

Work environment for staffing agency workers

– the physical and psychosocial work environment
of staff provided by employment agencies

State of Knowledge Report

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Preface

The Swedish Work Environment Authority has been tasked by the Government of Sweden to provide information and disseminate knowledge on areas of significance for the work environment. Over the course of the next few years a number of State of Knowledge Reports will be published in which reputable researchers will summarise the current state of knowledge within a number of thematic areas. A scientific review of this report has been carried out by Professor Eskil Wadensjö, however the final wording is the responsibility of the authors.

These reports are available free of charge from the Work Environment Authority website. Material from the seminar series the Authority arranges in connection with the publication of the reports may also be downloaded from the same source.

The project manager for this State of Knowledge Report at the Work Environment Authority was Ulrika Thomsson Myrvang. We would also like to take the opportunity thank our other colleagues at the Authority who have been instrumental in the work on this report.

The opinions expressed in this report are those of the authors and do not necessarily reflect those of the Work Environment Authority.

Magnus Falk, PhD.

Table of Contents

1. Introduction and background	7
1.1 Aim	7
1.2 Organization of report	7
2. General picture of the staffing agency industry.....	8
2.1 The development of the staffing agency industry in Sweden	8
2.2 Regulation of the staffing agency industry in Sweden compared with other countries.....	10
2.3 The Work Environment Act, systematic work environment management and the staffing agency industry	13
2.4 Regulation of work environment responsibility for the staffing agency industry in other countries	14
3. Methods.....	16
3.1 Selection of articles	16
3.2 Databases	16
3.2.1 Keywords.....	16
3.3 Procedures	17
4. Compilation of studies dealing with staffing agency workers' work environment.....	19
5. Psychosocial work environment linked to the staffing agency industry	20
5.1 General on the psychosocial work environment.....	20
5.2 The psychosocial work environment of agency workers.....	21
5.2.1 Career development	22
5.2.2 Role in organization	24
5.2.3 Decision latitude and control.....	24
5.2.4 Organizational culture and function	25
5.2.5 Interpersonal relationships.....	25
5.2.6 Work/life balance.....	26
5.2.7 Working hours	27
5.2.8 Task design.....	27
5.2.9 Workload	28
5.3 Summarized discussion on the psychosocial work environment of staffing agency workers	29
6. Physical work environment linked to the staffing agency industry.....	31
6.1 Physical work environment generally	31
6.2 Physical work environment risks for staffing agency workers.....	32
6.2.1 Research concerning the physical work environment of staffing agency workers	32
6.3 Discussion on factors affecting the physical work environment of staffing agency workers.....	34
6.3.1 The triangular relationship in the staffing agency industry.....	34

6.3.2 Workplace and safety introduction programmes	35
6.3.3 Risk management and preventative measures	35
6.3.4 Health checks, occupational injuries and insurance cover	36
6.3.5 State monitoring	37
6.4 Summarized discussion on the physical work environment of staffing agency employees.....	37
7. Occupational injuries linked to the staffing agency industry	39
7.1 Age as explanation for occupational injury rate.....	40
7.2 Employment form as an explanation for occupational injury rate	40
7.3 Employment period and job/business area as explanation for occupational injury rate	41
7.4 Special characteristics of the staffing agency business area as an explanation for occupational injury rates.....	42
7.4.1 Financial pressure - insecurity of employment.....	43
7.4.2 Lack of organization as concerns introduction and training of agency workers	43
7.4.3 Lack of regulation	44
7.5 Summarized discussion on staffing agency workers and occupational injury rates	45
8. Summarized discussion concerning the work environment and its health effects on agency workers	46
8.1.1 Future research	48
References.....	49
Legislation, ordinances and agreements	49
Literature.....	49
Annex 1. Guide to research into the work environment of staffing agency workers	57

Summary

The purpose of this State of Knowledge Report is to provide a comprehensive picture of available research on the physical and psychosocial work environment and occupational injury situation of personnel supplied by staffing agencies. This is a relatively new industry in Sweden since the private hiring of staff for financial gain was not permitted until 1993. Staffing companies' mission is to hire out staff to client companies for a specific, limited period. For the individual employees involved, this means that they have no guaranteed fixed workplace, but must be willing to work at various client companies. The relationship in the staffing industry may be described as triangular - between the employee and staffing agency there is an employer/ee relationship, between the agency employee and the client company there is a labour management relationship, and between the client and the staffing agency there is a business relationship. These relationships are important to keep in mind when discussing the work environment. Staffing agency workers have relationships with several organizations and work environment responsibility in Sweden is shared by the employer (staffing agency) and the client company.

A State of Knowledge Report involves a compilation of research already completed in the field. An extensive search of international databases of scientific journals, however, gave only 45 relevant articles. The primary difficulty of this search was to identify articles where agency workers were distinguished from employees in other forms of employment. In most countries, a job at a staffing agency means temporary employment. In international research, it is therefore common to treat agency workers and temporary employees as one group. In our State of Knowledge Report, we focused on articles where agency workers were identified as a separate group but have also included articles explicitly including agency workers in the wider group termed temporary employees (often referred to as temporary workers or precarious workers).

This State of Knowledge Report focuses on three areas: psychosocial work environment, physical work environment and occupational injuries. In terms of psychosocial work environment, the review shows that job insecurity is a major stress factor for psychosocial health. It is worth noting that agency workers in Sweden, unlike in most other countries, may hold permanent positions. Swedish studies show that employment by an employment agency in Sweden is perceived as insecure, even if individuals do have permanent positions. Given the volatility that exists in the field with boomtimes and busts, this is a potential work environment risk that is difficult to avoid. Several studies have shown the importance of social support from the employer, that is the staffing agency, which creates potential to provide better psychosocial work environments that agencies could utilise.

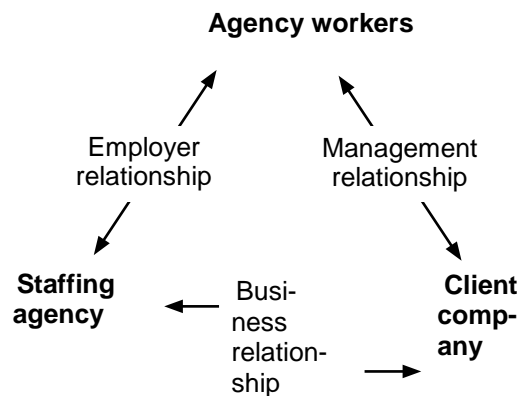
As concerns the physical work environment, the literature review shows that agency workers are overrepresented in occupations and industries where working conditions are hazardous. This group is also more vulnerable to occupational injury. It is difficult to draw any general conclusions on the reasons for their increased risk of injury. Studies have been based on data from different countries, different industries and different occupations. Several studies indicate, however, that always being new on the job brings its own risks as well as deficiencies in training and safety instructions. A well-functioning safety culture with proper introduction and safety information for the agency workers at each new assignment is consequently essential to reduce the risk of injury.

In summary, it may be concluded that research on agency staff work environments is clearly limited. Further research is necessary, research which more consistently separates agency staff work environments from other groups such as temporary employees. Furthermore, there is currently little knowledge of long-term work environment effects on agency workers. It would therefore be desirable to initiate longitudinal studies that follow agency staff work environments and health status over time.

1. Introduction and background

Staffing agencies is a relatively new business area in Sweden. The private hiring of personnel for profit has only been permitted since 1993 (Berg 2008). Staffing agencies' business concept is to rent out personnel to client companies for a fixed, limited period of time. The working period at a client may vary from a couple of hours to several years. The staff agency worker has no guaranteed client company but has to be prepared to work at different companies depending on demand. The primary relationship in this business area may be described as triangular, i.e. between the staffing agency, the client company and the agency worker (see, for example, Bergström & Storrie 2003; Håkansson & Isidorsson 2012A). See Figure 1.

Figure 1. Relationship patterns in the staffing agency business area



Agency workers are employees of the staffing agency, so the staffing agency consequently bears employer responsibility. These employees carry out their work at various client companies which therefore bear the employee management responsibility. The connection between the staffing agency and the client company is a business contract stating that the client company buys labour from the staffing agency for an agreed period. These relationships are important to keep in mind when discussing work environment. The people working for agencies have others organizations to relate to, but it is worth noting that work environment is a responsibility shared by the staffing agency and client company/organization.

1.1 Aim

The aim of this State of Knowledge Report is to provide a comprehensive picture of research on the physical and psychosocial work environment and occupational injuries for staffing agency workers. A State of Knowledge Report is a compilation of research completed in the field, consequently within the framework of this study no first hand studies of the work environment within the staffing agency industry have been undertaken.

1.2 Organization of report

The first chapter provides a general overview of the staffing agency industry and is followed by a methodology chapter in which a description is given of how the material that forms the basis of this State of Knowledge Report has been compiled. This is followed by three chapters dealing with the psychosocial work environment, the physical work environment and occupational injuries. The report concludes with a summarized discussion of staffing agency workers' work environment and its effects on their health. As an annex at the back of this report there is a Guide giving brief comments on the studies that have been used in this State of Knowledge Report.

2. General picture of the staffing agency industry

2.1 The development of the staffing agency industry in Sweden

Private employment agencies were banned in 1935 according to legislation dubbed the Maids Act, however ambiguities in the law as to the difference between brokering and renting persisted until the law was revised in 1942. Even if it was clearly stated that the hiring out of labour to other companies was considered to be private employment agency activity and therefore illegal, the limit for subcontracting of services was not entirely clear and some companies were sued in the Labour Court and the Supreme Court for their activities (Bergstrom et al, 2007). Some subcontracting could be conducted if fees charged only covered costs, the Chamber of Commerce was granted special permission from the Labour Market Board to hire out clerks and receptionists but the scope of such activities was very limited.

In the 1980s, the monopoly enjoyed by the Employment Service was debated, and deregulation was implemented in two stages. The first legislative amendment came in 1991 with a number of minor adjustments, which softened the ban. In 1993, the Private Employment Agencies and Temporary Labour Act (1993: 440) was passed. This legislation made it possible to engage in profit-making both in the hiring out and brokerage of labour. The number of employees in the industry grew rapidly in the 1990s, from a few thousand in 1994 to 42 000 people in 2000. The staffing agency industry also broadened its operations from a strong concentration in major cities to establishment virtually all over the country (Andersson Joona & Wadensjö 2010). Another expansion aspect of the industry concerned business areas, from a strong concentration on administrative occupations to the provision of staff within a wide range of professions and industries.

Some years after deregulation, the right wing government set up a commission to study the consequences of the law, led by the outgoing head of the white-collar union association (TCO) Björn Rosengren. A multi-party working group discussed, among other things, whether the industry should be regulated through state authorization or if it should be self-regulating via collective bargaining. The unions demanded some form of regulatory control, while the Ministry of Industry believed that an authorization instrument would be too unwieldy, and that authorization is primarily a means of limiting activities. Problems that had been noted to date concerned working conditions, which were considered to be better regulated through collective agreement (Bergstrom et al, 2007: 46-48). Although the commission proposed a governmental authorization of staffing agencies this was not carried out and the industry came to be regulated by collective agreement.

The first collective agreement for white-collar employees within the staffing agency business field was signed in 1988 between the Commercial Salaried Employees (HTF) and the Retail Employers' Organization (HAO). In 1994 the agreement was renegotiated and stipulated, among other provisions, that employees of staffing agencies were to have the same entitlement to permanent employment as employees in other industries (Walter 2012). The business association (Swedish Association of Staffing and Recruiting Companies) became an employers' organization (Swedish Staffing Agencies) and became party to collective agreements. Since 2000 a collective

agreement between the blue-collar unions and Swedish Staffing Agencies has also been established.

The change in the occupational structure of the staffing agency industry also means that its employee structure changed, from a female-dominated industry to a gender mix. The composition of the business area shows both similarities with, and differences to, the rest of the labour market. The most striking difference is age structure - the staffing agency industry is largely a youth industry (Andersson Joona & Wadensjö 2010: 28), and the 16-24 age group is significantly overrepresented.

The proportion of employees who were born outside the western world increased during the period 1998-2005, from 7% to 12%. This group is clearly overrepresented in the industry. The educational level changed during the same period to a slightly higher level, a trend that also applied to the labour market in general. The average educational level is slightly higher in the staffing agency industry compared with the rest of the labour market in that the proportion of employees with only secondary education is lower. This is related to the clear overrepresentation of young people in the industry - the large majority of young people have at least upper secondary education.

It is not easy to estimate the number of employees in the staffing agency industry. Statistics from Statistics Sweden (SCB) are based on statements by the company the individual was employed by on 1 November. Andersson Joona & Wadensjö (2010) have made an estimate of how many people worked in the industry for a year, but without being employed on the reporting date of 1 November. Their study showed that the number of people who, during the course of a year, at some point worked in the staffing agency industry is significantly higher. For 2005, the figures were about 32 000 and 49 000 which shows that there is a high proportion of short-term employee positions in the business area.

Since 2000, the staffing agency market has been characterized by boomtimes and busts. This industry is sensitive to economic fluctuations which became particularly evident after the 2008 crisis. 2009 brought a sharp decrease in the number of people employed, followed by a 30% increase in the same group in 2010 (SCB 2012A:7). There is a clear correlation between economic conditions and the use of agency workers. Andersson Joona & Wadensjö (2010:22) indicated in their report that the proportion of employees in the staffing agency industry is lower in regions of high unemployment.

Information from Statistics Sweden shows that, in 2010, there were 52 700 people employed in the business area, which represents 1.2% of the total number of people in employment (SCB 2012A:7;2012B). It is worth noting that this statistic includes both those who are employed as ambulatory staff and people employed at staffing agency offices, that is non-ambulatory, administrative employees.

There are approximately 400 authorized staffing agencies in Sweden, however the business area is dominated by a few large companies. According to Swedish Staffing Agencies' statistics, Manpower, Proffice and Adecco are together responsible for nearly half of the total turnover of the 35 largest companies in the industry (Swedish Staffing Agencies 2013).

The use of staffing agencies is relatively widespread. In Sweden, agency workers are used in a given reporting month by 32% of all workplaces in the private sector which have more than 100 employees; for public sector workplaces the share is 22% (Håkansson & Isidorsson 2007). The use of such staff differs between industries and is

most widespread within manufacturing (Håkansson & Isidorsson 2004). Swedish Staffing Agencies publishes quarterly statistics on turnover in the industry. The largest turnover in the first quarter of 2013 was shown in the industrial and manufacturing sector with 21% of sales, office and administration showed 18%, warehousing and logistics 16%, accounting and finance 11% and IT 9% of sales. These five occupational groups accounted for three-quarters of total turnover.

A further eight different occupations accounted for the remaining 25% (Swedish Staffing Agencies 2013). Compared with 2005, by far the largest increase is in warehousing and industry (13 percentage points). Although medical and healthcare has increased from 4% to its current 7%. Economy and finance has decreased by 5 percentage points when compared with 2005 (Swedish Staffing Agencies 2005:11).

According to the international trade organization (Ciett 2013), the gender structure is almost even among employees in the staffing agency field in Sweden. This places Sweden roughly in the middle of a compilation of 36 different countries. From an international perspective, there are countries with 75% men, such as Australia and Germany, and countries with 75% women, such as Luxembourg and Russia (Ciett 2013:35). According to the same statistics Sweden is characterized by few contracts of less than a month in duration. As many as 96% of the contracts are of one month or longer and more than half are longer than three months. This puts Sweden in sixth place out of 27 countries in terms of longer-term contracts (Ciett 2013). In France and Spain, on the other hand, the overwhelming majority of contracts are for less than one month. In France this is an effect of legislation that does not allow temporary workers to carry out operations that are part of the workplace's normal activities (Håkansson et al 2009: 20).

Studies of the use of agency workers in Sweden and the UK show that the most common reason for hiring such staff is to achieve stability in the client company. This was true for two-thirds of the jobs in the two countries (Håkansson & Isidorsson 2007: 141). When the object is to achieve stability agency workers, for example, may replace absent staff or temporarily fill vacant positions at the workplace. Approximately 40% of the workplaces used agency workers to achieve numerical flexibility, that is, the agency workers were hired to fulfil a temporary need for additional personnel. In a study by Teknikföretagen it was shown that the use of temporary staff as a buffer against layoffs has increased in recent years (Teknikföretagen 2011: 18).

2.2 Regulation of the staffing agency industry in Sweden compared with other countries

Staffing agency operations are regulated in the Agency Work Act (SFS 2012:854). Under Swedish law, a permit is not necessary to start up a staffing agency. One important goal of the legislation is to protect the workers in the staffing agency industry. The Act explicitly emphasizes that workers should not be prevented from taking up employment in any client company to which they are sent. This clause is non-negotiable. Neither is it permitted for staffing agencies to take fees from their employees as concerns employment. The business is regulated by collective agreements in the same way as other business areas. Staffing agencies are still criticized from some quarters, for example the Left Party voted at its Congress in 2012 to work actively towards achieving a ban on staffing agencies (Left 2012). In spite of this, the staffing agency business can currently be said to have become an institution on the Swedish labour market (Bergstrom et al, 2007).

Neither is any state authorization necessary to operate a staffing agency, however the

relevant employers' organization, Swedish Staffing Agencies, has introduced a voluntary authorization that is associated with membership of the organization. Authorization is awarded by an Authorization Committee, initiated by the employers but including representatives of the unions that organize staffing agency workers (Håkansson & Isidorsson 2009).

In comparison with other European countries, the regulation level applied to the industry is low in Sweden (Arrowsmith 2006:17; Storrie, 2002:5-10). The lack of strong legal regulation is in line with what is referred to as the Swedish Model for the regulation of labour relations. The joint Authorization Committee must be understood in the light of this tradition.

The Employment Protection Act (LAS) applies to employees in the staffing agency field in the same way as for other industries. LAS stipulates that the normal type of employment position is permanent. Consequently a person may have a permanent job, expressed an indefinite period position at a staffing agency. In most countries a job at a staffing agency automatically means temporary employment. In a few countries permanent employment may apply under certain conditions (the Netherlands, Portugal, Slovenia and Hungary (Arrowsmith 2008: 31-32)).

The law on agency workers explicitly emphasizes that employees should have the same conditions as if they were directly employed by the client company (SFS 2012:854, § 6). This part of the law may be replaced by a collective agreement (SFS 2012:854, § 3). According to the 2012 staffing agency collective agreement between Swedish Staffing Agencies and the 14 blue-collar unions, the agency workers must be paid an hourly rate equivalent to the average hourly wage at the client company, or as stated in the collective agreement "the average rate / ... / for comparable groups at the client company" (Staffing Agency Agreement 2012A: §4, Subsection 2.). For white-collar employees, individual salary levels apply according to the white-collar collective agreement between Swedish Staffing Agencies and Unionen/Akademikerförbundet.

Collective agreements also provide employees with entitlement to pay during periods when they are not on assignment, known as the guarantee salary. In the Staffing Agency Agreement for blue-collar workers, guarantee salary is SEK 100 or SEK 108 per hour (Staffing Agency Agreement 2012A:§5). The white-collar agreement expresses salary as guaranteed hours as this group are paid monthly salaries. The guarantee period for people who have been employed for up to 18 months is 133 hours a month, and 150 hours for those with longer service (Staffing Agency Agreement 2012b:§12.2.1 and 12.2.2 §).

The duration of a fixed-term position is limited in practice according to LAS to two years, after which the job becomes a permanent position. Through the collective agreement 2012-2013 between Swedish Staffing Agencies on the one hand and the Unionen on the other, fixed-term contracts are limited to six months (white-collar agreement 2012-2013, §2.2). This is an example of how collective regulation may be more restrictive than legislation, entirely in line with the Swedish Model system of multi-party negotiated regulation.

The regulation of the staffing agency industry in Sweden differs from other countries (Storrie 2007). In Belgium, France, Italy, Luxembourg, Portugal and Spain the industry as such is heavily regulated. Starting up a staffing agency in these countries requires a license and operations are monitored by special institutions.

Employment relationships in the industry, however, are not regulated. In the UK and Ireland, there are no specific regulations and consequently employment conditions may be unclear. Several cases of employer responsibility and employment conditions

have been settled in court (see e.g. Wynn & Leighton 2006). Although there are examples of deregulation in recent years, the overall trend is that legislation and regulations have increasingly aimed at the reduction of social dumping, one example being the EU Directive 2008/104/EC (Arrowsmith & Forde 2008).

The licensing system was removed in some countries (Finland, the Netherlands and the UK) in the 1990s. In Finland, it was argued that it formed a bureaucratic barrier. Starting up a staffing agency today requires a report to the Agency for Health and Safety, and otherwise compliance with the same procedures as other companies. In the Netherlands, who were first out with a system of licensing in 1965, significant changes in regulations have subsequently occurred. In 1998, the licensing system was abandoned as well as a number of restrictions on placement and length of contracts. In addition, staffing agency opportunities to deny any employee a transfer to employment at a client company were severely limited. Other regulations remained, such as the prohibition on supplying staff to workplaces where a strike is underway, the shared responsibility between client companies and staffing agencies for paying social security contributions and taxes, and the right to equal pay for the agency personnel. One year later in 1999, legislation on flexibility and security was introduced which established the staffing agency employment contracts as a standard contract and introduced certain rights for the agency workers at the client company (Arrowsmith 2006).

There are also large differences in employment relationships in the various staffing agencies. The major differences between staffing agencies can be illustrated by Peck & Theodore (2002) who give examples from the United States where, on the one hand, small staffing agencies hire out semi-skilled staff on short-term assignments using methods on the outer edge of legislation such as "warm bodies, delivered on time" and "try before you buy", and on the other hand, large multinational staffing agencies supply qualified staff on long-term contracts.

In Australia there is no national legislation concerning agency personnel, however individual states have adopted regulations in the form of, for example, licensing requirements. There are no restrictions in terms of operations, number of agency personnel or length of contract. In Australia this group of employees are included in the casual labour group, meaning that they have no right to paid holiday or sick pay (Knox 2010). Johnstone & Quinlan (2006) argue that there are major deficiencies in compliance with work environment-related legislation and advocate more proactive regulation and control.

In summary, it may be concluded that a person with a position in a staffing agency in Sweden is clearly better placed to enjoy employment and income compared with other countries. It may also be noted that regulation in this business area is designed so that equal opportunities are to be achieved, and this applies to both the employer and the management relationship (see Figure 1). Meanwhile, there is a third relationship, the business relationship between the staffing agency and the client company. In this relationship, the client company determines the conditions. This may mean that the client imposes terms concerning who should be hired or who does not fit. The unions believe, therefore, that job security in practice is weaker in the staffing agency business area than in other industries (Birch Marken 2012).

2.3 The Work Environment Act, systematic work environment management and the staffing agency industry

In Sweden, the work environment is regulated by the Work Environment Act. Chapter 2 of the Act deals with working conditions, the first paragraph states that the work environment "shall be satisfactory / ... / Technology, work organization and job content shall be designed in such a way that the employee is not subject to physical or mental strains which can lead to ill health or accident" (SFS 1977: 1160 Chapter 2., § 1). Even if many of the paragraphs in Chapter 2 (3-7) of the Work Environment Act deal with the physical aspects of the work environment, in this context it is important to emphasize, as is clear from the wording in the previous quote, that the Act also covers the psychosocial aspects of work environments. The Act emphasizes, for example, that employees must be given the opportunity of participating in developments affecting their own work. The law states that it must be ensured that working conditions provide opportunities for personal and professional development, as well as for self-determination and professional responsibility.

Furthermore, the Work Environment Act states that the employer bears responsibility for the work environment: "The employer shall take all the precautions necessary to prevent the employee from being exposed to health hazards or accident risks." (SFS 1977: 1160, Chap. 3, § 2). The employer must also "... systematically plan, direct and control activities in a manner which leads to the working environment meeting the prescribed requirements for a good working environment" (SFS 1977: 1160, Chap. 2, § 2a). It may also be noted that individual agency workers - as employees - also bear responsibility for the work environment. Under the Work Environment Act the employee must participate in work environment activities as well as following instructions and using protective devices (SFS 1977: 1160, Chap. 3, § 2).

Work environment management and work environment responsibility are more complicated when it comes to staffing agencies and their employees who work at another employer's workplace. However the legislation clearly states the responsibilities of both the staffing agency and the client company. The employer's, i.e. the staffing agency's, responsibility is stated in Paragraph 3 of Chapter 3 "The employer shall ensure that the employee acquires a sound knowledge of the conditions in which work is conducted and that he is informed of the hazards which the work may entail. The employer shall make sure that the employee has received the training necessary and that he knows what measures shall be taken for the avoidance of risks in the work. " (SFS 1977: 1160, Chap. 3, § 3). Client company responsibility is stated in the Work Environment Act Chapter 3, Paragraph 12: " A person hiring rented labour to work in his activity shall take the safety measures which are needed in that work." (SFS 1977: 1160, Chap. 3, § 12). Work Environment Authority regulations on Systematic Work Environment Management clarify this in the first paragraph of instructions stating that those who hire employees are equated with the employer (AFS 2001: 1, § 1).

Even though the law is clear that both the employer and the client company bear responsibility for the employee, it is obvious that joint work environment management may fall between two stools. A monotonous task, manned by agency workers for perhaps a week, may be assessed by the client company as reasonable from a work environment viewpoint, however depending on the individual's tasks in subsequent contracts, the aggregated work involved may impose work environment risks on the individual. Here, however, the Work Environment Act Chapter 2. § 2a, see above, clearly states the employer's work environment responsibility. It is worth noting here that the Health and Safety Officer at the staffing agency is entitled to access the client companies where staffing agency workers performs operations.

The Health and Safety Officer of the client company/organization may, in their turn, stop dangerous work in the workplace, even for people who are agency workers (SFS 1977: 1160, Chap. 6., 12 & § 7).

In other words, the Health and Safety officers at the client companies bear a dual responsibility to the extent that they have to monitor both their own staff's work environment and that of the agency workers. The Work Environment Authority has highlighted the problem of employers' joint labour and environmental responsibility in a 2010 publication on work environment responsibility for agency workers (Work Environment Authority, 2010). This booklet states that the client company is responsible for matters that are directly connected to current working tasks and that the employer is responsible for more long-term measures.

There is also a section on work environment activities for employees in the Staffing Agency Collective Agreement. This states that the staffing agency will work to ensure the client company takes, and provides information on, the protection measures required (Staffing Agency Agreement 2012A: §19). It also states that staffing agencies are responsible for any rehabilitation necessary for their employees.

Everyone who works in Sweden is covered by statutory occupational injury insurance. This is funded by employer contributions and is administered by the Social Insurance Office. The state workers' compensation fee is currently 0.3% of payroll costs. All employees of an employer who has a collective agreement are also covered by the collectively-agreed occupational injury insurance.

2.4 Regulation of work environment responsibility for the staffing agency industry in other countries

Joint work environment responsibility also applies in several other countries. In a study of how agency workers are represented in Sweden, UK, France, the Netherlands and Poland, it was demonstrated that there is shared work environment responsibility in all of these countries (Håkansson et al, 2009). In France, the shared responsibility for agency workers has been reinforced by financial incentives (Vaes & Vandenbrande 2009). Since 1990, the staffing agency and the client company have signed agreements on how costs should be allocated if an employee suffers an occupational injury. Costs for workplace accidents involving no more than a 10% occupational disability will be borne by the staffing agency. If occupational disability is greater than 10%, the client company must finance one third of the cost. In Belgium, an insurance system is under discussion that divides the cost of workplace accidents between staffing agency and client company (Vaes & Vandenbrande 2009).

Quinlan et al (2009) have studied how the legislation on atypical employment conditions is complied with in Australia. A survey of work environment inspectors showed that agency worker was the employment form that was most problematic. The researchers particularly stressed the difficulties in monitoring the long-term health effects of agency workers' working conditions.

Quinlan & Mayhew (1999) studied the system of compensation for occupational injuries in various types of temporary employment and concluded that responsibility for agency workers is unclear in many countries, leading to attempts to evade responsibility or circumvent regulations. Examples of such measures include indicating too few employees, changing the designation of trades for workers in occupations normally exposed to high risk levels, or paying wages that were too low or unreported. The vulnerability of staffing agency workers is normally amplified by the fact that union membership in this group is low in many countries, and that they therefore do not enjoy the same support when it comes to representation in cases of occupational injury. The lack of union membership is also liable to lead to increased uncertainty about new contracts (Underhill & Quinlan 2011; Peck & Theodore 1998).

3. Methods

It has previously been mentioned that Sweden distinguishes itself in that employees of staffing agencies enjoy the same opportunities for permanent employment as workers in other industries. In other countries, where fixed-term contracts are the norm for employees of staffing agencies, it is common that research includes them in the temporary worker group, often termed temporary work, precarious work, contingent work or atypical employment conditions. There is extensive research on temporary employees' work environment. However, much of this research highlights the importance of distinguishing between the different types of atypical employment (see, for example, Forde et al, 2008; De Cuyper et al, 2008; De Cuyper et al, 2009; Wilkin 2013; Nesheim, Olsen & Kalleberg 2007). In this State of Knowledge compilation the form of employment, i.e. permanent or fixed-period, is not the central point. In this study, the triangular relationship between the employee, staffing agency and client company (see Figure 1) is of greatest interest. Consequently this study of work environment for staffing agency workers has focused on research that deals with this group separately in their analyzes. In international research on agency workers this also means that they are, by definition, temporary employees.

3.1 Selection of articles

The basic principle for selecting publications for this State of Knowledge Report was to include all published scientific papers dealing with staffing agency workers and their work environment. In order to accomplish this, we have searched a number of databases of scientific articles. In these databases, we further used the keywords that would identify all the articles that may deal with staffing agency workers and the work environment in the broad sense. The constraints imposed include that the articles must be peer-reviewed and that they are published in English. In addition, we have also carried out a search in the Swedish research libraries' joint catalogue Libris as well as transferring a small number of relevant publications to our database, publications that have been referenced in the articles produced by our primary search.

3.2 Databases

In order to capture a wide range of items in our international search, we have turned to four different databases with slightly different emphases. The four databases: Web of Knowledge, SCOPUS, EBSCO Business Premiere and PubMed. Web of Knowledge or Web of Science contains articles from the social sciences, natural sciences and humanities. The SCOPUS database contains, in addition to the social sciences, natural sciences and humanities also economics, medicine and health, and is interdisciplinary. EBSCO Business Premiere is more focused on the economy but also covers social sciences. Finally PubMed is more focused on medicine and health psychology but also includes natural and social sciences in general. The Swedish database Libris was used as a supplement. Libris is the Swedish research libraries' joint catalogue. Currently, there 7 000 000 titles in this database.

3.2.1 Keywords

Keywords have been built up around words that will capture the staffing agency industry and staffing agency workers, as well as the work environment and health aspects. Keywords were tried out a couple of times to obtain results within occupational injury, physical work environment and psychosocial work environment. All search terms are shown below. Keywords that are within quotation marks (') mean that only the sequence of words were searched for. An asterisk (*) means that all words

that begin in this manner were included in the search. See Table 1.

Table 1. Keywords used when searching international databases

<i>Staffing agency business and staffing agency workers</i>	<i>Health effects and work environment</i>	<i>Cont. Health effects and work environment</i>
"Help industry"	illness	"work environment"
"Staffing industry"	"occupational disease"	accident
"Temporary service industry"	"chemical risks"	accidents
"Work agency"	"chemical risk factors"	injury
"Temp agency"	"chemical hazards"	injuries
	"physical risks"	Musculoskeletal
	"physical risk factors"	MSD
"Agency work"	"physical hazards"	wellbeing
"Agency worker"	"physiological risks"	"well being"
"Agency workers"	"physiological risk factors"	Stress
"Agency work*"	"physiological hazards"	"sick leave"
	"psychological risks"	Sick leave
	"psychological risk factors"	absenteeism
	"psychological hazards"	"Job satisfaction"
	"biological risks"	"development possibilities"
	"biological risk factors"	"development possibility"
	"biological hazards"	"development opportunities"
	noise	"competence development"
	vibration	"social relations"
	lighting	"relationships at work"
	"electro-magnetic fields"	"social support"
	radiation	"social interaction"
	"Health & safety"	Bully*
	"safety & health"	Bullying
	"health and safety"	Mobbing
	"safety and health"	Harassment
	"occupational health"	

When it comes to keywords about the staffing agency business area and its workers, these were searched with OR between them, which means that it was sufficient that one of these words was included. The same applies to keywords on health effects. In order to be included in our database of articles on work environment for staffing agency personnel, at least one of the words in the first column in the table above must be included in the article's title, abstract or keywords, that is the title must include the staffing agency industry/business area or staffing agency workers and at least one of the words in the following two columns on health effects and work environment.

3.3 Procedures

It may be mentioned here that in the Web of Science database produced keyword hits concerning health effects totalling 2 913 718, while keywords on staffing agency industry and staffing agency workers generated only 398 hits. When these two criteria were combined, the number of articles was reduced to 85 hits. SCOPUS yielded correspondingly 89 hits, EBSCO 37 and PubMed 67 hits.

In the next stage, all titles and abstracts were reviewed and those that could directly be dismissed as irrelevant were removed. Also duplicates that come up in two or more searches were deleted. Consequently 86 articles remained which, based on their abstracts, appeared to deal with the work environment for staffing agency workers.

A search of the Swedish library database Libris was also conducted. It was not possible to define the search in the same manner as in the searches of journal databases. We used the same keywords for the business area to capture everything that had been written about the industry and combined this with "work environment" and "health", which resulted in 104 hits including some duplicates, both in electronic and hard copy media.¹ Searches were carried out in two rounds and then merged. All types of publications were included in Libris searches. Mostly they concern books but reports and journal articles were also included. In general no traditional peer review process was included.

The 104 hits were reviewed. In total, five interesting matches were made, an IVL report on the work environment, a Swedish article later published in an international magazine and therefore already included in our compilation, a thesis in sociology, an essay in psychology and a scientific article published in the scientific publication series *Arbetsliv i omvandling* (Working Life in Transition). After a preliminary examination, only the last-named was retained as a relevant publication (Allvin, Jacobson & Isaksson 2003). It must be stated here that we ourselves have researched various aspects affecting agency workers over the past decade and therefore possess a good picture of Swedish research in the field.

Finally all the articles were examined in detail. Several articles then fell away at the reading stage. Mostly, this was because it was impossible to distinguish staffing agency workers from other types of temporary, fixed-period or atypical employment conditions in the results. During this reading, we also found some references to other relevant studies that were then included in this State of Knowledge Report. This particularly concerned articles on the physical work environment for staffing agency workers, which generated the lowest number of hits in the four original article searches. The database has been compiled as a Guide in the State of Knowledge Report as Annex 1 and contains a total of 45 relevant articles. It may be mentioned here that, in the general reasoning and the comparisons with other research in the Report, other articles and literature are also referenced. If this literature does not explicitly deal with staffing agency workers and their work environment it is not included in the Guide, however it is included in the list of references.

The results of the review of articles are presented in the following three chapters on the psychosocial work environment, physical work environment and occupational injuries in agency workers. We believe that this distinction is relevant, however it does mean that several of the articles appear in more than one of the three results chapters as articles often deal with several types of work environment problem. The three results chapters are structured according to themes that best suited their content. Prior to the three chapters on the psychosocial work environment, physical work environment and occupational injuries is a brief compilation of the studies explicitly addressing staffing agency workers' work environment.

¹ Searches were carried out with TIT: "staffing agency industry" OR "staffing agency" OR "work agency" OR "temp agency" OR "agency workers" AND "work environment" and then with "health".

4. Compilation of studies dealing with staffing agency workers' work environment

In total, for this State of Knowledge Report, we were only able to identify 45 relevant, peer-reviewed articles dealing with work environment for staffing agency workers. The most difficult aspects were information about occupational injury and physical work environment. Regarding staffing agency workers and work environment there is some research mainly from Australia - seven relevant studies. There are also some studies from the USA and the Netherlands, six each, and from the UK there are five studies in which staffing agency workers' work environment conditions are specifically distinguished. The remainder comes from a wide group of countries, including Sweden, with three or fewer studies.

The articles are based on both qualitative and quantitative methods. Most of the studies are quantitative (31) in some sense, mainly due to questionnaire data and register data, ten are purely qualitative studies mostly based on interviews, and a handful of the studies are based on documents such as legislative texts. A few studies are a combination of qualitative and quantitative methods. Four of the studies are research overviews or meta-studies. Some of the articles deal only with staffing agency workers while some of them make comparisons between staffing agency workers and other types of employees, such as those in traditional permanent employment or various types of temporary employees, making it easier to distinguish the data peculiar to staffing agencies. In terms of occupations, generally studies cover a wide spectrum of professions (26) and are not specific. A small number (5 studies) deal with individual professionals such as accountants, administrators or nurses and social workers. A few articles focus on particular industries, such as manufacturing (4) or construction (1).

When it comes to focusing on the health effects of the psychosocial work environment there are 22 articles, seven of which are in combination with the physical work environment and/or occupational injuries. As concerns occupational injuries, 20 articles were identified of which seven were combined with purely physical work environment and two took up all three aspects. For the physical work environment, we found a total of 14 studies, most of them in combination with occupational injuries. It must be emphasized here that this review shows that research on the physical work environment for staffing agency workers is the area where there is the least amount of stable scientific knowledge to relate to. The majority of these studies dealt with physiological risks and few considered physical hazards, chemical hazards, or a combination of several risks. A handful of studies were based on the law (5), of which one was based on work inspection activities in the staffing agency industry. For more detailed information about these articles please see the Guide in Annex 1.

5. Psychosocial work environment linked to the staffing agency industry

5.1 General on the psychosocial work environment

The Work Environment Act states that the "soft" parts of work are included in the work environment. This means that work organization and job tasks should be designed so that the employee is not exposed to psychological stress that may lead to ill health, and that variety, social contact and cooperation should be aims of task design. The Work Environment Act is refined further in the Work Environment Authority's regulatory code AFS. One of these is AFS 2001:1 Systematic Work Environment Management, often abbreviated to SAM. This states that systematic work environment management must include all physical, psychological and social conditions that are important for the work environment (AFS 2001:1, § 3). The Work Environment Authority's comments to the third clause exemplify psychosocial conditions to include workload, social interaction and variety. A more detailed discussion of psychological and social aspects can be found in AFS (1980:14) Mental and Social Aspects of the Work Environment. This specifies these aspects of the work environment concept as providing individuals with the opportunity to use their knowledge and skills and the preconditions to continuously develop their skills and gain new experience (AFS 1980:14,5). How exactly this is to be achieved is less clear although it is stated that this is dependent on how the tasks are designed physically, technically and organizationally (AFS 1980:14,7). Overall, it can be concluded that neither the Work Environment Act nor the two AFS stated above give any precise guidance as to what should be regarded as the explicitly psychosocial work environment.

The researcher Hörte (2009:15) discusses the work environment and work environment management and he also concludes that the psychosocial work environment must be understood in conjunction with physical, organizational and social environmental conditions. Eurofound also states that international research shows no clear definition of the psychosocial work environment (Eurofound: 2012). In the Fifth European Working Conditions Survey (Eurofound 2012, 52 ff) psychosocial risks are divided into six areas: high standards and labour intensity, emotional demands, lack of control, ethical conflicts, weak social relationships and insecurity. The International Labour Organization and the World Health Organization (ILO and WHO) presented a discussion in a publication by a joint committee on psychosocial factors at work. They defined psychosocial factors as the interplay between work environment, work content, organizational relationships, employee circumstances, needs and culture that affect health, work performance and job satisfaction (ILO & WHO, 1986:3-5). A recurring theme in the ILO & WHO publication is the ability of employees to meet the work demands imposed on them, as well as the social relationships between the employee, fellow workers and management. Employment conditions, especially job security, are also included as a factor of importance to the psychosocial work environment. Also relationships outside the workplace may have an impact on psychosocial well-being in the workplace - what might be called a work-life balance.

ILO and WHO explicitly indicate the negative health factors mentioned in innumerable reports caused by under-utilization of individual abilities, work (over) load, lack of control, role conflict, unfair wages, lack of jobs, relationship problems at work, shift work, and even physical risks on the job. The Swedish Stress Research Institute based its ongoing longitudinal study on work environment and health on a commonly-used theoretical model called the Demands-Control Model. This model was introduced by

Karasek some thirty years ago and was further developed by Theorell & Johnson (Karasek & Theorell, 1990:5, 71; Widmark 2005:25-9). The model is essentially based on two different dimensions: working demands and control over your own situation. Later Johnson also helped to develop a support function which includes social support from co-workers and managers. Since its inception, this Demands-Control-Support model has been used in numerous studies. The survey instrument included was developed using standardized questions about demands, supervision and support in the work situation. Psychological demands relate to workload, that is how much, fast and hard you work and include such factors as deadlines, how many units produced per hour and how many reports to be submitted during the week (Karasek & Theorell, 1990:63).

Independent control or decision latitude concerns the space the employees enjoy in which to make their own decisions about their work, i.e. how the work should be done or what kind of autonomy there is at work. Briefly it could be concluded that psychosocial risks may have originated in work task design, work organization and the individual's, or the organization's, relationship with the surrounding community.

International research on psychosocial work environment factors is summarized in a comprehensive state of knowledge report on occupational stress by Cox et al (2000: 67-81). These researchers have developed the categorization of psychosocial work environment further to include a total of ten different categories that broadly correspond to the ILO and WHO position. Half of Cox et al categories deal with work context and the other half work content. The categories are general in the sense that they apply to all types of work and not specifically to the work situation of staffing agency workers. It is possible, however, to note that some of the categories would be particularly relevant to agency personnel.

They highlight different risk factors for the different categories. In the category Organizational Culture and Function, low levels of social support form a psychosocial work environment risk. The category Role in the Organization includes uncertainty about role or function in the organization as a psychosocial work environment risk. Regarding Career Development, risks include job insecurity. Decision Latitude/Control refers to individuals' opportunity to participate in decisions concerning their work. Interpersonal Relationships such as social and physical isolation on the job, or poor relationships with other people and lack of social support from supervisors and co-workers, are conditions that affect the psychosocial work environment negatively. Risks regarding the category Work-life Balance may be due to different and conflicting, or inconsistent, demands from work and in private life. In terms of job content Cox et al (2000) stated that Work Environment and Work Equipment, Task Design, Workload/Workpace and Work Schedule, via perceived stress, may indirectly lead to psychosocial work environment problems. Cox et al see, in terms of task design for example, that issues such as failure to use the individual's knowledge, monotonous tasks, short work cycle and lack of learning at work may lead to poor psychosocial health. In the Work Schedule category, risk factors include unpredictable working hours which do form a risk to the psychosocial health for some types of staffing agency workers.

5.2 The psychosocial work environment of agency workers

In the review below, the Cox et al (2000:68) categorization has been used to structure up the research on the psychosocial work environment for staffing agency workers as identified in the literature searches.

5.2.1 Career Development

The Cox et al (2000) category Career Development includes lack of promotion and poor pay but also job insecurity and lack of role conformity. Employment insecurity and fear of layoffs, say the authors based on this extensive literature review, form a source of concern and thus a risk to psychosocial health. Previous experience of, or fear of, layoffs is a recurrent theme in many of the articles that deal with the psychosocial work environment.

De Cuyper, Notelaers & De Witte (2009) studied perceptions of job security, and made a comparison between permanent employees, temporary employees and employees of staffing agencies. One of their main contributions is to emphasize the importance of distinguishing between different types of employment among those often lumped together into the group atypical employment relationships. One conclusion they draw concerning both staffing agency workers and regular employees is that employees who experience job insecurity also display lower levels of job satisfaction (De Cuyper et al, 2009). An American qualitative study also shows that agency workers experience low job levels of job security (Morris 1999).

In a British study Forde and Slater analyzed data from three large questionnaire-based surveys, including the equivalent of the Swedish Labour Force Survey (AKU). One of several objectives was to compare the job satisfaction of staffing agency workers with employees who have other forms of employment. Of the six different variables, including career opportunities, job security, the opportunity to take initiative and the work tasks in themselves, staffing agency workers show significantly lower job satisfaction than other groups of workers (Forde & Slater 2006). In these analyzes, the researchers allowed for the effects of factors including age, gender, educational level and profession. The only one of the six variables for which researchers did not find any significant difference between staffing agency workers and other groups was working hours.

In an Australian study, Aletraris (2010, see especially p 1144) examined how a dozen variables affected job satisfaction for employees of staffing agencies compared with permanently-employed staff. Job satisfaction was found to be significantly lower for agency workers than for traditional employees, even after taking into account control variables such as age and education. The most important explanations for the staffing agency workers experiencing lower job satisfaction was that they have, or feel they have, lower levels of job security. It may be mentioned in this context that salary levels did not help to explain the differences in job satisfaction between these two groups of employees.

Another Australian study based on panel data² compared staffing agency workers with traditional employees (Hall 2006). When asked about their employment security, responses differed significantly between the two groups. The greatest difference was in response to the question of whether they felt that they had a secure future in this job, where 34% of the staffing agency workers considered they did, compared with 64% of those with traditional employment. 42% of the staffing agency workers were worried about the future, compared with 25% of those with traditional employment.

In a quantitative study by de Graaf-Zijl (2012) staffing agency workers were compared with people with permanent jobs, fixed term employees and on-call workers with

² Household, Income and Labour Dynamics in Australia (HILDA) is a panel data questionnaire covering 20 000 individuals.

respect to different types of job satisfaction. Staffing agency workers were the only group of workers who, relative to permanent employees, show lower values for seven different aspects of job satisfaction. One important explanation for the difference in job satisfaction levels is job insecurity. In analyzes de Graaf-Zijl takes into account work-related factors such as work content, working conditions, working hours and wages, as well as individual factors such as gender, age, educational level, cohabitation and number of children.

Also two Dutch studies, Kompier et al (2009:198) and Wagenaar et al (2012:770), studied job satisfaction for staffing agency workers and then compared them with workers holding four other types of positions. Staffing agency workers showed significantly lower job satisfaction than permanent employees, people with a temporary contract with the chance of receiving a permanent contract and temporarily employed in both studies. In a Dutch study from 2012 Wagenaar, Kompier, Houtman, Van den Bossche, Smulders and Taris carried out an analysis of working conditions and health for five different types of employment relationship and staffing agency workers do differ from other groups. Their data was retrieved from the Netherlands Working Conditions Survey 2008. Wagenaar et al (2012:770) examine phenomena closely related to security of employment - employability and the intention to change job for four different types of employment form: 1) permanent employees, 2) employees on temporary contract with the chance of receiving a permanent contract and temporary employees, 3) staffing agency workers, and 4) on-call employees. This study also demonstrates that staffing agency workers report the lowest values in terms of perceived employability and the highest values in terms of intent and activity aimed at changing job during the previous twelve month period.

Initially, it was described how, internationally speaking, employment by a staffing agency means a temporary position. In some few countries, including Sweden, it is possible for employees in this business area to obtain a permanent position. A Swedish quantitative study shows that, even with a permanent position, the perception of insecurity prevails among employees in the staffing agency industry when compared with the labour market as a whole (Håkansson, Isidorsson & Kantelius 2012). This study, which covered white-collar agency workers, showed that the majority of agency workers experienced insecurity in all the dimensions that are usually included in research on flexicurity: job security, employability, income security and combination security.

The above-referenced articles clearly show that staffing agency workers experience low levels of job security and employability. However, the opposite result is demonstrated in a Swedish study of nurses who joined a staffing agency for medical staff (Allvin et al, 2003). This group was not compared with other types of employees but almost all the nurses agreed that they could get a new job (between 4.1 and 4.4 on a 5-point scale depending on age group) and when it came to employment security, responses recorded between 1.5 and 1.8. It is important to note here that one reason that they had actually joined the staffing agency was dissatisfaction with their county council as an employer. The same study compares one nursing group with government officials, permanently-employed journalists and freelance journalists. On most of the health-related issues, the nurses show the best, or as good as, values. For example, 19% reported that they were fairly or very often mentally tired after work, compared with 38-43% for the other groups (Allvin et al, 2003).

5.2.2 Role in Organization

The category of Role in Organization in the Cox et al categorization of psychosocial

work environment risks includes uncertainty about the individual's job, role or function in the organization. Uncertainty as to role arises when it is unclear what the individual is supposed to do in the organization, or if there is a role conflict in the sense that the individual cannot use all of his/her abilities at work. In the literature search including keywords such as agency workers and work environment, we found only one study related to the Cox et al category Role in Organization and psychosocial health. The purpose of the study was to examine the new, boundary-less forms of organization and studied Swedish nurses who took employment at a staffing agency (Allvin et al, 2003). When asked about role clarity the nurses agreed almost unanimously, more than 4 on a 5 point scale.

5.2.3 Decision Latitude and Control

Decision latitude and control refers to individuals' opportunities to participate in decisions concerning their work. Control is defined by Cox et al (2000:72) as the Karasek & Theorell concept in their Demand Control Model. Lack of participation in decisions leads to stress and dissatisfaction with work and is therefore a risk to psychosocial health.

The Aletraris (2010) quantitative Australian study (previously referenced) on job satisfaction also studied how decision latitude and control, or different degrees of autonomy, influenced job satisfaction. Their analysis showed significantly lower job satisfaction for staffing agency workers than for traditional employees and this may be explained by differences in autonomy between the two groups. This difference persisted, even after the researchers took into account covariates such as age and educational level. Limited autonomy is one of several explanations for staffing agency workers experiencing lower levels of job satisfaction.

In a Dutch quantitative study based on cross-sectional and longitudinal data, four Dutch researchers (Kompier, Ybema, Janssen & Taris 2009) carried out a comparison of five different forms of employment and their implications for health and well-being at work³. Psychosocial work characteristics measured included four issues of autonomy. In their analyzes, these researchers allowed for age, gender and educational level. In terms of autonomy, it appears that staffing agency workers have less autonomy than both permanent employees, people on temporary contract with the chance of receiving a permanent contract, temporary employees and on-call employees. These researchers also tested whether levels of well-being differed between the groups. Well-being was measured using questions including how often the respondent felt depressed⁴. Staffing agency workers reported the highest values for the depression variables and these were significantly higher than those reported by the permanent and on-call employees. Overall staffing agency workers showed lower levels of job satisfaction.

In a Dutch study from 2012, Wagenaar, Kompier, Houtman, Van den Bossche, Smulders & Taris carried out a more extensive quantitative analysis of working conditions and health for five different types of employment relationships which included staffing agency workers as a separate group. The clearly-stated point of departure for the researchers in this study is the Karasek and Theorell Demand-Control Model. Their analysis showed not only that staffing agency workers had the lowest control levels of the five groups (permanent employees, employees on temporary contract with the chance of receiving a permanent contract, temporary

³ Quality of Working Life, often abbreviated to QWL.

⁴ To measure this the researchers used a previously-tested battery of 10 questions known as the CESD10 Scale, see Kompier, Ybema, Janssen & Taris 2009, p. 196.

employees and on-call employees). Staffing agency workers were also overrepresented in the passive and the tense job categories. Passive jobs involve low control and low demand levels; tense jobs involve low control in combination with high levels of demand. The latter is the worst combination in terms of psychosocial risks (Wagenaar et al 2012).

5.2.4. Organizational Culture and Function

In the Cox et al (2000) category of Organizational Culture and Function poor communication, poor support for problem solving and personal development, and a lack of organizational objectives pose risks to psychosocial health. None of the articles in the literature surveyed related directly to this Cox et al category. Indirectly it could be argued that Torka & Schyns' (2007:453) results are related to organizational culture. From their qualitative study based on interviews they conclude that if the client company wants to protect agency workers' health, i.e. not risk their psychosocial health through low levels of job satisfaction, agency workers must be treated in the same manner as the ordinary staff. Social support, which Cox et al mention in this category, will also recur in Interpersonal Relationships, see below.

5.2.5 Interpersonal Relationships

Interpersonal Relationships, such as social and physical isolation on the job or poor relationships with other people and lack of social support from supervisors and co-workers, are risk factors that affect the psychosocial work environment negatively (Cox et al, 2000:72). In their survey of women employed by staffing agencies, the Swedish researchers Isaksson & Bellaagh (2002:35-9) analyzed how the women's experience of contributions and rewards affected psychosocial health. Their analysis showed that perceived social support exerted a significant effect on psychosocial health. Consequently, social support reduces the risk of psychosocial problems in female staffing agency workers. Social support was measured using a survey instrument developed by Hovmarrkt & Thomsson dealing with issues such as being able to turn to someone when they experienced problems.

A qualitative study of the use of staffing agency workers in nursing homes showed a lack of support from the staffing agency, lack of support from the regular staff and isolation (Charnley & Arnold 2006). The results of this study, however, are based solely on a handful of interviews.

The Kompier et al (2009: 196f) Dutch study previously referenced examined differences between five different employment contract factors, and support from managers and colleagues, but found no significant differences between the groups. Neither when it came to emotional factors that could relate to what Cox et al referred to as Interpersonal Relationships did the study show any differences between the four groups.

In an article focusing on commitment (in Swedish) about involvement with employers, Galais & Moser (2009) carried out a longitudinal quantitative study on how commitment affects well-being, which in their study included both mental and physical health. Although commitment only borders on what may be considered to be relevant to the psychosocial work environment, employees' commitment to their staffing agency helped to form a buffer against illness when they changed client companies. By extension this would, according to Galais & Moser and supported by other research, point to the importance of organizational support from staffing agencies for their employees when they are out at client companies. Torka (2011:1582)

also used interviews with staffing agency workers and showed that it was common that they mentioned the importance of the staffing agency keeping in touch with them. These results thus relate to what Cox et al above term social support from managers. Studies of the Swedish staffing agency industry show that organizational support from staffing agencies and immediate managers has much to gain from development (Håkansson & Isidorsson 2012A;Kantelius 2010).

In a quantitative Canadian study by Lapalme, Stamper, Simrad & Tremblay (2009), results show the importance of support from co-workers and managers. The survey shows that support from colleagues and managers contributed to agency personnel experiencing "insider" status. The authors of the article point out that the staffing agency workers in this study were highly-trained staff in the financial sector and the authors believe that the client company was extremely interested in their expertise. Håkansson & Isidorsson (2012b) show in an article based on Swedish conditions that agency workers can become fully integrated into the work organization. This article also dealt with a group of highly skilled personnel, in this case IT technicians. The same article shows that hiring agency workers could also lead to structures characterised by a core of permanent staff and a periphery of temporary workers. The division into core and periphery has also been demonstrated in a number of earlier publications, although these have not been focused on psychosocial risks (Atkinson 1984; Houseman 2001; Kalleberg 2001; Kalleberg, Reynolds & Marsden 2003: 532; Kauhanen 2001).

5.2.6. Work/life Balance

The Cox et al category entitled Work-life Balance deals with the relationship between work and private life and may be based on different and conflicting or inconsistent demands from work and in the employee's private life, which in turn may affect psychosocial health. This aspect has been addressed in the de Ruyter, Kirkpatrick, Hoque, Lonsdale & Malans' (2008) qualitative study of motives for nurses and social workers to transition from traditional employment to employment through a staffing agency. The study is based on interviews with 32 staffing agency workers (nurses and social workers) and three former staffing agency workers. In addition a handful of managers at staffing agencies and client companies were also interviewed.

The researchers set up a push and pull model based on motives that push nurses and social workers out of their regular employment and also pull mechanisms that contribute to the staffing agencies attracting these categories of employees. In the interview responses, it appears that the decisive motive for leaving traditional jobs was the deteriorating working conditions and one of several motives mentioned for applying to staffing agencies was that it was easier to obtain family-friendly working hours. A study of Swedish nurses who took employment at staffing agencies produced the same result, i.e. that conditions in the county council were poor and that at the staffing agency they would have more control over their working hours (Allvin et al, 2003). Control over working hours is something that can reduce the risk of psychosocial ill health. It is worth noting in the latter study that only one third of the employees in staffing agencies worked full-time jobs.

5.2.7 Working Hours

In the Cox et al (2000:77) categorization of the psychosocial work environment, shift working and long working hours are explicitly stated as risk factors for psychosocial disorders. The researchers also discuss flexitime arrangement and refer to a study by

Landy⁵ showing how control of working hours is important. This category thus slightly overlaps with the category Work/life Balance above.

Working hours aspects have not formed a major area of research into the work environment for staffing agency workers. In some of the articles in the literature review, a few studies concerning working hours were identified. None of them dealt explicitly with shift working or long hours. Some of the items, however, take up how staffing agency workers perceive their working hours and what impact this has on job satisfaction, thus indirectly influencing psychosocial work environment risks. However results are not conclusive.

The Forde & Slater (2006) quantitative study on job satisfaction showed that working hours had no significant relationship to job satisfaction, either positively or negatively. This is in contrast to the other five variables examined in their study (see Career Development) which were negatively correlated with job satisfaction and thus constituted a risk to psychosocial health.

The de Graaf-Zijls (2012:209-12) Dutch study found that employees in staffing agencies were more satisfied with working hours than permanent employees, temporary employees or on-call employees. In a qualitative study by de Ruyter et al (2008) it was found that a motive for nurses and social workers to shift from traditional employment to employment through staffing agencies was exactly that - the ability to influence working hours. In the interview responses, it appears that one of the crucial reasons for leaving traditional employment positions was deteriorating working conditions.

Aletraris (2010) found the opposite result in an Australian study showing how a dozen variables affected job satisfaction for employees in staffing agencies and traditionally-employed personnel. The researcher found that working hours contributed to lower levels of job satisfaction for staffing agency workers, that is lack of control over working hours leads to lower levels of job satisfaction and thus increases the risk of psychosocial ill health. This result differs from the previous study which concerned nurses (de Ruyter, Kirkpatrick, Hoque, Lonsdale & Malans 2008; Allvin et al, 2003).

5.2.8 Task Design

The category Task Design involves risks to psychosocial health such as lack of utilization of individual skills, monotonous work, short work cycle and lack of learning at work. This category includes poor matching between the individual's skills and the duties that he or she is set to perform, i.e. tasks too easy or too difficult in relation to the individual's skills (Cox et al, 2000:67, 75f).

In the previously-referenced quantitative study by de Graaf-Zijl (2012) where staffing agency workers were compared with those with permanent employment, temporary employment and on-call employment, it appears that staffing agency workers show significantly lower job satisfaction. Part of this is explained by differences in the composition of the various groups of labour contracts. The primary reason for lower levels of job satisfaction is, however, attributable to the content of work among staffing agency workers. The author considers that this low satisfaction level with job content can be explained by an excess of qualifications among the staffing agency employee group, that is also a form of mismatch between job demands and individual skills. In the analysis, de Graaf-Zijl takes into account work-related factors such as work

⁵ Cox refers to Landy, FJ (1989) *The Psychology of Work Behaviour*. Brooks/Cole, assembly Rey, CA

content, working conditions, working hours and salary levels, and individual factors such as gender, age, educational level, cohabitation and number of children.

The previously-referenced quantitative study by Kompier et al (2009:196f) examined how repetitive work affected the five different groups of employees. Here staffing agency workers are a separate group and they exhibit a significantly higher degree of repetitiveness in their work than permanent employees, temporary employees with the chance of receiving a permanent contract, temporary employees and on-call employees. As mentioned earlier, research shows that staffing agency workers have a lower degree of autonomy in their work. Also a qualitative study of a nursing home showed a lack of utilization of individual skills and lack of learning at work (Charnley & Arnold 2006).

The above studies show that the staffing agency workers are not able to utilize their knowledge or that they lack learning opportunities. In a qualitative study of the reasons for the hiring of agency workers social workers, Cornes et al (2013) report that the agency workers were assigned the most complex cases, those the permanently-employed social workers did not want and this was combined with their lack of introduction, training and support.

5.2.9 Workload

Closely related to Task Design is Workload. Cox et al (2000:76) point out in their general literature review of psychosocial work environment risks that both work overload and work underload are risk factors for psychosocial ill health. Isaksson & Bellaagh, (2002:35-9), in their questionnaire study directed solely at staffing agency workers, analyze how the experience of contributions and rewards affects psychosocial health. In a regression analysis workload showed a significant effect on psychosocial health as measured by the General Health Questionnaire (GHC-12), namely: high workload leads to increased adverse health effects.

In Kompier et al (2009:196f) the previously-referenced Dutch study of five different types of employment contract factors and the tempo (pace of work) at which operations are to be performed, the values for staffing agency workers were significantly lower than for permanent employees. Wagenaar et al (2012:770) confirms this as staffing agency workers are overrepresented in the group with passive jobs, that is to say, with low levels of demands and control at work. Note, however, that staffing agency workers also are overrepresented in the tense job group, a combination of high levels of demands and low levels of control.

5.3 Summarized discussion on the psychosocial work environment of staffing agency workers

Our review of the literature on the psychosocial work environment for staffing agency workers shows that this group, in several aspects, experiences higher risk of exposure to psychosocial ill health. We have also found a study showing that job satisfaction among regular staff is lower in workplaces that use agency workers compared with workplaces that do not (Bryson 2013); this is, however, outside the real focus of this report. For the psychosocial work environment, several of the Cox et al categories are not satisfied which is a recognized stressor and increases the risk of psychosocial ill health. Studies examined have generally been interested in measuring job satisfaction. This turns out to be lower for staffing agency workers in comparison with other groups. In the Wilkin (2013:57) meta-study of job satisfaction, she distinguishes permanently-employed, loosely affiliated and agency workers. This study is based on 72 quantitative studies and

her analysis of these studies shows that agency workers enjoy significantly lower job satisfaction than permanent employees.

Cox et al argue, based on their state of knowledge report, that uncertainty about future employment is a significant risk factor for psychosocial ill health. In the studies discussed in this section, it may be observed that uncertainty about job security is widespread among staffing agency workers. The studies also measured the linked concepts of job security and employability and job change intention and results show that the staffing agency workers experience lower employability than other groups and higher job change intention levels.

One exception was nurses who, in a Swedish study, did not experience employment insecurity and also felt that they were employable. It should be noted that nurses in Sweden have a very good labour market. In the Cox et al category Career Development, poor pay was also included as a risk factor for psychosocial health. None of these studies have shown any links between low pay and job dissatisfaction, or that low pay has led to psychosocial health problems for the staffing agency worker group.

Regarding the category Decision Latitude and Control, three of the articles in our database deal with the subject of autonomy. All three show that the autonomy level of staffing agency workers is much lower than that of traditional employees. All three studies are general in the sense that they cover the entire labour market. In two of the studies, the researchers also distinguish between different types of employment contracts: permanent employees, people with a temporary contract with the chance of receiving a permanent contract, temporary employees, on-call employees and staffing agency workers. Other variables based on previous research that may be expected to be significant for psychosocial health such as repetitive work and general work satisfaction, showed that staffing agency workers were the most vulnerable group. Wagenaar and others go even so far as to write in their conclusion that "... staffing agency workers, but not on-call employees, constitute a risk group for ill health ..." (Wagenaar 2012: 771).

In terms of clarity concerning an individual's role in the organization, Cox et al consider that this poses a risk for psychosocial ill health. We have found only one study dealing with this aspect. It is to be expected that agency workers will be unsure of their role in the organization. This does not apply to Swedish nurses who are examined in the only study found in this field. The absence of this aspect of research on staffing agency workers might indicate that clarity about their roles in the client organization does not constitute a major psychosocial challenge, however the lack of studies dealing with this aspect may obviously have other causes.

Interpersonal relationships and social support and their importance to psychosocial health have been shown in many previous studies. This applies, for example, to all the research based on the Demand-Control-Support Model. In the articles collected, only a few deal with this aspect of staffing agency employment. The Isaksson & Bellaagh (2002) Swedish study of female staffing agency workers showed that social support reduced the risk of psychosocial health problems for this group. A study that measured social support, and included both staffing agency workers and other groups, shows mixed results. Kompier's study of five different forms of employment showed no significant differences between perceived social support for the different groups. On the other hand, several studies showed the importance of social support, especially from the staffing agency as concerns their employees. Results from Swedish research on the staffing agency industry shows that staffing agencies have much to gain by developing support vis-à-vis their employees (Kantelius 2012; Håkansson & Isidorsson 2012A).

In the two categories Work/life Balance and Working Hours, our state of knowledge

survey shows it is not possible to draw any clear conclusions about the influence of working hours and their implications for staffing agency workers' psychosocial work environment. A qualitative study of the reasons why British nurses and social workers transferred to staffing agencies showed that more control over their working hours was actually an incentive to apply. A Dutch study of a representative sample shows that staffing agency workers are more satisfied with working hours than other groups of employees. One of the articles we found, however, shows that working hours contributed to lower levels of job satisfaction for staffing agency workers and increased their risk of psychosocial ill health.

Our review of research on the category Task Design shows clearly that job satisfaction is significantly lower for staffing agency workers than for other groups. All but one of the studies show that staffing agency workers are not permitted to use their skills or that they lack learning opportunities. The lower level of satisfaction with job content among staffing agency workers remains even after characteristics such as age and education have been taken into account.

Regarding workload the studies that compare staffing agency workers with other groups indicate the perhaps unexpected result that staffing agency workers have lower workload demands. This, however, is based on only two Dutch studies.

As mentioned earlier in this partial summary, our review shows that most studies measure job (dis)satisfaction. Few of the studies examine psychosocial ill health. Here, Kompier et al (2009:195-8) constitute an exception as they have included depression as one of the variables measured. In order to measure depression, ten different questions about how often employees had experienced feelings of depression were asked. Here the staffing agency workers scored 1.7 on a 4-point scale, which is significantly higher than for permanent employees (1.5), people with a temporary contract with the chance of receiving a permanent contract (1.5) and those with fixed-term contracts (1.6).

6. Physical work environment linked to the staffing agency industry

6.1 Physical work environment generally

Every five years, the European Working Conditions Survey examines working conditions and work environment among the working population over 15 years of age in the EU. The survey is based on a sample of 1 000 people in each country, however the response rate is in some countries as low as 30%. Although caution must be applied when drawing conclusions from this material, it nevertheless provides an indication of trends, similarities and differences between countries in the EU. The fifth edition of the European Working Conditions Survey (Eurofound 2012:45) states that exposure to certain physical risks, especially repetitive hand and arm movements, increased during the last decade. Just under two thirds (63%) of those working in the EU27 report that they are exposed to such work at least 25% of the time. When all physical work environment risks are weighed together, Sweden has the same values as the EU27 average in terms of risks related to posture and physical environment (such as noise and temperature) and slightly higher than the average as concerns biological and chemical risks.

Although agency workers occur in most industries, they appear to be more prevalent in operations with a more risky work environment, such as production (Smith et al 2010; Storrie 202; Hintikka 2011, Fabiano et al 2008). Lamontagne et al (2012) analyzed the relationship between exposure to work environment risks and employment contracts in Victoria, Australia. They found that temporary employees, including staffing agency workers, were increasingly exposed to various risk factors such as dangerous working practices, dangerous machinery, chemicals, noise and electricity. Amuedo-Dorantes (2002) studied the relationship between work-related ill health and employment status in Spain and found that temporary staff were primarily used in workplaces with poorly developed health and safety, hazardous work environment and/or insufficient training. Although her study did not differentiate agency workers from other temporary employees, the study provides an indication of the reasons for the higher occupational injury rates within the staffing agency business area.

Several studies also show that there is a segregation of duties within workplaces. Agency workers are assigned the more risky and simpler tasks that the regular staff do not want to perform (Morris, 1999; Cornes et al 2013; Torcka & Schyns 2007; Metha & Theodore 2006). This is also supported by the results of the European Survey of Working Conditions (Paoli & Merlilé 2001). The survey shows that agency workers experienced poorer conditions than other employees. It is interesting to note that agency workers were less concerned about health and safety at work than the other employees (Paoli & Merlilé 2001).

The physical work environment is important for staffing agency employee health, but it is important to note that previous work experience has great significance for the development of occupational health problems. While the criteria for diagnosing a condition as work-related differ between countries, the cause is always that the individual has been exposed to a risk factor. The effects of being exposed to a hazardous environment may sometimes appear much later. For migrants, who are overrepresented among staffing agency workers (Arrowsmith 2008), previous exposure to work environment risks is often difficult to trace, and it may therefore be difficult to identify the causes of work-related conditions in this group. With high mobility between jobs, it becomes harder to determine whether the work environment is causing a particular

injury or illness. This problem is especially applicable to agency workers (Quinlan et al, 2001). Their study also shows that traditional work environment management at staffing agencies is hampered by inadequate information and documentation of the tasks the staff are hired to perform at the client company.

The Australian researchers Quinlan & Mayhew (1999) have studied how work environment activities function for agency workers. They found several problems such as evading work environment liability, criminal activity and litigation. This could manifest itself in the staffing agency wrongly classifying their employees, entering an incorrect number of employees on the payroll, failing to report workplace accidents, paying employees their wages unrecorded in cash and, in extreme cases, using firms that "laundered" dirty wages into clean. The employees' vulnerability is considerable, especially as they often lack union support in negotiations on working conditions and on occupational accidents and illnesses. Staffing agency workers' low unionisation rate (see Arrowsmith 2008) is also linked to their experience that union members may not get any more contracts (Underhill & Quinlan 2011B; Peck & Theodore 1998).

6.2 Physical work environment risks for staffing agency workers

Unlike research into agency workers' psychosocial work environment, research into the physical, chemical, biological and physical hazards they are subjected to, as well as their long-term effects on the health of individuals, is very limited. In this literature search, articles mostly concern agency workers' vulnerability to physiological risks, followed by a lesser number of physical risks such as dangerous machinery, chemical hazards, or a combination of different risk factors. We found no articles about the exposure of agency workers to biological hazards. This lack of research is remarkable since agency workers are also used within medical care. By extension, this may pose a risk of transmission of infection into the community.

6.2.1 Research concerning the physical work environment of staffing agency workers

Morris (1999), in a qualitative study, asked staffing agency managers and employees to list their experiences of work environment risks in the industrial environment. He found that the most common risks were physical risks associated with machine monitoring, insufficient knowledge or lack of safety equipment, which meant that the risk was not noted. Staffing agencies argued that the greatest work environment problem was that it was difficult to check the work environment at client companies.

Metha & Theodore (2006) studied the working conditions for agency workers in the construction industry in Atlanta, USA. Their survey covered construction companies, staffing agencies and contractors and showed that there was a division of tasks by which the agency workers were given the worst working conditions and inadequate safety equipment. Working at height and exposure to dust were reported as the main risks by half of the agency workers, and nearly 25% also mentioned dangerous machinery and chemical hazards in the workplace. Other risks cited included inadequate scaffolding, electrical faults, lack of introduction and information, lack of safety in work practices by other employees, and falling objects. Metha and Theodore's study focused on agency workers' conditions and they made no comparison with the construction company's own employees.

The authors believe that this is an institutional failure; the agency workers' risky work environment can be explained by work environment responsibility being shared between the client company and staffing agency, which reduces companies' incentives to work with environment risks. Another contributing explanation is also inadequate monitoring by government (Metha & Theodore 2006).

The importance of distinguishing agency workers from other types of temporary labour is clearly illustrated in a quantitative study by Kompier et al (2009). From a representative sample of the labour force in the Netherlands, the authors could conclude that agency workers were more exposed to poor jobs and risk of musculoskeletal injuries. Agency workers reported the highest levels of dynamic and static workload, repetitive work and work at a computer, compared with employees working on other types of employment contracts, including on-call employees and temporary employees (Kompier et al, 2009). However, it was found that the frequency of complaints concerning musculoskeletal disorders and ill health did not differ between the groups. When the researchers compared risk behaviour patterns between agency workers and other employees, they found that smoking was more common among agency workers but that alcohol consumption did not differ between the groups.

Smith et al (2010:141) found in a study of compensation claims in Washington State, USA that medical injuries related to toxic substances were 1.5 times more common in agency workers compared with employees on permanent contracts. The difference was especially evident in the construction industry where compensation claims for occupational injury related to chemical toxins were 400% higher for agency workers. Also in the warehousing and transport industries, agency workers reported a higher proportion of claims. In addition, the researchers found differences in compensation claims related to problems with neck, back and arms, in which agency workers were responsible for the larger share. These study results should be interpreted with caution as they are based on data reported in order to receive compensation from insurance companies.

Other US studies of claims support the theory that agency workers are assigned riskier jobs than regular employees (Silverstein et al, 1998 and Silverstein et al, 2002). In these studies, claims concerning work-related, non-traumatic musculoskeletal injuries in Washington State were examined. The researchers found an increasing proportion of agency workers in hazardous industries, as well as reporting an increasing share of non-traumatic injuries. Agency workers in the automotive industry or working on assembly lines were shown to have the greatest risk of injury to the neck, back and legs, while agency workers in administrative work were primarily exposed to non-traumatic wrist injury. The type of injuries indicates that the agency workers are extremely exposed to manual handling tasks (Silverstein et al, 2002). The authors consider that the injury rate among agency workers within administrative work was somewhat unexpected but may be explained by the statistics including a number of different groups, including the staff who are hired to work in assembly, at a machine or in other business areas.

A Finnish study showed that agency workers mainly occur in industries that require manual labour, such as manufacturing, process work, warehouse work, excavation/trenching, construction, demolition and repair work (Hintikka 2011). The author shows that there is generally a higher risk of occupational injury for agency workers, but she found no significant differences between the staffing agency business area and other areas in terms of occupational injury related to risk factors such as noise, vibration and chemical substances.

Guglielmi et al (2009) conducted a survey on work environment and health among employees in staffing agencies in Italy. Almost half of the staffing agency workers (48%) felt that there were some factors that had a negative impact on their health, a third mentioned a risk factor, and 12% two risk factors. The principal risk factors reported by staffing agency workers were physical fatigue, stress, mental workload and noise. The article does not, however, report the extent of the aforementioned risk factors. The study also shows some methodological weaknesses. The selection of the employees who participated in the study was made by staffing agencies, which may have influenced their responses. Furthermore, the study includes no control group which means it is difficult to draw any conclusions from the information in it.

Torka & Schyns (2007) examined working conditions for agency workers and regular staff in two companies in the metalworking industry in the Netherlands. Both agency workers and regular staff felt that the agency workers' physical working conditions were worse. Both groups also stated that the regular staff had better working postures, work wear and personal protective equipment. The authors believe that the differences may be explained by the client company's work environment responsibility differing between the groups, for example the client company provided clothing for their own staff while the agency workers had to buy their own. Furthermore, the regular staff had worked there for a long period of time which contributed to the division of tasks being to their advantage.

6.3 Discussion on factors affecting the physical work environment of staffing agency workers

Although studies of the staffing agency workers' physical work environment are few in number, they do suggest that agency workers are more vulnerable to physical work environment risks. In the section below, the contributing factors identified by this research are discussed.

6.3.1 The triangular relationship in the staffing agency industry

In most countries in the world, regardless of legal system, work environment responsibility for agency workers is, to varying degrees, divided between client company and staffing agency (Underhill, 2010; Morris 1999; Arrowsmith 2006). Staffing agencies are usually employers under labour law, while the client company is responsible for the management of the agency workers (Arrowsmith 2006). Researchers in Australia, where work environment is a shared responsibility between the staffing agency and the client company, state that while the shared responsibility for work environment is clearly stated in law, practice is often flawed. The employer (i.e. the staffing agency) often lacks relevant information and control of their staff's working situation at client companies, while client companies do not often consider their legal obligations (Quinlan et al, 2009; Underhill 2010; Underhill & Quinlan 2011; Vaes & Vandenbrande 2009). This is illustrated in their qualitative study of agency workers and union representatives in Australia. Both staffing agencies and client companies showed a lack of responsibility for the agency workers' health and safety and agency workers dared not call attention to shortcomings for fear of being out of a job (Underhill & Quinlan 2011).

There is an inherent conflict in shared work environment responsibility - if staffing agencies press the client company as concerns work environment management for agency workers, they risk losing the contract. If the client company's motives for using agency workers is actually to avoid responsibility for work environment, the client company does not intend to invest in these issues. This transfer of risk means that an

organization deliberately outsources responsibility for occupational injury and unhealthy working conditions (European Agency for Safety and Health at Work 2002; Underhill & Quinlan 2011A). The phenomenon has been termed Employment Risk Management (Hall 2006). The ability to do this is, of course, dependent on national legislation. In Australia, researchers found examples of client companies that used the wording in the staffing agency contract to argue themselves out of liability for breaches of work environment legislation (Underhill & Quinlan 2011A).

Metha & Theodore (2006) discuss this phenomenon in the American context where staffing agencies, in addition to the fierce competition between them, also faced competition from unofficial brokers of day workers (labour pools) which increased the risk of wage dumping. These researchers considered that the ability to hire agency workers reduces client company incentives to improve work environment and working conditions for staff on traditional employment contracts.

6.3.2 Workplace and safety introduction programmes

Numerous studies show that agency workers were given insufficient or no training at client companies (Morris, 1999; Cornes et al 2013, Mehta & Theodore 2006; Storrie 2002). Studies have shown that lack of training is associated with occupational injury and occupational illnesses for temporarily-hired staff generally (Amuedo-Dorantes 2002) and agency workers in particular (Fabiano et al 2008). A study of working conditions among all groups of employees in Europe showed that agency workers and employees on temporary contracts are the groups least likely to receive information about work environment risks. These groups also receive a minimum of training during paid working hours (Eurofound 2012). Metha & Theodore (2006) showed in their American study that nearly 40% of agency workers in the construction industry had not received adequate training before entering a hazardous work environment.

Two preconditions contribute to the lack of health and safety introduction. Firstly, there is uncertainty as to who - the staffing agency or the client company - is responsible for which parts of the introduction. Secondly, it concerns the logic of hiring agency personnel where the client company is in direct need of the agency workers. The client company considers that it does not have time for health and safety introductions. Metha & Theodore (2006) illustrate this lack of introduction in a case where neither the staffing agency nor the client company informed the agency workers about the chemical risks in the workplace, nor provided any safety equipment. In consequence skin irritations were frequently reported among the agency workers concerned.

Saha et al (2004) suggest that formal training and skills development is particularly important for agency workers. Their study, based on such staff in India, shows that agency workers' social capital is lower than regular staff. Consequently they find it more difficult to get help and support from client company personnel, which means that it is more difficult to obtain on-the-job training. As a result formal training becomes more important.

6.3.3 Risk management and preventative measures

Risk assessments for each task and for each individual form the cornerstone of all preventative work environment activities. The triangular relationship between the agency workers, the client company and staffing agency in combination with frequent job changes for the agency workers makes it difficult to use traditional methods of risk assessment (Park & Butler 200; Papadopoulos et al 2010; Underhill 2010). At the same

time there is a lack of methods that are particularly suited to agency workers as their risk assessment may be undermined by lack of interest, time and will as well as the staffing agency's lack of information about the tasks to be performed (Papadopoulos et al 2010; Underhill & Quinlan 2011A). The latter problem is made clear when the client company moves agency workers to another task within the company without notifying the staffing agency (Underhill & Quinlan 2011A).

Another difficulty is agency workers' mobility across professions. Occupational injury and occupational illnesses related to a specific occupation depend on cumulative exposure, combined with workplace working conditions and individual factors. For agency workers with high levels of mobility, sometimes with many short contracts at different sites, it becomes more difficult to identify occupational hazards. Many workplace injuries are investigated in relation to a limited exposure period, which can be difficult to measure for agency workers moving across multiple workplaces. Papadopoulos et al (2010) argue that effective risk management is challenged by changes in employment and demand specific tools to handle risk assessment when precarious employment forms are used.

6.3.4 Health checks, occupational injuries and insurance cover

There is very little research on health monitoring or diagnosed occupational illnesses among staffing agency workers, but research on occupational accidents and working conditions shows that it is vital to follow up the long-term health effects of staffing agency employment.

In a cross-sectional study of the workforce in Japan it was revealed that staffing agency workers were given health checks by their employer (i.e. the relevant staffing agency) to a very limited extent, (Inoue et al 2012). In contrast, staffing agency workers did not differ greatly from employees on permanent contracts as concerns the need for, or interest in, health checks. The authors concluded, among other issues, that staffing agency workers lacked knowledge on their rights to health checks.

Regarding access to health and medical care in the United States, staffing agency workers are in a particularly precarious situation; more than 90% in one study were not insured through their employer (Kalleberg et al, 2000). The study is based on data from the Current Population Survey 1995. Mehta & Theodore (2006) found that, in the United States, 60% of staffing agency workers hired out to construction industries who were injured did not receive any medical help, either due to lack of insurance or the fear of losing their job if the injury were mentioned. The staffing agency workers' attempts to seek medical help were thwarted in many cases by both the staffing agency and the client company. Consequently compensation to the staffing agency employee was denied or hampered by both companies arguing that the responsibility lay with the other company.

Underhill's (2010) analysis of the chances of returning to work after an occupational injury or illness shows that there are major differences between employees in the staffing agency sector and others. The study is based on register data of compensation claims in Australia. She found that 35% of the agency workers who suffered an occupational injury returned to the same employer after the injury. The corresponding figure for a comparable group of permanent employees was 58%.

Several studies show that staffing agency workers hold back their claims to health and safety and that they refrain from reporting minor accidents or incidents for fear of losing their contract or not gaining another contract (Morris, 1999; Smith et al 2010; Hintikka 2011).

Staffing agency workers are also more vulnerable to discrimination as concerns processing of compensation claims - the proportion of claims disputed or denied by employers and insurance companies is higher for staffing agency workers than for permanent employees (Morris, 1999; Smith et al 2010). Quinlan et al (2009) argue that this may be explained by uncertainties in liability coverage (staffing agency workers do not know whether they are eligible for compensation and who is responsible for complaints), and limited support from workmates and unions. Even if agency workers may be denied reimbursement for medical expenses from the companies, they are able to obtain it from social services. In the industrialized world it is estimated that 30% of total costs of occupational accidents and illnesses are paid by employers, 30% by employee and 40% by society (Quinlan & Mayhew 1999).

6.3.5 State monitoring

Only two articles have been identified that deal with the supervision of the staffing agency business linked to various aspects of the work environment. Quinlan et al (2009) conducted a survey of work environment inspectors in Australia to obtain their views on legislative efficiency and their ability to monitor the use of atypical employment conditions. Their study shows that agency workers form one of the most problematic forms of employment in terms of monitoring and prosecution related to the work environment, and particularly the long-term effects of agency employment.

Mehta & Theodore (2006) illustrate the lack of monitoring and control of the staffing agency business area in the United States with information on work environment and labour inspection: in 2002 there were 849 such inspections in the construction industry, but not one in the staffing agency industry.

6.4 Summarized discussion on the physical work environment of staffing agency workers

Only 13 scientific papers have been identified that deal with risks in the physical work environment for agency workers. However, it is sometimes difficult to distinguish agency workers from other temporary employees. The scope of research in this field is thus remarkably limited, especially given the growing volume of staffing agency workers.

The limited number of scientific articles makes it difficult to draw general conclusions, especially as these articles are based on data from different countries applying different national regulations, and the articles are often limited to specific industries or specific groups of employees. Quantitative studies show that staffing agency workers are increasingly exposed to risks in the work environment and are at risk of occupational ill health. Several factors interact in this business area: agency workers are used extensively in industries where work environment risks are greater and even if both the staffing agency and the client company are responsible for the work environment, such activities may fall between two stools. There is an inherent conflict in shared work environment responsibility - if staffing agencies press the client company to undertake work environment management with agency workers, they risk losing the contract. If the client company's motives for using agency workers was actually to avoid responsibility for the work environment, the client company has no intention of investing in these measures.

Several studies point to the lack of workplace and safety introduction as an important explanation for the poorer physical work environment for agency workers. In addition, there may be uncertainty between staffing agency and client company as to who is

responsible for these activities, and research highlights the fact that agency workers are often needed immediately, which may result in shortcomings as concerns introduction and training. Another type of explanation is associated with the staffing agency workers themselves: those who work in the industry may hold only a weak position in the labour market because of previous health problems. There are also factors that contribute to the underestimation of statistics on risks and accidents: agency workers are less likely to report hazards and injuries due to a fear of losing their current or future contracts.

7. Occupational injuries linked to the staffing agency industry

Definitions of occupational accidents and injuries may differ between countries. In Sweden occupational injury covers injuries or illnesses incurred in connection with a job or caused by work or working conditions. These include work-related accidents, travel accidents to and from work and occupational illnesses. Systematic work environment management (SAM) provides that the employer must examine, implement and monitor operations in such a manner that illness and accidents at work are prevented (AFS 2001, § 2). If any employee experiences ill-health or accident at work or if a serious incident occurs at work, the employer must investigate the causes in order to prevent future risks (AFS 2001, § 5).

If an employee has suffered a work-related injury or illness, the employer must be informed at the point in time when it occurs (Social Insurance Code, Chapter 42, § 8). An employer or work supervisor who becomes aware of an occupational accident is required to immediately report the injury to the Social Insurance Office.

An accident or illness can be determined to be an occupational injury by the Social Insurance Office in order to establish whether it is necessary to pay compensation from the statutory employee compensation insurance. Workers' compensation insurance examines all reports received in order to assess entitlement to compensation from collectively agreed occupational injury insurance. The Work Environment Authority national statistics on occupational injuries covers any injuries that have been notified to the National Insurance Office, even if they have not yet been evaluated to ascertain whether they meet the criteria for occupational injury.

The Work Environment Authority estimate of occupational injury statistics in 2011 shows that the number of reported accidents resulting in sick leave within the Employment Office, staffing agency and other personnel-related services increased by 60%. This is dominated by agency workers who submitted in excess of 90% of the notifications. Employment in staffing agencies grew by about 20% between 2010 and 2011 (Work Environment Authority, 2011; 2012:16). However, at the same time the official statistics also show that the number of occupational injuries per employee is higher in other industries. (Work Environment Authority, 2012).

In the literature review, we found few studies in which the agency workers' occupational injury rate is separated from that of temporary employees. In this chapter, research where agency workers are explicitly included in the wider group entitled temporary, often referred to as temporary workers or precarious workers, will be reported.

International research shows that the risk of occupational injury is higher for temporary staff including staffing agency workers. Vaes & Vandenbrande (2009) reported statistics from Belgium showing that staffing agency workers are clearly overrepresented in occupational injury rates; staffing agency workers represent about 3% of the workforce but account for 8.7% of occupational injuries. Smith et al (2010) concluded from their study of workers' compensation benefits in Washington State that agency workers are overrepresented among those injured. In the manufacturing and construction industries, twice as many agency workers are injured as regular employees. Very few meta-studies have been conducted and none of these deal separately with staffing agency workers. In Quinlan et al (2001) a summary of research concluded that 76 of 93 studies showed a relationship between precarious employment and health, safety and occupational injury.

Virtanen et al (2005:615-616) show in their meta-study that the occupational injury rate is higher among temporary workers, including agency workers, in comparison with other groups in the workforce in 5 of 10 studies. Three studies showed mixed results, and in two studies there was no difference. The authors believe that it is difficult to draw any firm conclusions about explanations as the group including temporary employees and agency workers is extremely heterogeneous. Higher occupational injury rates may be due to occupation rather than type of employment contract.

Our literature search identified 18 scientific articles on occupational injury for agency workers or temporary staff, see Appendix 1. In this chapter we outline research results linked to various explanations. The table shows that researchers have tested various explanations for occupational injury among temporary and agency workers: age, employment status, length of employment, profession/industry and staffing agency business area characteristics. Listed below are the research results for these explanations.

7.1 Age as explanation for occupational injury rate

The European Agency for Safety and Health at Work (2007:12) compiles statistics on occupational injury generally at EU level. Their report shows that age does hold some significance. Younger people are at greater risk of occupational injury, however their occupational injuries are less severe. In addition the statistics show that the proportion of work-related accidents with fatal outcome is lower for young people. The same result emerges in a literature review of young people's occupational injuries by Salminen (2004). Laberge & Ledoux (2011) also reported in their literature review that there is a gender dimension - young men are more vulnerable to occupational injury than young women. This, says Laberge & Ledoux, is because men and women work in different occupations, and that research on occupational injury more often focuses on risk factors in male-dominated professions, factors such as physical exertion. In general, it would therefore appear that very young age is a possible risk factor. Statistics show that young people are overrepresented in the staffing agency industry (Eurofound 2007:6). One possible explanation for the higher work injury rates in the staffing agency industry could therefore be the employees' low average age. No articles about young agency workers' occupational injury rates have been found. Research on occupational injury generally that allows for age, however, shows that it is not age per se that explains this situation, but seniority (Breslin & Smith 2006). Being new on the job is a risk factor for all age groups.

7.2 Employment form as explanation for occupational injury rate

Several studies examine the theory that higher occupational injury rates among temporary employees, including agency workers, are due to the employment form in itself. Saloniemi & Salminen (2010: 694) present two theoretical explanations:

- 1) Agency workers constitute the peripheral labour force according to Atkinson's (1984) model of the flexible firm. According to this model, agency workers are used for "plug-in" only jobs, tasks with short training periods. These jobs are often associated with low qualification requirements and poor working conditions. Saloniemi & Salminen say that accidents and occupational injuries are generally more frequent in these jobs. If

these are the jobs that agency workers perform, they will show higher rates of occupational injury.

2) Accidents may be connected to the lack of a safety culture. High levels of safety require continuity and predictability, and trust between employers and their employees. When relationships are short or unpredictable, it is difficult to create a good-quality safety climate.

The Saloniemi & Salminen (2010) study is based on three independent quantitative questionnaire or interview surveys of occupational injuries. Saloniemi & Salminen show that temporary workers are not at greater risk of accident or injury compared with permanent employees. This is explained by the fact that temporary workers in Finland mainly work in the public sector and these jobs more commonly held by well-educated women. This group of temporary workers is therefore not illustrative of the image of the peripheral or secondary labour force. The researchers believe that the industry concerned and the profession are more important explanations than employment status.

Tompa et al (2008:806) have investigated the role of employment status and length of employment in absences due to occupational illness or accident. The study is based on longitudinal data on approximately 4 700 employees aged 25-54 in Canada. The study does not separate staffing agency workers from other groups. Their conclusion is that temporary employment does not affect the level of absence due to occupational illness or accident when weighing in employment period, union membership, job risks and previous health status. This form of employment, in itself, according to these studies presents no increased risk. As other research has revealed major differences within the group working in temporary jobs, their conclusion is not directly applicable to staffing agency workers.

7.3 Employment period and job/business area as explanation for occupational injury rate

Virtanen et al (2005) have compiled research on the work environment of temporary employees, including agency workers, in a literature review. They note that there is considerable spread in results which they consider, among other factors, to be due to the fact that the temporary employee group is not a homogeneous group. They relate staffing agency workers to the most vulnerable group of temporary employees, reflecting the conditions under which this group works in most countries. In the Virtanen et al literature review, several detailed studies indicate temporary employees' limited experience and lack of introduction and safety instructions as an explanation for the higher risk of injury. Experience increases with period of employment, and those who are new on the job are likely to have less experience than those who have worked for a while.

Several studies emphasize employment period as an explanation for occupational injury, which means that short experience in the workplace increases risk of occupational injury. Breslin & Smith (2006:30) show in their quantitative study of employees in Ontario that the first month on the job market brings 4-6 times greater risk of occupational injury compared with those who had been employed for one year, regardless of age. Being new on the job, in other words, is a risk factor for occupational injury. Results in line with these have also been shown by Benavides et al (2006) who studied occupational injuries in Spain. These researchers show that the link between higher occupational injury rate and staffing agency workers/ temporary employees disappears when comparing for employment period and occupation. Benavides et al argue that the higher accident rate among agency workers and temporary employees can be explained by two factors: job type and employment

period. Agency workers and temporary employees more often work in unskilled jobs in poorer working conditions including repetitive movements, tiring working postures and fewer opportunities to influence their situation. In short, these jobs in themselves mean greater vulnerability to injury (Benavides et al, 2006: 419).

Hintikka (2011) has studied how occupational injuries reported in Finland differ between employees in staffing agencies and other companies over a ten-year period from 1998 to 2007. She found that the occupational injury rate within the staffing agency business area had increased, while occupational injuries generally have decreased in the industries where agency workers are commonly used (Hintikka 2011:478, 480). Overall, the male and the youngest age groups show the highest occurrence of an occupational injury that caused at least four days' inability to work. Furthermore, occupational injuries are more frequent in the construction, engineering and metalworking industries. The same pattern was true for the employees of the staffing agencies and for workers in other industries, but the staffing agency personnel showed more than twice as high frequencies (Hintikka 2011: 477). The trend of increasing occupational injuries, in Hintikka's opinion, may be attributed to the agency workers increasingly working in industries that have traditionally shown a high frequency of occupational injury. For electricians, where there is a legal requirement concerning training in electricity and safety, she found no differences in occupational injury among agency workers and employees in the industry generally. Hintikka therefore believes that improved introduction and instruction for agency workers could reduce the risk of injury.

Garcia-Serrano, Hernanz & Toharia (2010) draw, on the basis of occupational injury statistics in Spain, the same conclusions - the industry in which the work is performed is a more important explanation than whether the staff come from an agency. They show that agency workers who work in industries where there is a high occupational injury rate have a higher proportion of occupational injuries than regular employees. At the same time their statistics show that occupational injuries to agency workers are less serious and lead to fewer sick leave days.

7.4 Special characteristics of the staffing agency business area as explanation for occupational injury rates

Underhill & Quinlan (2011B) suggest that explanations for the higher occupational injury rate among agency workers may be found in several preconditions, i.e. industry characteristics such as that agency workers do not have permanent employment and must often change jobs. Their study is based on a sample of individuals working in both staffing agencies and in other industries who had suffered an occupational injury in one Australian state. Selection was made from the government agency that administers occupational injury compensation. In addition to the quantitative survey carried out, the researchers also implemented focus group interviews with employees in the staffing agency business area. Of the participants in the focus group interviews, the majority had not incurred an occupational injury. The results of Underhill & Quinlan's study are not statistically generalizable, however they do provide a greater understanding of the importance of organizational and contextual circumstances. Researchers present three explanations for higher agency workers' occupational injury rates:

- Financial pressure on employees and job insecurity. As a consequence the agency workers tend to take shortcuts with the attendant risk of accidents because they do not

have a fixed income.

- Inadequate organization of introduction and training of agency workers. Inadequate training and shortcomings in communication and management bring with them the risk of occupational injury.
- Inadequate regulation, for example gaps in regulatory coverage or difficulties for agency workers to point out work environment problems.

7.4.1 Financial pressure – insecurity of employment

In Underhill & Quinlan's (2011B) study, employees who have suffered occupational injury and who work in the staffing agency industry are compared with employees in other industries. Agency workers earned, to a significantly greater extent, an hourly wage (hired on a casual basis) and had no employment protection, worked irregular working hours and enjoyed shorter periods of employment. It is not clear whether the researchers allowed for age in the study. These conditions were more common among agency workers than other groups of temporary employees (Underhill & Quinlan 2011B: 404). In the qualitative survey it was revealed that agency workers felt that they were interchangeable with other agency workers. This insecurity made them hesitant to report less severe occupational injuries. Insecurity also entailed an acceptance of high work pace levels. Morris (1999) shows in a study of agency industrial workers in the United States that the agency workers were reluctant to report workplace injuries because they thought it may lead to them losing their contract or being passed over for permanent employment.

Saha, Rahmnath, Chaudhuri & Nasrullah (2004) compared the occupational injury rate for permanent staff and agency workers in an industry in India. The agency workers earned piecework while the permanent staff were paid a salary based on their working hours. The authors found that the agency workers showed a significantly higher rate of occupational injury. Several explanations were highlighted, including the pay system itself which meant an uncertain income, as probably contributing to the agency workers working more quickly and taking shortcuts to increase income. Other explanations emphasized were that agency workers did not have continuity of employment and therefore were not as experienced, which also means less knowledge of the work environment, and that the agency workers were assigned tasks involving greater risk for occupational injury.

7.4.2 Lack of organization as concerns introduction and training of agency workers

Underhill & Quinlan (2011B) highlight several preconditions relating to poor organization. According to the authors, occupational injury occurs due to a mismatch between the agency employee and the task he/she is hired to carry out. Agency workers may come to assignments that require knowledge and experience that they do not possess, which increases the risk of workplace injuries. This risk is higher for agency workers because of the competition situation in the staffing industry. A contract for a customer must be filled with rapidly-recruited temporary staff or the company risks losing the client company. Furthermore, Underhill & Quinlan also state that lack of proper introduction, training and management are risk factors.

Several studies support the hypothesis that higher occupational injury rates may be

explained by inadequate organization. This concerns flaws in the introduction and training of new agency workers, and not least the lack of a proper health and safety introduction (Virtanen et al 2005).

Benavides et al (2006:419) argue that one reason for higher occupational injury rates among temporary staff including agency workers is that permanent staff possess more knowledge and experience of, for example, technical assistance devices and tools, than temporary staff do. A similar argument was put forward by Fabiano et al (2007) who considered that the explanation is that agency workers have less experience because they have less time at the company, insufficient specific knowledge and inadequate training.

Underhill & Quinlan (2011B) also highlight the management system for work environment issues as a risk factor that affects not only agency workers but also ordinary personnel at the client company. There is, according to the authors, a lack of knowledge and inadequate processing of occupational injury reporting. Agency workers' occupational injuries must be reported to the employer, i.e. the staffing agency. This means that tasks often performed by agency workers, and where occupational injury is frequent, do not enter the client company's work environment activities or records. This, states Underhill & Quinlan, also poses a work environment risk for the regular staff.

7.4.3 Lack of regulation

Underhill and Quinlan (2011A) examine the role of dysregulation for occupational injury rates in Australia. Their study is based on focus group interviews with employers from both staffing agencies and client companies. They have, consequently, not studied the work environment nor occupational injuries themselves, but the perception of how work environment activities function when using agency workers. Underhill and Quinlan note that this is not a case of flaws in the legislation on work environment. In Australia, it is clearly stated that there is shared responsibility, namely that both staffing agency and client company are responsible for the agency workers' working environment, however the study shows that there are major problems in how this is enforced. The staffing agency is responsible for ensuring that their employees possess sufficient knowledge of the tasks they will perform at the client company, as well as agreeing with the client company on a division of responsibility. In practice, this responsibility is undermined by the fierce competition that exists between staffing agencies. A staffing agency who does not respect their work environment responsibility can offer a cheaper price. In this study both staffing agencies and client companies testify to how cowboy companies within the staffing agency industry are used by the less scrupulous client companies. Underhill & Quinlan (2011A:28) argue, therefore, that the industry itself needs greater regulation, such as some type of operating license. The same conclusion is drawn by Johnstone & Quinlan (2006).

Mentha & Theodore (2006) studied occupational injury rates for staffing agency workers in the construction industry in the United States. They argue that there are institutional factors that improve safety for client company employees while reducing safety levels for agency workers. Staffing agencies, competing for the lowest price, do not try to persuade the client companies to increase safety levels for agency workers and regulation of work environment has not been adapted to this type of triangular relationship (see Figure 1). As a consequence, the agency workers had less access to safety equipment and often worked without adequate introduction and supervision than employees in other industries.

7.5 Summarized discussion on staffing agency workers and occupational injury rates

In summary, it may be concluded that international research shows that occupational injury risks are higher for temporary and agency workers. Although the staffing agency workers are also temporarily employed in most countries, there is a major flaw in the available research in that these two groups are not distinguished from each other as concerns occupational injury rates. Results should therefore be interpreted with some caution. Statistics for agency workers in Sweden, who may be permanently employed however, show that agency workers still run a higher risk of occupational injury. In our literature review, great emphasis has been placed on studies that aim to explain this higher injury risk.

There are no clear explanations as to why temporary and agency workers run a higher risk of occupational injury. It is difficult to draw any general conclusions when the studies are based on data from various professions and industries and from different countries. Working conditions and agency working patterns are different in different countries, which should be of importance to occupational injury rates. Age has been suggested as one explanation. The research review shows that young people are more vulnerable to occupational injury. Research on injuries resulting from work that allow for age, however, show that it is not age per se that explains this, it is length of employment (Breslin & Smith 2005). Being new on the job is a risk factor for all age groups.

Neither can form of employment explain these higher occupational injury rates. Actually it appears that job type and length of employment period are important causes. In the countries where agency workers are most common in occupations that traditionally exhibit high occupational accident rates, occupational injury rates are also higher among agency workers. A Finnish study shows that occupational injury rates have decreased for regular staff but increased for agency workers in accident-prone industries (Hintikka 2011). This may be interpreted as that the agency workers have taken over the problem working areas, and a risky work environment becomes more even more risky for agency workers.

Short periods of employment are associated with short amounts of experience, and the risk of making mistakes due to ignorance. For agency workers, this risk is higher because they are new on the job every time they change contracts. The combination of being new on the job and receiving inadequate training and safety instructions would therefore appear to be a strong explanation for occupational injury rates in the staffing agency industry. Consequently both staffing agencies and client companies bear great responsibility as concerns introduction and staff training.

As mentioned in the introduction, in Sweden longer employment contract periods of more than three months dominate. The risk of always being new on the job should therefore be lower in Sweden than in other countries. At the same time Swedish case studies show that the introduction and training of long-term agency workers is significantly less extensive than for the client company employees. One explanation could be that the client company planned for a short contract period, but due to necessity, agency workers contracts were extended in stages (Kantelius 2012).

8. Summarised discussion concerning the work environment and its health effects on agency workers

After a review of the three areas occupational injury, physical work environment and psychosocial work environment, it may be concluded that research available is of a relatively limited scope. In total, this State of Knowledge Report has only identified 45 relevant peer-reviewed articles dealing with work environment where staffing agency workers are distinguished from other groups, see Annex 1. The most difficult task was to find information on occupational injury and physical work environment for staffing agency workers.

As concerns psychosocial work environment, a series of studies show that employment insecurity in the staffing agency business area is a clear risk factor that also leads to ill health among its employees. Worth noting is that the employees of the staffing agency industry in Sweden, unlike other countries, may actually hold permanent positions. Swedish studies show that employment in the staffing agency industry is perceived as insecure, even if individuals do have permanent positions in their staffing agencies (Kantelius 2010; Kantelius 2012; Håkansson, Isidorsson & Kantelius 2012). Given the volatility that exists in the industry, with increases and decreases in the number of employees, this is a potential work environment risk that is difficult to avoid. Several studies have shown the importance of social support from staffing agencies as concerns their employees, and there is potential here to improve the psychosocial work environment that staffing agencies could utilise. Research also shows that this would increase the commitment of staffing agency workers towards their employers (Håkansson & Isidorsson 2012A).

The research review also shows that insecurity of employment creates problems for the work environment and work environment management in the sense that it leads to a lower propensity for staffing agency workers to call attention to work environment risks compared with other groups of employees.

Previous research has shown the importance of distinguishing different types of temporary employment relationships, and this has often been successful as seen in this study. Our study also shows that it may be beneficial to differentiate between different professional groups' work environment problems. As concerns nurses, they have proved to be a distinct group when it comes to many of the health variables surveyed. A significant risk factor in this group is not job insecurity, at least not in a national Swedish context. Explanations for nurses studies' divergent results when compared with others may well be that this group, both in Sweden and in the UK, enjoy considerable opportunities for employment, and that they have chosen staffing agencies due to dissatisfaction with their previous employers.

Our research review of the physical work environment shows that agency personnel are overrepresented in occupations and industries with hazardous work conditions (Breslin & Smith 2005; Quinlan & Bohle, 2009). Furthermore, agency workers are often assigned work where the physical work environment is not as good as that of regular employees. Although both staffing agencies and client companies are responsible for staffing agency workers' work environment, there is an inherent conflict in this - if staffing agencies press client companies to carry out work environment management for agency workers, they risk losing the contract.

If the client company's motive for using agency workers was actually to avoid responsibility for the work environment, the client company has no intention of investing in these issues. We also note that both Swedish and international research shows that occupational injury rates are higher among staffing agency workers than in the labour market as a whole. However there are no clear explanations as to why this should be so. It is difficult to draw any general conclusions as studies are based on data from different jobs and industries and from different countries.

Working conditions and staff hiring patterns differ between countries, which should be of importance to the occupational injury rates. The financial pressure associated with being a temporary employee is stressed by several studies. In Sweden, this explanation would not be as prominent as staffing agency workers may have permanent employment positions. Other conditions for agency workers are more general, such as often being new on the job. One conclusion to be drawn from these two results, namely working in the most injury-prone jobs and often being new on the job, is that proper introduction and instruction for staffing agency workers should be paramount when they arrive at new workplaces.

One factor that could be an advantage for the Swedish staffing agency industry is that, according to data from the business itself, Sweden is characterized by long-term assignments, that is agency workers have fewer new jobs compared with, for example, staffing agency workers in France. Swedish studies show that the introduction of long-term agency workers is significantly less extensive than for the client company personnel.

When it comes to safety culture and information as stated in work environment legislation, several studies show that the joint work environment liability does not mean double the work environment control, but rather represents a complicating factor in the work environment. This joint work environment responsibility is found in a number of countries. An Australian study (Underhill & Quinlan 2011A) argues that this is not a case of flaws in Australian legislation, instead it is a problem of how the law is observed, the basic problem being intense competition between staffing agencies. The conclusion the researchers draw from their study is that the industry needs stronger regulation, such as operating licenses for staffing agencies.

Three Australian scientists carried out a combined interview and observational study of how work environment inspectors perceive and meet changing work arrangements or employment relationships, such as agency workers, subcontracting, temporary employment and home working (Quinlan, Johnstone & McNamara, 2009). The two working arrangements that inspectors found most problematic from a work environment perspective, and which were confirmed from researchers' observations, were agency workers and the use of subcontractors. Although inspectors adapted their experience and expertise to new working arrangements such as agency staff, it was difficult to maintain acceptable levels of compliance with work environment regulations. The explanation for the work environment inspectors' difficulties in safeguarding agency workers' work environment interests was a combination of the ignorance of those who hired agency workers, clients companies' intentional shift of risk from their own staff to agency workers, and the limited resources available to the inspectors. In the research survey a need was expressed to incorporate groups of vulnerable employment conditions into risk management. Currently there is no research into this area that we have been able to identify.

Worth mentioning in this summary discussion are also the results of a Japanese study that showed that it is three times as likely that staffing agency workers will not

receive annual health checks as it is for those in permanent employment (Inoue et al 2012). This was after taking into account age, work scope and household income. These researchers conclude, although the effects of annual health checks are not entirely clear, that staffing agency workers are less protected than other groups in this regard. It is also worth noting that among those who have an accident or suffer an occupational injury and who return to work for their previous employer, staffing agencies show a lower level: 35% among staffing agency workers compared with 58% among comparable groups in traditional employment. Improved opportunities to return to work for those who have suffered occupational injury could be a way to improve the, as has been demonstrated, weak job security of employees in the staffing agency industry. Consequently, a significant psychosocial risk factor could be counteracted.

It cannot be said that Swedish work environment legislation is inadequate or ambiguous, however experience from studies in other countries shows a tendency for the smaller and not as well-established staffing agencies, for reasons of competition (among others), not to comply with the law as well as the larger, well-established staffing agencies do. Several studies indicate that the staffing agency industry needs more attention from the authorities and the social partners (Underhill, 2010; Morris 1999; Arrowsmith 2006; Quinlan et al, 2009; Underhill 2010; Underhill & Quinlan 2011; Mehta & Theodore 2006; Hall 2006).

8.1.1 Future research

Finally, we note that it would be desirable to have more studies of agency workers' work environment. A large number of articles have been examined and eventually 40 or so studies addressing work environment problems were identified. In order to draw broader conclusions, it would be desirable that various forms of employment be compared in the same study. Here a small number of Dutch studies have led the way (Kompier et al, 2009; Wagenaar et al 2012). As concerns job security aspects and the impact they have on the staffing agency workers' psychosocial health, it would be desirable to carry out longitudinal studies that follow individuals into employment within the staffing agency industry to see if their perceived job insecurity is justified, or if individuals can see a professional career with its foundation in the staffing agency industry as a long-term stepping stone into employment and employability.

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Annex 1. Guide to research into the work environment of staffing agency workers

Articles sorted according to work environment focus and author

Work environment focus	Author/Year	Country	Business area/ profession	Method
Psychosocial	Aletraris (2010)	Aus	General	Quant, panel data
Psychosocial	Allvin et al (2003)	Sweden	Nurses	Quant & Qual Questionnaire and interviews
Psychosocial	Audhoe et al	Netherlands	General	Quant
Psychosocial	Bryson (2013)	UK	Private sector	Quant
Psychosocial	Charnley & Arnold (2006)	UK	Nurses	Qual, interviews
Psychosocial	De Cuyper et al (2009)	Belg.	General	Quant, Questionnaire
Psychosocial	de Graaf-Zijl (2012)	Netherlands	General	Quant, panel data
Psychosocial	de Ruyter et al (2008)	GB	Nursed and social workers	Qual, interviews
Psychosocial	Forde & Slater (2006)	GB	General	Quant
Psychosocial	Galais & Moser (2009)	Germany	White collar employees	Quant, longitudinal
Psychosocial	Håkansson et al 2012	Sweden	White collar employees	Quant, Questionnaire
Psychosocial	Isaksson & Bellagh 2002	Sweden	Women in staffing agencies	Quant, Questionnaire
Psychosocial	Lapalme et al (2009)	Can.	Officials in financial sector	Quant
Psychosocial	Torka (2011)	Netherlands	Trainers, health consultants and secretaries	Qual
Psychosocial	Wilkin (2013)		General	Quant, meta-analysis
Physical, Psychosocial	Cornes et al (2013)	UK	Social workers	Qual
Physical, Psychosocial	Kompier et al (2009b)	Netherlands	General	Quant, cross section and longitudinal
Physical, Psychosocial	Torka & Schyns (2007)	Netherlands	Engineering industry	Qual
Physical, Psychosocial	Wagenaar et al (2012)	Netherlands	General	Quant
Physical, Occupational injury,	Hall (2006)	Aus	General	Quant
Physical, Occupational injury,	Morris (1999)	USA	Manufacturing	Qual
Physical, Occup. injury	Hintikka (2011)	Finland	General	Quant
Physical, Occup. injury	Mehta & Theodore (2006)	USA, Atlanta	Construction	Quant, Questionnaire

Work environment focus	Author/Year	Country	Business area/ profession	Method
Physical, Occup. injury	Quinlan et al 2001		General	State of Knowledge Report
Physical, Occup. injury	Saha et al (2004)	India		Quant, Qual
Physical, Occup. injury	Silverstein et al (1998)	USA, Wash.	General	Quant
Physical, Occup. injury	Silverstein et al (2002)	USA	General	Quant
Physical, Occup. injury	Smith et al (2010)	USA, Wash.	General	Quant, occup. injury statistics
Physical, Psychosocial	Guglielmi et al (2009)	Italy		Quant
Occupational injury	Benavides et al (2006)	Spain	General	Quant, occup. injury statistics
Occupational injury	Breslin & Smith 2006	Canada		Quant
Occupational injury	Fabiano et al (2008)	Italy	General	Quant, occup. injury statistics
Occupational injury	García-Serrano et al (2010)	Span.	General	Quant, occup. injury statistics
Occupational injury	Laberge & Ledoux (2011)		General	State of Knowledge Report
Occupational injury	Neonen (2011)	Finland	Manufacturing	Qual
Occupational injury	Park & Butler (2001)	USA	General	Quant
Occupational injury	Salminen (2004)		General	State of Knowledge Report
Occupational injury	Saloniemi & Salmi-ninen (2010)	Finland	all	Quant
Occupational injury	Underhill & Quinlan 2011A	Aus		Quant
Occupational injury	Virtanen et al (2005)		General	State of Knowledge Report
General, legislation	Johnstone & Quinlan (2006)	Aus	General	Qual, interviews and documents
General, legislation	Underhill & Quinlan (2011B)	Aus	General	Qual, Quant
General, legislation	Underhill (2010)A	Aus		Qual
General, health checks	Inoue et al (2012)	Japan	General	Quant
General, work environment inspection	Quinlan et al (2009)	Aus	General	Qual



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Our vision: *Everyone wants, and everyone is able, to create a good work environment*