain tämmöstä, että käydään oksentamassa työn välissä silleen, eikä lähdetä kotio, on ihan semmosia esimerkkejä, että joku työntekijä on mennyt esimiehelle sanoon, että nyt meet sanoon tolle ihmiselle, että lähtee meneen täältä. Että on näitä tämmösiä, jotka nostaa kirkkaan kruunun päähän. RYHMÄ 2

HYVÄ ELINTARVIKETYÖNTEKIJÄ

Haastattelupuheissa hyväksi ja toivotuksi elintarviketyöntekijäksi kuvattiin työntekijä, jolla on tietynlaisia ominaisuuksia ja toimintatapoja. Erityisesti sairauspoissaolokäyttämiseen liittyvänä hyvänä toimintatapana pidettiin korkeaa kynnystä jättää sairauslomalle. Korkeaan kynnykseen jättää sairauslomalle liitettiin sisukkuus ja hyvä työmoraali sekä vastuuntunto työstä niin työnantajalle kuin työtovereillekin. Vastuuntuntoinen ei jätä työnantajaa eikä työtovereita vaikeuksiin olemalla pois. Hän on sitoutunut työhönsä ja kokee mahdollisen poissaolonsa hankalana ja työn etenemistä vaikeuttavana tilanteena.

Toisaalta hyvä ja hyväksytysti käyttäytyvä elintarviketyöntekijä ymmärtää olla pois töistä silloin kun on sairas. Sairaana töihin ei pidä tulla, sillä riski sairastuttaa työtoverit ja vaarantaa elintarvikkeet tulee huomioida. Tällaisessa tilanteessa korrektisti toimiminen on osa elintarviketyöntekijän ammatillisuutta.

Hyvän elintarviketyöntekijän kuuluu myös arvostaa itseänsä työntekijänä ja tietää oikeutensa työntekijänä. Työntekijän ei tarvitse alentua käyttämään epäkuntoisia laitteita ja epäkohdista

tulisi hyvän ja oman arvonsa tuntevan työntekijän uskaltaa sanoa esimiehelle. Hyvä työntekijä ei ole ”nössö”.

Hyvä työntekijä ja hyväksytty työtoveri on huumorintajuinen, avulias, ymmärtäväinen, rehellinen ja kokenut (”näpsäkkä”). Avulias ja ymmärtäväinen työtoveri auttaa puolikuntoista tai työrajoitteista työn edistämiseksi. Hän toimii periaatteella: ”sinne mennään auttaan missä nähdään, että tarvetta on”. Nämä edellä kuvatut, haastatteluissa esitetyt, elintarviketyöntekijän toivotut toimintatavat kuvaavat työntekijän piirteitä, joita voidaan pitää yleisestikin työilmapiiriä parantavina tekijöinä.

Lisäksi puheissa ilmaistiin, että työtoverien tulisi ymmärtää sairauslomalla olijan asema, eikä epäillä sairausloman oikeutusta. Esimerkiksi ulkoilua sairausloman aikana ei tulisi tulkita sairaudettomuudeksi, vaan ymmärtää ulkoilun, liikunnan tai muun kodin ulkopuolisen toiminnan tarpeellisuus sairaudesta riippuen. Hyvä työtoveri luottaa siis kollegaansa. Epäilevä suhtautuminen tai epäluottamus työtoverin sairausloman oikeutukseen heikentää työilmapiiriä.

Vastaavasti taas luottamus työtoveriin ja hänen sairauslomansa oikeutukseen ylläpitää hyvää ilmapiiriä. Sairauslomien oikeellisuustulkintoihin liitettiin usein se, että miten usein joku on yleensä pois tai kuka poissaoleva henkilö on. Tämä sisältää ajatuksen, että hyvä työntekijä tunnistetaan ja häneen luotetaan. Kun luottamus on olemassa, voivat työtoverit olla varmoja, että poissaolo ei ole turha. Tällöin ei joudu poissaolon oikeutus epäilyn kohteeksi.

POHDINTA

Tämä laadullinen elintarviketyöntekijöiden sairauspoissaolokäsityksiä ja -kokemuksia selvittävä tutkimus osoitti, että elintarviketyön fyysinen raskaus, yksitoikkoisuus ja hygieniavaatimukset eivät nouse esille erityisen korostuneesti työntekijöiden ryhmähaastattelutilanteessa. Sen sijaan haastattelut painottivat, että sairauspoissaoloja on paljon, jos työt on organisoitu huonosti, esimies on etäinen, työilmapiiri on huono eikä työtä arvosteta työyhteisössä. Elintarviketyötä ei koettu sen paremmin sisältä kuin ulkoapäinkään erityisen arvostetuksi. Haastattelujen perusteella vaikutti siltä, että juuri arvostuksen puutteen vuoksi korostuivat työyhteisöllisten seikkojen ja erityisesti henkilökohtaisten toimintatapojen sekä ratkaisujen merkitys keskeisenä sairauslomatilanteessa.

Haastattelujen perusteella työntekijän henkilökohtainen kynnys jäädä sairauslomalle ei ole erillinen henkilökohtainen ominaisuus, jonka voi päätellä esimerkiksi persoonallisuuden piirteistä. Kynnys muodostuu tilanteisesti eli se joustaa ja muovautuu jatkuvasti ympäristön ja työntekijän välisessä vuorovaikutuksessa. Sairauslomalle jäämisen kynnys on se paikka, porras, jolla mietitään jäädäänkö sairauslomalle vai ei silloin, kun sairauden tai työkyvyttömyyden tila ei ole selkeä. Kynnystilanteita voi olla usein, esimerkiksi silloin kun kunto, terveys tai työkyky on heikentynyt, mutta mahdollistaa kuitenkin työhön lähdön ja työnteon. Haastattelut korostivat, että työntekijä itse loppujen lopuksi vastaa kynnyksellä tekemistään päätöksistä. Matalan kynnyksen ja suoranaisten aiheuttoman sairausloman raja on moraalikysymys. Sairauden varjolla on helppo tyydyttää muita poissaolotarpeita, varsinkin jos matala kynnys on yleisesti hyväksytty (Dodier 1985). Työntekijän sairauspoissaolopäätökseen ei siis vaikuta vain objektiivisesti todettavissa oleva sairaus ja yksilölliset käsitykset vaan myös työyhteisön suhtautuminen ylipäätään sairauspoissaoloihin.

Sairauslomalle jäämisen kynnystä pohdittiin pitkälti irrallaan siitä tosiasista, että haastatellut elintarviketyöntekijät tarvitsevat terveydenhuollosta kirjoitetun todistuksen jokaisesta sairauslomapäivästä. Todistuksen saamista ei pidetty ongelmana, vaikka toisaalta kerrottiin, että esimerkiksi flunssasta loman saaminen vaatii yleensä kuumeen. Kaiken kaikkiaan prosessi menee niin, että työntekijä itse tekee päätöksen ottaako hän yhteyttä terveydenhuoltoon sairauslomaa hakeakseen vai ei. Haastattelujen perusteella loman kyllä yleensä saa, kun vetoaa sopiviin vaikeuksiin, tarvittaessa vaikka vanhoihin kulumisiin. Lisäksi työntekijä voi vielä sairauslomatodistuksen saatuaankin päättää, käyttääkö hän sen vai ei.

Sairauslomakynnyksen korkeudesta ja loman sosiaalisesta oikeutuksesta puhuttaessa viitattiin yleisesti työn ominaispiirteisiin. Työn fyysinen raskaus ja yksitoikkoisuus voivat yhdessä tai erikseen uuvuttaa työntekijän siten, että työn merkitys vähentyy. Haastatteluissa kuvattiin myös tilanteita, jolloin henkilön työkyky ei vastaa työn vaatimuksia. Tällöin kynnys jäädä sairauslomallekin alenee. Matala kynnys katsottiin oikeutetuksi tartuntataudeissa, mutta nimenomaan tällöin lomatodistuksen saamista ei pidetty itsestään selvänä. Toisaalta arvioitiin, että korkea henkilökohtainen kynnys saattoi joskus estää jäämisen perustellullekin sairauslomalle.

Heikkoudet psykososiaalisessa työoloissa vaikuttavat sairauslomakynnykseen. Huonosti organisoidut ja epäkohtia sisältävät työt turhauttavat työntekijöitä ja alentavat sairauslomakynnystä joko suoraan tai yhdessä jonkin muun kuormittavan seikan kanssa. Esimerkiksi joskus pitkäänkin epäkunnossa olevat laitteet ja toimeenpanoa odottavat ergonomiset muutokset koetaan ylimääräisiksi taakoiksi. Tällaiset ongelmat, jotka olisivat korjattavissa paremmalla organisoinnilla ja pienellä taloudellisella panoksella, viestivät työntekijöille alhaisesta arvostuksesta ja välinpitämättömyydestä. Siten työntekijä ikään kuin ajetaan sekä henkisesti että fyysisesti tilaan, joka sekä edellyttää sairauslomaa että oikeuttaa pois-saoloon. Työnantajan osoittama välinpitämättömyys ja tästä johtuva turhautuminen saattavat lisätä sairauspoissaoloja, etenkin silloin kun työilmapiiri on huono. Ilmapiiri toimii suodattimena tai kynnyksenä sairauslomalle jäämiseen. Ilmapiirin ollessa huono kynnyks on matala ja toisaalta taas ilmapiirin ollessa hyvä, kynnyks on korkea.

Yhden tehtaan sairauspoissaolojen taso oli selvästi matalampi kuin kahden muun (Virtanen ym. 2008). Kysymys tästä erosta oli yhtenä haastatteluteemana. Sekä teemaan liittyen että muissa yhteyksissä kahden muun tehtaan työntekijät valittivat etäisistä työnjohtajista, kun matalan pois-saolotason tehtaalla mainittiin myönteisessä hengessä läheiset, läsnä olevat työnjohtajat. Muiden selitysten ja epäkohtien (kunnossapito huonoa, puhutaan selän takana jne.) osalta tehtaat kuvautuivat varsin yhtenäisinä. Tämän vuoksi olisi tärkeää tutkia tarkemmin sekä fyysisesti että yhteisöllisesti läsnä olevan työnjohtajan vaikutusta sairauspoissaoloihin.

Korkean henkilökohtaisen työmoraalin ja korkean sairauslomakynnyksen välillä nähtiin ilmeinen yhteys. Työmoraalilla oli puolestaan yhteys työn arvostukseen. Haastattelujen perusteella vaikutti siltä, että mikään taho, edes työntekijät itse, ei arvosta elintarviketyötä kovinkaan korkealle. Arvostuksesta puhuttaessa näyttää ensisijaista olevan se, että työntekijä itse arvostaa työtänsä. Työnantajalta ja ympäröivästä yhteiskunnasta saatu arvostus voi vahvistaa, mutta ei korvata sitä. Arvostettuun työhön myös sitoudutaan. Esimerkiksi lääkäreiden korkea sairauspoissaolokynnystä on selitetty sitoutumisella (Rosvold ja Bjertness 2001) ja heikon sitoutumisen on todettu lisäävän poissaolon riskiä esimerkiksi pienten flunssien aikana (Mohren ym. 2005). Ratkaiseva vaikutus niin työmoraaliin,

arvostukseen kuin sitoutumiseen ja sitä kautta sairauspoissaoloihin näyttää kuitenkin lopulta olevan työpaikan ja työyhteisön sisäisillä seikoilla.

Perhetilanteen merkitys myönnettiin kysyttäessä, mutta sitä ei mitenkään painotettu. Samansuuntainen tulos saatiin tutkimuksessa, jossa keskeisiksi toimijatahoiksi sairauspoissaolojen ennaltaehkäisyssä kannalta osoittautuivat terveydenhuollon ammattilaiset, työnantaja, sosiaalivakuutusasioita hoitavat virkailijat ja itse työntekijä (Ockander ym. 2005). Toisaalta työn ja perhe-elämän välisten ristiriitojen on kuitenkin havaittu lisäävän sairauspoissaolon riskiä (Jansen ym. 2006, Väänänen ym. 2007).

Elintarviketyöntekijät arvottivat sairauspoissaolojen syitä ja toimintatapoja hyväksyttävyyden näkökulmasta. Työyhteisön hyväksymä tilanne oikeuttaa matalaankin sairauslomakynnykseen. Jos hyväksyntä on kyseenalainen, sairauslomalla olija saatetaan syyllistää ja leimata. Sairauspoissaolo voidaan esimerkiksi nähdä oikeutetuksi vallan käytön välineeksi, jos työyhteisössä vallitsee yhteisesti koettu turhautunut ilmapiiri. Jos taas työntekijä jää sairauslomalle kiukutellakseen esimiehelleen jostain yksittäisestä, henkilökohtaisesta ristiriidastaan, työtoverit eivät välttämättä pidä sitä oikeutettuna. Vaikka siis sairauslomalle jääminen on aina henkilökohtainen ratkaisu, kynnyksellä seisova työntekijä joutuu punnitsemaan toimintatapaansa työyhteisössä vallitsevien sosiaalisten paineiden ja tapojen alaisena. Tämä punninta on osin tietoista, osin yhteisön jäsenet 'tietävät tietämättään' millainen 'habitus' (Bourdieu 1977, Virtanen ym. 2000) kuuluu asiaan sairauspoissaolojen kentällä.

Työtoverit saattavat tehdä sairauslomalle jääneen toimintatapojen perusteella pitkällekin meneviä päätelmiä poissaolon syystä (Dodier 1985). Joissakin tilanteissa ei työtoverin toimintaa kyseenalaisteta mitenkään eikä mahdollisia diagnooseja pohdiskella. Tähän tutkimukseen osallistuneet elintarviketyöntekijät vahvistivat, että on olemassa luotettavia ihmisiä, joiden sairauspoissaolon oikeutusta ei tarvitse epäillä. Toisaalta jollakin saattaa olla sellainen maine, että työtoverit eivät punnitse tilanteen asianhaaroja mitenkään, vaan "leimaavat" hänet aina samalla "diagnoosilla".

MENETELMÄN POHDINTAA

Ryhmähaastattelut sopivat tähän tutkimukseen erityisen hyvin, koska niiden on todettu soveltuvan hyvin tilanteisiin, joissa halutaan tavoittaa

sitä mikä on yhteistä ryhmän jäsenille, ja tuoda esille haastateltavien mielipiteitä yhteisöllisten, kulttuuristen tekijöiden merkityksistä (kulttuuriset jäsenyykset) johonkin koko yhteisöä koskettavaan ilmiöön (Alasuutari 1994, Pötsönen ja Välimaa 1998, Barbour 2007). Ryhmähaastattelut eivät useinkaan mahdollista kovin erilaisten tai yksilöllisten mielipiteiden esiin tuomista. Tässä tutkimuksessa se ei ollut ongelma, koska kiinnostuksen kohteena olivat yleisesti työpaikalla vallitsevat käsitykset, eivät yksilölliset sairauspoissaolojen syyt. Tämän tutkimuksen tavoitteena oli saada lisää tietoa siitä, miten sairauspoissaoloihin työpaikalla suhtaudutaan ja miten työntekijät tulkitsevat sairauspoissaolotilanteita. Ryhmähaastattelut tuovat esiin sen prosessin, jossa asenteita muodostetaan ja ne seikat, jotka ovat relevantteja sairauspoissaoloista keskusteltaessa (Kitzinger 1994, Barbour 2007). Työpaikan organisaatio-kulttuurin täydelliseen valottamiseen valitsemamme menetelmä ei ole ehkä ole paras mahdollinen, mutta pitkäkestoisen osallistuvan havainnoinnin ja useiden yksilöhaastattelujen sijaan, ryhmähaastattelut ovat ryhmädynamiikkaa korostavan luonteensa lisäksi myös taloudellinen tapa kerätä aineistoa, jonka avulla saatoimme valottaa elintarviketeollisuuden työyhteisöissä sosiaalisesti hyväksytyjä toimintatapoja. Ryhmähaastatteluisa ajateltiin myös syntyvän keskustelua, ideoita ja ajatusten jäsentymistä haastateltavien keskuudessa rikkaammin kuin yksilöhaastatteluisa. Pyrkimyksenä ei ollut yhtenäisen mielipiteen saavuttaminen (Powell ja Single 1996), ja haastattelijat pyrkivätkin rohkaisemaan myös eriävien mielipiteiden esittämistä. Haastattelutilanteita ei rajattu tiukasti huolimatta tema-aiheista. Näin ollen tavoitettiin sairauspoissaoloihin liittyviä näkemyksiä varsin monipuolisesti ja menetelmävalinta koettiin onnistuneeksi. Haastateltavat olivat kolmesta eri tehtaasta, erilaisilta osastoilta ja erilaisia tuotannon työtehtäviä tekeviä.

Analyysimenetelmänä käytetyn sisällönanalyysin suurin haaste oli kategorisoinnissa. Se ei

ole yksiselitteistä, kun tutkitaan työntekijöiden käsityksiä ja tiettyä työtä tiettyssä työympäristössä ja -yhteisössä. Työn ominaispiirteet ja työyhteisölle ominaiset piirteet (esim. psykososiaaliset työolot) sisältävät toisinaan yhteisiä tai päällekkäisiä, vaikeasti toisistaan erotettavia tekijöitä. Vaikka tuloksia ei voikaan täysin yleistää koskemaan koko elintarvikealaa, on tämän tutkimuksen arvo uuden elintarviketeollisuuden sairauspoissaoloja koskevan tiedon tuottamisessa. Tulevaisuudessa voidaan tämän tutkimuksen tulosten perusteella paremmin kiinnittää huomio esille nousseisiin seikkoihin myös kyselytutkimuksia suunniteltaessa. Lisäksi hyödyllistä voisi olla toteuttaa vastaavanlaiset ryhmähaastattelut elintarviketyöntekijöiden työnjohtajille heidän näkökulmansa kuulemiseksi.

PÄÄTELMÄT

Tämän tutkimuksen mukaan elintarviketyöntekijöiden sairauspoissaoloihin liittyy vahvasti sairauslomalle jäämisen kynnys. Kynnys merkitsee tämän haastatteluaineiston perusteella henkisen jaksamisen tasoa tiettyssä työpaikan ilmapiirissä ja oikeutettuja toimintatapoja tässä ympäristössä. Kynnyksellä tehty ratkaisu ovat aina loppujen lopuksi henkilökohtaisia, mutta niihin vaikuttavat monet työyhteisölliset seikat. Elintarviketyön ominaispiirteet eivät saaneet suurta merkitystä toisin kuin työn psykososiaaliin oloihin liittyvät seikat. Niiden merkitys kiteytyi työn arvostuksen vähäisyyteen. Se ilmeni vahvana elintarviketyöntekijöiden sairauspoissaoloihin ja -lomalle jäämisen kynnukseen liittyvänä tekijänä. Täten huomion kohteeksi tulisi ottaa työn arvostuksen hrottaminen työyhteisöissä. Kun työn arvostus ja työhön sitoutuminen lisääntyisivät, työmoraali ja sairauslomalle jäämisen kynnys kohoaisivat ja sairauspoissaolot vähenisivät. Lisäksi tehtyjen ryhmähaastattelujen perusteella työntekijästä välittämisen tunteen lisääminen sekä läsnä olevan esimiehen olemassa olo olisivat tärkeitä sairauspoissaolojen vähentämiseksi.

Siukola A, Lumme-Sandt K, Virtanen P, Nygård C-H. Sickness absence in food industry; a qualitative study about sick leave experiences and prevailing practices among blue-collar workers
 Sosiaalilääketieteellinen Aikakauslehti — Journal of Social Medicine 2008;45:175–186

This paper analyses blue-collar workers' sick leave experiences and prevailing practices in food industry. The attention is drawn to characters and psychosocial aspects of food industry work

and workers' way of action in the situations of sickness absence. The data were gathered through nine focus group interviews with workers from three factories in a large Finnish food industry

group. The focus groups have been analysed using content analysis. Work characteristics, for example hygiene demands, didn't explain sick leaves in workers' conversations. Instead, lack of appreciation of the work, taking care of workers,

attending supervisors and positive working climate were meaningful aspects in the discussions about sick leaves. These are deciding factors when a worker is considering whether or not to take sick leave.

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Attitudes and arrangements at workplace and sickness absence among blue- and white-collar workers

Anna Siukola, Clas-Håkan Nygård, Pekka Virtanen

Abstract

Purpose: This study focused on the associations of employees' attitudes and human resource arrangements to sickness absence from the perspective of absence culture and work ability.

Design/methodology/approach: The study was conducted in one of the largest food industry companies in Finland. Sickness absence register data was obtained from the years 2003 to 2005 and a survey from 2005. This survey included single propositions about work arrangements (5 propositions) and attitudes (3 propositions) during sickness absence. These were analysed by absence days and short (1-7 days) and long spells (>7 days). **Findings:** The attitude of blue-collar workers who agreed that it is a matter of course that someone is absent was statistically significant regarding sickness absence. They had increased risk for sickness absence days and for short spells.

From work arrangements during absence the fact that jobs will wait returning to the workplace decreased the risk for short and long sickness absence spells in both groups.. In addition, the fact that the employer will take a substitute during workmates' absence increased the risk for all measured sickness absence rates among white-collar workers. **Research limitations/implications:**

The study was restricted to the view of the employees. The view of managers and human resource management would enhance the understanding about this study area. **Practical implications:** These findings should be noted in enterprises' human resource management and occupational health services to manage and understand sickness absence. **Originality/value:** Although sickness absence

has been widely studied, very little is known about sickness absence related work arrangements and attitudes associated with sickness absence. This study increased knowledge about these issues.

Key words: sickness absence, work arrangements, absence culture, occupational class, food industry, Finland

Introduction

General starting points

Sickness absence is an everyday challenge for the human resource management of various organizations and enterprises. From the viewpoint of the employers, sickness absence is associated with loss of productivity, and their prime interest is to maintain practices and arrangements that minimize the costs of sickness absence. (Koopmanschap et al. 2005) The challenges for the managers originate in the need to adjust this interest according to workers' individual and collective views and attitudes about absence, and also to identify the particular physical, psychological and social features of the workplaces and communities. However, sickness absence is not totally manageable at the workplace level. Salary compensations related to the nation level sickness insurance (Henrekson & Persson, 2004, Voss et al., 2001) have a major effect on sickness absence, and national and industry specific collective agreements /bargains may be assumed to have corresponding impacts. Locality also seems to determine sickness absence rates across all workplaces (Virtanen et al., 2000, Virtanen et al., 2010). Aware of such 'macro contexts', we intend in the present study to elicit the variation in sickness absence (i) due to human resource management, i.e. work arrangements during the absence, and (ii) due to employee's perceptions of attitudes towards sickness absence in their work community.

Absence culture

Absence culture may be defined as the shared views (e.g. of legitimacy for absence) on absence in a company or part of it (Allebeck & Mastekaasa, 2004, Väänänen et al., 2008). In the case of the absence due to sickness, this approach may be derived from sociological theories about being sick

in society (Gerhardt, 1989) and about the cultural construction of sickness in different communities, for example the work community (Nicholson & Johns, 1985). Different behavioural practices in the workplace can also be explained on the basis of socially constructed “sickness absence habitus”. Habitus expresses the conception that even if an employee has her/his own opinions and attitudes about sickness absence practice, they are, more or less consciously, adjusted in order to conform to those of the surrounding work community and wider local community and society. (Virtanen et al., 2000, Bourdieu, 1977)

There are studies associating organization culture and behaviour with general non-attendance (e.g (Allebeck & Mastekaasa, 2004, Bamberger & Biron, 2007), but only a few studies deal specifically with sickness absence. Väänänen et al. (2008) in their follow-up study integrated views of occupational health and organizational management. The study gathered questionnaire data about the social components of work (group absence norms and group cohesion) and analysed their associations with medically certified sickness absence both at the individual and at the group level. Although the effects of these work group characteristics (how tolerant absence norms are and how strong the group cohesion is) on sickness absence were not significant, indirect impact occurred. If the group absence norms were tolerant and the group cohesion weak, individual attitudes toward work attendance influenced the absence behaviour more strongly.

Recently, studies about attitudes, behaviour and organization at work have also concerned presenteeism (Hansen & Andersen, 2008, Böckerman & Laukkanen, 2010). Sickness absence and presenteeism are counterparts, but the explanations for their occurrence differ. Presenteeism seems to be particularly sensitive to working time arrangements; shift or period work and overlong working weeks, for example, clearly increase it. (Böckerman & Laukkanen, 2010)

Work arrangements during absence

Research on our second object of interest, work arrangements during sickness absence and their impact on absence, is very scarce. There is a study (Aronsson and Gustafsson 2005) showing that replaceability of the employees is associated to sickness presenteeism. Corresponding phenomenon could be expected with respect to sickness absenteeism as well. However, Böckerman and Laukkanen (2010) could not confirm the hypothesis that replacement by substitute or by colleagues increases sickness absence.

Work ability and sickness absence

During a sick leave the employee is, by definition, unable to work due to a temporary health problem. Also inherent in a case of sickness absence is the dichotomy able versus unable, which evidently represents an oversimplified view of work ability. A richer view can be obtained by turning to work ability models which originally aimed to stratify employees according to permanently impaired work ability, for example due to aging, and consequently to support workplace health promotion (Tuomi et al., 2001) and productivity (Guidotti, 2011). The model can be presented as a building with four floors (Ilmarinen, 2006). Roofed by work ability, the house consists of the ground floor of the health and the functional capacity of the employee, of the second floor of professional competence, of the third floor of values (such as attitudes and motivation of the employee), and of the top floor of characteristics and conditions of the work (environment, ergonomics, content and demands, community, organization and management). In order to be durable, the work ability roof has to rest upon these four elements in a balanced manner. In addition, several external elements (e.g. occupational health care, family, society) may support or undermine the building.

So far, the model has not been applied to explaining and understanding temporarily impaired work ability, although 'sickness absence' is obviously not related solely to problems in health and functioning, but is influenced by the elements included in the upper floors of the building as well. In the present study, the work ability building has been adopted as the theoretical frame. The focus of our interest is in particular on the third floor and the fourth floor. There is variation between individuals in the attitudes and motivations regarding sickness absence, even if the work related values also have to conform with the cultures in their working community and other communities where they belong. At the fourth floor level, there are the various solutions and arrangements of the human resources during the sickness absence.

Blue-collar and white-collar workers

Although universal, the work ability model assumes different contents in different settings. The present study concerned the food industry. The company, consisting of factories and an office unit, is a traditional industrial organisation with respect to the management and staff structure. Inherent in organisations producing this kind of goods is a clear-cut division of the employees into blue-collar and white-collar. Among blue-collar food industry employees the work ability is constructed in working conditions characterised by physically demanding jobs in physically adverse environments with restricted opportunities for self-regulation of the work tasks. White-collar employees, on the contrary, build their work ability in an ordinary office environment by managing the customer contacts and the production, including the human resources. The sickness absence culture of white-collar employees also tends to represent middle-class lifestyle, which includes a relative reluctance to take advantage of welfare benefits, while the blue-collar employees conform more to working-class lifestyle which predicts that one more often feels entitled to make use of the rights that the employees have won (Virtanen et al. 2000). The class differences incorporated in

sickness absence are also related to control practices and human resource management (HRM) arrangements. Overall, the work ability houses of the blue-collar and the white-collar workers differ from the ground to the roof so profoundly that they also have to be studied separately.

Aims

Based on sociological theories about sickness and on the frame of the work ability house, the aim of this study was to explore whether there is 1) an association between sickness absence rate and workers' attitudes towards absence, and 2) an association between sickness absence rate and HRM arrangements during absence. In particular, the aim was to ascertain whether there are differences in these associations between blue-collar and white-collar workers.

Subjects and methods

A questionnaire survey was conducted in 2005 in a Finnish food industry company comprising four factories and an administrative centre. The response rate was 73% (n=1,453), and the number of employees giving their consent to the survey and register data being linked (see below) was 1,201 (60%). In this study we used eight propositions, set to examine the employees' perceptions of what occurs at a workplace when someone is absent. The propositions were as follows (Virtanen et al., 2010):

Imagine that you have to be on sick leave for a week. What do you think would be going on at your workplace?

1. The employer will take a substitute.

2. My co-workers will have to do my jobs.
3. My jobs will wait until I return to work.
4. After returning to work I will have to work harder or to lengthen my working time due to the accumulated work.
5. My jobs will be done well despite my absence.
6. My absence will strain the atmosphere in my work community.
7. I feel worried about my work during my absence.
8. In my work community it is regarded as a matter of course that most of the time someone is on sick leave.

Each item was scored on a Likert scale from 1 (totally disagree) to 5 (totally agree). The responses were classified into a dichotomous variable (1-2 disagree and 3-5 agree). Propositions 1 to 5 concerned work arrangements. Propositions 6 and 8 reflected the attitudes of the work community and proposition 7 more personalized behaviour, but it was used under the attitude propositions in this study.

Sickness absence data

The information about sickness absence was obtained from the personnel register of the company. Sickness absence was measured with short spells (1-7 days), long spells (>7 days) and with days. A certificate from a nurse or a physician is required for every sickness absence, among blue-collar workers from the first day on. White-collar workers are allowed to self-certify a sickness absence until three days away from work.

Sickness absence was summed up across years 2003-2005. In order to obtain correct denominator for the absence figures, we calculated “time at risk” for every employee during these years by subtracting from the total duration of the employment other absence (not holidays) than that due to sickness. In other words the “time at risk” was 3.0 for those who person-years if a person had been contracted without interruptions throughout the follow-up and was shorter if the contract had started and/or ended during the follow-up or if there were interruptions. .

Inclusion criteria

The survey and the absence data were linked if an employee had given written consent to the study and had “time at risk” for at least 0.5 years (N=1198).

Statistical analysis

Rates of sickness absence spells and days were described by medians and ranges, as the distribution of the variable is not normal. Mean values per person year were also presented in order to facilitate general comparability. Responses to the propositions were described as percentages by agreement. Descriptive statistics were shown for all study subjects and stratified by occupational class (blue-collar workers and white-collar workers). Blue-collar workers were manual workers in the food factory, whereas white-collar workers included all office workers and managers.

Generalized linear models (McCullagh & Nelder, 1989) were used in the analyses of the associations of sickness absence with the attitudes and HRM. The absence variables turned out to be over-dispersed in the analyses with the assumption of a Poisson distribution; therefore rate ratios for the accumulation of sickness absence were defined with the assumption of negative binomial distribution of the variable (Gardner et al., 1995). Each proposition was analysed separately for the

white-collar and the blue-collar workers with age and gender adjusted models, and the significance of the between-class difference was assessed by p-value of the proposition*class interaction.

Statistical analyses were performed by SPSS version 19.0.

The study was approved by the ethics committee of Pirkanmaa Hospital District.

Results

There were 898 (75 %) blue-collar and 300 (25 %) white-collar workers among the respondents. In all, 63 % (N=756) of them were women. The mean age was 41 years (ranging from 20 to 66 years). Among blue-collar workers the mean age was 39 years (ranging from 20 to 66 years) and among white-collar workers 44 years (ranging from 23 to 65 years). The proportion of women were 62 % (N=558) and 66 % (N=198), respectively.

Sickness absence rates per person-year are presented in Table 1. On average, the employees had 19.5 sickness absence days, 2.6 short spells and 0.6 long spells. In blue-collar workers the figures were 2-3 times higher than in white-collar workers.

Table 1

There were considerable differences between blue-collar and white-collar workers in the arrangements of HRM during sick leave (Table 2). The figures were about the same only for the proposition “co-workers will do my jobs during sickness absence”, whereas, for example, 76 % of the white-collar workers and 8 % of the blue-collar workers agreed that jobs would be waiting for

their return to work. Responses in the attitude propositions also differed; only 31 % of blue-collar workers felt worried about their work during their absence, whereas the rate was 82 % among white-collar workers. It was also more likely to be regarded as a matter of course that most of the time someone is on sick leave among blue-collar workers (79%) than among white-collar workers (37%).

Table 2

Analyses of short sickness absence spells revealed three significant associations in the set of the HRM propositions and one in the set of the attitude proposition (Table 3). The risk was high (RR 1.58 [1.10-2.29]) in white-collar workers, who agreed that the employer would take a substitute if they were on sick leave, as well as in blue-collar workers, who agreed that in the work community it is regarded as a matter of course that most of the time someone is on sick leave (RR 1.27 [1.05-1.52]). Blue-collar workers who agreed that after returning to work they had to work harder or to lengthen their working time had a low risk for short spells (RR 0.60 [0.45-0.80]). Irrespective of the occupational class the workers had 0.6 to 0.7-fold risk for short spells if the jobs will wait their return to work.

The findings for long sickness absence spells were largely similar to those for short ones (Table 4). However, in case of the proposition “I have to work harder due to accumulated work after returning to work” the association was also statistically significant among white-collar workers. In other words, those agreeing that after returning to work they had to work harder or to lengthen their working time showed an decreased risk for long sickness absence spells in both groups.

Table 3

Table 4

The associations of sickness absence days with the arrangements of HRM and attitudes of the employees are presented in Table 5. Among white-collar workers a increased risk (RR 1.55 [1.13-2.11]) was apparent if there was a substitute during the sick leave. Among blue-collar workers a increased risk (RR 1.25 [1.05-1.48]) for absence days was found respectively if they take it for granted that someone from the work community was always on sick leave. In line with the finding for long spells, both the white-collar and the blue-collar workers had decreased risk for absence days if it was likely that they have to work harder after sick leave.

Table 5

Regarding HRM, no associations to sickness absence were found for the proposition that co-workers have to do one's work, and for the proposition that jobs would be done despite one's absence. In the area of attitudes there were also two absence-neutral propositions: absence would strain the atmosphere in the work community and an employee felt worried about her/his work during her/his absence.

Overall, the differences between blue-collar and white-collar workers were small regarding the associations of sickness absence both with HRM and attitudes. However, in the case of the proposition "The employer will take a substitute", the p-values for interaction showed that white-collar workers were more reluctant to take long-term sick leaves ($p=0.03$) and sick days ($p=0.007$) if there was no substitute.

Discussion

Our study revealed the HRM practices around the return to work after an absence as particularly strong determinants of sickness absence. If a worker needs to work harder after returning to work, she/he had decreased risk for absence days and long spells (and in blue-collar workers also for short spells). If there were accumulated jobs waiting on worker's return, an employee had decreased risk for short spells and long spells. If there was a substitute during absence, the risk of absence was high, but only among white-collar workers. Absence-related attitudes were associated with sickness absence only in case of the proposition of sick leaves as a matter of course: the blue-collar workers who agreed, had increased risk for sickness absence days and short spells.

Among blue-collar workers four out of five respondents regarded it as a 'matter of course' that someone was absent, whereas in white-collar employees the corresponding proportion was one of three. The difference is logical given that the blue-collar workers are more commonly in need of a sick leave due to the physically heavy work, but in the theoretical frame of the present study we also interpreted the replies to this proposition as a reflection of differences in the sickness absence habitus, or absence culture, between the occupational classes. In other words, the blue-collar workers more commonly shared the view about absence as a tolerable and permitted event, whereas among white-collar workers the shared view was the opposite. Although the design and methods of this study differ from the study by Väänänen et al. (2008), our findings are also in line with the conception that the sickness absence behaviour was based on the norms and the social cohesion of employee groups.

One explanation for the difference between blue-collar and white-collar respondents may be that the latter included managers and supervisors with different numbers of subordinates. Their responses

could not be excluded from our data, but we may refer, for example, to the study by Wynne-Jones et al. (2011), which showed a difference between managers and employees concerning perceptions of organisational policies and beliefs and attitudes about absence /attendance with musculoskeletal pain. The difference crystallized in beliefs in the legitimacy of the complaints leading to absence. Factors behind occupational class differences in sickness absence are strongly associated with physical working conditions (Laaksonen et al., 2010). We scrutinised blue-collar and white-collar workers separately, also because of their commonly known difference in sickness absence rates (Laaksonen et al., 2010, North et al., 1993), the nature of work tasks and practice for the notification of absence. The latter difference may be one dimension forming the absence culture of the groups. This practice may also reflect the assumption of the company's HRM of existing different class-based lifestyles (notably that blue-collar workers need more paternalistic practice than white-collars). On the other hand, it may be an unanswered question, if it is the absence related practice of HRM or the absence related action /behaviour of employees which for its part maintains class-based lifestyle at the workplace. However, it is good to consider that the meanings of the propositions related to the arrangements during absence are likely different among blue-collar workers and white-collar workers. For example, if there is no substitute during an employee's absence, it means for a blue-collar worker that someone else has to do her/his job, but the job of the white-collar worker is waiting for her/him to return to work. Based on this thought, we assume that the proposition 'My jobs are waiting until I return to work' is more informative about the situation for both employee groups. Regarding this proposition, Böckerman and Laukkanen (2010) did not find associations between replaceability and sickness absence.

It is also reasonable to ask how far the results are specific to the studied branch. This study was conducted in the food industry where sickness absence rates, at least among blue-collar workers, are high compared to other industries (Työaikaakatsaus, 2011). This high rate has been explained by

sector-specific features (like shift work, hygiene regulations in the food industry). On the other hand a qualitative study concluded that food industry workers did not themselves feel that sector-specific features played an important role in sickness absence phenomena (Siukola et al., 2008). Despite of these results and the fact that the used questions were not food industry specific, the generalizability of the present study is limited. To the best of our knowledge there are no studies utilizing the same propositions as we used. However, they may be used in future studies. We assumed that these propositions were acceptable for use in working life outside of Finland, because Finland does not differ from other countries in comparative culture studies about employment, organisation commitment and work orientations (Kirkman & Shapiro, 2001, de Witte, 2004, Turunen, 2011).

The three-year retrospective approach is strength of our study, regarding the statistical power of the analyses as well as the content items of the questionnaire. The scarce earlier research provides no established ways to study sickness absence from the viewpoints taken in this study, therefore we considered it appropriate and valuable to construct a set of propositions of our own. The analysis item by item helps to tackle in detail the determinants behind the sickness absence. In addition, within the limitations of the study, it is possible to suggest that a more comprehensive understanding of the significance of HRM for sickness absence could in the future be obtained from studies reflecting replies to the propositions against information collected from the supervisors and managers. A limitation in the present study might also be the lack of a measure of presenteeism which evidently may be associated with work arrangements (Aronsson and Gustafsson 2005, Bäckerman & Laukkanen 2010).

The finding that employees regard it as a matter of course that someone is always on sick leave gives rise to different implications and challenges, depending on the point of view. It might reflect low sickness presenteeism, which is chiefly a positive phenomenon. On the other hand, it may

indicate that the work community has accepted a relatively low absence threshold. If this “permissive” absence culture means increased risk for sickness absence, as it did in our study among blue-collar workers, the options for the employer or the occupational health services to tackle the situation may be scarce. For instance, the influence of health promotion actions is debatable: Grinyer & Singleton (2000) claimed in their study that sickness absence can be seen as risk-taking behaviour rather than health promotion behaviour for employees. In addition they suggest that health promotion with ideal models of the social and working environment may be experienced as threatening by employees, and this may have unintended and negative consequences for employers and employees by increasing sick leaves or presenteeism. (Grinyer & Singleton, 2000)

Kristensen (Kristensen, 1991) has proposed that sickness absence should be regarded as a coping behaviour, which corresponds to the combination of job demands and coping possibilities at work related to an individual’s perceived health. A corresponding idea can be applied to the work ability – sickness absence relation. If work ability is not balanced with work demands and an individual’s capabilities (health, competence, and motivation), sickness absence is one way to survive /cope. Another way to handle the situation may be presenteeism (Aronsson & Gustafsson, 2005). For example, in the present study the decreased risk for sickness absence among white-collar workers if there is no substitute during absence may mask presenteeism. However, work ability is an elastic concept, and it can mean that before absenteeism an employee has a “fight” between her/his capabilities and suggestions about her/his work demands. For example, from the perspective of the work ability house, an employee may be able to work even if she/he has difficulties on some floor of the work ability house, because the strength of the other floors can compensate for the deficiency.

In light of the present study with the house of work ability it seems that the fourth floor, including general work arrangements (no substitute – jobs waiting – more work to do after returning) during sickness absence can be associated with imbalanced work ability, which may create an increasing risk for sickness absence. Most clearly this seemed to appear, in spite of the sickness absence measure as well as of the occupational class if an employee had to work harder when returning to work after absence. Therefore, we encourage the occupational health services and the employers to exploit this view when assessing work and sickness absence. Three of our used propositions placed on the third floor (individual attitudes). They interact with the values of the surrounding community/-ies. Even if only one attitude proposition was statistically significant, we assume that this part of the house is not less important for the building of sickness absence, but rather that two of the propositions were not so relevant to this topic.

Overall, sickness absence is an unambiguous phenomenon and maybe for this reason it is an enduring subject for further studies. The results of our study indicate that it might be possible to arrive at explanations for absence behaviour with a couple of key propositions. In the occupational health services the questions could be presented to an employee about absence related substitution, amount of accumulated work or how common is that someone is absent. The employer could then try to remedy the situation, for example, by appointing a substitute for the absent person, especially for a white-collar worker. It should be the responsibility of the employer to arrange the work during the absence so, that it is not waiting for the person to come back to work, thereby increasing the workload of a returning employee. Influencing the sickness absence culture is likely a more challenging issue.

Conclusions

Four out of eight propositions related to work arrangements and attitudes during absence were clearly associated with sickness absence. Work tasks accumulating during absence is one factor associated with decreased sickness absence regardless of occupational class. White-collar workers who had a substitute during their absence and blue-collar workers who take it for granted that someone is always absent, had increased risk for sickness absence.

Policy recommendations

If an employer wants to prevent sickness absence, attention should be paid to work arrangements during absence. More specifically, this means that jobs are not waiting so that when an absent employee returns, she/he does not have to work harder. Another, and maybe a more complicated aspect, is how to have an impact on absence related attitudes. If a permissive absence culture (absence is regarded as a matter of course) is prevalent, reflections about the reasons for the behaviour in the work community should be discussed.

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Table 1. Sickness absence per person year of the participants by occupational class.

	All N=1198			Blue-collar workers n=898			White-collar workers n=300		
	mean	Md	(range)	mean	Md	(range)	mean	Md	(range)
Sickness absence days	19.5	10.6	(0-196)	24.0	14.3	(0-196)	6.1	2.6	(0-87)
Short absence spells (1-7days)	2.6	2.0	(0-21)	3.2	2.4	(0-21)	0.9	0.6	(0-7)
Long absence spells (>7 days)	0.6	0.3	(0-5)	0.7	0.3	(0-5)	0.2	0	(0-2)

Table 2. Participants' agreement with propositions about work arrangements and attitudes by occupational class.
Instruction for the propositions: 'Imagine that you have to be on sick leave for a week. What do you think would be going on at your workplace?'

		All N=1198		Blue-collar workers n=898		White-collar workers N=300	
Arrangements 1-5		<u>n</u>	<u>(%)</u>	<u>n</u>	<u>(%)</u>	<u>n</u>	<u>(%)</u>
1. The employer will take a substitute							
	Agree	437	(36.5)	386	(43.0)	51	(17.0)
	Disagree	756	(63.1)	507	(56.5)	249	(83.0)
	missing	5	(0.004)	5	(0.6)	0	
2. My co-workers will have to do my jobs							
	Agree	867	(72.3)	660	(73.5)	207	(69.0)
	Disagree	327	(27.3)	234	(26.1)	93	(31.0)
	missing	4	(0.003)	4	(0.4)	0	
3. My jobs will wait until I return to work							
	Agree	300	(25.0)	72	(8.0)	228	(76.0)
	Disagree	894	(74.6)	822	(91.5)	72	(24.0)
	missing	4	(0.003)	4	(0.4)	0	
4. After returning to work I have to work harder or to lengthen my working time							
	Agree	303	(25.2)	67	(7.5)	236	(78.7)
	Disagree	891	(74.3)	827	(92.1)	64	(21.3)
	missing	4	(0.003)	4	(0.4)	0	
5. My jobs will be done well despite my absence							
	Agree	1023	(85.4)	829	(92.3)	194	(64.7)
	Disagree	172	(14.4)	66	(7.3)	106	(35.3)
	missing	3	(0.003)	3	(0.3)	0	
Attitudes 6-8							
6. My absence will strain the atmosphere in my work community							
	Agree	495	(33.0)	269	(30.0)	126	(42.0)
	Disagree	801	(67.0)	627	(69.8)	174	(58.0)
	missing	2	(0.002)	2	(0.2)	0	
7. I feel worried about my work during my absence							
	Agree	523	(43.7)	278	(31.0)	245	(81.7)
	Disagree	673	(56.2)	618	(68.8)	55	(18.3)
	missing	2	(0.002)	2	(0.2)	0	
8. It is regarded as a matter of course that most of the time someone is on sick leave							
	Agree	822	(68.6)	712	(79.3)	110	(36.7)
	Disagree	372	(31.1)	182	(20.3)	190	(63.3)
	missing	4	(0.003)	4	(0.4)	0	

Table 3. Association of short sickness absence spells (1-7 days) 2003-2005 and arrangements and attitudes at the workplace during absence analysed by a generalized linear model (negative binomial) adjusted for age and gender.

		Blue-collar workers n=898		White-collar workers n=300	
		RR	[CI 95%]	RR	[CI 95%]
1.The employer will take a substitute					
	Disagree	1		1	
	Agree	1.103	[0.95-1.28]	1.583	[1.10-2.29]
2.My co-workers will have to do my jobs					
	Disagree	1		1	
	Agree	0.988	[0.84-1.16]	0.995	[0.74-1.35]
3.My jobs will wait until I return to work					
	Disagree	1		1	
	Agree	0.733	[0.56-0.96]	0.626	[0.45-0.87]
4.After returning to work I have to work harder or to lengthen my working time					
	Disagree	1		1	
	Agree	0.600	[0.45-0.80]	0.759	[0.54-1.06]
5.My jobs will be done well despite my absence					
	Disagree	1		1	
	Agree	0.943	[0.72-1.24]	0.994	[0.74-1.33]
6.My absence will strain the atmosphere in my work community					
	Disagree	1		1	
	Agree	0.951	[0.82-1.11]	1.087	[0.82-1.45]
7.I feel worried about my work during my absence					
	Disagree	1		1	
	Agree	0.883	[0.75-1.03]	1.094	[0.76-1.58]
8.It is regarded as a matter of course that most of the time someone is on sick leave					
	Disagree	1		1	
	Agree	1.265	[1.05-1.52]	1.309	[0.98-1.75]

Table 4. Association of long sickness absence spells (>7 days) 2003-2005 and arrangements and attitudes at the workplace during absence analysed by a generalized linear model (negative binomial) adjusted for age and gender.

		Blue-collar workers n=898		White-collar workers n=300	
		RR	[CI 95%]	RR	[CI 95%]
1.The employer will take a substitute	Disagree	1		1	
	Agree	0.949	[0.80-1.13]	2.058	[1.28-3.31]
2.My co-workers will have to do my jobs	Disagree	1		1	
	Agree	1.002	[0.83-1.21]	0.734	[0.49-1.11]
3.My jobs will wait until I return to work	Disagree	1		1	
	Agree	0.725	[0.53-1.00]	0.613	[0.40-0.95]
4.After returning to work I have to work harder or to lengthen my working time	Disagree	1		1	
	Agree	0.513	[0.36-0.73]	0.470	[0.30-0.73]
5.My jobs will be done well despite my absence	Disagree	1		1	
	Agree	1.036	[0.75-1.43]	0.905	[0.60-1.37]
6.My absence will strain the atmosphere in my work community	Disagree	1		1	
	Agree	1.021	[0.85-1.22]	1.053	[0.70-1.58]
7.I feel worried about my work during my absence	Disagree	1		1	
	Agree	0.943	[0.79-1.13]	0.765	[0.47-1.25]
8.It is regarded as a matter of course that most of the time someone is on sick leave	Disagree	1		1	
	Agree	1.229	[0.99-1.53]	0.903	[0.60-1.37]

Table 5. Association of sickness absence days 2003-2005 and arrangements and attitudes at the workplace during absence analysed by a generalized linear model (negative binomial) adjusted for age and gender.

		Blue-collar workers n=898		White-collar workers n=300	
		RR	[CI 95%]	RR	[CI 95%]
1.The employer will take a substitute	Disagree	1		1	
	Agree	0.956	[0.84-1.09]	1.545	[1.13-2.11]
2.My co-workers will have to do my jobs	Disagree	1		1	
	Agree	1.012	[0.87-1.18]	1.162	[0.90-1.50]
3.My jobs will wait until I return to work	Disagree	1		1	
	Agree	0.862	[0.67-1.11]	0.832	[0.63-1.09]
4.After returning to work I have to work harder or to lengthen my working time	Disagree	1		1	
	Agree	0.584	[0.45-0.76]	0.639	[0.48-0.85]
5.My jobs will be done well despite my absence	Disagree	1		1	
	Agree	1.062	[0.82-1.37]	1.032	[0.81-1.32]
6.My absence will strain the atmosphere in my work community	Disagree	1		1	
	Agree	0.923	[0.80-1.07]	0.997	[0.78-1.28]
7.I feel worried about my work during my absence	Disagree	1		1	
	Agree	1.011	[0.87-1.17]	0.971	[0.72-1.32]
8.It is regarded as a matter of course that most of the time someone is on sick leave	Disagree	1		1	
	Agree	1.248	[1.05-1.48]	1.034	[0.81-1.33]

Original Article

Perceived Working Conditions and Sickness Absence - A Four-year Follow-up in the Food Industry

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Objectives: To analyze the association between changes in perceived physical and psychosocial working conditions and change of sickness absence days in younger and older (< 50 and ≥ 50 years) food industry employees.

Methods: This was a follow up study of 679 employees, who completed working conditions survey questionnaires in 2005 and 2009 and for whom the requisite sickness absence data were available for the years 2004 and 2008.

Results: Sickness absence increased and working conditions improved during follow-up. However, the change of increased sickness absence days were associated with the change of increased poor working postures and the change of deteriorated team spirit and reactivity (especially among < 50 years). No other changes in working conditions were associated with the changes in sickness absence.

Conclusion: Sickness absence is affected by many factors other than working conditions. Nevertheless, according to this study improving team spirit and reactivity and preventing poor working postures are important in decreasing sickness absence.

Key Words: Occupational exposure, Social environment, Sick leave, Food industry, Follow-up studies

Introduction

The incidence of sickness absence is high at workplaces with poor physical working conditions [1,2]. The effect of a heavy physical workload is especially strong in combination with poor psychosocial conditions, such as low job control [3]. Research has also shown that many features of psychosocial working conditions (decision authority, adjustment latitude, job control, job complexity, supervisors' support and unfairness) are related to sickness absence [4-14].

Although much is known about factors associated with sickness absence, little is known about the relationship between changes in sickness absence and changes in working conditions.

Vahtera et al. [15] found that negative changes in the psychosocial work environment increased sickness absence and concluded that favorable changes in job control, job demands and social support at work might reduce the risk of sickness absence. Head et al. [16] reported that adverse changes in the psychosocial work environment predicted the incidence of long (> 7 days) but not short (≤ 7 days) spells of sickness absence; if the decision latitude or work demands increased, then the risk for long spells increased, whereas an increase in social support at work decreased the risk. By contrast, to the best our knowledge, there are no similar studies relating changes in physical working conditions to sickness absence.

The present study was conducted in a food industry com-

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pany. This industry is known for its demanding physical conditions due to the way in which production is organized (assembly-line work, repetitive and monotonous movements, hectic pace of work) and the physiological workload (much standing, bending, carrying or lifting of heavy loads) [17,18]. The work also includes high environmental exposure (heat, cold, draught, humidity, dust, odors).

The impacts of the working conditions depend on age [19]. Work ability also decreases with age [20,21]. There are, however, no studies relating age to the association between changes in working conditions and sickness absence. Nevertheless, it is known that short spells of absence are more common in young workers, while older ones have more long spells [22-24], and that sickness absence days also commonly increase with age [25].

The main aim of the present study was to investigate whether changes in perceived physical and psychosocial working conditions over a period of four years are associated with changes in sickness absence and whether these associations differ by age.

Materials and Methods

The study was carried out in a Finnish Food Industry Company employing about 2,000 people [26]. Survey questionnaires on physical and psychosocial working conditions, health and work ability were distributed to all employees in February 2005 and again in February 2009. The employees completed the questionnaires during working hours. Responses given in the beginning of the year clearly reflect past experiences (i.e., the conditions during previous year) of the employees rather than their expectations regarding future conditions. Sickness absence data for the years 2004 and 2008 were therefore used in determining whether changes in the working conditions are accompanied by changes in sickness absence.

Measurement of working conditions

The aspects of psychosocial working conditions studied were the incentive system, the task and goal system, incentive and participative leadership, team spirit and reactivity, task value, extrinsic incentives and opportunities to influence one's work [27]. The incentive system was evaluated using five propositional statements (sample item: "Personnel have an opportunity to develop their own work and work environment in this company"), the task and goal system with four propositions (sample item: "This company has clear and logical/realistic goals"), incentive and participative leadership with six propositions (sample item: "My manager pays attention to my sugges-

tions and wishes"), team spirit and reactivity with six propositions (sample item: "My colleagues discuss improvements to the work and/or the work environment"), task value with three propositions (sample item: "My job includes different and varied tasks"), extrinsic incentives with five propositions (sample item: "I get encouraging feedback on my work") and opportunities to exert influence with five propositions (sample item: "The organization allows its employees an opportunity to set their own goals"). Responses to each statement were given on a 5-point Likert scale with 1 = "totally disagree/very probably not" to 5 = "totally agree/very probably". Mean scores on each of the seven sum variables (ranging from 1.00 to 5.00) were used in the analysis of results. The Cronbach's alphas for the variables ranged from 0.71 to 0.89.

Physical working conditions were assessed with questions adopted from the Quality of Work Life Survey by Statistics Finland [28]. There are six single items about environmental exposure (draught, noise, heat, cold, poor indoor climate and poor lightning) and two questions about biomechanical exposure (repetitive movements and poor work postures). A 5-point Likert rating scale with values ranging from 1 = minimal inconvenience to 5 = extreme inconvenience was used for each item.

Measurement of sickness absence

The data on sickness absence (2004 and 2008) were obtained from the personnel register of the company. Sickness absence was measured in days and was related to the "time at risk", which was obtained by subtracting the time absent from work for reasons other than sickness during the year from the duration of the job contract. The measure of "time at risk" is a person-year, which is 1.0 if a person has been at work for a whole year. Accordingly, sickness absence days were the rates per person year adjusted for "time at risk". Employees were included in the study if they had a time at risk of more than six months in both 2004 and 2008.

Study subjects

A total of 1,201 employees responded in 2005 and 1,398 in 2009, and all provided written consent to the linking of the survey data to the sickness absence register. The response rates were 60% and 72%, respectively. However, only 734 individual employees responded to both surveys. This number reduced to 679 after exclusion of those with less than six months time at risk. Data on age, gender and occupational status (blue-collar or white-collar workers) were also obtained from the personnel register.

The sample included 64 % (n = 433) women and 70 % (n = 475) blue-collar employees, and the mean age in 2004 was 41

years (standard deviation 9.7), ranging from 20 to 62 years.

The study was approved by the Ethics Committee of the Pirkanmaa Hospital District.

Statistical analysis

Changes in the working conditions were calculated by subtracting the values of the year 2005 from the values of the year 2009. The change in sickness absence was calculated by subtracting the rate for 2004 from the rate for 2008. The changes were analyzed by linear regression. The multifactor model comprised age, gender, occupational status, changes in working conditions, changes in sickness absence and baseline level of working conditions and sickness absence, and the variables were introduced by the enter method. The sets of psychosocial factors and physical factors were analyzed separately. Separate analyses were also conducted for younger (< 50 years, $n = 517$) and older (≥ 50 years, $n = 162$) employees with age excluded as an adjusting factor. In addition, analyses with pooled variables of psychosocial factors and physical factors in the same model were conducted for all study subjects and by age group. Adjusted R square values were computed to adjust for the number of explanatory terms in a model. Variables were summarized in the form of means and standard deviations or as medians with ranges. The differences between baseline and follow-up were assessed by paired t-tests or by the Wilcoxon rank sum test. All statistical analyses were performed using SPSS version 19.0 (SPSS Inc., Chicago, IL, USA).

Results

The data for all employees (Table 1) show that sickness absence increased significantly ($p < 0.001$) from 2004 to 2008. The psychosocial working conditions improved on all indicators. Biomechanical exposure decreased with regard to repetitive and monotonous movements and poor working postures, and decreases in environmental exposure indicators were observed for draught, noise and cold working conditions.

Sickness absence increased from 2004 to 2008 in the younger group (< 50 years) from 6.0 to 8.0 ($p = 0.002$) and in the older group (≥ 50 years) from 6.0 to 12.5 ($p < 0.001$) days per person-year (Table 1). Changes in psychosocial factors did not differ by age group, even though there was a statistically significant improvement in team spirit and reactivity in the younger group, which was not found to be significant in the older respondents. Changes in the physical working conditions were positive or neutral in both groups, with the exception of increased exposure to poor lightning in older employees. Significant improvements were seen in draughty and cold envi-

ronmental conditions and in repetitive and monotonous movements and poor working postures by the younger group and in noise by the older group. Overall, in the older group there were fewer changes in physical factors than in the younger respondents.

Table 2 presents the results of the age, gender, sickness absence days adjusted linear regression models for physical and psychosocial factors separately (Model 1) and pooled (Model 2). Of the physical factors, only the change in poor working postures was associated with the change in sickness absence days: an increase in the change of poor working postures was accompanied with an increase of the change of sickness absence (t -value = 2.92, p -value = 0.004) (Model 1). Among the psychosocial factors, an association was observed between change in sickness absence and change in team spirit and reactivity, but was not statistically significant ($p = 0.084$). Results were parallel with those above, when the multivariate analyses were performed with pooled psychosocial factors and physical factors (Model 2). The association between the change of poor working postures and the change of sickness absence was still statistically significant ($t = 2.18$, $p = 0.029$).

In the age stratified analysis (Table 2), no new associations were revealed. The finding concerning poor working postures survived in both age groups ($t = 2.20$, $p = 0.028$, for younger; and $t = 2.06$, $p = 0.042$, for older employees). The change of decreased team spirit and reactivity was associated with change of increased sickness absence among the younger workers ($t = -2.22$, $p = 0.027$).

In the pooled model (Model 2) the association between the change in poor working postures and the change in sickness absence remains in the age stratified analysis for the younger group ($t = 2.06$, $p = 0.040$), but not for the older group ($t = 0.96$, $p = 0.342$). The association between the change in team spirit and reactivity and the change of sickness absence also remained and was statistically significant ($t = -1.99$, $p = 0.047$) in the younger group in the pooled model. In addition, according to the pooled analysis in the younger employees group, if disturbing exposure of cold changed (decreased), sickness absence ($t = -2.05$, $p = 0.041$) changed (increased).

Discussion

According to this four-year follow-up study among the personnel of a food industry company, negative changes in perceived team spirit and reactivity and in perceived poor working postures were associated with increased sickness absence days. The finding regarding team spirit and reactivity applied only to employees younger than 50 years. In addition among them

Table 1. Distributions of sickness absence days, perceived physical and psychosocial factors in the baseline year and in the follow-up year and their statistical differences among all study subjects and among two age groups

All (N = 679)																							
Baseline Follow-up				Baseline Follow-up				Baseline Follow-up				≥ 50 years (n = 162)											
6.0 (0-261)		9.0 (0-319)		z-value -4.90		p-value* < 0.001		6.0 (0-261)		8.0 (0-219)		z-value -3.07		p-value* 0.002		6.0 (0-189)	12.5 (0-319)		z-value -4.34		p-value* < 0.001		
t-value		df		t-value		df		t-value		df		t-value		df		t-value		df		t-value		df	
Physical factors, mean (SD)																							
Draught		2.9 (1.30)	2.8 (1.23)	-2.94	665	0.003	2.9 (1.28)	2.8 (1.22)	-2.78	509	0.006	2.8 (1.34)	2.8 (1.25)	-1.04	155	0.301							
Noise		3.2 (1.29)	3.1 (1.25)	-2.77	669	0.006	3.2 (1.28)	3.1 (1.23)	-1.80	512	0.072	3.2 (1.33)	3.0 (1.30)	-2.48	156	0.014							
Indoor climate		2.7 (1.10)	2.6 (1.13)	-1.65	661	0.100	2.7 (1.09)	2.7 (1.14)	-1.23	508	0.221	2.6 (1.13)	2.4 (1.10)	-1.23	152	0.222							
Lightning		2.1 (0.92)	2.1 (1.00)	1.12	660	0.263	2.1 (0.92)	2.1 (0.96)	0.64	507	0.523	2.0 (0.92)	2.1 (1.13)	1.16	152	0.247							
Heat		2.1 (1.19)	2.0 (1.11)	-0.34	662	0.731	2.1 (1.19)	2.1 (1.10)	-0.46	508	0.647	2.0 (1.18)	2.0 (1.13)	0.16	153	0.875							
Cold		3.0 (1.28)	2.8 (1.21)	-4.70	662	< 0.001	3.1 (1.23)	2.8 (1.20)	-4.57	505	< 0.001	2.9 (1.43)	2.7 (1.26)	-1.43	156	0.154							
Repetitive and monotonous movements		3.0 (1.27)	2.9 (1.27)	-2.92	665	0.004	3.1 (1.28)	2.9 (1.29)	-3.29	509	0.001	2.8 (1.21)	2.8 (1.20)	< 0.01	155	1.000							
Poor working postures		2.9 (1.26)	2.8 (1.23)	-2.20	669	0.028	3.0 (1.28)	2.9 (1.23)	-2.27	510	0.024	2.7 (1.18)	2.7 (1.20)	-0.40	158	0.689							
Psychosocial factors, mean (SD)																							
Incentive system		3.0 (0.67)	3.2 (0.73)	6.51	645	< 0.001	2.9 (0.65)	3.2 (0.73)	5.15	498	< 0.001	3.0 (0.74)	3.2 (0.72)	4.40	146	< 0.001							
Task and goal system		3.5 (0.56)	3.6 (0.63)	1.98	653	0.048	3.5 (0.56)	3.7 (0.63)	1.51	501	0.131	3.6 (0.56)	3.6 (0.64)	1.42	151	0.158							
Incentive and participative leadership		3.5 (0.69)	3.7 (0.78)	6.11	653	< 0.001	3.5 (0.68)	3.7 (0.76)	5.26	497	< 0.001	3.5 (0.73)	3.7 (0.83)	3.10	155	0.002							
Team spirit and reactivity		3.4 (0.82)	3.5 (0.72)	4.04	661	< 0.001	3.5 (0.65)	3.6 (0.67)	4.06	506	< 0.001	3.3 (0.75)	3.4 (0.83)	1.12	154	0.264							
Task value		3.4 (0.82)	3.8 (0.80)	13.57	668	< 0.001	3.4 (0.81)	3.8 (0.80)	12.19	511	< 0.001	3.4 (0.86)	3.8 (0.82)	5.97	156	< 0.001							
Extrinsic incentives		2.7 (0.74)	2.9 (0.75)	6.37	655	< 0.001	2.7 (0.72)	2.9 (0.72)	5.59	498	< 0.001	2.7 (0.79)	2.9 (0.83)	3.06	156	0.003							
Opportunities to influence		3.4 (0.71)	4.0 (0.62)	21.10	663	< 0.001	3.4 (0.70)	4.0 (0.60)	18.93	507	< 0.001	3.4 (0.77)	3.9 (0.68)	9.39	155	< 0.001							

SD: standard deviation. *analyzed by paired samples t-test and results shown by t-value with degrees of freedom (df) despite of sickness absence days, which were analyzed by Wilcoxon Rank Sum test. Statistically significant results were shown in bold.

Table 2. Associations of the change of sickness absence days from year 2004 to year 2008 and change of perceived physical and psychosocial working environment from 2005 to 2009

Independent variable	Adjusted by age, gender, occupational status, and baseline-factors All (N = 679)						Adjusted by gender, occupational status, and baseline-factors					
	Model 1			Model 2			< 50 years (n = 517)			≥ 50 years (n = 162)		
	t-value	p-value	t-value	p-value	t-value	p-value	t-value	p-value	t-value	p-value	t-value	p-value
Physical factors; change of												
Draught	-0.12	0.908	-0.89	0.372	0.54	0.587	-0.31	0.758	-0.79	0.433	-0.80	0.428
Noise	-0.48	0.630	0.08	0.941	-0.75	0.455	-0.31	0.758	-0.24	0.810	-0.30	0.762
Indoor climate	1.63	0.103	0.53	0.594	1.02	0.308	-0.01	0.994	1.47	0.144	1.06	0.292
Lightning	-0.43	0.667	-1.17	0.244	-1.09	0.275	-1.97	0.050	0.93	0.352	1.33	0.188
Heat	0.66	0.511	0.12	0.908	0.88	0.381	0.77	0.440	-0.14	0.891	-0.96	0.340
Cold	-0.78	0.434	-1.18	0.240	-1.70	0.090	-2.05	0.041	0.68	0.500	0.94	0.350
Repetitive&monotonous movements	-0.68	0.494	-0.16	0.876	0.13	0.901	0.33	0.745	-1.46	0.148	-1.27	0.207
Poor working postures	2.92	0.004	2.18	0.029	2.20	0.028	2.06	0.040	2.06	0.042	0.96	0.342
Physical factors R ²	23.6%				29.2%				22.3%			
Adjusted R ²	21.1%				26.4%				10.2%			
F-value	9.497				10.316				1.843			
p-value	< 0.001				< 0.001				0.025			
Psychosocial factors; change of												
Incentive system	-1.17	0.241	-1.48	0.140	-1.20	0.233	-1.15	0.250	-0.20	0.842	-0.64	0.526
Task and goal system	1.24	0.215	0.77	0.444	1.02	0.311	0.84	0.403	0.46	0.648	0.30	0.769
Incentive and participative leadership	0.47	0.637	1.30	0.194	-0.54	0.588	0.38	0.705	1.49	0.138	1.00	0.320
Team spirit and reactivity	-1.73	0.084	-1.40	0.163	-2.22	0.027	-1.99	0.047	-0.54	0.589	-0.07	0.945
Task value	0.26	0.793	0.75	0.452	-0.29	0.774	0.66	0.511	1.05	0.295	0.86	0.392
Extrinsic incentives	0.03	0.979	-0.19	0.852	1.10	0.271	0.05	0.963	-1.09	0.279	-0.38	0.706
Opportunities to influence	-0.51	0.607	-0.68	0.495	0.02	0.984	-0.85	0.395	-1.16	0.247	-0.28	0.780
Psychosocial factors R ²	23.7%				29.2%				21.9%			
Adjusted R ²	21.3%				26.4%				10.4%			
F-value	9.720				10.477				1.902			
p-value	< 0.001				< 0.001				0.024			
Pooled (model 2) R ²			5.8%				8.5%				20.4%	
Adjusted R ²			-0.1%				1.2%				-8.5%	
Pooled F-value			0.977				1.167				0.705	
Pooled p-value			0.506				0.248				0.867	

Baseline-factors: physical and psychosocial factors in the year 2005 and sickness absence days in the year 2004, Model 1: physical and psychosocial factors in separate models, Model 2: physical and psychosocial factors pooled into the same model, R²: the coefficient of determination. Linear regression models with enter method were used (N = 679). Psychosocial and physical factors are presented separately in the model. Statistically significant results are shown in bold.

positive change, decrease of perceived cold, seemed to be significant for an increase in sickness absence.

However, changes in most of the studied features of physical and psychosocial working conditions were not associated with changes in sickness absence.

Differences by age in the associations between changes of working conditions and sickness absence were rare. This was contrary to our assumption that associations would be found among the older employees in particular, as in an earlier 11-year follow-up study, where municipal workers over 50 were susceptible to work disability [29]. The lack of associations with age in our study could partly be explained by a 'healthy worker effect' due to only those with enough good work ability remaining in the physically demanding food industry jobs.

In sum, only three out of fifteen indicators of working conditions were associated with the change in sickness absence. Moreover, the indicators showing the greatest change (task value and opportunities to exert influence) were unrelated to changes in absence days. Sickness absence is not likely to be strongly associated with features of the working conditions or the work community. The psychosocial environment outside work may also have effects on sickness absence [14]: for example, sickness absence seems to depend on a person's close community [30], as well on the local community in which an individual lives [31].

Although conceptually different, the indicators in our study clearly overlap with those used in the study by Vahtera et al. [15], such as job demands and job control. However, we found weaker associations than Vahtera et al. The reason may be that Vahtera's study was conducted in a different setting (public sector), and there were only healthy employees in the cohort. A specific new finding of our study was the association between a negative change in team spirit and reactivity and change with increased sickness absence. With respect to the much discussed quality of leadership, this study did not confirm the association with sickness absence and was therefore not in agreement with the findings of earlier research [32].

Psychosocial working conditions in general have lately dominated discussions about the reasons for sickness absence, in both research and practical work life. However, Laaksonen et al. [33] found that psychosocial working conditions, such as low job control in women and job dissatisfaction in men, were less significant predictors of sickness absence than the physical conditions (heavy workload and environmental exposures). In our study both aspects of working conditions were emphasized equally, but our findings do not permit us to state whether physical or psychosocial factors are more important. Furthermore, in the realm of physical working conditions, our study

supports the conclusion of Allebeck and Mastekaasa [34] that biomechanical factors (e.g., poor working postures) are more important for sickness absence than environmental conditions (e.g., draughts). The finding in our study that cold working conditions are associated with sickness absence among those below 50 years of age is difficult to explain and might be caused by some relationship between physical and psychosocial factors among younger employees.

The strength of this study is the follow-up design and the combination of the sickness absence register and a questionnaire. A research design in which change is related to change has been rare in the field of sickness absence research. In such a design, the most valid indicator of sickness absence is number of days, as it allows the use of more advanced statistics than the number of spells. A limitation inherent in an observational setting is that it is not possible to predict whether - and what kind of - changes occur in the presumed determinants of sickness absence during follow-up. In the beginning and during the study, the researchers did not become aware of any major and purposeful interventions in the working conditions. The changes, which took place, can be characterized as spontaneous, or due to the routine occupational safety and human resource management of the company.

The follow-up time-frames were different for the surveys (2005-2009) and the sickness absence data (2004-2008). This was considered to be the most reliable approach because employees' responses about their work reflect their past experiences and may therefore be more comparable with sickness absence data for the previous year. In the event that the basic assumption is wrong and that the employees' responses should reflect their experiences from the moment they complete the questionnaire and/or the expectations of the future working conditions, the mismatch of the data-set years could be seen as a limitation of the study. A further limitation was that factors outside work life [30] could not be included in the statistical analyses. Finally, the study was restricted to the food industry. While the exploration of sickness absence and working conditions in other industries was not possible within the scope of the present study, future research with the same design should be done in different industrial settings to test the generalization of the current findings.

In general, improvement in the employees' working conditions was paralleled by an increase in sickness absence. Taking this result strictly, we cannot subscribe to the encouraging statement at the end of many study reports that it is possible to lower the level of sickness absence by paying more attention to the psychosocial and physical working conditions. The findings of this study indicate that sickness absence is mostly caused by

reasons other than physical and psychosocial factors. Sickness absence is associated with many other things, both inside and outside working life. Nevertheless, it might be possible to decrease sickness absence by improving team spirit and reactivity in the work community among employees under 50 years old and by decreasing the physical exposure due to poor working postures among employees of all ages.

Since the opportunities to improve working conditions are more or less limited, depending on the work tasks [35], it might be rewarding, instead of conducting nonspecific intervention projects, to pay attention to the factors identified in this study (team spirit and reactivity and working postures) as an integral part of the schedule to promote employees' work ability and prevent sickness absence [35].

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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SHORT REPORT

Absenteeism following a workplace intervention for older food industry workers

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Background	The effects of workplace interventions on sickness absence are poorly understood, in particular in ageing workers.
Aims	To analyse the effects of a senior programme on sickness absence among blue-collar food industry workers of a food company in Finland.
Methods	We followed up 129 employees aged 55 years or older, who participated in a senior programme (intervention group), and 229 employees of the same age from the same company who did not participate (control group). Total sickness absence days and spells of 1–3, 4–7, 8–21 and >21 days were recorded for the members of the intervention group from the year before joining the programme and for the control group starting at age 54 years. Both groups were followed for up to 6 years.
Results	The median number of sickness absence days per person-year increased significantly from baseline in both groups during the follow-up. Compared with the control group, the intervention group had increased risk for 1–3 days spells [rate ratio 1.34 (1.21–1.48)] and 4–7 days spells [rate ratio 1.23 (1.07–1.41)], but the risk for >21 days spells was decreased [rate ratio 0.68 (0.53–0.88)] after participation in the senior programme.
Conclusions	A programme to enhance individual work well-being in ageing workers may increase short-term but reduce long-term sickness absence.
Key words	Blue-collar worker; follow-up; food industry; intervention; sickness absence.

Introduction

Age is associated with several features of sickness absence. Sickness absence increases with age [1] but short spells are more common in young workers, while older ones have more long spells [2, 3]. As absence is more common in blue-collar occupations [4], the combination of ageing and physically demanding work [5] is a high risk for sickness absence and a strong predictor of disability retirement [6]. Early exit from work life is a macroeconomic problem. Keeping ageing employees at work is a key goal of European labour policy. In Finland, the earnings-related pension scheme enables flexible retirement from 63 to 68 years.

Companies often organize interventions to promote work ability and reduce sickness absence [7]. These may be particularly important for older workers, and some are aimed specifically at ageing workers [8]. However, there is little research evidence about the feasibility and impact of such programmes. In this study, we analysed the effects of a senior programme on sickness absence.

Methods

Participation in the senior programme was voluntary. It was intended for employees aged 55 years or above, who had been employed by a Finnish food company for at least 5 years. The declared aim of the programme was to maintain and to promote work well-being and work ability among ageing workers in order to increase their willingness to work until age-based retirement. A further aim was to prevent age discrimination and to enhance appreciation of the long work experience of older workers. At the individual level, the programme aimed to pay attention to the specific needs of a worker with work-related arrangements and dispensations.

The participating employees had an appraisal with their supervisor about their work demands, work ability, opportunities to alter the content of work, need for rehabilitation or education. Participating employees were offered various options on wage security (wage not reduced even if work changed to be less demanding), exemption from night work or three-shift work, reduction of work

task rotation, option to exchange bonus in salary for extra time off, option for free or subsidized physical therapy following referral by the company physician. The production manager made the final decision on the employees' inclusion in the programme depending on the supervisor's recommendation.

One hundred and twenty-nine blue-collar workers aged 55 years or above participated in the programme (the intervention group). Two hundred and twenty-nine blue-collar workers of the same age did not participate (the control group).

Sickness absence data were retrieved for both groups from the employer's register for 1 year before entering the programme and for one to five follow-up years. The number of sickness absence spells and days was recorded for each individual, and person-years were calculated. These figures were used to calculate yearly sickness absence rates in days and spells of durations 1–3, 4–7, 8–21 and >21 days.

Sickness absence rates between the groups were compared using generalized linear models. For spells, Poisson regression models were used because their number is a form of count data [9]. For days, a negative binomial distribution was assumed for the analyses. Analyses were adjusted for gender and baseline sickness absence in the year before entry to the programme or the control group.

The study was approved by the Ethics Committee of the Pirkanmaa Hospital District.

Results

Table 1 shows baseline demographic and sickness absence data for both groups.

Table 2 shows that sickness absence days increased significantly from baseline in both groups. However, the

changes were not significant for spells >21 days in either group or for spells of 1–3 days in the control group.

Comparing sickness absence between the groups, using generalized linear models adjusting for gender and baseline sickness absence, the risk of 1–3 days spells and 4–7 days spells in the intervention group increased significantly, while the risk of >21 days spells decreased significantly. The difference between the groups in changes of 8–21 days spells and total absence days was not statistically significant.

Discussion

Blue-collar workers aged 55 years and over had an increased risk of total sickness absence spells of 1–7 days

Table 1. Baseline demographics, sickness absence and follow-up of study groups

	Control group, <i>n</i> = 229	Intervention group, <i>n</i> = 129
	<i>n</i> (%)	<i>n</i> (%)
Gender		
Women	155 (68)	103 (80)
Men	74 (32)	26 (20)
	Mean (SD)	Mean (SD)
Age at entry	57 (2.8)	57 (2.2)
Duration of follow-up (years) excluding baseline year	2.9 (1.4)	3.1 (1.4)
Sickness absence during follow-up	<i>n</i> (%)	<i>n</i> (%)
None	35 (15)	10 (8)
1–3 days spells	167 (73)	109 (84)
4–7 days spells	133 (58)	89 (69)
8–21 days spells	112 (49)	88 (68)
>21 days spells	89 (39)	54 (42)

Table 2. Sickness absence per person-year [median (Md) with range] in both study groups in the baseline year and during follow-up and rate ratios with 95% confidence intervals for the intervention group during the follow-up compared to the control group

Measure of sickness absence	Control group (<i>n</i> = 229)			Intervention group (<i>n</i> = 129)			Intervention versus control group ^a	
	Baseline Md (range)	Follow-up Md (range)	Change ^b <i>P</i>	Baseline Md (range)	Follow-up Md (range)	Change ^b <i>P</i>	RR	95% CI
Number of days	9.0 (0–296)	12.8 (0–292)	<0.01	14.0 (0–264)	24.0 (0–197)	<0.05	0.822	0.66–1.03
Number of 1–3 days spells	1.0 (0–10)	0.8 (0–8)	NS	1.0 (0–13)	1.9 (0–14)	<0.01	1.340	1.21–1.48
Number of 4–7 days spells	0 (0–6)	0.3 (0–5)	<0.05	0 (0–9)	1.0 (0–7)	<0.01	1.227	1.07–1.41
Number of 8–21 days spells	0 (0–6)	0 (0–6)	<0.05	0 (0–6)	0.7 (0–5)	<0.05	0.921	0.79–1.08
Number of >21 days spells	0 (0–3)	0 (0–4)	NS	0 (0–3)	0 (0–2)	NS	0.683	0.53–0.88

Statistically significant results are shown in bold.

^aGeneralized linear models, adjusted for gender and corresponding absence of the baseline year.

^bChange was analysed by Wilcoxon's test.

absence but a reduced risk of spells >21 days absence for up to 5 years after participating in a workplace senior programme in a Finnish food company.

The study included all workers in the company aged 55 years or over, either in the intervention or the control group. Randomization would have been ethically questionable as the participation in the programme was voluntary. Although the sample was small, limiting the study to one company eliminated many potential external confounders.

Our findings suggest that intervention might affect the sickness absence profile of older employees. Reducing long spells at the expense of increasing short spells may not seem beneficial with respect to immediate productivity, but it may reduce the risks and costs of early retirement. Longer spells of sickness absence may reduce the probability of returning to work [10], so decreasing long spells in exchange for increasing short ones could have a positive effect although not reflected by the total number of absence days. The senior programme aims to improve well-being in older workers. This could be explored in future research.

Funding

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Conflicts of interest

None declared.

Key points

- Blue-collar workers aged 55 and over years had an increased risk of total sickness absence and spells of 1–7 days absence but a reduced risk of spells >21 days absence for up to 5 years after participating in a workplace senior programme in a Finnish food company.
- A workplace intervention might affect the sickness absence profile of older employees, potentially reducing the risks and costs of early retirement.

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