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**Workplace bullying –**  
*A study on the work environment,  
well-being and health*

ACADEMIC DISSERTATION

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Faculty of Arts at the University of Helsinki in small hall, on the 15<sup>th</sup> of  
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Helsinki, December 2002

*Maarit Vartia*

## CONTENTS

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# Contents

ABSTRACT .....	6
LIST OF ORIGINAL PUBLICATIONS.....	7
1. INTRODUCTION .....	8
Defining workplace bullying .....	8
The origins and process of bullying .....	12
The environmental view .....	12
The personality view .....	13
The victim .....	13
The victim's own perception of him/herself and the reasons for bullying .....	15
The bully .....	16
The process nature of bullying.....	17
Prevalence and forms of bullying .....	18
Prevalence .....	18
Risk sectors .....	19
Organizational level, gender, age and ethnic background as risk factors .....	22
Forms of bullying .....	22
Persistence and recurrence .....	24
Bullies .....	24
Consequences of bullying .....	25
Job satisfaction .....	25
Psychological well-being and mental-health symptoms .....	25
Post-traumatic stress disorder (PTSD).....	26
Musculoskeletal health complaints .....	26
Sickness absence, intentions to resign and suicide .....	26
Self-image and self-respect.....	27
2. THE PRESENT STUDY .....	28
Framework.....	28
Aims.....	29
3. METHODS .....	30
Participants .....	30
Measures .....	31
Bullying .....	31
The work environment and climate in the work unit .....	31

## CONTENTS

---

Personality traits .....	33
Potential consequences of bullying .....	33
Other variables .....	34
Study design .....	34
Statistical analysis .....	34
<b>4. RESULTS .....</b>	<b>36</b>
Prevalence of bullying and the bullies .....	36
Victimization and observed bullying .....	36
Forms of bullying .....	37
Bullies .....	39
Antecedents of bullying .....	39
The work environment and personality traits .....	39
Observers' views of their work environment .....	41
Consequences of workplace bullying .....	42
Self-reported stress, mental distress and job dissatisfaction .....	42
Use of sleep-inducing drugs and sedatives .....	45
Cardiovascular disease and depression .....	45
<b>5. DISCUSSION .....</b>	<b>48</b>
The work environment and personality as risk factors of bullying .....	48
Consequences of bullying .....	50
Job dissatisfaction and stress reactions .....	50
Bullying and serious health problems .....	50
Observers of bullying .....	51
Prevalence of bullying .....	51
Bullies .....	53
Gender differences .....	53
Methodological considerations and implications for further research .....	55
Conclusions .....	57
<b>REFERENCES .....</b>	<b>58</b>
<b>ORIGINAL PUBLICATIONS .....</b>	<b>69</b>

## Abstract

**Vartia, M. Workplace bullying – A study on the work environment, well-being and health. University of Helsinki, FIN**

This study examines the phenomenon of workplace bullying in various organizational settings, with a special focus on the relationships between bullying, the work environment, well-being and health. Cross-sectional questionnaire surveys were carried out among 949 municipal employees and 1870 prison workers (896 prison officers). Longitudinal data on 5,432 hospital employees comprised responses to two surveys over a two-year period.

Bullying was most common in prisons (prevalence 20.1%), followed by municipal institutions (10.1%) and hospitals (5.0%). Both being a target of bullying and observing bullying correlated with a poor social climate, a poor managerial climate and the amount of violence by inmates, suggesting that work environment-factors may play an important role at the onset of workplace bullying. The victims of bullying scored lower on self-esteem than the other respondents.

Both victims and observers of bullying reported more stress and job dissatisfaction than employees from workplaces in which no bullying occurred. The longitudinal study showed that prolonged bullying was associated with increased incidence of depression (odds ratio 4.81) and cardiovascular disease (2.31). Depression also predicted subsequent bullying.

Gender differences in facing workplace bullying seemed to be small. Men and women perceived bullying equally often across the samples studied. Female prison officers felt subjected to sexual harassment more often than their male counterparts. Female victims were usually bullied by their co-workers, whereas male victims reported supervisors/managers and co-workers as bullies equally often.

The findings imply that measures should be introduced to deal with bullying in the workplace and that improving the social climate and leadership practices would help to prevent it in the future. Further longitudinal research and studies of group processes that can strengthen or arrest the escalation of the bullying process are needed.

## List of original publications

This review is based on the following four original publications and some additional analysis. The original articles are referred to in the text with Roman numerals (I–IV).

- I Vartia, M.: The Sources of Bullying – Psychological Work Environment and Organizational Climate. *European Journal of Work and Organizational Psychology*, 1996, 5(2), 203–214.
- II Vartia, M.: Consequences of workplace bullying with respect to the well-being of its targets and the observers of bullying. *Scandinavian Journal of Work Environment Health*, 2001, 27(1), 63–69.
- III Vartia, M. & Hyyti, J.: Gender differences in workplace bullying among prison officers. *European Journal of Work and Organizational Psychology*, 2002, 11(1), 113–126.
- IV Kivimäki, M., Virtanen, M., Vartia, M., Elovainio, M., Vahtera, J. & Keltikangas-Järvinen, L.: Workplace bullying and the risk of cardiovascular disease and depression. *Occupational and Environmental Medicine*. (Accepted for publication)

# 1. Introduction

Workplace bullying has been a frequent subject of discussion in Finland and the other Scandinavian countries for the past fifteen years. Academic interest in bullying among adults arose in the mid-1980s when Heinz Leymann, a pioneer in the field, collected the first empirical data on workplace bullying/mobbing in Sweden, and reported his research results (Leymann 1986, Leymann & Tallgren 1989). Before him, only a few authors had written about the subject (e.g., Brodsky 1976).

Leymann's ideas about the phenomenon and the effects of workplace bullying quickly spread to the other Scandinavian countries, especially Finland and Norway (Einarsen & Raknes 1991). In Finland, the first article on the subject was published in 1989 by Lindström and Vartia. Both public and academic awareness gradually arose in many other European countries in the 1990s. During the past few years, bullying at work has attracted growing public attention, and researchers and practitioners all over the world have become interested in the phenomenon. According to PsycINFO (11.2.2002), almost 90 papers have been published about bullying or mobbing since 1984.

## Defining workplace bullying

No general agreement or clear consensus exists on the definition of workplace 'bullying', and several other terms have been used interchangeably. One of these is 'mobbing', which derives from the English word 'mob', originally used to describe animal aggression and herd behaviour. Today, 'mobbing' is also widely used in German-speaking countries and in the Netherlands (Hubert & Veldhoven 2001, Niedl 1996, Zapf, Knorz & Kulla 1996). Other concepts close in meaning to workplace bullying are harassment or work harassment (Brodsky 1976, Björkqvist, Österman & Hjelt-Bäck 1994), non-sexual harassment (Zapf & Einarsen 2001), psychological harassment (Vartia 1993a), victimization (Einarsen & Raknes 1997), psychological terror (Leymann 1990), scapegoating (Thylefors 1987) and petty tyranny (Ashforth 1994). Concepts such as abusive behavior or emotional abuse (Keashly 1998, Keashly, Trott & MacLean 1994), generalized nonsexual workplace harassment (GWH) (Rospenda 2002), workplace trauma (Wilson 1991), and workplace aggression (Baron & Neuman 1996) have been used in the USA to describe hostile behaviours relevant to workplace bullying. Table 1 presents some of the terms and definitions used.

## INTRODUCTION

**Table 1. Terms and definitions for workplace bullying used by various authors.**

Author	Term	Definition
Brodsky (1976)	Harassment	Repeated and persistent attempts by one person to torment, wear down, frustrate, or get a reaction from another. It is treatment that persistently provokes, pressures, frightens, intimidates, or otherwise discomforts another person.
Thylefors (1987)	Scapegoating	One or more persons during a period of time are exposed to repeated, negative actions from one or more other individuals.
Leymann (1990, 1996)	Mobbing / Psychological terror	Psychological terror or mobbing in working life involves hostile and unethical communication, which is directed in a systematic way by one or a few individuals mainly towards one individual who, due to mobbing, is pushed into a helpless and defenceless position, being held there by means of continuing mobbing activities. These actions occur on a very frequent basis (statistical definition; at least once a week) and over a long period of time (statistical definition: at least six months).
Wilson (1991)	Workplace trauma	The actual disintegration of an employee's fundamental self, resulting from an employer's or a supervisor's perceived or real continual and deliberate malicious treatment.
Björkqvist, Österman & Hjelt-Bäck (1994)	Work harassment	Repeated activities, with the aim of bringing mental (but sometimes also physical) pain and directed towards one or more individuals who, for one reason or another, are not able to defend themselves.
Einarsen & Skogstad (1996)	Bullying	Bullying is a problem in some workplaces and for some workers. To label something bullying it has to occur repeatedly over a period of time, and the person confronted has to have difficulties defending himself/herself. It is not bullying if two parties of approximately equal 'strength' are in conflict or the incident is an isolated event.
Keashly, Trott & MacLean (1994), Keashly (1998)	Abusive behaviour/ emotional abuse	Hostile verbal and nonverbal behaviors that are not tied to sexual or racial content, directed by one or more persons towards another that are aimed at undermining the other to ensure compliance from others.

*table continued next page*

## INTRODUCTION

**Table 1. continued**

Author	Term	Definition
O'Moore, Seigne, McGuire & Smith (1998)	Bullying	Bullying is destructive behaviour. It is repeated aggression, verbal, psychological and physical, conducted by an individual or group against others. Isolated incidents of aggressive behaviour, while not to be tolerated, should not be described as bullying. Only inappropriate aggressive behaviour that is systematic and enjoyed is regarded as bullying.
Hoel & Cooper (2000)	Bullying	A situation where one or several individuals persistently over a period of time perceive to be on the receiving end of negative actions from one or several persons, in a situation where a target of bullying has difficulty in defending him/ herself against these actions. We will not refer to one-off incidents as bullying.
Zapf (1999)	Mobbing	Mobbing at work means harassing, bullying, offending, socially excluding someone or assigning offending work tasks to someone in the course of which the person confronted ends up in an inferior position.
Salin (2001)	Bullying	Repeated and persistent negative acts that are directed towards one or several individuals, and which create a hostile work environment. In bullying the targeted person has difficulties defending himself; it is therefore not a conflict between parties of equal strength.

At least five significant features of the phenomenon are distinguishable. First, bullying involves negative or hostile behaviours occurring regularly, repeatedly and over time. A one-off incident is not regarded as bullying. The negative behaviour involved is usually the kind of behaviour that is common to everybody in everyday working life, but it becomes bullying when it is systematically repeated.

Second, a feature common to almost all European definitions is the difficulty that the victim experiences in trying to defend him/herself against the negative actions. This implies an imbalance of power between the target of the bullying and the bully. Some authors emphasize that a person will be victimized only if he/she perceives him/herself as unable to defend himself/herself or escape from the situation (Niedl 1995). It is not bullying if two equally strong parties are in conflict. The feeling of defencelessness may be due to an imbalance of power (e.g., the hierarchical position between

## INTRODUCTION

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an employee and a superior), or it may be an indirect consequence of a bullying incident itself or of a previous interpersonal conflict situation (Einarsen 2000).

Third, most authors have regarded bullying as an interpersonal phenomenon that occurs between two individuals, between one/several individual/s and a group, or towards a group of people. Usually, both superiors and co-workers are regarded as potential bullies. However, some authors consider that bullying is a situation between an employee and his/her superior/manager, arising from the characteristics or motivation of the superior (Ashforth 1994, Wilson 1991). Although bullying is usually regarded as a conflict between co-workers or supervisors and subordinates, people outside the workplace, e.g., clients, patients and pupils, have also been identified as bullies (Hoel & Cooper 2000, Hogh & Dofradottir 2001).

A situation created by 'faceless bureaucracy', referring to a situation, in which an individual feels defenceless in a bureaucratic organization has also been regarded as bullying (Leymann 1986). It has recently been shown that employees use the term 'bullying' to describe humiliating and demeaning organizational practices to highlight their discontent with increasingly difficult work situations (Liefvooghe & Mackenzie Davey 2001).

Fourth, intentionality (Björkqvist et al. 1994a), or even enjoyment (O'Moore et al. 1998), of negative behaviours has sometimes been included in the definition. The effect/danger ratio (Björkqvist, Österman & Lagerspetz 1994) is an expression of the subjective assessment of the probable consequences of an aggressive act that an individual is about to perform. The aggressor assesses the relation between the effect of the intended strategy and the dangers involved whether they be, physical, psychological or social. The aggressor tries to maximize the effects and minimize the risks.

Fifth, various kinds of negative acts are involved. These have been classified as the manipulation of 1) the victim's reputation, 2) the victim's performance of work tasks, 3) the victim's communication with co-workers, 4) the victim's social life, and as 5) physical assaults, or the threat of physical violence (Leymann 1990). Some researchers exclude physical violence from bullying strategies (Keashly et al. 1994). Sexual harassment could be regarded as a manifestation of bullying or as a separate problem. It has been regarded as the kind of bullying in which sexuality is utilized as a means of oppression (Brodsky 1976, Björkqvist et al. 1994a, Mikkelsen & Einarsen 2001). In contrast to the persistent and long-term nature of most negative behaviours called bullying, a single negative act of a sexual nature in the workplace can be regarded as sexual harassment.

In this study, 'workplace bullying' refers to a situation in which one or more individuals are subjected to persistent and repetitive negative acts by one or more co-workers, supervisors or subordinates, and the person feels unable to defend him/herself. Bullying has been investigated in various organizational settings, with special attention paid

to its occurrence and to the relationships between bullying, the work environment, gender, well-being and health.

### **The origins and process of bullying**

Both environmental factors and characteristics of the victim and the bully are assumed to contribute to the onset of a bullying situation. The environmental view emphasizes the role of the work environment as an underlying factor, while the role the victim's personality has been assessed variably. Some researchers have argued that the environment and work conditions are the primary causes of bullying, and that the personality of the victim is irrelevant (Leymann 1996). On the other hand, it has been suggested that certain characteristics of the victim may be predisposing (Coyne, Seigne & Randall 2000). From the broader viewpoint of organizational psychology, bullying has been described as a complicated interactive and escalating process in which the work environment and organization, the personality traits of both the victim and the bully, the general characteristics of human interaction in the organization, and the other members of the work unit all have specific roles (Einarsen 2000, Hoel, Rayner & Cooper 1999, Zapf 1999).

Bullying situations have been divided into two categories in terms of their initial state (Einarsen 1999, Einarsen 2002). First, 'dispute-related bullying' refers to cases in which bullying occurs as a result of a highly escalated interpersonal conflict, where the initial condition and the triggering factor are often assumed to be work-related. Second, 'predatory bullying' refers to situations in which it is assumed that the victim has done nothing personally to provoke the negative behaviour of the bully. In these cases, the victim may be bullied as a representative of a certain group, or he/she could be accidentally in a situation, in which the bully is demonstrating power. Examples of predatory bullying include victimization of the first woman in a male-dominated workplace, a newcomer at work, and bullying by a rival who applied for the same job.

### **The environmental view**

The environmental view on the antecedents of bullying emphasizes the work situation, organizational factors and features of leadership as its causes. Bullying is seen as a symptom of organizational dysfunction. Empirical evidence has shown that it is correlated with many features of the work environment, including organizational problems, experienced role conflicts, work control, a heavy work load, increasing haste at work, high stress, organizational restructuring, change of management, low satisfaction with leadership or 'negative' management styles, the social or organizational climate and unsatisfactory relationships at work, conflicts in general in the work unit, as

## INTRODUCTION

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well as difficulties in talking about problems in the working group (Baron & Neuman 1996, Björkqvist 1992, Einarsen, Raknes & Matthiesen 1994, Hoel & Cooper 2000, Kearns, McCarthy & Sheehan 1997, Sutela & Lehto 1998, Zapf 1999). Among men, a combination of monotonous and hectically-paced work has been shown to be associated with an elevated risk of interpersonal conflicts at work in general (Appelberg, Romanov, Honkasalo & Koskenvuo 1991). Interviewed victims of bullying have reported that their superiors in the organisation are autocratic, and the environment competitive, strained and stressful (O'Moore et al. 1998). Low-quality work environments and increased role conflicts, as well as dissatisfaction with the social climate and leadership at the workplace, have been reported more often by both victims and observers of bullying (Einarsen et al. 1994a).

Theoretically, at least two frameworks could account for the role of environmental factors as antecedents of bullying. The frustration-aggression model (Berkowitz 1989) emphasizes the role of external circumstances in causing aggression by negative affect. According to the General Affective Aggression Model (GAAM) (Anderson, Anderson & Deuser 1996, see also Neuman & Baron 2003), a more modern perspective to aggression, aggression is triggered or elicited by a wide range of input variables. These include aspects of the current situation, e.g., frustration, provocation, and stress, and/or tendencies or predispositions that individuals bring with them to a given context, e.g., high irritability and negative affectivity. This model suggest that these situational and individual difference variables lead to overt aggression through their impact on three basic intervening processes: physiological arousal, negative affect and hostile cognitions.

The social-interaction approach to aggression (Felson 1992, Felson & Tedeschi 1993) is another aggression model that may have relevance to environmental factors as antecedents of bullying. This approach maintains that stressful events indirectly affect aggression through their effect on the victim's behaviour. Stressful events and environments may cause people to behave in ways that make others attack them. In a bullying situation, a person distressed by an unsatisfactory or stressful work situation may annoy others, and for this reason provoke aggressive or hostile behaviour.

### **The personality view**

The personality view attributes the origins of bullying to the characteristics of the persons participating in the bullying process. These characteristics may relate to the victim, to the bully, or to both.

### ***The victim***

The role of the victim's personality has been emphasized somewhat differently by different authors, and a hypothesis has been put forward concerning the specific person-

## INTRODUCTION

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ality traits that are connected with victimization in bullying. It has been suggested that some personality traits may make people more vulnerable than others to bullying in general, or in specific situations (Coyne et al. 2000, Randall 1997). On the other hand, it has been suggested that some personalities may elicit aggressive behaviours and bullying in others (Einarsen 2000). Some people may also perceive a person's behaviour as bullying more easily than others.

According to Zapf and Einarsen (2003), the following personality traits of the victim may have a role in the onset of bullying: 1) the exposed position of the victim, 2) social incompetence and self-esteem, and 3) overachievement and conflict with group norms. Research on groups suggests that individuals who do not belong, outsiders, and who differ from the rest of the group are at risk of conflict with others, and may even be forced into the role of a scapegoat (Thylefors 1987). According to social-identity theory (Tajfel & Turner 1986), being different may cause others to regard a person as one of 'them' and not one of 'us', and this may in certain circumstances lead to displaced aggression towards the person regarded as an outsider (see also Zapf & Einarsen 2003). Victims of bullying are in many cases different in some respects from the others in the work unit. A bullying victim may be different from others in many ways; e.g., he/she may represent a minority in terms of gender, race or religion, education or occupation in the work unit.

The view that some people are more vulnerable than others to bullying because they are low on self-assertiveness, have low self-esteem and are unable to defend themselves, is very common and has been supported in some cross-sectional studies. Research on individual factors in bullying has found that victims score lower on self-esteem than non-victims (Einarsen & Raknes 1991, McGuckin, Lewis & Shevlin 2001). Victims have also been found to be anxious in social settings (Einarsen & Raknes 1991). In a study comprising bullying victims and their non-bullied co-workers, the victims tended to be less independent and extrovert than the non-victims (Coyne et al. 2000). Thus, the authors concluded that personality traits may indicate who in an organization are most likely to be bullied, and the reasons why these individuals become victims. Very similar results have been obtained in studies of schoolchildren, showing that a typical victim of bullying at school is more anxious and insecure than others, and is often regarded as a cautious, sensitive and reticent person. Victims of school bullying react by withdrawing when bullied, and they have lower self-esteem than their peers (Olweus 1987, 1991).

A study using MMPI-2 (the Minnesota Multiphasic Personality Inventory) found a specific personality profile for victims of bullying (Matthiesen & Einarsen 2001): they were oversensitive, suspicious and depressive, and had a tendency to convert psychological distress into psychosomatic symptoms. There were three kinds of victims: the members of the first group, the 'seriously affected', were depressive, anxious, suspicious, uncertain of themselves and confused. The second group, the 'disappointed

## INTRODUCTION

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and depressed', tended to be depressed and suspicious of their environment. The members of the 'common group' had a relatively normal personality, in spite of having suffered the largest number of negative acts. The authors interpreted these results as indicating that a specific vulnerability factor may exist, and that personality is of importance in determining how bullying is experienced and how the victims react.

The view that some people may elicit negative reactions and negative behaviour in others because of their personality or behaviour has been addressed in studies of schoolchildren (Olweus 1978) (see also the social-interaction approach page 13). Case studies have described the victims of bullying as conscientious, literary-minded and somewhat unsophisticated, as well as overachievers who tend to have an unrealistic view of themselves and their situation (Brodsky 1976). Victims have also obtained lower scores on the social-desirability scale than non-victims, which indicates that they tend to be more conventional, organized, rule-bound and dependable than non-victims (Coyne et al. 2000). By being punctual, honest and, at the same time, overcritical, these people may be perceived as a threat to others, and hence elicit negative behaviour. They could also be seen as breaking the performance standards and informal rules of the workplace (Zapf & Einarsen 2003).

Studies of interpersonal conflicts at work, have found that an elevated risk is associated with hostility, neuroticism, life dissatisfaction and experienced stress of daily living (Appelberg et al. 1991).

The personality traits found among victims of bullying have been suggested to originate, e.g., from early childhood (Randall 1997).

### ***The victim's own perception of him/herself and the reasons for bullying***

Victims themselves do not usually perceive any personal involvement in the emergence of bullying, often considering themselves hard workers, and wronged by the group, by the system, or by bad luck (Brodsky 1976). However, some think that some of their individual characteristics e.g., their private life, religious/political attitudes or appearance, cause bullying (Zapf 1999). In one study, a group of bullying victims regarded themselves as more unassertive and as poorer conflict managers than their colleagues (Zapf 1999).

When victims of bullying have been asked about their own perceptions of the reasons for the bullying, both environmental factors and the characteristics of the bully have been mentioned. In one study, university employees reported competition for status and jobs, uncertainty of the bully, and envy as reasons for bullying. The victim's gender was also mentioned as a possible cause (Björkqvist et al. 1994a). In an Irish study, all 30 victims interviewed referred to the 'difficult' personality of the bully (Seigne 1998).

## INTRODUCTION

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The attribution theory (Kelly 1972) may explain some of perceived reasons for bullying. According to the theory, individuals tend to project reasons for negative experiences onto others. Thus, it may be difficult for the bullied to see any reasons for the bullying in themselves, and they may thus look for reasons in their environment or in the bully, even when their own behaviour has contributed to the problem.

### ***The bully***

The role and personality of bullies has been emphasized particularly in the UK (Adams with Crawford 1992), and authors have pointed out that the personality and intentions of bullies underlie their bullying behaviour. The characteristics of a workplace bully have been difficult to study, and characterisation has often been based on the opinions of victims.

The behaviour of the bully has been characterized in terms of various personality disorders, and these personality traits have been suggested to originate from the bully's early childhood (Brodsky 1976, Randall 1997). For example, the bully has been described as a bigot because of his or her overt bias, and as a person who believes in free speech even if this includes discomfoting a subordinate or a co-worker. Bullies have also been described as persons motivated by a need to demonstrate power (Brodsky 1976). In studies of schoolchildren, school bullies have been described as aggressive individuals, lacking in empathy, and finding pleasure in the suffering of their victims. Instead of gaining self-respect and social status by competence and skill, bullies seem to be conditioned to boost other aspects of their personality by harassing suitable victims (Björkqvist, Ekman & Lagerspetz 1982).

Zapf and Einarsen (2003) have suggested three main types of bullying related to the personality of the bully: 1) self-regulatory processes with regard to threatened self-esteem, 2) lack of social competence, and 3) bullying as a result of micropolitical behaviour. The protection of self-esteem is assumed to be a basic human motive influencing and controlling human behaviour in social situations. A traditional view has regarded low self-esteem as a powerful and dangerous cause of violence. However, it has been argued (Baumeister, Smart & Boden 1996) that high rather than low self-esteem is related to aggressive behaviour. School bullies have been found to be self-confident, impulsive, and to display a general tendency to react aggressively in many situations (Olweus 1991). Thus, violence may appear to be a result of threatened egotism. Some self-reported bullies have described themselves as low on social competence and self-esteem, and high on social anxiety and aggressiveness (Einarsen, Raknes, Matthiesen & Hellesoy 1994).

In terms of social competences, lack of emotional control, as well as a lack of self-reflection and perspective taking has been mentioned. Bullies may not be aware of what they are doing or of how their behaviour affects others. They normally do

## INTRODUCTION

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not admit the bullying, probably because aggressive behaviour is not socially acceptable. Micropolitical behaviour refers to organizational structures and processes, and to the use of power. People exhibit such behaviour in order to protect and improve their own position, and it thus may sometimes manifest as bullying (Zapf & Einarsen 2003).

Some individual predispositions as facilitators of tyrannical behaviour have also been suggested as underlying factors in bullying. These include beliefs about the organization (bureaucratic orientation), subordinates (“the average person dislikes work, lacks ambition, avoids responsibility, prefers direction”), the self (self-esteem), and preferences for action (directiveness, tolerance of ambiguity) (Ashforth 1994).

The behaviour of both bullies and the victims is sometimes explained in terms of the social learning theory of aggression (Bandura 1973). According to this theory, bullying could be seen as a variant of repeated aggression, and be understood as a learned set of behaviour, primarily stimulated by external sources of modelling (see also Hoel & Cooper 2001).

### **The process nature of bullying**

Bullying occurs in an organizational setting, and could be described as an escalated process in which the group processes and the acts of the other members of the work unit have a substantial role. The means of bullying become more and more serious as time passes, which also illustrates its process nature.

The escalation of a bullying process has been described as proceeding through four distinct stages (Leymann 1996). At first, the situation begins with a conflict that triggers a critical incident. The second stage comprises different negative acts, bullying and stigmatizing. In the scapegoating process (Thylefors 1987), frustration elicited by the environment or the situation is projected onto an individual, who thus becomes a victim of workplace bullying and thereby fulfills the needs of the members of the work unit and the organization. Personnel management steps in at the third stage. Stigmatization of the victim during the second stage easily leads to him or her being considered to be at fault at this third stage. The final, fourth stage is expulsion, when the victim is compelled to leave the workplace.

The escalating bullying process has also been described in terms of bullying methods that become increasingly serious with time (Björkqvist 1992). This approach also takes into account the personalization of the conflict as well as the collective nature of bullying. The process begins with indirect negative behaviour (such as gossip, malicious or false stories) that are difficult to counteract. When this has been going on for some time, the situation begins to change. Bullying then becomes more direct, and the victim may be isolated or ridiculed. Workmates gradually begin to think that the conflict is a result of the personality of the victim. The victim no longer has the same

## INTRODUCTION

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human dignity as others, the situation is his or her own fault, and he or she thus deserves to be treated negatively. The collective nature of bullying makes this process possible. By degrading the victim, bullies justify their behaviour and avoid feelings of guilt. Phase three is the last final of the process, when bullying takes the form of direct threats, and both physical and psychological violence is used. Attacks on the victim's private life and insinuating that he or she is mentally ill are, for example, methods used in this final phase.

An essential feature of the bullying process is that the victim can do very little to solve the problem, and as time goes on he/she becomes stigmatized. In the eyes of the other members of the work group, he or she becomes 'the problem'. The stigmatizing effects of bullying behaviours and their escalating frequency and intensity make the victim increasingly powerless to cope with his or her daily duties and the cooperation requirements of the job, and thus he/she becomes more vulnerable and 'a deserving target' (Einarsen 2000).

The role of all members of the work unit is crucial in the escalation of this kind of bullying process. They could stop the escalation at an early stage, but for reasons such as group pressure and self protection, and fear that they might be the next victims, they do not support the victim or oppose the bully.

## Prevalence and forms of bullying

Studies on workplace bullying addressing its occurrence and forms, the bullies, as well as the background factors and consequences, have so far been mainly cross-sectional surveys, comparative studies in which a group of bullying victims and a control group have been studied and compared, and more or less systematically compiled case studies of victims.

### Prevalence

Many methods have been used to measure the occurrence and forms of bullying at work. Some researchers have used a strategy based on definitions of bullying, such as the one shown on pages 9–10. Respondents have been asked if they have been a victim of bullying, according to the definition, during the previous 6 or 12 months, for example, and they have decided whether or not to label themselves victims of bullying. Some researchers have directly asked "Have you been bullied during the last 6 months?" without defining bullying.

Another method involves subjects being given a list of negative and potentially harassing acts. The Leymann Inventory for Psychological Terrorization, LIPT (Leymann 1989), the Negative Acts Questionnaire, NAQ (Einarsen & Raknes 1997), and

## INTRODUCTION

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the Work Harassment Scale, WHS (Björkqvist, Österman & Hjelt-Bäck 1992) have been used for this purpose. Subjects who report at least one negative act on a weekly basis are classified as victims of bullying, without the respondent doing the classification or the labelling. Lists of harassing acts have generally been used to measure the bullying behaviours that the victims have been subjected to.

Using the definition and self-judgment strategy, prevalences of 2–5% have usually been obtained in the Scandinavian countries, while the figures have been somewhat higher in other European countries. Studies using this strategy have reported lower prevalence rates than those using lists of negative acts (Mikkelsen & Einarsen 2001, Quine 2002, Salin 2001). One example is a study among hospital staff in which 3% reported having been bullied during the previous six months, or labeled themselves as victims. The corresponding rate was 16%, when the operational criterion that a person is bullied if he/she is exposed to a negative act once a week or more often was used (Mikkelsen & Einarsen 2001).

Table 2 summarizes the results of Scandinavian and some other European studies on the prevalence of bullying.

A third way to assess the occurrence of bullying is to ask respondents if they have observed someone at their workplace being exposed to bullying. However, this method does not disclose anything about the prevalence of bullying, as many people may report one and the same person as a victim. When questions on witnessed bullying have been used, rates from about 30% to almost 70% have been obtained (Björkqvist et al. 1994a, Hoel, Cooper & Faragher 2001, Salin 2001, Quine 1999, Quine 2002, Sutela & Lehto 1998).

### **Risk sectors**

Several studies have shown bullying to be more common in the public than in the private sector (Hoel & Cooper 2000, Leymann 1992a, Piirainen, Elo, Hirvonen, Kauppinen, Ketola, Laitinen, Lindström, Reijula, Riala, Viluksela & Virtanen 2000), but conflicting results have also been obtained (Einarsen & Skogstad 1996). The third European survey on working conditions in 15 European countries (Paoli & Merllie 2000) revealed that intimidation was most common in public administration and defence. Some studies have found industry to be one of the risk sectors (Einarsen & Skogstad 1996, Hubert & Veldhoven 2001). High prevalence rates have been found among graphical workers, hotel and restaurant workers (Einarsen & Skogstad 1996, Paoli & Merllie 2000), in the teaching profession, education and health (Hoel & Cooper 2000, Leymann 1992a, Sutela & Lehto 1998, Paoli & Merllie 2000), in transport and communication (Paoli & Merllie 2000), in the prison service, among post and telecommunications workers, and in the dancing profession (Hoel & Cooper 2000).

Table 2. Studies of the prevalence of workplace bullying.

Country	Author/s	Sample	N	Definition	Prevalence
Norway	Einarsen & Skogstad (1996)	14 samples; total	7787	4+1a	8.6% (4.5% at least every now and then)
	Einarsen, Matthiesen & Skogstad (1998)	Assistant nurses	745	4+1a	3%
Denmark	Hogh & Dofradottir (2001)	Randomized sample of adult citizens	1857	5	2%
	Mikkelsen & Einarsen (2001)	Hospital employees	236	4+1a+3a	3% 3a: 16% (2%)
		Manufacturing company	224		4.1%; 1b + 3a: 8% (2.7%)
		Department store	215		0.9%; 1b + 3a: 25% (6.5%)
Sweden	Leymann (1992a)	Representatives of employees, no self-employed persons	2438	1b + 3a	3.5 %
Finland	Vartia (1991)	Government employees	984	4	10.1%
	Björkqvist, Österman & Hjelt-Bäck (1994a)	University employees	338	1a + 2	16.9%
	Sutela & Lehto (1998)	Representatives of employees	2979	4	3%
	Nuutinen, Kauppinen & Kandolin (1999)	Police force	754	4	women 14%, men 8%
	Piirainen, Elo, Hirvonen et al. (2000)	Representatives of employees	1991	4	4.3%
	Salin (2001)	Random sample of business professionals with a university degree	385	4+1b	1.6%; 8.8% occasionally; 1b and 3a: 24.1%
Germany	Mackensen von & Astfeld (2000)	Administration	1989	1b + 3a	2.9%

## INTRODUCTION

Country	Author/s	Sample	N	Definition	Prevalence
Hungary	Kaucsek & Simon (1995)	Army Bank employees Bank inspectors	323 41 43	1b + 3a 1b + 3a 1b + 3a	5.6% 4.9% 2.5%
Netherlands	Hubert & van Veldhoven (2001)	Sample of 11 sectors	66764	5	2.2% (mean of four items referring to aggressive and unpleasant situations, often or always)
Ireland	O'Moore (2000)	Random national sample	1009	4	16.9% occasionally, 6.2% frequently
Portugal	Cowie, Jennifer, Neto et al. (2000)	International organization	221	4	33.5%
U.K.	Rayner (1997)	Part-time students	581	4+1c	53%
	UNISON (1997)	Public sector union members	736	4+1b	14%; 1c+4: 50%
	Cowie, Jennifer, Neto et al. (2000)	International organization	386	4	15.4%
	Hoel, Cooper & Faragher (2001)	Employees from 70 organizations within the private, public, and voluntary sectors	5288	4+1a+3a	1.4%; 3b: 10.6%
	Quine (1999) Quine (2002)	Employees of a NHS community trust Junior doctors	1100 594	1b+2 4	38% 37%
Austria	Niedl (1995)	Hospital employees Research institute employees	368 63	1b + 3a 1b + 3a	26.6% 17.5%

Key to definition symbols, definition: 1) Duration of bullying: 1a: within the last 6 months, 1b: over 6 months,

1c: ever in the career; 2) Type of acts included in judgments; 3) Frequency of acts: 3a: at least weekly, 3b: less frequently than weekly; 4) Victims consider themselves bullied according to the definition; 5 = approximate criterion (e.g., some kind of negative relationship) (see also: Hoel et al., Zapf, Einarsen, Hoel & Vartia 2003)

## INTRODUCTION

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With respect to the size of the organization, bullying was more common in large organizations than in smaller ones in Norway (Einarsen & Skogstad 1996), although no such relationship was found in a Finnish study (Piirainen et al. 2000).

### **Organizational level, gender, age and ethnic background as risk factors**

With regard to organization level, study results have varied. A UK study showed that people from different organizational levels were bullied equally often (Hoel et al. 2001). In Finland, senior white-collar employees reported bullying somewhat more often than junior white-collar employees or workers in a representative sample of employees (Piirainen et al. 2000), while among business professionals, employees in lower hierarchical positions reported bullying more often than those in managerial and expert positions (Salin 2001).

Several studies have found that men and women perceive themselves as being bullied equally often (Einarsen & Skogstad 1996, Hoel & Cooper 2000, Keashly et al. 1994, Kivimäki, Elovainio & Vahtera 2000, Leymann 1992a, Piirainen et al. 2000, Quine 1999, Vartia 1991), although some have shown an overrepresentation of women among the victims (Björkqvist et al. 1994a, Nuutinen, Kauppinen & Kandolin 1999, Quine 2002, Salin 2001). As far as age is concerned, conflicting results have also been obtained. No differences have been found in some studies (Leymann 1992a, Quine 2002), while in others, older employees have reported more bullying than their younger peers (Einarsen & Skogstad 1996, Piirainen et al. 2000), and a study from the UK showed that young employees were slightly more at risk of bullying than others (Hoel & Cooper 2000, Quine 1999).

With regard to ethnic background, studies in the UK have shown that respondents of Asian descent are more likely to be bullied than those considering themselves white (Hoel & Cooper 2000, Quine 2002).

### **Forms of bullying**

Six main types of bullying were identified among government employees visiting occupational health care units: 1) slander, gossip and rumours, 2) social isolation and keeping people uninformed, 3) giving a person too few or overly simple work tasks, 4) continuous criticism of people's work and its results, 5) threats or acts of physical violence, and 6) insinuations about a person's mental state (Vartia 1993a). The following main groups of negative behaviours were identified in a more recent study: 1) work-related harassment (e.g., persistent criticism of work and effort, attempts to find fault), 2) personal harassment (e.g., insulting or offensive remarks, spreading of gossip and rumours), 3) organizational harassment (e.g., having key areas of responsibility removed

## INTRODUCTION

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or replaced with more trivial or unpleasant tasks, being given tasks below one's competence), and 4) intimidation (e.g., threats of violence or physical abuse, intimidating behaviour such as finger-pointing, exposure to shouting or spontaneous anger) (Hoel & Cooper 2000).

The withholding of necessary information, ignoring a worker's opinions and views, the assignment of tasks with unreasonable or impossible targets or deadlines, being exposed to unmanageable workloads, and being given tasks below one's competence have been found to be the negative acts usually experienced (Hoel & Cooper 2000, Salin 2001) accompanied by verbal abuse, practical jokes and slander and rumours (Mikkelsen & Einarsen 2001). Respondents from managerial ranks have reported exposure to "unmanageable workloads" and "unreasonable deadlines" more frequently than workers and supervisors. On the other hand, workers have reported "insults or offensive remarks" and "excessive teasing" more often than managers. (Hoel et al. 2001) The assignment of few or overly simplified tasks has been shown to be the form of bullying most often used by supervisors, while threats or acts of physical violence were most often used by subordinates (Paananen & Vartia 1991). Studies of the connection between the form of bullying and the victim's age have suggested that younger men experience more work-related bullying than older men (Einarsen & Raknes 1997).

Sexual harassment seems to be a less common form of bullying, particularly in the Nordic countries; 0.5–3.9% of Danish respondents reported occasional sexual harassment (Mikkelsen & Einarsen 2001), while in Finland, 1.5% of a representative sample of employees reported at least occasional sexual harassment during the year preceding the interview (Piirainen et al. 2000). In a British study, 10.3% had experienced unwanted sexual attention, and 1.2% of these had experienced it regularly (Hoel & Cooper 2000).

Bullying has also been viewed as a special form of aggression (Björkqvist et al. 1982). Research on aggressive styles has classified forms of aggressive behaviour as indirect and direct. Research on bullying in schools showed that, among adolescents, direct verbal aggression was the most common form used by both boys and girls, but girls used more indirect means of aggression (e.g., gossip, malicious or false stories, efforts to make people dislike a person), whereas boys tended to employ direct verbal aggression (e.g., insults, shouting, calling other people names) (Björkqvist, Lagerspets & Kaukiainen 1992, Björkqvist, Österman & Kaukiainen 1992). In the work context, indirect forms of aggression (undue disruption, belittlement of opinions, limitation of workers' opportunities to express themselves and to have influence, exposure to accusations, and the spreading of malicious rumours) among the university employees were the most common forms of aggression perceived by bullying victims (Björkqvist et al. 1994a).

In the same research tradition, two kinds of covert aggression have been identified, rational aggression (e.g., workers' reduced opportunities to express themselves,

## INTRODUCTION

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interruptions, nonconstructive criticism, devaluation of work performance) and social manipulation (e.g., insulting comments about a person's private life, backbiting, not being on speaking terms, insinuation and negative glances). Rational forms of bullying were found to be more common than social manipulation among university employees. Moreover, men used rational strategies more often than women, who used social manipulation more than men (Björkqvist 1992, Björkqvist et. al. 1994b). Among government employees, men were subjected to shouting and criticism (direct verbal aggression) more often than women, whereas women were more often isolated from social interaction than men (social manipulation) (Paananen & Vartia 1991).

### **Persistence and recurrence**

The persistence and recurrence of negative behaviours are the main features of bullying. Studies in Sweden (Leymann 1992a) have reported that 20% of all victims, and in Finland as many as 48% of male victims and 27% of female victims (Vartia 1993b), suffered bullying lasting for more than five years. The mean duration reported from surveys and interviews has varied from 15 months to 2.7 years (Einarsen & Skogstad 1996, Leymann 1996, Salin 2001), and has been higher among systematically selected victims, at more than three years (Leymann & Gustafsson 1996, Zapf 1999).

Of the victims, 10–24% have reported daily or almost daily negative acts (Leymann 1992a, Vartia 1991). Recent studies have shown that bullying strategies are more often in evidence when the bullying has lasted for a longer time (Zapf & Gross 2001).

### **Bullies**

In Scandinavian countries, one or several workmates have usually been reported to be the bullies (Vartia 1991) or co-workers and superiors about equally often (Einarsen & Skogstad 1996). A study conducted in Denmark found that all the victims in a manufacturing company reported that their colleagues had bullied them, in hospitals most victims reported their colleagues or immediate supervisor and department-store bullies included superiors, colleagues and subordinates (Mikkelsen & Einarsen 2001). In Britain, however, perceived bullies have usually been managers (Hoel & Cooper 2000, Quine 1999, Rayner 1997, UNISON 1997). Nevertheless, a managerial position does not guarantee protection from bullying. In one study, 4% of all victims among government employees (Vartia 1991), and in another as many as one-sixth of the victims among business professionals, were only bullied by their subordinates (Salin 2001). Further, co-worker bullying has been found to be more prevalent among women than among men (Hoel et al. 2001).

Men have been found to be predominantly bullied by men, whereas women are bullied by other women, by men or by both genders (e.g. Einarsen & Skogstad 1996;

## INTRODUCTION

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Hoel et al. 2001, Leymann 1992a, O'Moore et al. 1998). Men have also been reported as bullies more often than women (Einarsen 1996). In many studies, about 20–40% of the victims have pointed out only one perpetrator (e.g., Einarsen & Skogstad 1996), while in studies on victims, more than half of the respondents have reported more than four perpetrators. The duration of bullying has shown a positive correlation with the number of bullies, indicating its escalation – more and more people become involved over time (Zapf 1999).

### **Consequences of bullying**

Before any studies of bullying had been carried out, research on stress at work had shown that poor relationships with co-workers and supervisors were associated with lower job satisfaction and well-being among employees (Cooper & Marshall 1976). When negative relationships were measured by asking how much the respondents were criticized and hassled by co-workers and supervisors, they were found to be strongly related to both global job stress and negative job feelings. Negative relations with co-workers were also associated with depression, and negative relations with supervisors with global physical health (Israel, House, Schurman, Heaney & Mero 1989). Bullying has been regarded as a severe social stressor at work (Niedl 1996, Zapf et al. 1996), and as a critical life event (Mikkelsen & Einarsen 2002) causing lowered job satisfaction, lowered well-being, and post-traumatic stress disorder.

### **Job satisfaction**

Significant correlations between perceived bullying and overall job satisfaction have been found in many studies, e.g., among Norwegian workers, supervisors and managers in the marine- engineering industry (Einarsen & Raknes 1997), and among assistant nurses (Einarsen, Matthiesen & Skogstad 1998). In a study among NHS community-trust employees in the UK, respondents who had experienced bullying in the past year reported significantly lower levels of job satisfaction (Quine 1999).

### **Psychological well-being and mental-health symptoms**

Strong associations have been found between perceived bullying and lowered psychological well-being, increased levels of self-reported psychological stress symptoms, depression, anxiety and psychosomatic health complaints (Björkqvist et al. 1994a, Einarsen et al. 1998, Einarsen, Raknes, Matthiesen, Hellesoy 1996, Mikkelsen & Einarsen 2001, Quine 1999), aggressiveness (Björkqvist et al. 1994a) and mental-health symptoms (GHQ 12) (Hoel & Cooper 2000). Of the different strategies used, at-

## INTRODUCTION

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tacks on the victim's private life and personal derogation have been shown to have the strongest correlation with psychological ill-health (Einarsen & Raknes 1997, Zapf et al. 1996).

Some differences between men and women have been found in that bullied women have been shown to feel aggressive more often than bullied men (Björkqvist et al. 1994a). Victims bullied by their superiors have been shown to suffer more than the victims of co-worker bullying (Einarsen & Raknes 1997). High frustration, stress, strong feelings of helplessness and work alienation, low self-esteem and performance, and low work-unit cohesiveness have been suggested as effects on subordinates (Ashford 1994). The relationship between bullying and health has been found to be moderated by the victim's personality, and by social support at the workplace (Einarsen et al. 1996, Quine 1999).

Bullying does not only affect the target person; those observing it in their work units have also reported negative effects on their mental health (Hoel & Cooper 2000).

### **Post-traumatic stress disorder (PTSD)**

Studies have shown that victims of bullying often exhibit symptomatology analogous to post-traumatic stress disorder (PTSD) (Leymann & Gustafsson 1996, Mikkelsen & Einarsen 2002). In one study, for example, interviewed victims of bullying reported insomnia, nervous symptoms, melancholy, apathy, lack of concentration, and sociophobia constituting a syndrome indicative of PTSD (Björkqvist et al. 1994a). Many have experienced bullying as the major trauma in their lives (Mikkelsen & Einarsen 2002).

### **Musculoskeletal health complaints,**

The reported effects of bullying have not been restricted to the victim's mental well-being, and associations between being bullied and musculoskeletal health complaints have also been found (Einarsen et al. 1996). The reason behind such symptoms may be the tension that bullying causes in the victims.

### **Sickness absence, intentions to resign and suicide**

Bullying has proved to be a factor in sickness absence (Kivimäki, Elovainio & Vahtera 2000, Voss, Floderus & Diderichsen 2001). Among hospital staff, medically certified sickness absence adjusted for age and sex was 51% more frequent among victims of bullying than among other employees (Kivimäki et al. 2000). Associations have also been found between bullying and intentions to resign (Hoel & Cooper 2000, Vartia 1993b).

## INTRODUCTION

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Suicide has also been suggested as a consequence of bullying. Reports from people involved in counselling suicidal persons and families of suicide victims suggest that 100 to 300 suicides are committed in Sweden every year because of workplace bullying (Leymann 1988, 1992b). Doubts about these conclusions have been expressed (Einarsen et al. 1994b), although the authors suggested that as many as 40% of those most frequently bullied have contemplated suicide.

### **Self-image and self-respect**

The view that bullying may negatively affect the victim's self-image and self-respect has been discussed, but few studies have been conducted so far. Mikkelsen & Einarsen (2002) carried out such a study. Measured on the World Assumption Scale (WAS), victims of bullying compared with their non-bullied controls considered themselves less worthy, less capable, and more unlucky and also perceived the world as less benevolent, less controllable and just, and other people as less supportive and caring.

## 2. The present study

### Framework

The term ‘bullying’ has been used here to refer to a situation in which one or more individuals are subjected to persistent and repetitive negative acts by one or more co-workers, supervisors or subordinates and are unable to cope with the situation. Persons perceiving themselves as subjects of bullying according to this definition have been classified as victims.

Figure 1 presents the theoretical framework of the study. Features of the work environment, individual characteristics of the victim and the bully, and group processes are considered potential contributing factors to bullying. The hypothesized consequences include decreased job satisfaction, increased stress symptoms and an increased risk of stress-related illnesses such as depression and cardiovascular disease, post-traumatic stress disorder and absenteeism. The adverse consequences of bullying are assumed not to be restricted to victims, but to affect other employees in the work unit as well.

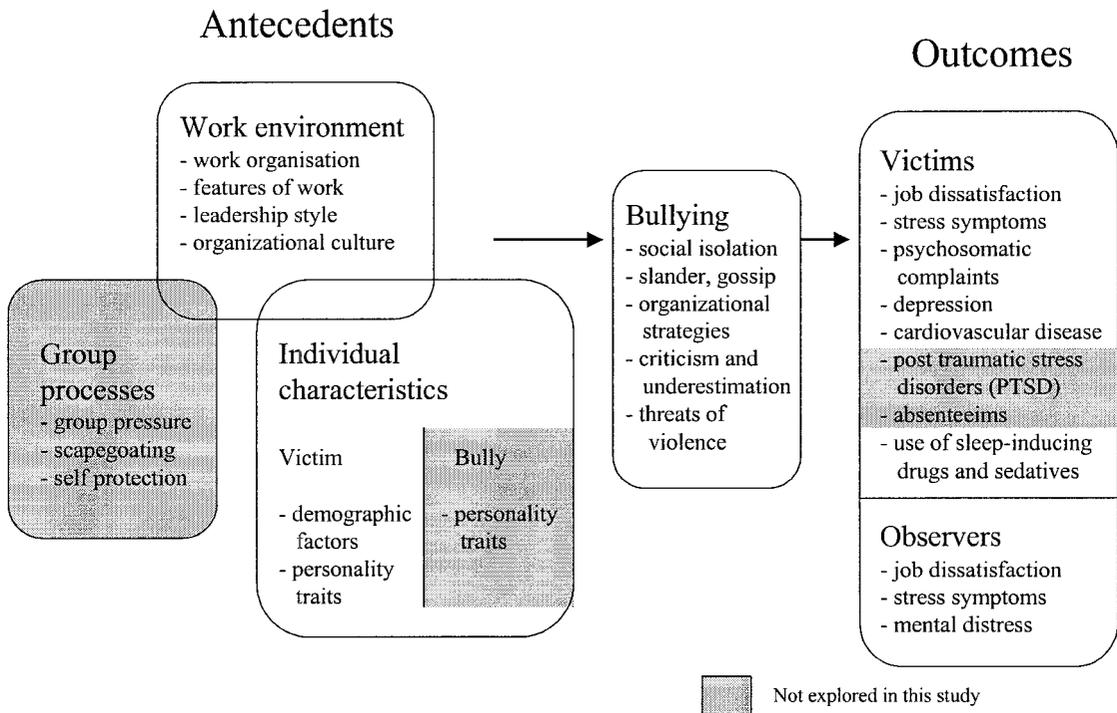


Figure 1. Theoretical framework of the study.

### Aims

The aim of this study was threefold: (1) to increase knowledge of the occurrence of bullying, (2) to identify work-environment and climate factors as potential antecedents of bullying, and to determine the role of gender, age and self-esteem in becoming a victim and in facing and experiencing workplace bullying, and (3) to increase understanding of effects of workplace bullying on the health and well-being of victims as well as on bystanders.

Although the personal characteristics of bullies were regarded as potential underlying factors of bullying, and group processes and the way the other members of a work unit act in a bullying situation were thought to be factors in the escalation of the bullying process, these aspects were beyond the scope of this study. Of the consequences of bullying, neither PTSD nor absenteeism were studied. The intention was to collect information from different occupational and organizational settings, and the study was thus conducted in the municipal sector, in prisons and in hospitals. All of these fields have been listed in earlier studies as risk sectors.

The specific study questions were:

1. What is the prevalence of bullying in Finnish workplaces compared with other Scandinavian and European countries, and what differences can be found between female-dominated organizations (municipal sector I, II, hospitals IV) and male-dominated organizations (prisons III)? What are the most common forms of negative behaviours, and are men and women bullied in the same way (III)? Who are the bullies by organizational status, and are there any differences between men and women in this respect (III)?
2. To what extent are psychological work-environment factors and the climate in the work unit connected with the experience of being bullied and with witnessing bullying, and what is the role of self-esteem in this respect (I)?
3. What is the association between bullying and subjective stress and reported stress symptoms in victims and in observers? Does the connection between bullying and decreased well-being remain significant when other work-related stressors are taken into account? (III) Does bullying have similar associations with mental health and job satisfaction in male and female employees? (IV) What forms of bullying have the most detrimental effects on the reported stress of the affected persons? (III) Does prolonged bullying increase the risk of cardiovascular disease and depression (IV)?

### 3. Methods

#### Participants

The participants were members of the Finnish Federation of Municipal Officials (I, II) prison officers (III) and other prison personnel, and hospital employees (IV).

A questionnaire was sent to the home addresses of 1577 municipal officials (I, II) randomly selected from the Federation's register. The questionnaire was returned by 1037 of them (response rate 66%). Eighty-eight respondents were excluded from the final study group because of long-term absence from the work. The final study group comprised 949 individuals, of whom 85% were women and 15% men. This reflects well the membership of the union (in 1993, 85.1% were women and 14.9% were men). Most of the subjects were office workers (48%), and others were employed in catering and other basic services (12%), technical occupations, fire fighting, harbour and transportation offices (12%) and in social work (10%). The mean age was 40.1 (SD 10.2) years (men 41.2 SD 10.5 years, women 40.0 SD 10.1 years).

All prison personnel in Finland were included in a large study of physical violence and bullying at work. A questionnaire was sent to more than 2900 prison workers and was returned by 1870 (69% men, 31% women). The response rate was 63%. The respondents worked in administration (N=265), as officers (guards) (N=896), as superintendents (N=294), in rehabilitation and social work (N=157), and in health care (N=138). Prison officers were selected for special analysis, because male and female officers have similar jobs with equal positions in their work units, and work in close daily contact with the inmates (III). The response rate in this group was 64%. Of the prison officers, 86% were men. The distribution of male and female prison officers was in good agreement with the gender distribution of Finnish prison officers, of whom about 20% are women. The mean age of the male prison officers was 41.0 years (SD 9.5 years), and of the female officers 38.1 years (SD 9.5 years). The mean age of all the other prison personnel was 45.2 years (SD 8.5 years) for men, and 42.0 years (SD 9.2 years) for women. Of them, 51% were men and 49% women.

The sample of hospital employees (IV) was drawn from the on-going study 'Work and health in Finnish hospital personnel'. The participants were employees working in Finnish hospitals in four health-care districts (Varsinais-Suomi, Kanta-Häme, Vaasa, Helsinki-Uusimaa) in 1998. Ten per cent of the employees were doctors, 47% nurses, 12% laboratory and x-ray department staff, 12% administrative staff and 19% maintenance, cleaners and other workers. Altogether, 8104 (7,131 women, 973 men) people responded to the first questionnaire (response rate 74%). The 6674 respondents who were still working in the hospitals two years later were sent a follow-up questionnaire of whom 5432 responded (response rate 81%). Of them, 4831 were women

## METHODS

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and 601 men. Women were slightly overrepresented. The mean age of the female respondents was 44.1 years (SD 8.4 years) and of the male respondents 44.6 years (SD 8.9 years).

### Measures

Data were collected by questionnaire surveys on the following issues: bullying at work, the work environment and climate in the work unit, exposure to violence by inmates, job satisfaction, psychological well-being, cardiovascular disease and depression, as well as individual and personality traits.

### Bullying

In all of the samples, bullying was first defined and then assessed asking the respondents whether they had been subjected to it. Bullying was defined as follows: "Bullying is a long-lasting, recurrent, and serious negative process of actions, and behaviour that is annoying and oppressing. It is not bullying if you are scolded once or if somebody shrugs his/her shoulders at you once. Negative behaviour develops into bullying when it becomes continuous and repeated. Often the victim of bullying feels unable to defend him/herself". The respondents were asked if they felt that they were subjected to such bullying at the time of the study (I, II, IV) or within the previous six months (III). They were also asked if they had seen anyone else at their workplace being bullied (I, II).

Among the municipal employees (II), the various forms of bullying were measured using a revised version of the *Leymann Inventory of Psychological Terrorization* (Leymann 1989), including 25 negative acts, and among prison officers (III) using six categories of negative acts. This classification was derived and revised from an earlier study by Vartia (1993a). The organizational status of the bully was assessed with a single question: 'Who in your work unit is directing this kind of bullying at you?' (III).

### The work environment and climate in the work unit

*The characteristics of work* (haste, individual control, excessively difficult tasks, role ambiguity) were measured by asking single questions from the *Occupational Stress Questionnaire* (OSQ), developed at the Finnish Institute of Occupational Health (Elo, Lepänen, Lindström & Ropponen 1992) (I, II, III). Studies of the measurement properties of the questionnaire, including reliability and validity, have been reviewed, and the dimensions (general work characteristics) found to be more or less uniform in different studies and sectors (Elo et al. 1992). *Joint meetings* in the work unit and *an-*

## METHODS

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*anticipated changes* (I, II) were measured by asking single questions designed for the study: 'How often do you have joint meetings in your work unit', with four response choices from 'about once a week' to 'never', 'Are you aware of marked changes that will occur at your workplace in the near future (e.g., organizational changes, new working methods, notice of termination), with response choices 'yes' or 'no' ?'

*Communication climate* (I) was assessed on a factor-analytically contributed scale comprising five items (everybody is listened to at my workplace, problems at work and differences of opinion are discussed openly, everybody has the courage to express his/her opinion, independence is appreciated and encouraged, personal differences are accepted) (Cronbach's alpha 0.83). The response format was a three-point scale from 'I fully agree' to 'I don't agree'. Some of the original statements measuring the organizational climate were taken from earlier studies partly designed for this study.

*The general climate* (I) of the workplace was measured by asking a single question with five fixed response choices (strained and competitive, encouraging and supportive, prejudiced, clinging to old ways, easy-going and pleasant to work with, quarrelsome and sullen).

The *social-climate scale* (III) comprised seven items: two questions on social relationships, the first on relationships between workmates and the other on relationships between supervisor and subordinates, with a five-point response scale from 'very good' to 'bad', and five propositions: 'Everyone is listened to in my work unit', 'Differences of opinion are resolved together', 'Everyone takes responsibility', 'A high level of trust prevails in our work unit', 'Everyone has the courage to express his or her opinion' (Cronbach's alpha .86). The response format was a five-point scale from 'I fully agree' to 'I totally disagree'. The *managerial-climate scale* (III) consisted of three items: 'Management is interested in the health and well-being of their personnel', 'There is a trustful relationship between management and personnel in my institution', 'In my institution everyone is encouraged to think about better ways of doing one's job' (Cronbach's alpha .86). The response format was a five-point scale from 'I fully agree' to 'I totally disagree'. Some of the items used to measure the social and managerial climates were taken from earlier studies at the Finnish Institute of Occupational Health, partly designed for this study.

*Violence by inmates* (III) was measured by using a list of violent behaviours with a severity range from calling names and negative criticism to violent physical attacks. A similar distribution of forms of violence has been used in studies by the National Research Institute of Legal Policy in Finland (Haapaniemi & Kinnunen 1997). The sum of all forms of violence by inmates was calculated, describing the amount of violence that the employees were subjected to.

### Personality traits

*Self-esteem* (III) was measured using Rosenberg's self-esteem scale comprising 10 items, which is a well-validated measure of general self-worth (Robinson, Shaver & Wrightsman 1991) (Cronbach's alpha 0.85). *Neuroticism* (I) was measured using the Maudsley Personality Inventory comprising 12 items (Cronbach's alpha 0.87).

### Potential consequences of bullying

Overall *job satisfaction* (III) was assessed on a single item: 'How satisfied are you with your present work?' A meta-analysis, in which single-item measures were correlated with scales measuring overall job satisfaction, found that single-item measures were sufficiently reliable. The estimated minimum reliability of the single-item measure was 0.57. It was concluded, that although there are good reasons for preferring scales to single items, single-item measures of overall job satisfaction are acceptable when situational constraints limit or prevent the use of scales (Wanous, Reichers and Hudy 1997).

The *overall feeling of stress* (II, III) was measured using a single-item measure from the OHQ: 'Stress refers to a situation in which a person feels tense, restless, nervous or anxious, or is unable to sleep at night because his or her mind is troubled all the time. Do you feel this kind of stress these days?' The content, construct and predictive validities of this single-item measure have been investigated using four data sets, and the question has proved valid and feasible in various measurement contexts at the group level (Elo, Leppänen & Jahkola 1999). Psychological stress symptoms (II) and mental resources were measured on 14 items, mainly from the OHQ. Following to a factor analysis, two scales were formed. The scale measuring *mental-stress reactions* consisted of seven items (depressed, strained, exceptionally tired, nervous, distressed, staying awake at nights, difficulty in falling asleep (Cronbach's alpha .88) and that measuring *feelings of low self-confidence* comprised four items (feeling inferior, feeling helpless, feeling incapable and less confident, feeling lonely) (Cronbach's alpha .78).

*Mental distress* (III) was assessed using the 12-item version of the General Health Questionnaire (GHQ) (Goldberg, Gater, Puccinelli, Gureje & Rutter 1997) (Cronbach's alpha .94).

The measure of *diagnosed disease* (yes-no) (IV) was derived from the responses to a list of 14 chronic diseases diagnosed by a doctor. *Cardiovascular disease* was identified if the respondent reported myocardial infarction, angina pectoris, cerebrovascular disease or chronic hypertension.

### Other variables

The respondents in all of the subject groups were asked about their gender and age. Income levels were obtained from the employers' records (IV).

### Study design

Data on work-environment factors, bullying and well-being among municipal employees and prison personnel were derived from cross-sectional measurements (I–III). Three groups were identified: (i) bullied employees, (ii) observers, and (iii) the unexposed, i.e., those who were not bullied themselves and who had not witnessed bullying.

The analysis of hospital staff was a cross-lagged longitudinal study (IV), in which measurements of bullying and illness (cardiovascular disease, depression) were conducted at two points of time (1998 and 2000). This design allows testing bullying as a predictor of illness and illness as a predictor of bullying (reversed causality). Three exposure groups were identified: (i) employees not reporting bullying in the first and second surveys (the control group), (ii) employees reporting victimization either in the first or in the second survey (but not both), (iii) and employees reporting victimization in both surveys (victims of prolonged bullying). Those with baseline diseases were excluded.

### Statistical analysis

Frequencies, means and standard deviations were used to describe and compare the prevalence and forms of bullying, the organizational status of bullies, and reported stress symptoms in the various study groups (II, III). Differences between men and women, and between age groups, were tested using the  $\chi^2$ -test (III). In order to determine the most detrimental forms of bullying, product-moment correlations (Pearson's  $r$ ) were calculated between forms of bullying and stress reactions (II). Associations of work-environment variables were also analyzed using product-moment correlations.

Differences between victims, bystanders and unexposed in reported stress symptoms were studied using analyses of variance (ANOVA). The differences between the groups were tested with the pairwise t-test (II).

Multivariate variance analyses (MANOVA) were computed, with stress, mental distress and job satisfaction as dependent variables, and bullying and gender as independent variables, in an attempt to examine the associations of bullying and gender

## METHODS

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with the victims' well-being. The interaction term 'bullying \* gender' was used to test whether the effects of bullying on well-being were similar in men and women. (III)

Logistic regression models were used to test the predictive relations of organizational and personality factors to being victimized and to witnessing bullying. For the analysis, the variances of the antecedent variables were divided into tertiles. Odds ratios and 95% confidence intervals for victimization and witnessing bullying were calculated in the bivariate model to show the independent effects of role ambiguity, individual control, managerial climate, social climate, violence by inmates and self-esteem. The effect of each variable was adjusted for all other variables in the multivariate model.

Logistic regression models were also used to test predictive relations of bullying to cardiovascular disease and depression. The first step tested reversed causality. Baseline diseases were set as predictors of incident caseness of bullying (being bullied in the second survey) among employees not reporting being bullied at baseline. The test compared the likelihood of being bullied in the follow-up among employees with illness at baseline. The second step examined whether prolonged bullying predicted cardiovascular disease and depression. Only employees who were free from illness at baseline were selected. The next step was to find out whether the risk of illness was higher among those who were subjected to bullying than among those who were not. As higher age and low income level have been shown to be predictors of both of these diseases, and cardiovascular morbidity has been shown to be more common in men than in women, and further, since the female gender has been found to be a risk factor for depression (Koskenvuo, Kaprio, Rose, Kesäniemi, Sarna, Heikkilä & Langinvainio 1988), odds ratios and 95% confidence intervals for new cardiovascular disease and depression in the second survey were adjusted for gender, 5-year age categories, and income tertiles (calculated separately for men and women) (IV).

## RESULTS

### 4. Results

The main results of the study are presented according to the study questions (see page 29). Some findings reported in the original articles are highlighted, and some new analyses have been computed. New analysis from the data of the original studies is referred to in the text by I' with reference to municipal workers, III' with reference to prisons officers and IV' with reference to hospital employees. V refers to the new data on all prison personnel.

### Prevalence of bullying and the bullies

#### Victimization and observed bullying

The prevalence of bullying varied between 5% and 20%, depending on the organization. The highest prevalence was found in prisons, where 20.1% of the prison officers labelled themselves as victims of bullying (III). Among the municipal employees, the corresponding rate was 10.1% (I) and among the hospital employees 5.0% (IV).

Table 3 summarizes the occurrences of bullying in the three sample populations according to gender and age. As the table indicates, no differences between men and women in perceptions of being bullied were found in any of the groups, and no consistent results were obtained regarding connections between age and being bullied.

**Table 3. The prevalence of bullying by gender and age group in the different samples (I, III, IV, I', III', IV').**

	Municipal employees				Prison officers				Hospital staff			
	Women (N=808)	Men (N=140)	$\chi^2$	p-value	Women (N=123)	Men (N=773)	$\chi^2$	p-value	Women (N=4831)	Men (N=601)	$\chi^2$	p-value
	10.3	9.3	0.13	ns	24.8	19.1	2.16	ns	5.0	4.8	0.03	ns
Age												
- 30	7.1	6.1	0.05	ns	23.3	12.6	2.28	ns	4.0	4.2	0.02	ns
31 - 50	11.0	8.5	0.44	ns	28.0	21.5	1.59	ns	5.1	4.2	1.00	ns
51 -	11.9	16.0	0.33	ns	15.4	18.0	0.06	ns	6.2	6.7	0.11	ns
Between age-groups	$\chi^2 = 2.41$ ns	$\chi^2 = 1.80$ ns			$\chi^2 = 1.02$ ns	$\chi^2 = 5.51$ p<.06			$\chi^2 = 5.87$ p<.05	$\chi^2 = 2.70$ ns		

## RESULTS

Among the municipal employees and hospital staff, those aged over 50 experienced bullying somewhat more often than the younger employees (IV'), but the difference was significant only among the female hospital employees. The middle-aged prison officers (31–50 years) particularly reported bullying (III, III'). Men and women perceived bullying equally often in every age group (I', III', IV'), and among the prison officers, women under 36 years of age reported higher prevalences than the men in the same age group (III).

Observing bullying was also more common in prisons than in municipal workplaces, 8.7% of the municipal employees (I) and 35.4% of the prison officers 35.4% (III') reporting such observations.

### Forms of bullying

Among the municipal employees, ignoring the victim's presence, giving hostile looks or expressions, making derogatory comments out of earshot, and laughing at the victim were the most common negative behaviours (Table 4) (I'). Only a few differences between men and women, and between the age groups, were found. The men were subjected to organizational harassment and work-related bullying, as well as to verbal threats, more often than the women. Victims over 50 years of age reported more social exclusion than the younger victims.

**Table 4. Forms of bullying by gender and age group among the municipal employees. The figures are expressed as percentages of victims perceiving the kind of negative behaviour often (I').**

	Men	Women	≤ 50 years	≥ 51 years	Total
<u>Social isolation</u>					
Your presence is ignored	31	42	42	33	40
You are not allowed to express a personal opinion	15	28	26	26	26
People refuse to listen to you	23	22	21	26	22
People refuse to talk to you	0	23	19	24	20
You are socially excluded from the company of others	31	16	13	44 <sup>xx</sup>	18

*table continued next page*

## RESULTS

**Table 4. continued**

	Men	Women	≤ 50 years	≥51 years	Total
<u>Organizational and work related means</u>					
You are not invited to meetings	46	19 <sup>x</sup>	26	11	23
You are criticised and your job or contribution is devalued	23	16	19	10	17
You are given meaningless tasks	15	15	16	11	15
You are given overly few or no work tasks at all	31	5 <sup>xx</sup>	10	6	9
<u>Personal means</u>					
People give you negative glances or have negative expressions	15	36	35	25	33
People make derogatory comments and laugh at you	33	29	29	32	30
People make offensive remarks about and criticise your private life	15	18	19	11	18
People gossip and spread false rumours about you	17	23	25	11	22
<u>Intimidation</u>					
People call you name	15	8	8	11	10
You are given verbal threats (occasionally or often)	62	31 <sup>x</sup>	37	30	35
You are sexually harassed (occasionally)	23	13	16	10	15

x p<.05, xx p<.01

Among the prison officers, derogatory comments out of earshot, gossiping and spreading negative rumours as well as giving negative criticism and devaluing the victim's job or contribution, were the most common forms of bullying, with no differences between the men and the women. The female victims reported sexual harassment significantly more often (43%) than their male counterparts (6%) ( $\chi^2 = 28.92$

## RESULTS

df=1 p<.001) (III). Victims over 50 years of age among the prison officers were more often subjected to social exclusion than younger victims (aged under 50 years 43%, over 50 years 67%,  $\chi^2 = 4.44$  df=1 p<.05) (III').

### Bullies

Table 5 shows the organizational status of bullies among the municipal employees and prison officers. The bullies were usually co-workers; 46% of the victims among the municipal employees (I') and 52% among the prison officers (III) reported their co-workers as bullies. The female victims in particular were bullied by co-workers, while the male victims reported bullying by co-workers and supervisors or managers about equally often. Among the municipal employees, the victims identified many bullies, both co-workers and supervisors or managers, and the whole work unit.

**Table 5. The organizational status of the bullies of male and female victims among the municipal employees (I') and prison officers (III). The figures are percentages unless otherwise stated.**

Bullies	Municipal employees		Prison officers	
	Men (N=13)	Women (N=80)	Men (N=120)	Women (N=19)
Co-worker	31	49	49	74*
Immediate supervisor/manager	38	24	43	21
Subordinate	8	0	5	5
Whole work unit			3	0
Whole work unit/co-worker and the nearest supervisor, co-worker and a manager/supervisor and subordinate	23	28		
	$\chi^2 = 7.96$ df=3 p<.05		$\chi^2 = 4.38$ df=3 ns	

\*)  $\chi^2 = 3.95$  p<.05 between men and women for co-worker/other bully

## Antecedents of bullying

### The work environment and personality traits

Table 6 presents the results of the logistic regression analyses conducted among all prison personnel (V) to determine work-environment factors and personality traits

## RESULTS

**Table 6. Victimization among all prison personnel by levels of organizational factors and self-esteem (victims N=396, observers and unexposed N=1264) (V).**

Predictor	Bivariate model Odds ratio (95% Confidence Interval)	Multivariate model Fully-adjusted odds ratio (95% Confidence Interval)
<b>Role ambiguity</b>		
Low	1.00	1.00
Moderate	1.39 (1.02, 1.89)	1.04 (0.73, 1.47)
High	2.16 (1.63, 2.86)	1.28 (0.92, 1.77)
<b>Individual control</b>		
Many possibilities	1.00	1.00
Moderate	1.43 (1.09, 1.88)	1.16 (0.85, 1.60)
Few possibilities	2.94 (2.23, 3.88)	1.59 (1.13, 2.23)
<b>Managerial climate</b>		
Interested	1.00	1.00
Intermediate	1.45 (1.06, 1.98)	0.82 (0.58, 1.19)
Not interested	2.56 (1.92, 3.42)	1.02 (0.71, 1.47)
<b>Social climate</b>		
Good	1.00	1.00
Moderate	1.97 (1.32, 2.92)	2.23 (1.42, 3.49)
Poor	8.12 (5.59, 11.80)	8.22 (5.26, 12.84)
<b>Violence by inmates</b>		
Little	1.00	1.00
Moderate	1.09 (0.81, 1.45)	1.06 (0.77, 1.47)
Much	1.63 (1.24, 2.15)	1.39 (1.02, 1.91)
<b>Self-esteem</b>		
High	1.00	1.00
Intermediate	1.31 (0.97, 1.76)	1.07 (0.78, 1.47)
Lowered	1.69 (1.28, 2.22)	1.08 (0.77, 1.52)

p<0.05 when both values in a confidence interval are either < 1.00 or > 1.00.  
Fully adjusted odds ratio = adjusted for all other variables of the model

## RESULTS

**Table 7. Correlations between the study variables (V).**

Variable	1	2	3	4	5
1. Role ambiguity	–				
2. Individual control	.29	–			
3. Managerial climate	.22	.34	–		
4. Social climate	.30	.36	.38	–	
5. Violence by inmates	.08	.15	.30	.08	–
6. Self-esteem	.20	.25	.15	.23	.03

All correlations are statistically significant  $p < 0.001$  except that between violence by inmates and self-esteem (ns)

predicting victimization. Table 7 shows the correlations between the study variables (V).

As Table 6 shows, role ambiguity, individual control, the managerial and social climate, as well as violence by inmates, were associated with perceived bullying. In the fully-adjusted model, high correlations in particular between social climate, managerial climate, role ambiguity and individual control seemed to decrease the effects of the variables as independent predictors of bullying. However, after adjustment for all of the other variables of the model, the odds ratio of bullying for poor social climate remained unchanged at 8.22.

In the bivariate model, lowered self-esteem was associated with bullying, but in the adjusted model, the effects of the other variables decreased the effect of self-esteem as an independent variable. Gender and age were not included in the analysis, because an earlier analysis had shown that they were not connected with perceived bullying.

Among the municipal employees (I), perceived bullying was associated with organizational climate and with the way in which opinions were accepted in the work unit, as well as with anticipated changes at work. Self-esteem and neuroticism were also analysed as potential antecedents of bullying. Both correlated with perceived bullying, but the connection disappeared when gender and age, social climate and some work-environment factors were controlled for.

When the victims were asked about their perceptions of the reasons for the bullying that they had been subjected to in municipal workplaces (I), they referred most often to envy (strong effect 63%), a weak supervisor (42%), competition for work or advancement (38%), and competition for the superior's favour and approval (34%).

### **Observers' views of their work environment**

Given that victims of bullying may have an overly negative view of their work unit, and that their experience may have been affected by bullying, the experiences of bystanders in terms of their work environment were investigated.

## RESULTS

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In order to determine the work-environment factors predicting witnessed bullying among the prison personnel, a logistic regression analysis was conducted among the observers (Table 8) (V). As the table shows, the social climate in the work unit, the managerial climate in the organization and violence by inmates were associated with observed bullying. The odds ratio for poor social climate remained significant after adjustment for the other variables at 3.28 and for much violence by inmates at 2.10.

The victims of bullying among the municipal employees usually perceived the general climate of their workplace as strained and competitive with everybody pursuing their own interests (42%), while 21% of the observers, and 10% of the unexposed, had such perceptions (the difference between the three study groups  $p < .001$ ). A non-bullying workplace was usually described as relaxed and pleasant (42% of the unexposed), but only 21% of the observers, and 7% of the victims perceived the climate of their workplace in this manner ( $p < .001$ ). The observers also perceived the communication climate in their work unit as poorer ( $p < .001$ ), their possibilities of influencing matters as poorer ( $p < .001$ ), the flow of information as poorer ( $p < .001$ ) and attitudes to innovations as poorer ( $p < .01$ ) than the unexposed (I).

## Consequences of workplace bullying

### Self-reported stress, mental distress and job dissatisfaction

In this study, bullying was regarded as a problem of the whole work unit. The level of well-being was therefore analyzed among the victims, the observers and the unexposed group. Table 9 sums up the results on reported stress, mental distress, feelings of low self-confidence and job satisfaction in the three study groups among the municipal employees (II) and all of the prison personnel (V).

As Table 9 shows, the bullied employees reported all these reactions more often than the observers and the unexposed group did. The observers were also affected by bullying. They particularly differed from the unexposed in overall feelings of stress and job satisfaction, but did not differ in the feelings of low self-confidence.

The effect of gender on the reported symptoms of ill-health was also analyzed (I', V). As Table 9 also shows, gender was a significant explanatory factor among the prison personnel. The male prison employees, whether victims, observers or unexposed, reported more stress and job dissatisfaction than the females. The non-significant interaction term bullying \* gender suggests that bullying may have similar effects on stress, mental health and job satisfaction in men and women.

## RESULTS

**Table 8. Observed bullying among all prison personnel by levels of organizational factors and self-esteem (observers N= 524, unexposed N=740) (V).**

Predictor	Bivariate model Odds ratio (95% Confidence Interval)	Multivariate model Fully adjusted odds ratio (95% Confidence Interval)
<b>Role ambiguity</b>		
Low	1.00	1.00
Moderate	1.08 (0.84, 1.40)	0.89 (0.66, 1.29)
High	1.21 (0.93, 1.60)	1.08 (0.80, 1.45)
<b>Individual control</b>		
Many possibilities	1.00	1.00
Moderate	0.96 (0.70, 1.30)	0.54 (0.38, 0.79)
Few possibilities	1.07 (0.83, 1.36)	0.90 (0.68, 1.19)
<b>Managerial climate</b>		
Interested	1.00	1.00
Intermediate	1.77 (1.36, 2.32)	1.52 (1.12, 2.06)
Not interested	2.54 (1.95, 3.33)	1.83 (1.32, 2.52)
<b>Social climate</b>		
Good	1.00	1.00
Moderate	1.61 (1.23, 2.09)	1.55 (1.16, 2.07)
Poor	3.27 (2.43, 4.41)	3.28 (2.32, 4.64)
<b>Violence by inmates</b>		
Little	1.00	1.00
Moderate	1.65 (1.26, 2.16)	1.51 (1.13, 2.01)
Much	2.42 (1.85, 3.17)	2.10 (1.56, 2.83)
<b>Self-esteem</b>		
High	1.00	1.00
Intermediate	0.87 (0.67, 1.12)	0.74 (0.55, 0.99)
Lowered	1.08 (0.83, 1.41)	1.04 (0.77, 1.39)

p<0.05 when both values in a confidence interval are either < 1.00 or > 1.00.  
Fully-adjusted odds ratio = adjusted for all other variables in the model

RESULTS

**Table 9. Feelings of stress, mental distress, low self-confidence and job-dissatisfaction experienced by the bullied, the observers of bullying and the unexposed among municipal employees (II, I') and prison personnel (V).**

	<u>Feelings of stress</u>		<u>Mental distress</u>		<u>Feelings of low self-confidence</u>		<u>Job dissatisfaction</u>	
	Municipal employees Mean SD	Prison personnel Mean SD	Prison personnel Mean SD	Prison personnel Mean SD	Municipal employees Mean SD	Prison personnel Mean SD	Prison personnel Mean SD	Prison personnel Mean SD
Bullied (B)	3.23 1.09	3.17 1.13	2.40 0.62	2.68 0.81	2.73 0.99			
Observers (O)	2.83 1.12	2.53 1.01	2.07 0.50	2.31 0.68	2.38 0.82			
Unexposed (Non)	2.56 1.06	2.38 1.04	2.00 0.47	2.18 0.61	2.18 0.82			
ANOVA	F=27.75 p<.001	F= 76.09 p<.001	F=80.99 p<.001	F=22.62 p<.001	F=53.78 p<.001			
Pairwise t-test	B/O p<.01 B/Non p<.001 O/Non p<.001	B/O p<.001 B/Non p<.001 O/Non p<.01	B/O p<.001 B/Non p<.001 O/Non p<.03	B/O p<.001 B/Non p<.001 O/Non ns	B/O p<.001 B/Non p<.001 O/Non p<.001			
MANOVA	F-value p-value	F-value p-value	F-value p-value	F-value p-value	F-value p-value			
Main effects	22.19 <.0001	125.07 <.0001	131.04 <.0001	26.62 <.0001	82.37 <.0001			
Bullying	0.93 .33	12.89 .0003	10.75 .0011	0.88 .35	6.53 .0107			
Gender								
Interaction effects	0.02 .89	0.34 .56	2.16 .14	0.16 .69	0.24 .62			
Bullying * gender								

## RESULTS

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As employees also face other work-related stressors, an analysis was conducted among the municipal employees to determine whether the connection between bullying and decreased well-being remained significant when the effects of other stressors were controlled for (II). A heavy work pace and poor goal clarity, as well as excessively difficult tasks and the scarcity of meetings, were significant predictors of feelings of stress and of mental stress reactions. After adjustment for these work-related stressors, being a victim of bullying remained a significant predictor of the stress reactions measured. Observation of bullying also predicted stress after the effects of a high work pace, role ambiguity, excessively difficult tasks, scarcity of meetings and anticipated changes had been controlled for.

Organizational and work-related bullying seemed to have the strongest correlations with reported stress reactions among the municipal employees (Table 10) (II, I'). All forms of social isolation, ignored presence, meaningless tasks and direct social exclusion, as well as sexual harassment, had strong correlations with feelings of low self-confidence.

### **Use of sleep-inducing drugs and sedatives**

The victims of bullying also used sleep-inducing drugs and sedatives more than the respondents who were not bullied (II).

### **Cardiovascular disease and depression**

Prolonged bullying among the hospital staff (IV) was associated with the onset of both depression and cardiovascular disease among those who were free from these diseases at baseline, as Figure 2 shows. After adjustment for age, gender and income, the odds ratio of incident cardiovascular disease for prolonged bullying compared with no bullying was 2.3, and that for new physician-diagnosed depression 4.8. Thus, the association between bullying and these diseases was not attributable to differences in the studied demographic factors.

The possibility of reversed causality, that is whether cardiovascular disease or depression at baseline predict bullying of those who were not bullied at baseline, was also tested. The results indicated that depression at baseline predicted bullying. Gender and age did not predict subsequent bullying (IV).

## RESULTS

**Table 10. Correlations between the forms of bullying and reported stress reactions among the municipal employees (N=96) (II, I').**

	Feelings of stress	Mental stress reactions	Feelings of low self-confidence
<u>Social isolation</u>			
Your presence is ignored	.13	.21 <sup>x</sup>	.28 <sup>x</sup>
Your opinions are ignored	.22 <sup>x</sup>	.21 <sup>x</sup>	.31 <sup>xxx</sup>
You are socially excluded from the company of others	.08	.19	.27 <sup>xx</sup>
<u>Organizational and work-related means</u>			
You are criticised and your job or contribution is devalued	.34 <sup>xxx</sup>	.25 <sup>xx</sup>	.21 <sup>x</sup>
You are given meaningless tasks	.14	.25 <sup>xx</sup>	.43 <sup>xxx</sup>
<u>Personal means</u>			
People make derogatory comments and laugh at you	.17	.24 <sup>x</sup>	.23 <sup>x</sup>
People make offensive remarks about and criticise your private life	.29 <sup>xx</sup>	.28 <sup>xx</sup>	.14
<u>Intimidation</u>			
You are given verbal threats (occasionally or often)	.39	.22	.07
You are sexually harassed (occasionally)	.13	.23 <sup>x</sup>	.28 <sup>xx</sup>

x p<.05    xx p<.01    xxx p<.001

## RESULTS

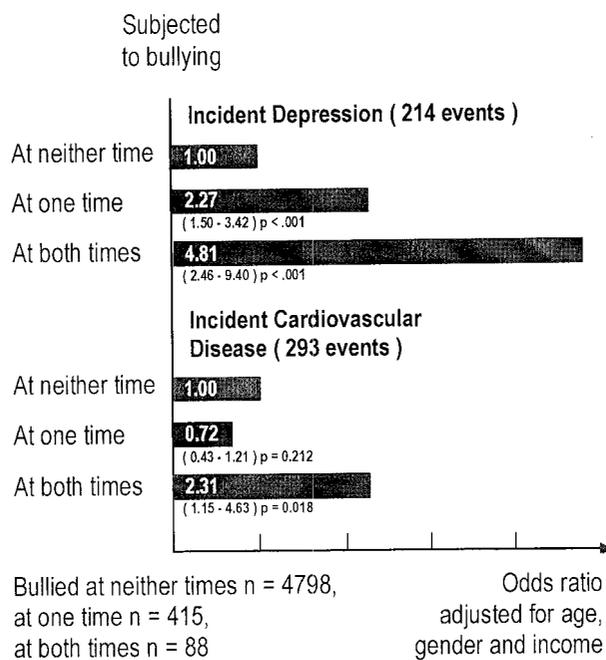


Figure 2. Incident depression and cardiovascular disease.

## 5. Discussion

The European Union (Paoli & Merllier 2001) and the ILO (Violence on the Job 1998) have recognized workplace bullying as a serious problem in European workplaces, and have expressed their concern about the effects of bullying on the health and well-being of workers. Research into bullying has been and is going on in many European countries. This study provided new insights and perspectives into adult bullying, particularly with respect to different organizational settings, gender differences, observers of bullying, and the health effects of prolonged bullying, as well as into the role of depression in predicting its onset.

### **The work environment and personality as risk factors of bullying**

Regarding the connections between bullying and the work environment, the present findings were in agreement with other studies (Einarsen et al. 1994, Hoel & Cooper 2000). In particular, a poor social climate seemed to be a risk for perceived bullying. The lack of individual control and high role ambiguity were also connected with perceptions of being bullied, although multicollinearity (high correlations between the variables) seemed to decrease the effects of these variables as independent correlates. The functioning of the work unit, as well as anticipated changes at work, were also associated with perceptions of being bullied. As far as the prison personnel were concerned, of special interest was the association between being subjected to violence by inmates and perceptions of bullying. The results suggest that being subjected to violence by prison inmates correlates with perceptions of bullying.

On the basis of this study, neither the frustration-aggression nor the social-interaction models of aggression, discussed earlier, could be rejected. Longitudinal data should be used and, as suggested earlier by Einarsen et al. (1994a), e.g., the stress levels of both victims and bullies ought to be measured in support of or rejection of either model. The frustration-aggression model would suggest high stress levels in bullies, whereas the social-interaction model would suggest higher stress levels in victims. As the present study also showed, the stress level of the victims is generally high. Observers and respondents from workplaces free from bullying reported less stress than the victims of bullying. No data were available on the stress levels of bullies, however. To test the General Affective Aggression Model, also the individual difference variables ought to be measured.

Given that bullying could be construed as a negative experience, its victims may, according to attribution theory (Kelly 1972), put the 'blame' on bullies or on the external work environment. By analysing observers' perceptions of the work environ-

## DISCUSSION

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ment, any skewed views of victims were avoided. The results indicating connections between the work environment and bystanders' observations of bullying were similar to those of victims' reports: a poor social climate, a poor managerial climate and a violent environment (violence by inmates) correlated with observers' reports on bullying. The observers also perceived the atmosphere in their work unit as strained and competitive more often than the employees from workplaces where no bullying occurred. Role ambiguity and individual control, which could be regarded as more 'personal' features of work, did not correlate with observed bullying. Thus the results make attribution theory a more unlikely explanation for the strong link between the work environment and bullying.

When the victims were asked about their perceptions of the reasons for the bullying that they had been subjected to, they usually referred to the characteristics of bullies (envy), weak leadership or work the environment (competition), thus indicating the process of attribution. This supports earlier findings (Björkqvist et al. 1994a), and indicates that it may be difficult for victims to see the connection between the work environment and bullying. It has also been suggested (Kile 1990, Hoel et al. 1999) that bullies are increasingly condemned as their bullying continues, and that studies should pay attention to the potential presence of attribution in severely traumatized victims.

To date, only a few studies have attempted to determine whether some of the victim's personality traits trigger bullying. Lowered self-esteem has been regarded as a potential antecedent of bullying. The present findings seem to support previous studies (Einarsen & Raknes 1991, McGurkin et al. 2001) in that the victims of bullying scored lower on self-esteem than the observers and the unexposed, although no differences were found between the latter two. This could indicate that individuals with low self-esteem may be more vulnerable to bullying and, as Coyne et al. (2000) suggested, personality traits may indicate who might be selected as victims when a bullying process starts at a workplace. Another explanation for the lower self-esteem scores of the victims of bullying than of those who were not bullied may be that individuals with low self-esteem perceive some behaviours as bullying more easily than those with high self-esteem.

The low self-esteem found in the victims may also result from bullying; long-term intimidation and repressive and dismissive behaviour may ruin a person's self-esteem. In this study, lowered self-esteem correlated with perceptions of bullying, but after adjustment for role ambiguity, individual control, managerial climate, social climate and violence from inmates, it was not a significant correlate. This may suggest that other stressful work characteristics may also contribute to the decline of self-esteem, and the finding would thus be in agreement with previous cross-sectional studies that have suggested that lowered self-esteem may sometimes be a response to high occupational stress (Kivimäki & Kalimo 1996). A cross-sectional study does not allow for the

## DISCUSSION

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interpretation of causality between bullying and self-esteem, however. The following vicious circle may, however, be hypothesised to exist: a person's lowered self-esteem makes him/her more vulnerable to bullying and, when bullied, his/her self-esteem declines further.

### **Consequences of bullying**

#### ***Job dissatisfaction and stress reactions***

Being subjected to bullying is considered a serious work stressor (Zapf et al. 1996). Thus, one of the main questions of this study concerned the influence of bullying on job satisfaction, health and well-being. A high stress level was particularly regarded as a consequence, not as an antecedent, of the bullying process.

The victims of bullying more often reported job dissatisfaction, overall stress, symptoms of mental distress and feelings of low self-confidence than the observers and the respondents from non-bullying workplaces. This is in agreement with previous studies (Björkqvist et al. 1994a, Einarsen et al. 1998, Einarsen & Raknes 1997, Hoel & Cooper 2000). In addition, qualitative studies (Mikkelsen 1997) and discussions with victims have shown that victims regard their poor health as due to bullying, and not vice versa.

Of the various forms of bullying, negative criticism and devaluation of the victim's job or work contribution, offensive remarks or criticism about the victim's private life and verbal threats seemed to have the most devastating effects on the psychological well-being of the victims. This is in agreement with the results of previous studies (Einarsen & Raknes 1997, Zapf et al. 1996), in which criticisms of a person's private life and personal derogation showed the strongest correlations with the victim's psychological ill-health. Different forms of social isolation, ignoring a person's presence, not allowing him or her to express his/her opinions, and social exclusion, as well as giving pointless tasks, were the forms of bullying with the strongest associations with feelings of self-confidence. Feelings of self-confidence were also particularly affected by sexual harassment.

#### ***Bullying and serious health problems***

The study among hospital workers was the first longitudinal study on the association of bullying and serious health problems. The study design allowed for testing both the extent to which bullying predicted the onset of cardiovascular disease and depression, and the extent to which these illnesses predicted bullying. A clear cumulative relationship between bullying and the incidence of depression was found: the longer the exposure to bullying, the greater the risk of depression. The role of workplace bullying

## DISCUSSION

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as an etiological factor in mental-health problems was thus supported. This finding is in agreement with those of previous studies of bullying as a predictor of depressive symptoms among teenage schoolchildren (Bond, Carlin, Thomas, Rubin & Patton 2001), of cross-sectional studies of the association between bullying and symptoms of depression (Björkqvist et al. 1994a), and of prospective studies on the association between interpersonal conflicts and psychiatric morbidity (Romanov, Appelberg, Honkasalo & Koskenvuo 1996).

In the present study, depression also predicted subsequent bullying. This suggests that the process is a vicious circle in which mental-health problems are a result of, and at the same time increase susceptibility to, bullying. In stressful work situations in particular, employees with ailments limiting their work capacity may be more vulnerable. Previous cross-sectional studies have also found that employees in subsidized employment, who may have been limited in their work ability were bullied more often than others (Leymann 1992c). On the other hand, people with mental-health problems may also more easily perceive other peoples' behaviour as bullying.

### ***Observers of bullying***

There have been very few studies on the effects of bullying on observers (Hoel & Cooper 2000). In the present study, the observers also reported feelings of stress, symptoms of mental distress and job dissatisfaction more often than the respondents from the non-bullying workplaces. However, observing bullying had no connection with feelings of self-confidence. In all, these results give some additional support to the view that the stress reactions measured among victims of bullying are consequences of it and that the problem is not confined to the victim, but affects the whole work unit.

### **Prevalence of bullying**

The prevalence of bullying seems to vary depending on the organizational setting. In the present study, the prevalence among municipal employees (10.1%) was only slightly higher than has been found in other Finnish studies (Piirainen et al. 2000) and in Norwegian research in the public sector (8.2%) (Einarsen & Skogstad 1996), and slightly lower than that found in a UK study in the public sector (14%) (UNISON 1997).

Among hospital staff (5.0%), the prevalence was similar to what has been found in other Scandinavian studies on hospital staff and nurses (about 3–5%) (Einarsen et al. 1998, Einarsen & Skogstad 1996, Mikkelsen & Einarsen 2001). Thus, this study did not support the concept that health-care workers are at a higher risk of bullying than workers in other sectors (Paoli & Merllie 2001). However, this may only be true of Scandinavian countries, as much higher prevalences have been reported among hospital staff outside Scandinavia, e.g., in Austria (26.5%) (Niedl 1996) and Northern

## DISCUSSION

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Ireland (46.9%) (McGuckin et al. 2001). Direct comparisons between different studies are often difficult because of the different measurement methods used, although quite similar definitions and measures of bullying have been used in studies carried out in Scandinavia.

The prevalence of bullying in prisons (20.1%) was very high compared with most rates obtained using the same measurement strategy, although previous studies in prisons have also shown very high rates of perceived bullying. A British study, in which the prevalence of bullying was assessed in exactly the same way as in this one, found that 16.2% of the prison workers reported bullying (Hoel & Cooper 2000), and according to Swedish research, 22.6% of the prison workers had been subjected to offensive words or behaviour by a supervisor or a co-worker more than once during the previous 12 months (Thylefors 1999). Bullying has been found to be unusually common in the police force, another male-dominated, masculine occupation (Nuutinen et al. 1999). Thus, the male dominance and masculine culture that prevail in prisons, and the possible acceptance of bullying as an element of masculine communication, may partly explain its high prevalence.

Perceptions of behaviours perceived as 'bullying' may also show differences from one organizational context to another, and the role of organizational culture is significant in this respect (Archer 1999, Liefoghe & Olafsson 1999). According to the results of a study of bullying in fire-service organizations, which could be described as rank-structured and power-based cultures with long-standing traditions and dominant position of white males, the prevailing culture seemed to have a strong influence on people's perceptions of bullying (Archer 1999). Bullying in the form of ridicule and teasing may be accepted in such environments as horseplay and as part of the prevailing masculine culture, and thus nobody interferes or tries to stop it. However, the targets perceive it as bullying.

Prison personnel are also subjected to behaviour comparable to bullying, in other words verbal abuse, ridicule, scolding, being called names and continuous criticism, by inmates. It might be supposed that verbal abuse by inmates desensitize employees so that they would tolerate negative behaviour as part of the organizational context or culture, but the opposite may be true. The present study showed a connection between violence by prison inmates and perceived bullying. This reverse view was reported by the interviewed workers, who commented, "You can put up with the negative behaviours of inmates as part of the job, but negative behaviours by co-workers or supervisors are too much".

A hypothesis suggesting that Scandinavian workplaces are characterized by low levels of bullying has been put forward (Mikkelsen & Einarsen 2001). As said above, comparable studies from other European countries, with the exception of the UK, are scarce to date. The low level of bullying in the Scandinavian countries could be due to the egalitarian culture and the low power distance in workplaces compared to coun-

## DISCUSSION

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tries such as the U.K: there are relatively small differences in power and status between people in different formal and informal positions. The Scandinavian countries are also said to be more female-oriented than the United States, for example. Feminine cultures encourage their members not to be aggressive, dominating or assertive in social relations. Equality between the sexes and fluid sex roles are also valued. This may indicate less tolerance of aggressive behaviour and power abuse, and thus lead to a low level of harassment (Hofstede 1980, see Einarsen 2000).

Representative long-term studies on changes in the prevalence of bullying are still scarce. A Finnish study conducted its prevalence in a representative sample of employees in 1997 and again in 2000, and reported a very small increase, from 3.6% to 4.3% (Piirainen et al. 2000). If working environments become more demanding, while workloads, organizational changes, competition, uncertainty and different kinds of threats in the workplace substantially increase, the prevalence of bullying may also increase.

### **Bullies**

Co-workers were most frequently reported as bullies, which is in agreement with the results of some studies in other Scandinavian countries (Mikkelsen & Einarsen 2001). By way of contrast, in the UK (Hoel & Cooper 2000), supervisors have been most frequently reported as bullies. Power inequality between victim and bully is essential to the experience of bullying. As pointed out above, the Scandinavian countries could be characterized as countries with low power distance, which may at least partly explain the differences in results regarding reported bullies between Scandinavia and countries with higher power distance.

### **Gender differences**

Gender differences or similarities in facing and experiencing workplace bullying have attracted surprisingly little attention so far. One aim of this study was to consider the role of gender in this respect. Gender differences seem to be small. As in most previous studies (Einarsen & Skogstad 1996, Hoel & Cooper 1999, Leymann 1991, Piirainen et al. 2000, Quine 1999), the men and women in the present study reported bullying equally often across the samples studied. Gender did not predict incident bullying among hospital workers, either.

Men and women were bullied in very much the same ways. Derogatory comments out of earshot was one of the most common forms among the municipal employees and the prison personnel, with no differences between the men and the women. However, it was more often the men than the women who were not invited to joint meetings, and given overly little or no work at all, i.e. subjected to organizational or work-related bullying. These results are slightly different from those of previous studies

## DISCUSSION

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(Paananen & Vartia 1991). Respondents from managerial ranks have reported being burdened with 'unmanageable workloads' and 'unreasonable deadlines', i.e. work-related bullying, more frequently than workers and supervisors (Hoel et al. 2001). Given that managerial ranks are composed of more men than women, these results are in agreement with the findings of the present study.

The female prison employees reported significantly more sexual harassment than their male colleagues, and the extent of their reported sexual harassment was also unusually broad compared with the results of other Scandinavian studies (Mikkelsen & Einarsen 2001, Piirainen et al. 2000). Among the female-dominated municipal employees, no difference in extent of reported sexual harassment was found between the men and the women. These findings are in agreement with those of previous studies, in which high rates of sexual harassment of female employees have been found in male-dominated, masculine occupations, namely the police force (Nuutinen et al. 1999).

No questions were asked about the gender of the bullies in this study, so it was not possible to analyse the various forms of bullying accordingly.

The female victims specified co-workers as their bullies slightly more often than the male victims, while the male victims reported their supervisors as bullies more often than the females. This result is in line with the results of previous studies (Hoel et al. 2001). Most supervisors, particularly in prisons, are men. This may lead to more competitive situations between male workers and their male supervisors than is the case with female workers, and may be the underlying factor in some bullying of male workers by their supervisors. Female prison officers, a minority in their work units, may show some differences in approach and attitudes to work, or in the way they treat the inmates and are treated by them compared with the approaches and attitudes of their male colleagues. This may sometimes lead to a situation of perceived bullying between female officers and their male colleagues.

Bullying had similar effects on stress, mental health and job satisfaction in the men and the women. Gender was a significant correlate of stress symptoms among the prison personnel but not among the municipal employees. The male prison employees, whether victims, observers or unexposed, reported more stress and job dissatisfaction than the females. Previous studies (Vartia & Hyyti 1999) have shown that male prison employees are more often subjected to violence by inmates than female employees. Workplace violence has also been shown to be correlated with stress and psychological well-being (Budd, Arvey & Lawless 1996, Rogers & Kelloway 1997, Vartia & Hyyti 1999). Thus, the greater amount of violent attacks on male employees by inmates may account for some of the differences between men and women in the reported stress reactions.

### **Methodological considerations and implications for further research**

The strengths of this study were the relatively large sample sizes (and the total sample in the prisons), the use of data from different occupations and work organizations, and the prospective hospital data. The response rates in the surveys were 64–81%, which is satisfactory for a study of this type. The gender distributions of men and women were in good agreement with those in eligible populations of municipal and prison personnel. Among the hospital workers, women were slightly over-represented but gender was not associated with bullying.

A study of bullying faces several conceptual challenges. The lack of a common definition of bullying often makes it hard to compare the findings of different studies. The strategy used here, involving definition and self-judgment, has been recommended because it seems to give a good picture of the proportion of people experiencing a wide range of specific negative behaviours and perceiving themselves as victims. It has also been suggested that if only the operational criterion is used, the number of acts to which a victim is subjected on a weekly basis should be increased to two, for instance, in order to obtain a more reliable picture of the prevalence of bullying (Mikkelsen & Einarsen 2001).

The lists of intimidating behaviours, also used in this study as an additional measure of bullying, also largely rely on subjective views (Cuzack 2000). How, for example, should interpersonal rivalry be distinguished from bullying, or legitimate management measures from victimization? On the other hand, some items used to assess the functioning or social climate of a workplace (e.g., “Everybody is listened to at my workplace” or “Can you influence decisions concerning yourself in your work unit?”) may also be regarded as forms of bullying, and the question is answered accordingly. Obviously, conceptual and methodological development is needed in this area of research.

The perception of being bullied at work is a subjective experience, and people show differences in their perceptions (Liefoghe & Mackenzie Davey 2001). So far, bullying has been considered and studied by most authors in general terms. This means that very different kinds of situations are called ‘bullying’, such as bullying by co-workers and supervisors, as well as bullying by an organization or a faceless bureaucracy. Further studies are needed on the meaning of ‘bullying’ in different organizational contexts and sectors, and of co-worker bullying/supervisory bullying. Researchers should jointly discuss and decide whether it is time to extend the vocabulary used to describe the different kinds of bullying. This has also been suggested earlier (Rayner, Sheehan & Barker 1999). It has been proposed that the term ‘bullying’ should be used as an umbrella term encompassing more than one phenomenon (Einarsen 1996), and that the term ‘perceived victimization’ could be appropriate to describe the experience of

## DISCUSSION

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individuals and 'collective or group intimidation' could be a term more suitable for the bullying experience of groups (Hoel et al. 2001).

While significant positive correlations were obtained between perceived bullying and self-reported stress symptoms, the cross-sectional design of the surveys does not allow for the establishment of a causal relationship between bullying and ill-health. In the longitudinal study of bullying and serious health problems, bullying predicted the onset of depression but depression also predicted subsequent bullying. Further longitudinal studies are needed to clarify the relationships between bullying, well-being and morbidity.

Longitudinal studies are also needed to investigate stress as a potential antecedent of bullying, in other words as a potential risk to become bullied and to become a bully. This also presupposes the identification of the bullies.

An additional limitation of the present study is that its measurements solely relied on self-reports. This raises concerns about common-method variance problems, i.e., bias due to third variables that may affect relationships between the variables measured using the same method. The results showing connections between the work environment and bystanders' observations of bullying were similar to those from the victims' reports, thus providing additional support for a connection between social climate and bullying.

The question has often been asked whether victims of bullying respond more actively to questionnaires on the subject and thus cause exaggerated prevalence rates. Studies among 2000 pupils involving self-reporting and teacher rating showed very good agreement between the two (Olweus 1987). The high percentages of observers of bullying in many studies also validate the perceptions of self-reported victims to a certain degree. On the other hand, being bullied at work could also be perceived as humiliating, or as an admission of some kind of weakness. This may make it difficult for the subject to admit in a questionnaire study that he or she is a victim of bullying, which may lead to its underestimation.

The study gave new insights into the role of some of the work-environment variables and individual traits in perceiving bullying. However, little is still known about the role of different personality traits in this context, and further studies are needed. Studies of individual traits such as introversion, criticality, negativity and spontaneity in connection with bullying would be useful. Further longitudinal studies are needed to explore the role of self-esteem in the bullying process. Further studies of victims and bullies are also needed in order to clarify, support or abandon the frustration-aggression or the social-interaction approach as links between work environments and bullying.

Studies of bullying at school have considered the different participant roles of classmates, such as defenders, outsiders, assistants and reinforcers (Salmivalli, Huttunen & Lagerspetz 1997, Salmivalli, Lagerspetz, Björkqvist, Österman & Kaukiainen 1996).

## DISCUSSION

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Workplace bullying may be possible only when supervisors, other members of the work unit and the organizational culture accept it. Not enough is known of the behaviour of other members of work units, including supervisors. Thus, future studies of group processes are needed with a view to preventing the escalation of bullying in workplaces. Further studies are also needed on the personality, intentions and motives of bullies.

### **Conclusions**

The present study investigated potential antecedents of bullying and self-reported symptoms of stress, as well as serious health problems, in connection with perceived and observed bullying. The results suggest that work environment-factors may play an important role in the onset of workplace bullying. The psychological well-being not only of the victims, but also of the observers, was lower than that of the employees who worked in workplaces where no bullying occurred. The longitudinal study revealed an association between a history of bullying and increased incidence of cardiovascular disease and depression. Bullying seemed to be an escalating multiform process. There is the risk of a vicious-circle effect with mental problems resulting from bullying and susceptibility to bullying increasing at the same time. Future research should employ more sophisticated methods to study bullies and the group processes associated with bullying in workplaces.

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