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Absenteeism as a Reaction to Harmful Behavior in the Workplace from a Stress Theory Point of View**

The paper gives an overview as to the extent of socially harmful behavior in the workplace. Data comes from European Survey on Working Conditions. We draw upon the information from the surveys which were carried out in 2000, 2005 and 2010 in the EU-15. Unfortunately, the findings show that the number of employees who suffer socially harmful behavior in their work environment is not low. Following the assumption that stressful working conditions increase the probability of harmful behavior it is shown that the reaction to harmful behavior depends on what resources are available to the person affected. Social support and satisfying working conditions prove to be effective buffers against hostile behavior. Nevertheless, behavioral buffers can only play a supporting role in detecting and removing the causes of hostile behavior. The paper adds new insights into the topic and in addition to an overview, we identify empirically significant determinants and conduct a stress theoretic analysis of different ways of reacting to socially aversive behavior.

Key words: **absenteeism, working conditions, stress theory** (JEL: J28, J78, J81)

Introduction

This paper presents empirical findings on the extent and the different forms of harmful behavior within business establishments. Surveys usually show that the vast majority of employees are satisfied with their colleagues and usually get along well with their superiors.¹ On the whole the positive aspects of the working relationships

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1 The results of the representative German Socio-Economic Panel (GSOEP) from the year 2001 may serve as an example (in the following years, regrettably, the following questions were no longer asked). Question: “*Do you get on well with your fellow workers?*” Answer: “applies fully” 76.2%, “applies partly” 17.4%, and “does not apply” 6.5%. Question: “*Do you often have conflicts with your boss?*” Answers: “applies fully” 2.4%, “applies partly” 20.2%, “does not apply” 77.4% (the figures can be obtained on the soepinfo portal: <http://panel.gsoep.de/soepinfo2013>).

with co-workers and superiors prevail, the interactions are characterized by benevolence or at least by a certain kind of indifference. Colleagues help each other, support each other, and evoke feelings of belonging and community. However, one observes sometimes also very negative incidents in working environments in all gradations, from indifference to rejection, hostility and aggression. In the academic as well as in the practical literature special attention has been given to harmful behaviors of co-workers and supervisors under the heading “bullying” or “mobbing”, terms which denote a multitude of both ruthless but also of subtle forms of aggressive behavior. There is disagreement about the frequency of such behavior, a fact that is not especially surprising, because the terms “bullying” or “mobbing” are often defined very differently. Beyond those terminological quarrels, at the core, all definitions are concerned with the experience of a socially induced impairment, which overstretch the coping-abilities of a person (Neuberger, 1999, p. 19). Neuberger mentions three main targets of bullying behavior: depreciation, social exclusion and destruction of the working basis of a person (*ibid.*). It is not possible to give a definitive catalogue of mobbing-typical behaviors, since the effects even of obvious aggressive behaviors also depend very much on the perception of the persons concerned. However this may be, because all men are in a fundamentally sense social beings, hostile behavior never leaves anyone unaffected, social stress will always be connected with severe psychological impairment.

One way of dealing with this kind of stress is to avoid it, i.e. to (at least temporarily) escape the hostile environment by staying away from the workplace. This is the subject of our article, which has two objectives: As a first aim, we wish to describe the frequency of socially harmful behavior in the workplace. To this end, we will look at the results of the European Working Conditions Survey (EWCS). The EWCS provides a solid database, because it is a representative survey across Europe, is carried out on a regular basis, and therefore provides information on the temporal stability of its results. A number of studies on related topic – e.g. job quality, work related sickness and health (Benavides, Benach, Diez-Roux, & Roman, 2000; Gimeno, Benavides, Amick, Benach, & Martínez, 2004; Nienhüser & Matiaske, 2006; Smith, Burchell, Fagan, & O'Brien, 2008; Wagenaar et al., 2012) – is based on EWCS accordingly. The second aim of our article is to present a stress-theoretical interpretation of the correlation between socially harmful behavior and avoidance behavior (in the form of absenteeism). Stress-theoretical studies usually try to identify stress-inducing conditions, situations and events (“stressors”). In our analysis, we look at the effect of a special kind of stress-inducing behavior: intimidation (bullying and harassment) at work. An important branch of stress theory asks about what makes it easy or difficult for people to cope with stress. In the present paper, we are dealing with two factors which can buffer the impulse “to leave the field” as a reaction to social stress: social support and a person’s affiliation with his organization. Thereby we have to distinguish two levels of argumentation. At the theoretical level, we argue with rather abstract constructs; at the empirical level, we deal with

concrete answers to the questions of the EWCS with limited possibilities for an elaborate measurement. Thus, the variables of the empirical analysis only partially depict the content of the theoretical constructs, but can (at least in our opinion) serve as suitable proxy-variables and the study provides a viable approach to combine the strengths of a theory-based argumentation with the descriptive strength of a large-scale representative survey.

Theory and Hypotheses

Hostile behavior towards fellow individuals does not stem from malice alone (Zimbardo, 2004). Often, it is only a misdirected attempt to impose one's own will (Tedeschi & Felson, 1994). Anyhow, psychic and physical violence is not acceptable in any sense, and it is by no means accidentally that normally internalized values and social sanctions prevent a person from acting destructively. Because of this, strong forces are needed to brush aside the internal and external norms that control social interaction and direct a person towards peaceful courses of action. One of these forces is a high level of stress because it can trigger latent aggressive feelings. However, stress theory considerations do not only play a significant part in explaining the origin of harmful behavior of colleagues, superiors, customers, etc., they are also relevant when it comes to explaining the behavior of the victim. The reaction on humiliation and intimidation will vary widely depending on the coping strategies the person has at his/her command.

Stress as a Trigger of Harmful Behavior

Studies on stress in the workplace highlight a whole series of so-called stress inducers (Furnham, 1997, p. 319), such as heat, noise and excessive work load, role conflicts, lack of group cohesiveness, poor working atmosphere (Cox, Griffiths, & Rial-Gonzales, 2000). Whether a particular factor actually causes stress depends on the effect that it triggers. The deciding factor is whether one is able to meet the demands that arise in a work situation, i.e., whether one has sufficient capabilities and resources to cope with the stressful factors (McGrath, 1976).

Stress can have a lasting negative impact on a person's well-being, and can direct behavior towards some very strange courses of action. The list of the effects of stress that have been investigated in empirical research is at least as long as the list of stress-generating influential factors. Emotional and physical consequences (e.g. feelings of anxiety, emotional exhaustion, impairment of health, dissatisfaction) and behavioral effects (e.g. reduced performance, drug abuse and absenteeism) were studied. Also investigated were the effects of stress on modes of hostility and socially damaging behavior both of which are of primary concern in our article (Kahn & Byosiére, 1992). Even physical violence in the workplace can be observed as the result of stress. Aggressive behavior is certainly often caused by disruptions that are rooted in the area of interpersonal relations, but it can also be triggered by anxiety,

frustration and general feelings of being threatened, all of which are based on factors other than social stress factors (Elliott & Jarret, 1994). Some examples of this include poor labor organization and bureaucratic regulations that are perceived as spoon-feeding (Ashforth, 1994; Wright & Smye, 1996). From an empirical point of view, it is evident that stress can have a rather significant impact on harmful behavior. Stress creates unfavorable conditions for successful collaboration and can even lead to the destruction of labor relations, which, at their very core, are based on cooperation. Employees within an area of work that is affected by high stress may collectively suffer from social-psychological overload. If there exist no social rules and regulations socially damaging patterns of behavior may result, especially if feelings of being threatened and powerlessness prevail. Stress in such situations causes narrow-mindedness when assessing the causes of the stress, ignoring the fact that the colleagues are affected by work-related stress in the same way as oneself. Work stress can induce social stress, causing uncontrolled attempts to regulate the behavior of the colleagues, discrimination and looking for scapegoats.

However, these consequences will not occur in every case. A high stress level merely increases the likelihood for the occurrence of socially harmful behavior. Whether or not it manifests itself depends on additional conditions. If employees do not need to collaborate closely, for example, collective actions such as mobbing rarely occur; when opinion leaders present a positive example, aggressive tendencies can be avoided; if the employees toward whom the hostile acts are directed are equipped with effective counter-strategies, then the conflict needs not to escalate, etc. The latter point refers to the reactions of the persons affected by the harmful behavior, which we will discuss in more detail below.

Reactions to Harmful Behavior

It seems fitting to take a look at mobbing (or in more general terms: at harmful behavior) as a particular stress factor (Zapf, Knorz, & Kulla, 1996). Among the many stressors, social sources of stress are among the strongest stress-producing factors – both quantitatively and qualitatively (Schwartz & Stone, 1993). If social stress takes on hostile forms, a completely bewildering interactive situation can easily develop. Conflicts that are carried out with aggressive means have a tendency to escalate (Van de Vliert, 1998; Glasl, 1999) and can evolve into vicious circles. As described above, stress can elicit harmful behavior. Harmful behavior as such is also encumbered with stress and thus induces further stress, which in turn intensifies the originally causative work stress. In view of overwhelming stress experiences caused by hostile behavior, the question becomes even more urgent as to how people cope with this type of stress. Stress theory considerations can provide explanations by looking at the coping strategies individuals choose, which does not mean, that the resources for coping with the situation lie primarily within the individual. “Stress management” is not a one-sided task of the affected person, but always occurs in tune with the forces of the social environment. In other words: The social environ-

ment is not only the source of (possible) stressors it also provides resources for coping with stress (Cox & Mackay, 1979). Below, we will address three stress-reducing resources and focus in particular on their buffering function. A stress buffer is characterized by the fact that it reduces the feeling of stress, or gives emotional relief and thus also reduces the probability of unproductive stress reactions. We are unable to elaborate on the entire scope of possible stress reactions here. These range from active efforts to eliminate the stressors to using cognitive mechanisms that give a new interpretation to the situation (among other things by repression, denial and redefinition), and attempts to evade the situation. In our empirical analysis, we deal only with one specific stress-based evasive behavior, the temporary “flight from the field” by absenteeism from the workplace. Of course the decision to stay away from the workplace can also be part of an active problem-solving behavior, but as a rule it most likely results from the need for relief from excessive pressure and should therefore be classified as reactive behavior (for empirical results about causes of absenteeism see, among others, Harrison & Marocchio, 1998). In the following, we would like to examine which conditions increase the probability of this behavioral reaction – from a stress theory point of view.

Personal prerequisites as a buffer

Many industrial science studies are based on the distinction between “objective” stress factors and the mental strain. One of the central statements of the so-called stress-strain concept (cf. Hacker 1984) is whether workload and working conditions operate as genuine stressors depends on the person’s unique work situation. A person who has good work-related capabilities can better withstand work pressures, a person who can make his own decisions about his work can handle work pressures by good time-management and a person with high stress resistance (e.g. low sensitivity or high emotional stability) perceives work pressures as less encumbered with stress. The stress-strain concept indicates that there are specific personal characteristics that can help a person to cope with stress. While this point of view certainly seems plausible, it is not completely satisfactory, because it does not take into account the behavioral processes that help a person to cope with stress.

Social environment as a buffer

Social support is an important resource for dealing with stresses and strains, and with conflicts that may result from social interaction (House, 1981; Schwarzer & Leppin, 1991; Zapf et al., 1996; Hobfoll, 1989, 2009). A person who becomes the victim of harmful behavior and feels isolated in this situation will be less capable to meet this challenge than someone who can rely on the encouragement, the emotional closeness, and the active support of a third person. Frese and Semmer (1991) mention four mechanisms, which result from social support. The first one involves social support as a way of meeting the need for social approval. The second one operates as a means for maintaining self-confidence. The third one pertains to concrete

assistance, which helps to eliminate social stressors, and the fourth one involves changing perception: stressors lose their threatening character if a person is not forced to face them alone. All of these reasons lead to a situation where people who can rely on social support will be less inclined to react to hostile actions with evasive behavior.

Work situation as a buffer

While the social environment can be a source of harmful behavior, it can also be an effective remedy. In any case, social support can considerably soften the effects of stress. This observation can be applied to the entire work situation. Social support is an important element of action, but there are other factors as well, i.e. it is the entire work-situation, which may support or undermine the attempts of employees to manage stress. But what characterizes an employee's work-situation? One central element is the person's perception of the employment relationship, especially the emotional commitment towards this relationship. A person whose membership within the organization is carried by positive experiences and who feels that he or she is an important part of the organization is most likely able to gain confidence from this affiliation so that he/she is also in a position to cope with difficult and high-pressure situations. These conclusions can for example be drawn from the stress theory of Lazarus and Folkman (1984). According to those authors, stress is primarily a matter of perception and judgment. The psychological management of stress situations depends primarily on whether they are perceived as threatening or not (primary judgment) and whether the affected person believes that there is a chance for taking actions to remove the causes of this stress (secondary judgment). People who are emotionally attached to the organization are therefore in a (relatively) favorable position as far as stress management is concerned. They will not experience the harmful behavior directed towards them in the same way as people who develop only an impersonal relationship with their employers. In contrast to social support, however, being emotionally attached does not pertain to assistance coming from the outside, but rather to the way one sees oneself, a perception which is drawn from one's daily work and from experience gained within the organization. A person who acts from a robust and self-confident base will not be so deeply impressed by social pressures and will also counter them with more confidence than a person who experiences the workplace as a place of insecurity. Moreover, he or she will therefore be less inclined to see flight behavior (as for example absenteeism) as an adequate means of handling social stress.

Summary

In the following, we present an analysis of the data of the European Working Conditions Survey and use the indicated theoretical considerations as a basis. Our line of argumentation is presented in Figure 1. According to this, a work environment

burdened by stress increases the probability that socially harmful behavior will occur (upper half of the figure).

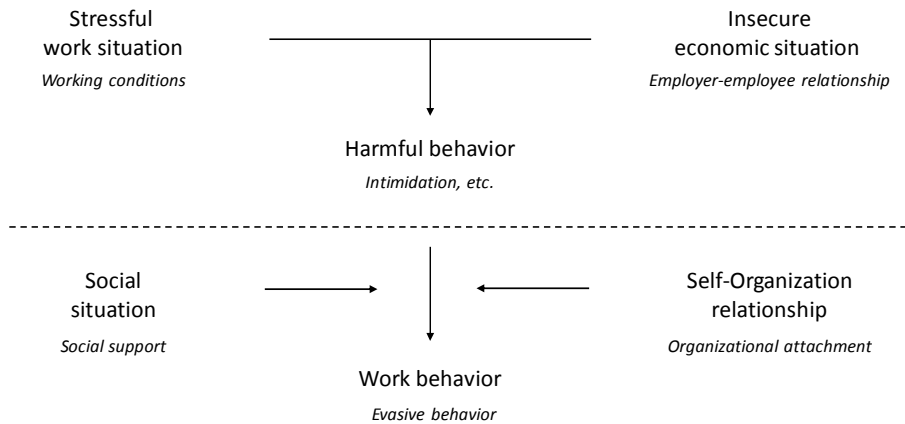


Fig. 1: Empirical model of the relationship between stress, harmful behavior and absenteeism

Following this we examine whether the buffer effects discussed in the previous section can be verified empirically (lower half of Figure 1). The focus is on the hypothesis that social support on one hand and self-perception on the part of the affected employee on the other hand lessen the impact of social stress on individual stress behavior. We expect that employees will use evasive behavior less often as a reaction to stress if they can fall back on social support and/or a well-founded perception of themselves (the specific variables we were able to use in our empirical analysis are shown in Table 1 below, after describing the data set of the EWCS).

Method

We draw upon the information contained in the European Working Conditions Survey, and analyze the data from the surveys which were carried out in 2000, 2005 and 2010. The sample of 2000 consists of 21,679 participants from the then 15 EU member states (Paoli & Merllié, 2001). The data of 2005 is based on 29,680 interviews in 31 countries in Europe (Parent-Thirion, Macías, Hurley, & Vermeylen, 2007), and the data of 2010 on 44,000 interviews in 34 countries (Parent-Thirion et al., 2012), whereby— for reasons of comparability — focus is on the 14,952 (2005) and, respectively, 18,535 (2010) respondents in the then 15 EU countries.

In order to investigate these relationships, we first have to assign the empirically collected data to the theoretical constructs that we used (see Table A1 and the questionnaire in the appendix). In doing so, we have put up with a few compromises, which we feel are justified, however. The determination of *stress factors* is relatively

easy. For this purpose, the survey examines a number of employment-related aspects, which can easily be compiled into an overall index (see below). In addition to the direct work situation, there is also another string of potentially stressful factors. A particularly significant class of this type of stressors results from the *economic situation*, in particular from financial dependency. The existing data encompasses this aspect only to a very limited extent. Still we do not want to completely ignore this relationship and check whether experiences with harmful behavior can be found in various occupational relationships, which provide different level of economic security.

Information provided by workers as to whether they were exposed to *intimidation attempts* at their place of work is used as a manifestation of harmful behavior. The European Working Conditions Survey also includes other forms of harmful behavior (e.g. discrimination, physical violence and sexual harassment). Because they are very heterogeneous, it makes no sense to consolidate them into an overall index of "harmful behavior." We therefore concentrate on the intimidation variable (bullying/harassment), which deserves special attention because it carries a large portion of the meaning of socially induced harmful behavior. The *social support* aspect is operationalized by using questions regarding the opportunity for social interaction in the workplace. One of the specific questions asked whether the workers have contact to persons they can talk with about possible changes of the working conditions within the organization. To be sure, this question only indirectly addresses the social support one can resort to, but gives nevertheless some indications as to whether one has the possibility to find social responsiveness in the workplace and to what extent one can feel confident that one's work-related problems would be dealt with in an open and helpful manner. Unfortunately, these questions are only available for the survey in 2000, therefore we had to look for a substitute which was used also in 2005 and 2010. We chose an item which asks whether one can get assistance from colleagues if one asks for it. An indirect indicator was also chosen for the variable *self-perception*, namely job satisfaction. People who report a high level of job satisfaction state that in a sense they feel at home at (or are emotionally attached to) their place of work. March and Simon (1958) even see job satisfaction as the result of the correspondence between self-image and job role. In this view, job satisfaction can be seen as the result of those aspects that we touched on with our discussion on perception of self, and therefore seems to be a useful indicator. Finally, we consider *absentee behavior* to be a dependent variable – as described. Of course, the EWCS only covers the periods of absence *related to illness* (number of days per year) – caused by work. In light of our topic, this limitation seems not only justifiable, but in a sense even fitting. In the literature, absenteeism is often interpreted as evasive behavior, although it is acknowledged that absenteeism covers only one of many facets of this complex phenomenon (cf. Mobley, 1982, Darr & Johns, 2008, Martin & Bartscher-Finzer, 2016, pp. 66, Ordlieb, 2017). A distinction is often made between health-related and motivational absenteeism, albeit this differentiation is

problematic as can be seen from the fact, that so-called motivational absenteeism can be rooted in fundamentally opposed motives. On the one hand, absenteeism may be an opportunistic attempt to maximize one's leisure time; on the other hand, it may be an understandable attempt to avoid massive strain. In addition, with regard to illness-induced absenteeism, it is frequently assumed that with sickness (however diagnosed), one has an objective condition of incapacity for work, and that the person concerned has no other option but to stay away from work. Certainly, there are quite different personal conceptions of health and the existence of a medical certification is merely a formal criterion for being ill. Nicholson (1977) therefore emphasizes the importance of attendance motivation in conscious opposition to the motivation for absenteeism. It is this motivation, which determines to what extent one gives way to the many conceivable absence-inducing events. "The key feature of the model is the motivational state of the person's ability to determine his or her susceptibility to the potential proximal causes of absence." (Nicholson 1977, p. 245). Warr & Yeata (1995) explain this idea as follows: "In cases of extremely severe sickness or injury there is no doubt about the interpretation of absence: a person 'off sick' is truly sick. However, when an individual is only marginally ill, it is clear that the decision whether or not to attend work is also in part a function of personal motivation. The relative contribution of health and motivational factors to attendance or sickness absence remains poorly understood." (p. 33) Actually, it may be extremely difficult to clarify the way in which the various tendencies towards absenteeism behavior intersect, even in a specific case. However, it seems reasonable to assume that in disease-related absenteeism, one will find considerable proportions of more or less conscious withdrawal motivation (whether somatic, psychologic or psychosomatic) – the desire to avoid (for a certain time) work-related stress. With the necessary caution, therefore, it seems justifiably to use the health related absenteeism caused by work as a form or a proxy for withdrawal behavior. A little complication in our study results from the fact, that in 2000 and 2005 the items, which asks for absenteeism behavior are not perfectly identic. The differences, however, seem to be not very large. A substantial problem arises from the 2010 data: there the question of *work-caused* absenteeism is completely lacking (see the questionnaire in the appendix).

In Table 1 our hypotheses are summarized schematically. They correspond to the relationships shown in Figure 1, but they now specify the concrete variables of the EWCS (see also the questions in the appendix). We have direct and indirect effects. Hypotheses 1 a and 1 b argue that in situations with many work-related stressors, one will observe more cases of intimidation than in situations with few work-related stressors. Hypothesis 2 argues that employees are more frequently absent from their job, when they are exposed to acts of intimidation. The hypotheses 3 a and 3 b suggest that the effect, which is postulated in hypothesis 2, is smaller if the employees have the opportunity to get assistance from co-workers and/or if they are satisfied with their job.

Table 1: Hypotheses of our empirical analysis

Direct Ef- fect	Hypothesis 1a: Stressful Working Conditions → Intimidation (Bullying/Harassment)	Hypothesis 1b: Irregular employment contract → Intimidation (Bullying/Harassment)
Direct Ef- fect	Hypothesis 2: Intimidation (Bullying/Harassment) → Absenteeism (due to health problems caused by work)	
Interaction Effect	Hypothesis 3 a: [Intimidation + Social Interaction] → Absenteeism	Hypothesis 3 b: [Intimidation + Job Satisfaction] → Absenteeism

Findings

In the following, we first present the empirical results on the frequency of harmful behavior at the workplace. We also report the correlations between work stress and types of harmful behavior and between the stress triggered by the harmful behavior and possible absentee behavior. With the help of multivariate analyzing procedures we examine whether our theoretical model stands the test of the empirical data.²

Significance of Harmful Behavior

In a survey of 2,500 Swedish workers, Leymann (1996) identified approximately 3.5% of workers affected by mobbing. In this survey, typical conflict situations of the previous 12 months were identified. As Leymann (1996) states “psychological terror or mobbing in working life involves hostile and unethical communication (...) mainly towards one individual who (...) is pushed into a helpless and defenseless position (...). These actions occur on a very frequent basis (...) and over a long period of time” (p. 168). The European Working Conditions Survey (EWCS) also asked about various stress-causing events. The respective question was: “Over the past 12 months, have you, or have you not, been subjected at work to ...”, whereupon up to 12 types of harmful behavior were listed (the items vary between the survey periods). The main results are reproduced in Table 2.

2 Our analysis is limited to employees, self-employed persons – apart from some descriptive observations in section 4.2 – were excluded from our analysis.

Table 2: Workers’ experiences with harmful behavior

Harmful behavior	Women			Men		
	2000	2005	2010	2000	2005	2010
Physical violence (work environment)	2.1 %	3.7 %	2.7 %	1.4 %	2.5 %	2.5 %
Intimidation (bullying/harassment)	10.9 %	9.3 %	7.0 %	8.6 %	6.8 %	5.7 %
Sexual discrimination	2.9 %	2.7 %	3.3 %	0.9 %	0.7 %	0.8 %
Unwanted sexual attention	3.2 %	3.2 %	3.0 %	0.9 %	0.8 %	1.2 %
Discrimination, age	3.1 %	3.0 %	3.7 %	3.1 %	2.8 %	3.2 %
Discrimination, nationality	1.2 %	1.2 %	1.6 %	1.0 %	1.8 %	2.7 %
Discrimination, ethnic background	1.0 %	0.9 %	1.6 %	0.9 %	1.1 %	2.6 %
Discrimination, disability	0.6 %	0.5 %	0.5 %	0.5 %	0.4 %	0.8 %
Discrimination, sexual orientation	0.4 %	0.2 %	0.4 %	0.3 %	0.2 %	0.8 %
Number of cases (intimidation)	7,960	6,435	9,526	9,907	5,920	8,972

As you can see, a considerable portion of the respondents reported that they are or have been exposed to acts of intimidation. By comparison, discrimination based on age or nationality has less significance for the time being. But if, instead of all of those surveyed, we consider only those people over the age of 55, the percent of persons affected by age-related discrimination increases to 5.4% (in 2000 and in 2005) and 6.0% (in 2010). Age-related discrimination is of course not only a phenomenon related to older people, but also affects young workers, since 8.1% (2000) of the people under the age of 20 also report that they are discriminated against based on age (8.6% in 2005, 9.0% in 2010). An impression of the extent of harmful behavior can be obtained when the broader work environment is included. If you look not only at those directly affected, but also at other occurrences in the respective organization, then the numbers increase accordingly. 77.3% of employees report no occurrences at all of harmful behavior in their work environment. Expressed in a different way, 22.7% of the workers report that they have observed at least one of the different types of harmful behavior listed in Table 2 in their work environments. 13.8% of the employees report more than one and 8.0% report more than two of these types of behavior (data only for 2000 available).

Differences specific to nationality are listed in Table A2 in the appendix. There, the figures on the extent of sexual harassment vary greatly. In very general terms, we can

see that there are many more reports of sexual harassment in the northern European countries than in the southern European countries. These differences cannot be explained simply in terms of the “actual” behavior, but rather also in terms of different interpretation patterns of the respective behavior. Methodical reasons may also be responsible for the different pattern of responses, because willingness to speak freely about sexual harassment is not the same in all parts of the world. The likelihood of becoming the victim of sexual harassment (i.e. unwanted sexual attention) is greatest in the service industries (6.1% of women in the branch of hotels and restaurants in 2005 and 9.1% in 2010), which can be seen as an indication that sexual harassment cannot be localized to just within one’s circle of colleagues, but also applies to customers. In 2010 one question was (as in 2000 and 2005) on “unwanted sexual attention”, a further question directly asked for “sexual harassment”. Only 117 (41.2%) of the 284 women who report about unwanted sexual attention also report about sexual harassment.

Work Stress Factors and Harmful Behavior

The EWCS is concerned primarily with the documentation of working conditions. Therefore, the number of job aspects considered in the questionnaire is quite large. In the following, we will focus on a few selected aspects of the working conditions. Nevertheless we want to cover a broader range of possible types of work stress – with the help of an index including vibrations, noise, heat, cold, vapors, contact with chemical substances etc.³ We ask whether work stressors increase the likelihood that harmful behavior will occur. The results show a positive correlation between *environmentally-based work stress* and the risk of being exposed to socially harmful behavior. In workplaces without environmental stress only 7.2% (2000; 5.6% in 2005; 4.3% in 2010) of the employees report being exposed to intimidation attempts. This value increases continuously with the number of environmental stress factors. In workplaces having more than five environmental stress factors, 16.3% (2000; 10.1% in 2005; 9.9% in 2010) of the people report intimidation attempts. Besides the working environment, aspects of the work content also relate to social stress. Elements of *stressful work content* are for example tiring or painful positions, carrying or transporting heavy loads, and repetitive hand or arm movements. The likelihood of the occurrence of intimidation furthermore increases if work is characterized by frequent *interruptions* and by lacking opportunities on the part of the employee to take *influence* on his working conditions.

Additional stressful work characteristics are summarized here. As described above, direct customer contact can be a significant explanation for social stress. Stressful *work content* also increases the likelihood of the occurrence of intimidation. The

3 The existence of the respective working conditions was determined using a seven-step rating scale. Cases in which the indicated working conditions do not exist or exist only to a very small degree were compiled and compared to the other cases (existence in at least 25% of working hours).

same holds for frequent work interruptions and for lack of opportunities on the part of the employee to take influence on his working conditions. Autonomy in the workplace, i.e. the opportunity to independently determine the sequence of tasks, the work methods, and the speed with which tasks are completed, does not have any direct effect, however. If we combine all of the stressful characteristics mentioned we get the results shown in Table 3. Our hypothesis that stress factors increase the likelihood that socially harmful behavior will occur is forcefully reaffirmed by these results.

Table 3: Extent of work stress and intimidation in the workplace (Index of stressful work content, work interruptions, lack of autonomy, lack of influence)

Number of types of stress	Intimidation (bullying/harassment)		
	2000	2005	2010
No stress at all	2.8 % (1,697)	4.0 % (1,487)	2.4 % (2,288)
One type of stress	7.2 % (4,564)	5.0 % (3,377)	4.0 % (5,157)
Two types of stress	9.3 % (4,893)	7.7 % (3,421)	5.8 % (5,187)
Three types of stress	12.0 % (4,226)	10.9 % (2,703)	9.1 % (4,141)
All four types of stress	17.9 % (1,464)	19.7 % (822)	15.8 % (1,167)

Stress and the resulting socially harmful behavior is not only the result of the direct stress factors of work, however. Stress at work also has economic causes. Associated with this is a very strong dependence on the employer. Unfortunately, this variable is not directly included in the EWCS, and therefore the type of employment relationship is used as a proxy, which gives some indication of the dependency of employees. Compared to “regular employees”, for example, subcontracted and temporary employees have a rather uncertain employment relationship. If one assumes that the economic pressures are quite high in companies that make use of these “flexible” employment relationships, then one can assume that in such firms – stress-related – conflicts will increase. Employees who have a more flexible employment relationship may be the objects of hostile acts, because regular employees may perceive them as a threat to their own position.

The empirical results show only some minor effects of the employment relationship. On the other hand, as far as work stress is concerned, distinct differences come to light, in particular with respect to autonomy. While about half of the employees in a standard employment relationship report having a high level of autonomy, only a third of the subcontracted workers responded in this way (the results are similar in 2000, 2005 and 2010). With respect to the work environment and work content as

well, subcontracted workers come out on the short end. The differences only amount between 5 to 10 percentage points in each case, however for 2000, 2005 and 2010.

Harmful Behavior and Absenteeism

About 9.5 percent of the employees surveyed in 2000 report that they have stayed away from work due to work-related illnesses over the last twelve months. For the survey in 2005 the items were a bit different, so a direct comparison is not possible, but the magnitude is very similar (7.5%). In 2000, the days absent from work were about 22 days (arithmetic mean, median 10 days), in 2005 the arithmetic mean is 27 days, median 10 days.⁴ In 2010, regrettably, the respondents were only surveyed about absence because of health problems in general and not health related absence days which were caused by work. Working conditions also proved to be an important influential factor with regard to the absentee pattern of behavior. Of the people who say that they are not exposed to any of the stress factors listed in Table 3, only 2.6% report (in 2000) work-related absence from work, while it was indicated by 23.6% of the persons who are exposed to all four types of stress – more than eight times as many.

But what type of correlation exists between harmful behavior and absenteeism? The empirical results in Table A3 in the appendix show that the likelihood for the occurrence of work-related absence from work climbs two- to threefold when social stressors in the form of harmful behavior occur.

Intervening Processes

In summary, we can confirm that the existence of social stressors clearly increases the absence from work ratio. The intention of our theoretical explanations is to make it clear that the effects resulting from social stress can be buffered if certain social and/or individual conditions exist. The topic will be discussed in more detail in the next section. In the following sections multivariate analyses will be used to show whether our theoretical arguments are valid.

Job satisfaction

Approximately 31% (26%) of the employees surveyed are “very satisfied” with their working conditions, about 54% (58%) are “somewhat satisfied”, about 12% (13%) are “somewhat dissatisfied” and about 3% (3%) are “very dissatisfied” (results for 2000, in parentheses the results for 2005). As was to be expected, there is a close correlation between dissatisfaction and absentee behavior (Table A4 in the appendix). The results are similar for the 2010 data, where only the numbers for health-related absences are reported: In 2010 the average absence days is 4.7 days

⁴ Not included in these average figures are those employees who report that they had not missed a single day due to illness.

for the very satisfied employees, for the dissatisfied employees 20.8 days (regarding only those employees with at least one day of absences the respective numbers are 10.8 days and 34.7 days).

On the other hand, job satisfaction is adversely affected by hostile behavior. The greatest impact have discriminating types of behaviors, but the effects of the other stressors are also considerable. Hostile behavior doubles or even triples job dissatisfaction among employees (see Table A5 in the appendix).

How do harmful behavior, job satisfaction and absenteeism act in combination? We expect – as described beforehand – a buffering effect of job satisfaction. That is, we assume that people who are satisfied do not react to social stress by being absent to the same degree as dissatisfied employees. And indeed, of the people who are exposed to intimidation attempts, 36.5 % (2000; 30.2% in 2005) react with absentee behavior – if they are unsatisfied with their jobs at the same time. If, on the other hand, they are satisfied with their working conditions, this pattern of reaction loses considerable significance. The corresponding percentage rate decreases to less than one half, or to only 16.6% (2000; 15.1% in 2005). If not intimidated the frequencies of absenteeism change because of dissatisfaction from 7.6% to 18.2% (2000) and from 5.5% to 14.8% (2005), i.e. less than in the case of being intimidated. The data therefore confirms our theoretically derived hypothesis.

Social support

As part of the EWCS, employees were also asked, whether they have a contact person with whom they can discuss the working conditions and whether they could discuss possibilities to change the working conditions. About 81% answered the first question with “yes” and about 78% answered the second question with “yes”. Both questions were answered in the affirmative by 75% of the employees surveyed (data only for 2000 available). These employees will be compared to the other employees in the following.

The two groups show very little difference with respect to absentee behavior. The same applies for socially harmful behavior. Noteworthy differences can be found with respect to the questions on discrimination. Employees who are unable to resort to social support in order to influence their working conditions experience more discrimination.⁵ Because the mentioned items only were available for the survey 2000, we used as a substitute an item which asked whether the employees can count on the assistance of colleagues (89% in 2000 answered “yes”, in 2005 53% answered “almost always”, 21% answered often and 15% answered “sometimes”). The bivariate correlations between this item and absenteeism are only of limited statistical significance. Nevertheless, it makes sense to test our suspected buffering ef-

⁵ Respectively, about 25% harmful behavior if contact persons are available compared to 35% if there are no contact persons.

fect. The results of this analysis are shown in Table A6 in the appendix. As the reader can see, intimidation is reflected both in the case of persons with as well as in the case of those without social support ("assistance from co-workers") by a distinctly higher rate of absenteeism, although this effect is greater for persons without social support than for persons with social support. Our buffer hypothesis is therefore confirmed not only with regard to job satisfaction, but also with regard to social support (but see the results below).

Correspondence Analysis: Summary of Empirical Findings

In order to summarize the empirical findings, we would like to present a graphic overview of important determinants and consequences of harmful behavior. To create the graphic overview, we are using the correspondence analysis (Benzécri, 1992), a procedure related to the main component analysis, which allows us to present the correlations between the categories of cross-classified tables within the area. Physical closeness, or more precisely, the common position of the categories in distance from the center of the presentation is therefore to be interpreted as the correlation or correspondence of the categories. One thing to consider here is that the axes, determined in order to present the correlations, depict the variations of the input data with decreasing amounts of explanation. In our correspondence analysis (Figure 2) the first axis (Dim. 1) absorbs about 18% of the variance and the second only 9%. The variation of the input data is therefore depicted with only a very small loss of information.

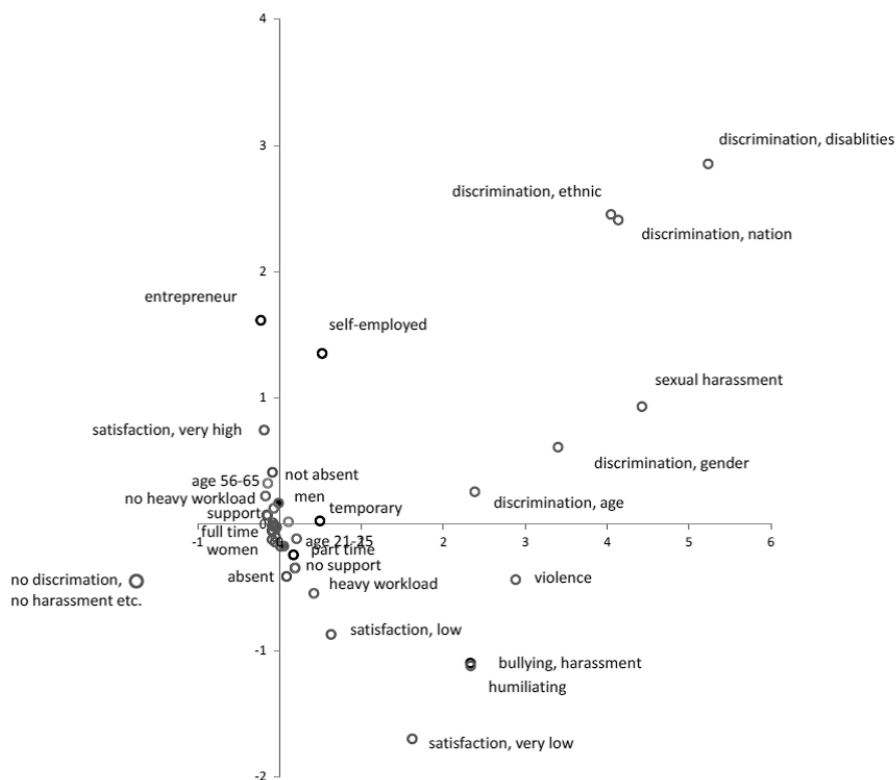
The figure shows the results of the analysis of the 2010 data set. We used the linked Burt table as the input data of the theoretical argumentation presented here. The variations of socially harmful behavior collected in the EWCS are the focal point. Economic dependence and the burdens of stress are related to these methods of behavior as upstream effects. We use the discussed index of overall stress. The indicator of social support and self-perception are not included here as moderating variables, but instead solely in terms of their simple correlation with the harmful behavior. Their buffering function or, technically speaking, their interaction with harmful methods of behavior and the combined effect on absence from work is the subject of the subsequent multivariate evaluation. In the correspondence analysis, periods of absence from work as a result of harmful behavior are recorded as a dichotomized index. As already mentioned the survey of 2010 does not directly refer to absenteeism as a result of working conditions but more general to absenteeism because of health problems. Therefore, we use this variable as a proxy for the actually more informative work related absence variable. In order to round off the picture with reference back to the individual findings as discussed, we also take the age and sex of the persons surveyed into consideration.

The results in Figure 2 show a clear separation of the occurrence of harmful methods of behavior along the first dimension. These are again separated into two groups

by the second axis. The types of discrimination based on nationality, ethnic affiliation or due to a disability are closely associated. Discrimination based on age and gender and sexual harassment are also closely associated. A special group of social harmful behavior encompasses physical violence, bullying, harassment and humiliating, behaviors that tend to be experienced more by women than by men. In this region, one finds also situations of heavy workload, no social support and low job satisfaction and absenteeism.

It should be noted, that in essential points the reported results (on the base of the survey 2010) are very similar to the results of the correspondence analysis on the base of the survey 2000.

Fig. 2: Correspondence analysis: Scatterplot of included variables



Total Model: The Buffer Function of Social and Individual Resources

Finally, our considerations on the buffer function of emotional attachment and social support are checked with the help of multivariate analysis. In this section we use the Nonmet program of Kritzer (1987; for a detailed application-oriented des-

cription, cf. Küchler, 1979). The Nonmet program is based on an approach developed by Grizzle, Starmer, and Koch (1969), which can serve as a general frame of reference for the variety of methods for table analysis. It does not consider the values of individual persons but the values of subpopulations. On this aggregate level, it is possible to define a metric of the target variable (for example a percentage) and analyze the data using regression analysis. In other words, with the help of the Nonmet program it is possible to carry out regression analyses whereby the independent variables are non-metric and the dependent variable is metric with the subpopulations as units (Küchler, 1979, p. 160). The statistical procedure therefore is characterized by a straight logic and the parameters of Nonmet-models do have an intuitive plausibility. In addition, the Nonmet procedure detects the effects of moderating variables in a straightforward way. It is therefore particularly well suited for testing our buffer hypotheses. In our analysis are included the variables that are mentioned in Table 4.

Table 4: Nonmet-models for explaining absentee behavior (health related absenteeism caused by work)

Parameter	Model I		Model II		Model III	
	2000	2005	2000	2005	2000	2005
Expected value	0.174	0.149	+0.188	+0.167	+0.187	0.167
Work stress	+0,023	+0.028	+0.042	+0.026	+0.023	+0.028
Intimidation	+0.045	+0.043	+0.063	+0.059	+0.062	+0.061
Dissatisfaction	+0.055	+0.042	+0.070	+0.056	+0.073	+0.055
Social support	+0.001	+0.001				
Work stress, Dissatisfaction			+0.009	+0.005		
Intimidation, Work stress			+0.014	-0.006		
Intimidation, Dissatisfaction			+0.019	+0.018	+0.024	+0.017
Model fit	X ² =54.4, df=11, p=0.000	X ² =28.7, df=11, p=0.026	X ² =0.8, df=1, p=0.771	X ² =0.6, df=1, p=0.424	X ² =12.8, df=3, p=0.050	X ² =2.1, df=3, p=0.550

The dependent variable is – as described beforehand – health related absenteeism caused by work. The set of independent variables consists of the following items: work stress (total index of all five types of stress), the occurrence of intimidation in the workplace, satisfaction with working conditions (as an expression of emotional attachment) and the availability of contact persons for questions regarding working conditions (as an expression of social support). Several models were formulated to test our hypotheses. The results of three model specifications are shown in Table 4.

Model I presumes only major effects. As the fit-index shows, model adaptation is not quite good. In Model II the direct effect of social support is not taken into account. The bivariate analysis already showed (see above) that social support has only a minor effect on absenteeism, if any. The multivariate analysis also confirms this. The contingent effect between social support and the stress variables is also not included because it is without effect. The goodness of fit index of Model II for the data is very good. For the 2000 data all shown effects are statistically significant. They can be interpreted as follows. Each of the variables included in the model changes the probability for the occurrence of absence from work. In workplaces with numerous work-related stresses, the probability that employees will exhibit work-related absences from work is about 4.2 points ($p=+0.042$) above the expected value. The direct opposite can be found in workplaces that are characterized by a low level of work stress. There the probability for absentee behavior is 4.2 points below the expected value. Thus, there is an absentee difference of 8.4% between workplaces involving a great deal of stress and those without a great deal of stress. The other coefficients can be interpreted analogously. Intimidation in the workplace causes the percentage of absentee behavior of employees to increase by 6.3% – as compared to workplaces where intimidation does not occur, it may even increase by twice that amount or 12.6%. This figure indicates that socially harmful behavior beyond the directly resulting psychic and social stress also has a considerable economic dimension. The direct effect of job satisfaction is also very important: it diminishes the probability of absentee behavior (-0.070), and job satisfaction also shows the previously mentioned buffer function. When employees are satisfied, the effects of intimidation are lessened (-0.019). The same applies for work stress (-0.014) and to a lesser extent there is also an interaction effect between dissatisfaction and work stress. For the 2005 data the two effects mentioned last do not reach the significance level of $\alpha = 0.05$. In Model III we have therefore omitted these relationships. As can be seen, the goodness of fit index for the 2005 data improves, but for the 2000 data it is more appropriate to include at least the interaction term between intimidation and work stress. The missing effect of social support may be due mainly to the measurement problems discussed above. Actually, when using the items which ask more directly for the possibility to discuss problems that may result from working conditions (question 30 a, which were regrettably only available for the survey in 2000), a distinct interaction effect between this indication of social support and intimidation results. If an employee is given the opportunity to discuss his working conditions in general and about the organization of his work when changes take place, the effect of high work stress on work-related absenteeism is considerably reduced. Also very impressive is the additional interaction effect between work-stress, intimidation and social support and satisfaction with work (see Table A7 in the appendix). It makes clear that the combination and interaction of the independent variables stimulate an overall effect which goes well beyond the mere addition of the individual effects.

Because the survey from 2010 does not entail the question for work-related absenteeism, to test our model with the data from 2010 we used the answers to general health related absences, whether they were caused by work or not. Referring to this data only the main effects for work stress, satisfaction and intimidation are significant. This is of interest both in methodological and in theoretical terms, because it shows that it makes a difference, whether one is speaking about sickness-related absenteeism in general, or about health related absenteeism caused by the work.

Discussion

All in all, the data confirm the relationships that we have derived theoretically.⁶ But there are limitations too. One problem comes from the changes in several questions in the different survey waves (e.g. the question to describe the social support of the social work environment through participation). Another problem lies in one-item measurements for complex phenomena (again the social support variable is an example). In addition, some variables of great interest are missing, for instance, the EWCS does not ask for overall job satisfaction but only for satisfaction with the working conditions, and additionally, the covered spectrum of proactive and defensive behavior strategies is rather small. Undoubtedly, the survey methodology in general has some intrinsic weaknesses regarding reliability and depth of the analysis, but one should not downplay its advantages. If based on sound theory it can deliver valuable insights. And only with the help of large-scale and representative data one can get a valid picture of developments in the world of work.

One of the aims of our paper was therefore to give an overview as to the extent of socially harmful behavior in the workplace. Unfortunately, the findings show that the number of employees who suffer from socially harmful behavior in their work environments is not low. A second objective of our analysis was to identify empirically significant determinants of socially harmful behavior. The results prove a close relation between work stress and social stress. The third objective was to show that it is helpful to use a stress theoretical argumentation to describe the reactions of employees to socially aversive behavior. The selected stress theory argumentation proved to be empirically conclusive. It shows that there are ways to cushion the effects of social stress. Social support and satisfying working conditions can be effective buffers against hostile behavior. In spite of this, the best method for dealing with socially harmful behavior is not to set up buffers, because behavioral buffers can only play a supporting role. The best way to deal with socially harmful behavior is to detect and remove the causes of hostile behavior and to support the employees to enhance their abilities and chances to deal with stress.

6 With the exception of hypothesis 1 b, which argues that employees with fixed term contract or temporary employment agency contract more often are affected by acts of intimidation than employees with unlimited permanent working contracts.

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APPENDIX

Questions from the European Survey on Working Conditions (EWCS) 2000, 2005 and 2010

Employment status (2000, 2005 and 2010 identical)

Are you mainly self-employed without employees, self-employed with employees, employed, other (spontaneous). Is it... on an unlimited permanent contract, on a fixed term contract, on a temporary employment agency contract, on apprenticeship or other training scheme, other (spontaneous).

Physical Environment (2000, 2005 and 2010 most often identical)

Please tell me, using the following scale, are you exposed at work to A-Vibrations from hand tools, machinery, etc; B-Noise so loud that you would have to raise your voice to talk to people; C-High temperatures which make you perspire even when not working; D-Low temperatures whether indoors or outdoors; E-Breathing in smoke, fumes (such as welding or exhaust fumes), powder or dust (such as wood dust or mineral dust) etc. (modified); F-Breathing in vapours such as solvents and thinners (new); G-Handling or being in skin contact with chemical products or substances (modified); [H-Radiation such as X rays, radioactive radiation, welding light, laser beams, not in 2010]; I-Tobacco smoke from other people (new); J-Handling or being in direct contact with materials which can be infectious, such as waste, bodily fluids, laboratory materials, etc. (new).

All of the time, almost all of the time, around 3/4 of the time, around half of the time, around 1/4 of the time, almost never, never, don't know.

Working Conditions (2000, 2005 and 2010 identical)

Please tell me, using the following scale, does your main paid job involve painful or tiring positions, carrying or moving heavy loads, repetitive hand or arm movements All of the time, almost all of the time, around 3/4 of the time, around half of the time around 1/4 of the time, almost never, never, don't know.

Interruption (2000, 2005 and 2010 identical)

How often do you have to interrupt a task you are doing in order to take on an unforeseen task?

Several times a day, a few times a day, several times a week, never, don't know.

Autonomy (2000, 2005 and 2010 identical)

Are you able, or not, to choose or change your order of tasks, your methods of work, your speed or rate of work?

Yes, no, don't know.

Social support through participation (only 2000)

Within your workplace, are you able to discuss...? 1. Your working conditions in general, 2. The organization of your work when changes take place
Yes, no, don't know

Assistance from colleagues (2000)

For each of the following statements, please answer yes or no.

You can get assistance from colleagues if you ask for it.

Yes, no, don't know.

Assistance from colleagues (2005)

For each of the following statements, please select the response which best describes your work situation.

You can get assistance from colleagues if you ask for it.

Almost always, often, sometimes, rarely, almost never, don't know, refusal.

Assistance from colleagues: help from colleagues (2010)

For each of the following statements, please select the response which best describes your work situation.

Your colleagues help and support you.

Almost always, often, sometimes, rarely, almost never, don't know, refusal.

Harmful Behavior (2000 and 2005 almost identical, 2010 in new order)

Over the past 12 months, have you or have you not, personally been subjected at work to [A-threats of physical violence, not in 2010], B-physical violence (2000, 2005: from people from your workplace), [C-physical violence from other people, not in 2010] D-bullying/harassment (modified), E-sexual discrimination/discrimination linked to gender (modified), F-unwanted sexual attention, G-age discrimination, H-discrimination linked to nationality, I-discrimination linked to ethnic background, J-discrimination linked to religion, K-discrimination linked to disability, L-discrimination linked to sexual orientation.

Yes, no, don't know, refusal.

Absenteeism (2000)

In your main paid job, how many days over the past 12 months were you absent due to an accident at work?

And due to health problems caused by your work?

Absenteeism (2005)

Q34A: In your main paid job, over the past twelve months, have you been absent for any of the following reasons? D-health problems.

Yes, no, don't know, refusal.

Q34B: Over the past 12 months how many days in total were you absent from work for reasons of health problems?

Q34C: Of the days of absence indicated above, can you indicate how many days were attributable to the following: Health problems caused by your work.

Absenteeism (2010)

Q72: Over the past 12 months how many days in total were you absent from work for reasons of health problems?

Satisfaction with working conditions (2000, 2005, and 2010 identical)

On the whole, are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with working conditions in your main paid job?

Very satisfied, fairly satisfied, not very satisfied, not at all satisfied, don't know.

Table A1: Theoretical constructs and their empirical manifestations

Variables of the theoretical model	Variables of the empirical model	Empirical indicators (survey 2000)
Independent/dependent variable: <i>Socially harmful behavior</i>	Intimidation in the workplace (bullying/harassment)	Question 31
Independent variable: <i>Stress load</i>	Stressful factors from work content, environment, organization	Index from questions 11, 12, 23, 25, 30 c
Independent variable: <i>Economic dependence</i>	Type of employment relationship (unlimited, fixed term, temporary)	Question 4
Moderator variable: <i>Social support</i>	Contact person with respect to working conditions and changes	Index of partial questions from question 30 a
Moderator variable: <i>Perception of self</i>	Satisfaction with the working conditions	Question 38
Dependent variable: <i>Evasive behavior</i>	Absenteeism due to health problems caused by work	Question 36

Table A2: Workers' experiences with harmful behavior by nationality (women only)

Harmful behavior (%)	Year	D	GB	F	I	S	N
Physical violence, work environment	2000	0.3	5.9	1.7	0.6	7.5	1.2
	2005	0.0	5.4	3.9	0.3	6.8	10.4
	2010	0.9	4.2	2.3	0.3	4.3	5.0
Intimidation (Bullying/Harassment)	2000	10.2	17.3	11.3	2.7	16.6	16.2
	2005	8.4	7.6	9.3	3.7	6.0	12.7
	2010	5.8	6.0	9.6	0.6	3.5	10.7
Sexual harassment (unwanted sexual attention)	2000	3.4	4.4	2.7	0.9	6.4	5.8
	2005	2.3	4.1	2.4	2.1	4.7	2.3
	2010	4.0	3.0	2.2	1.7	3.1	2.7
Discrimination, nationality	2000	1.8	1.9	0.8	0.7	1.2	1.7
	2005	1.2	1.4	1.2	0.3	2.1	0.8
	2010	0.9	0.8	1.6	0.2	1.6	1.2
Number of cases (in respect to the item "Intimidation")	2000	1,721	1,431	1,286	1,122	803	211
	2005	901	486	506	375	467	479
	2010		735	1,445	580	491	401

D=Germany, F=France, I=Italy, GB=Great Britain, S=Sweden, N=Netherlands

Table A3: Absence from work and social stressors (percentage of people who report absence from work attributable to health problems)

Type of harmful behavior	Absence from work because of health problems caused by work	
	2000	2005
Physical violence, work environment	16.9 % (302)	15.1 % (372)
Physical violence, other people	24.2 % (785)	13.1 % (564)
Intimidation/Bullying, Harassment	22.1 % (1,689)	20.9 % (975)
Sexual discrimination	32.3 % (319)	16.2 % (210)
Unwanted sexual attention	20.9 % (340)	17.7 % (248)
Discrimination, age	24.5 % (547)	18.8 % (351)
Discrimination, nationality	32.1 % (193)	12.6 % (182)
Discrimination, ethnic origin	25.6 % (160)	17.4 % (121)
Discrimination, disability	38.9 % (95)	31.5 % (54)
Discrimination, sexual orientation	15.9 % (63)	19.2 % (24)
Absence from work (all cases)	9.5% (17,693)	7.9 % (12,210)

Table A4: Absenteeism as it relates to satisfaction (percentage of employees with work-related absences from work)

Degree of job satisfaction	Absence from work		No. of cases	
	2000	2005	2000	2005
Very satisfied	5.1 %	4.1 %	4,858	3,205
Somewhat satisfied	8.4 %	6.9 %	9,991	7,016
Somewhat dissatisfied	18.0 %	16.5 %	2,177	1,538
Dissatisfied	29.6 %	24.1 %	578	378

Table A5: Job satisfaction and social stressors (percentage of dissatisfied people)

Type of harmful behavior	Job Dissatisfaction		
	2000	2005	2010
Physical violence, work environment	26.6 % (297)	25.3 % (383)	25.6 % (476)
Intimidation/bullying, harassment	31.1 % (1,702)	39.4 % (996)	42.7 % (1,162)
Sexual discrimination	37.6 % (319)	38.6 % (210)	36.2 % (381)
Unwanted sexual attention	28.7 % (338)	33.1 % (251)	26.3 % (388)
Discrimination, age	38.0 % (552)	37.6 % (362)	32.9 % (635)
Discrimination, nationality	32.8 % (195)	46.7 % (184)	40.7 % (393)
Discrimination, ethnic origin	33.7 % (163)	54.9 % (122)	41.1 % (375)
Discrimination, disability	40.4 % (94)	35.2 % (54)	36.6 % (115)
Discrimination, sexual orientation	46.0 % (63)	52.0 % (25)	31.7 % (82)
Percentage of dissatisfied employees (all cases)	15.8 % (17,814)	16.0 % (12,330)	14.6 % (18,389)

Table A6: Absence from work and intimidation (bullying/harassment) in relation to the opportunity to get (work related) assistance of colleagues (percentage of employees reporting work-related absences from work)

Type of harmful behavior	Assistance of Colleagues			
	2000		2005	
	Yes	No	Almost always, often, sometimes	Rarely, almost never
No intimidation	8.1 % (14,087)	8.3 % (1,745)	6.9 % (9,835)	6.4 % (1,242)
Intimidation	20,9 % (1.483)	32.3 % (192)	20.2 % (860)	26.1 % (115)

Table A7: Data 2000 Nonmet-models for explaining absentee behavior (health related absenteeism caused by work) including interaction effects of social support

	Saturated Model	Interaction-Model				
	B	Chi-Square	P	B	Chi-Square	P
MEAN	.8147E+00	7956.82	.00000	.8132E+00	16364.46	.00000
Work Stress (L)	.5634E-01	38.06	.00000	.5262E-01	50.47	.00000
Intimidation (B)	.6394E-01	49.02	.00000	.6184E-01	94.64	.00000
Dissatisfaction (S)	.7609E-01	69.41	.00000	.6814E-01	110.80	.00000
No Social Support (U)	.2300E-02	0.06	.80121	-	-	
LB	-.3712E-01	16.52	.00005	-.3705E-01	25.03	.00000
LS	-.1802E-01	3.89	.04846	-	-	
LU	-.1911E-01	4.38	.03641	-.2052E-01	8.41	.00374
BS	-.2313E-01	6.42	.01130	-.1795E-01	7.69	.00556
BU	-.7945E-02	.76	.38432			
SU	-.1136E-01	1.55	.21365	-	-	
LBS	.1004E-01	1.21	.27165	-	-	
LBU	.3166E-01	12.02	.00053	.2756E-01	15.16	.00010
LSU	.1209E-01	1.75	.18555	-	-	
BSU	.1027E-01	1.27	.26063	-	-	
LBSU	-.1418E-01	2.41	.12043	-	-	
Fit	saturated	$X^2=13.2$, $df=81$, $p=0.1051$				