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The effects of workplace bullying on witnesses: Violation of the psychological contract as an explanatory mechanism?

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The Effects of Workplace Bullying on Witnesses: Violation of the Psychological

Contract as an Explanatory Mechanism?

Abstract

This study analyses the effects of witnessing workplace bullying on employee attitudes and well-

being. Furthermore, the study seeks to extend our understanding of why bullying may result in

negative outcomes for witnesses, by studying violation of the psychological contract as an

explanatory mechanism. The paper draws on two survey studies conducted in Belgium (n=1,473)

and Finland (n=1,148). The results show that witnessing bullying affects work-related attitudes,

but not necessarily stress outcomes, when controlling for witnesses' own experiences of bullying.

Experiences of bullying on the part of the witnesses themselves are seldom controlled for in witness

studies, thus possibly leading to false positive results. Furthermore, the study finds support for the

role of psychological contract violation in explaining the relationship between witnessing bullying

and poorer employee attitudes, thus contributing to our understanding of the mechanisms behind

witnesses reactions. That witnesses perceive a psychological contract violation suggests bullying

affects the employee-organization relationship not merely for targets. Overall, the results

demonstrate bullying has effects beyond the target-perpetrator relationship and thereby further

highlight the need for organisational action to reduce the risk of bullying.

Keywords: workplace bullying; psychological contract violation; witnesses; employee

attitudes; well-being

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The Effects of Workplace Bullying on Witnesses: Violation of the Psychological Contract as an Explanatory Mechanism?

Workplace bullying has been recognized as a severe negative stressor in the work environment, and the research has shown that it can have a strong negative impact on those targeted (e.g. Hauge, Skogstad, & Einarsen, 2010; Nielsen & Einarsen, 2012). We seek to extend current knowledge on bullying by focusing on how bullying affects employee attitudes and well-being beyond the perpetrator-target relationship.

Workplace bullying is about 'harassing, offending, or socially excluding someone or negatively affecting someone's work' (Einarsen, Hoel, Zapf, and Cooper, 2011, p. 22). While bullying can take many forms, it is typically characterized by repeated and prolonged exposure to predominantly psychological mistreatment, often processual and escalating in nature, and typically involves a perceived power imbalance, making it difficult for the target to retaliate in kind (Einarsen et al., 2011). While the exact number of employees directly targeted is hard to establish due to difficulties in identifying clear cut-off points between occasional negative encounters and actual bullying, a meta-analysis of prevalence studies estimated the average prevalence rate as approximately 14.6% (Nielsen, Matthiesen, & Einarsen, 2010).

In addition, a considerably higher percentage of employees is exposed to bullying indirectly, either through witnessing or through hearsay from colleagues, friends, or family (e.g. Salin, 2013). This paper focuses on those who witness others being bullied in the workplace. A nationwide study in the UK showed that 46.5% of employees had witnessed bullying at their workplaces in the past five years (Hoel & Cooper, 2000). Similarly, Keashly and Neuman (2008) found that 41% of the US faculty members surveyed in their study had witnessed workplace

bullying. These studies suggest the number of employees indirectly concerned is substantial. As such, understanding the impact on these employees is important from a human resource management perspective.

Surprisingly, the research on how bullying affects witnesses is rather scarce, and on why it affects them almost non-existent. Our aim is to further understanding of the impacts of workplace bullying beyond the target-perpetrator relationship. More precisely, we examine the effects of witnessing bullying on employee attitudes and well-being. For employee attitudes, we focus on job satisfaction, organizational commitment, and turnover intentions. To assess the effects on well-being, we focus on three stress-related outcomes: recovery need, sleep quality, and worrying. Moreover, we seek to explore why the act of witnessing bullying results in negative outcomes, as the existing research has yet to undertake an analysis of explanatory mechanisms. We draw upon social exchange theory, presenting psychological contract violation as a mechanism explaining the relationship between witnessing and negative outcomes.

Our contributions to the existing literature are three-fold. First, we challenge the conceptualization of bullying largely as an interpersonal phenomenon, since our results show the negative impacts extend beyond those individuals directly targeted and permeate the broader work community. Second, our results show that witnessing bullying is associated with perceived psychological contract violation. This suggests witnessing bullying makes employees re-evaluate their relationship with the organization itself, which affects their attitudes, and possibly also their behaviour and performance. For organizational interventions, this seems to imply that organizations must actively seek to repair the relationship and restore trust also among bystanders, if bullying has occurred. Third, the study makes a methodological contribution as it points to the importance of controlling for the witnesses' own experiences of bullying in studying how bullying

affects witnesses. Our results suggest studies that include targets in their witness group may overestimate the strain effects of witnessing, and our study therefore points to the need to critically (re)examine some previous findings on the strain effects of witnessing bullying.

Workplace Bullying and Its Impact on Witnesses

Effects of Witnessing Bullying

Bullying has been described as a severe stressor in the workplace (Hauge et al., 2010). A large body of research shows that bullying is associated with numerous negative outcomes for those targeted (for a meta-analysis, see Nielsen & Einarsen, 2012). For instance, bullying has been shown to result in a variety of negative health outcomes, including, but not limited to, anxiety, depressive symptoms, burnout, and a number of psychosomatic symptoms (Hogh, Mikkelsen, & Hansen, 2011; Nielsen & Einarsen, 2012). Similarly, bullying has been shown to produce a downward adjustment of work-related attitudes, such as job satisfaction, organizational commitment and work engagement, and increased turnover intentions (Lutgen-Sandvik, Tracy, & Alberts, 2007; Nielsen & Einarsen, 2012; Park & Ono, 2017).

In contrast to the large body of empirical research showing that being a target of bullying is a severe stressor, there are only a handful of studies investigating the outcomes of witnessing bullying. Yet, these studies seem to indicate it is not only the direct targets of bullying who are affected by this negative social interaction, but bystanders who witness or hear about the bullying may also suffer consequences. For example, in the seminal work by Hoel and Cooper (2000), results showed that witnesses reported worse scores for health and work-related attitudes than those not affected by bullying, but better scores than those currently or previously bullied.

However, due to an absence of pair-wise analyses, it remained unclear whether the effects on witnesses were significant. In a sample from a Finnish municipality, observers of bullying used twice the amount of sleep-inducing drugs and sedatives as their colleagues (Vartia, 2001). Other studies also indicate that witnessing bullying impacts well-being and psychological strain (Cooper-Thomas, Bentley, Catley, Gardner, O'Driscoll & Trenberth, 2014), as well as employee attitudes (Cooper-Thomas et al., 2014; Sims & Sun, 2012). Similarly, qualitative study has shown that witnesses experience guilt and fear, insomnia, headaches, and fatigue (D'Cruz & Noronha, 2011). In contrast, studies on cyberbullying have failed to find effects on witnesses' mental strain and job satisfaction, suggesting that online communication may lack the personal dimension and reduce empathy (Coyne, Farley, Axtell, Sprigg, Best, & Kwok, 2017).

Studies from the field of incivility seem to indicate the effects of rude behaviour go beyond those individuals directly targeted, and organizational-level incivility affects employees over and above their personal experience of incivility (Griffin, 2010). This has also been demonstrated in ambient sexual harassment and racism, where employees not personally targeted, but working in environments permeated by high levels of harassing or discriminatory behaviours, respond with lower job satisfaction and more health problems (Chrobot-Mason, Ragins, & Linnehan, 2013; Glomb, Richman, Hulin, Drasgow, Schneider, & Fitzgerald, 1997).

Although several studies point to the negative effects of bullying among witnesses as well as on targets, some shortcomings remain. First, few studies distinguish between witnesses who are also subject to bullying and those who are not, thereby possibly overestimating the effects of witnessing (see Nielsen & Einarsen, 2013). Indeed, witnessing and experiencing bullying may be overlapping phenomena, and correlations of 0.49 (Cooper-Thomas et al., 2014) suggest that a significant group of witnesses may have their own experiences of being bullied. However,

including targets in the witness group may distort results, as suggested by Nielsen and Einarsen (2013), who found that witnessing bullying was no longer related to subsequent depressive symptoms when targets of bullying were removed from the analyses. This points to the importance of removing targets from witness groups, as meta-studies have already confirmed that being a target of bullying has negative effects on attitudes and well-being (Nielsen & Einarsen, 2012). Hence, we expect that experiencing bullying has greater ramifications than only witnessing, which in turn is worse than neither witnessing nor experiencing bullying.

H1a: Witnesses of bullying report more stress-related negative outcomes and worse work-related attitudes than those unaffected by bullying.

H1b: Witnesses of bullying report fewer stress-related outcomes and more positive work-related attitudes than those subjected to bullying themselves.

Psychological Contract Violation as an Explanatory Mechanism

Although the previous research suggests witnessing bullying may be associated with negative outcomes, the mechanisms linking witnessing with such outcomes remain unknown. While studies exploring the mechanisms through which exposure to bullying translates into negative outcomes for targets are slowly starting to emerge (Kakarika, Gonzalez, & Dimitriades, 2017; Trepanier, Fernet, & Austin, 2016), there are to date no studies examining the dynamics for witnesses.

In line with Parzefall and Salin (2010), who suggest bullying may be perceived as a psychological contract violation from both the target and bystander perspective, we argue here that the violation can act as an explanatory mechanism. In essence, psychological contracts are about

the largely implicit beliefs concerning promises and reciprocal obligations in the exchange relationship (Rousseau, 1995). Violation refers to the emotional experience – typically feelings of anger and betrayal – that follows from the belief that such promises and obligations have not been fulfilled (Morrison & Robinson, 1997). Psychological contract violation draws on social exchange theory, which in essence concerns how human relationships develop between two parties through a series of mutual exchanges based on reciprocity (Gouldner, 1960).

Studies have demonstrated that non-fulfilment of perceived promises leads to a range of negative outcomes, including, but not limited to, reduced job satisfaction, lower organizational commitment, increased intentions to leave, more withdrawal behaviours, and lower in-role performance (Robinson 1996; Turnley & Feldman, 1999; Zhao, Wayne, Glibkowski, & Bravo, 2007). Should employees perceive that witnessing bullying constitutes a violation of the psychological contract, it may affect their attitudes, behaviours, and performance.

Empirical studies suggest psychological contract violation acts as a mediator between being subject to workplace bullying and lower work attitudes (Kakarika et al., 2017). Parzefall and Salin (2010) hypothesized that witnesses, too, may perceive bullying as a violation of the psychological contract, echoing arguments from the layoff research. Research has demonstrated layoffs have negative effects, not only on those directly affected but also on surviving employees (Kets de Vries & Balazs, 1997); several researchers argue that layoff notices to colleagues may be perceived as a contract breach by the surviving employees, and feelings of betrayal may lead to downward adjustments in employee attitudes and behaviours (Edwards, Rust, McKinley, & Moon, 2003; Kets de Vries & Balazs, 1997). In line with the above, we argue that witnessing colleagues being subject to systematic negative behaviour in the workplace may also be perceived as a violation of perceived promises of respectful treatment.

H2: The relationship between witnessing workplace bullying and negative outcomes is

mediated by psychological contract violation.

Study 1: Effects on Witnesses

Method

Design and Sample

Study 1 aimed to test Hypothesis 1, that witnesses of bullying report more stress-related

negative outcomes and worse work-related attitudes than those unaffected by bullying, but fewer

stress-related outcomes and more positive work-related attitudes than those both subjected to and

witnessing bullying themselves. Data were collected through a questionnaire in six Belgian

organizations, conducting a psychosocial risk analysis in collaboration with the former Directorate

of Research on Working Conditions of the Belgian Federal Public Service Employment, Labour

and Social Dialogue. This produced a total of 1,473 replies and a response rate of approximately

70%.

A total of 48.8% of the respondents completed a Dutch and 51.2% a French questionnaire.

The mean age of the respondents was 38 years (SD = 9.9). Whereas 34.9% of the sample stemmed

from the private sector, 65.1% worked in the public sector. Gender was fairly evenly distributed

in the sample (52.5% male). Approximately 19% of the respondents held a supervisory position.

The average tenure was 12 years and 2 months (SD = 11.8).

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Measures

In line with Nielsen, Notelaers and Einarsen (2011), we measured both Witnessing and Experiencing bullying using single-item measures preceded by a definition of bullying. As this was part of a psychosocial risk analysis, the organizations preferred that we used the definition of bullying codified in Belgian law (dated 11 June 2002, concerning protection against violence, bullying, and sexual harassment):

'Bullying at work is any illegitimate and recurrent behaviour, within or outside an enterprise or institution, that can manifest itself in the form of behaviour, verbal aggression, threats, gestures and unilateral writings. It is aimed at, or has as a consequence, that the personality, the dignity or the physical or psychological integrity of an employee (or any other person to whom the law can be applied) is harmed during work, that their position is jeopardized or that an atmosphere is created that can be labelled as threatening, hostile, offensive, or humiliating'.

Witnessing bullying was measured by asking the respondents to reply to a single-item question: 'Have you observed others being bullied at your workplace during the past six months?' The distribution was as follows: 71.9% 'no', 12.3% 'yes, rarely', 11% 'yes, occasionally', 3.5% 'yes, at least weekly', and 1.4% 'yes, (almost) on a daily basis'.

Exposure to bullying was measured through self-labelling and respondents were asked 'Have you been bullied at your workplace during the past six months?' The definition and response categories were as above. The distribution was as follows: 80.6% 'no', 8.8% 'yes, rarely', 6.8% 'yes, occasionally', 2.6% 'yes, at least weekly', and 1.2% 'yes, (almost) on a daily basis'.

To define targets of bullying and witnesses, we recoded the response categories of both variables to create dichotomies. We recoded the no option as 'no', and all yes options, regardless of frequency, as 'yes' (cf. Vie, Glasø, & Einarsen, 2011). The combination of both recoded measures allowed us to differentiate between four groups: 'neither witnessed nor experienced bullying', 'only witnessed bullying', and two target groups we treated as a single group in the analysis i.e. 'target of bullying but not witnessed it', and 'both a target and a witness of bullying'.

Well-being at work and employee attitudes were measured using the 'Vragenlijst Beleving en Beoordeling van de Arbeid' [The Questionnaire of Experience and Evaluation of Work, QEEW], a widely used and validated questionnaire (Van Veldhoven, 1996; Van Veldhoven & Meijman, 1994). A total of 50 items was employed from this questionnaire, measuring three indicators of strain and three indicators of employee attitudes (see below). The items are listed in Appendix A. The response alternatives were 'yes' or 'no', and the QEEW instructions were followed to score the responses.

Job satisfaction was measured with nine items (e.g. 'Mostly, I am pleased to start my day's work.'). Internal stability as measured by Cronbach's alpha was .855.

Organizational commitment was measured with eight items (e.g. 'I really feel very closely involved with this organisation.'). Cronbach's alpha was .758.

Turnover intention was measured with four items (e.g. 'I sometimes think about changing my job.'). Cronbach's alpha was .792.

Need for recovery was measured with eleven items (e.g. 'I find it difficult to relax at the end of a working day.'). Cronbach's alpha was .890.

Worrying was measured with four items (e.g. 'I often lie awake at night ruminating about things at work.'). Cronbach's alpha was .791.

Sleep quality was measured with 14 items (e.g. 'At night, more often than not, I am tossing and turning.'). Cronbach's alpha was .894.

Results

Prior to studying the relationships and outcomes, we wanted to know how many respondents had experienced or witnessed bullying. Of the respondents, 67.9% had neither witnessed bullying nor experienced bullying, 12.8% had (only) witnessed bullying, and 19.4% were targets. To test the first hypothesis, we focus on the different employee attitudes and well-being outcomes across three subgroups ('neither witness nor target', 'only witness', and 'target').

Table 1 presents the outcomes for the different groups. The first row shows the distribution of our sample across the three different groups. The last column shows the F-value of the one-way Anova procedure. The remainder of the body of the table portrays the mean standardized scores (z-scores) of the different groups for the outcome measures. These z-scores facilitate comparison between the different types of outcome within and between samples.

- Insert Table 1 approximately here -

The F-value clearly shows that the between group differences were significantly larger than the within group differences. Hence, there are significant differences between 'neither witness nor target', 'only witness', and 'target', with respect to all outcome variables. The results from post hoc multiple comparisons (Tukey HSD post hoc tests) showed that not all groups were

significantly different to one another. The superscripts (a) in Table 1 indicate that for some pairs their means were not significantly different.

With respect to employee attitudes, targets reported significantly lower job satisfaction and organizational commitment than employees who had only witnessed bullying, who in turn reported significantly lower scores than employees who had neither witnessed nor experienced bullying. For turnover intention, intentions to leave were significantly higher among targets than among witnesses, and again, significantly higher among witnesses than among unaffected employees. As for the strain indicators, between all these groups only recovery need displayed a significant difference. Targets were worse off than those who had only witnessed bullying, and the latter group worse off than those who neither witnessed nor experienced bullying. For worrying and sleep quality, there were no significant differences between those unaffected by bullying (neither witnessing nor experiencing), and those only witnessing.

Altogether, the results indicate that witnessing bullying has clear negative effects on employee attitudes. However, we failed to find clear support for stress-related outcomes. Those who witnessed bullying reported a higher recovery need, but not worse sleep quality or more worrying. Since there was only partial support for our hypothesis concerning stress-related outcomes, we focus the second part of the study (mediation analysis) on employee attitudes, as mediation analyses typically require a significant association between the independent variable and the outcome.

Study 2: Explaining Effects on Witnesses

Method

Design and sample

In line with the argumentation above, Study 2 focused on examining in more detail the relationships between witnessing bullying and employee attitudes. More specifically, we analyse the role of psychological contract violation as a possible mediator. The sample comprised business professionals in Finland, recruited through the country's two largest professional organizations for business school graduates, whose members are employed in a diverse set of organizations, mostly within the private sector. The study was conducted as a web-based survey; a cover letter and link to the questionnaire was sent to 4,382 randomly selected members of the two professional organizations. One reminder was sent out. This resulted in a total of 1,148 replies at a response rate of 26.2%.

Of the respondents, 17% classified themselves as representing management or top management, 23% as middle management, 50% as professionals working in expert positions, and 10% as ordinary employees/officials. Women were somewhat over-represented in the sample (62%) and the mean age was 44.0 years. With regard to tenure, 9% had worked for less than a year at their current organization, 17% 1-2 years, 24% 3-5 years, 17% 6-9 years, and 33% for 10 years or more.

Measures

Witnessing bullying was measured by first introducing respondents to a definition of bullying:

'Bullying is when one or more persons systematically and over time feels they have been subjected to negative treatment on the part of one or more persons, in a situation where the person(s) exposed to the treatment find it difficult to defend themselves. Two equally strong opponents in conflict with each other does not qualify as bullying.'

Subsequently, respondents were asked to reply to a single-item question: 'Have you observed others being bullied at your workplace during the past six months?' The distribution across the response categories was as follows: 70.4% 'no', 17.6 'yes, on isolated occasions', 10% 'yes, sometimes', 1.8% 'yes, at least weekly', and 0.2% 'yes, on a (almost) daily basis'.

Exposure to bullying was measured through self-labelling, and respondents were asked 'Have you been bullied at your workplace during the past six months?' The definition and response categories were as above, and distribution across the categories was as follows: 90.5% 'no', 5.1% 'yes, on isolated occasions', 3.7% 'yes, sometimes', 0.5% 'yes, at least weekly', and 0.2% 'yes, on a (almost) daily basis'. To ensure consistency, we applied the same strategies as in Study 1 to define targets and witnesses of bullying. Hence, respondents were labelled targets or witnesses of bullying if they chose any of the 'yes' alternatives, regardless of frequency.

Psychological contract violation was measured with four items (Robinson & Morrison, 2000) that respondents were asked to rate on a 7-point Likert scale. Sample items included 'I feel betrayed by this organization', and Cronbach's alpha was .896.

Turnover intentions were measured with two items (Boroff & Lewin, 1997) that respondents were asked to rate on a 7-point Likert scale. Sample items included 'During the next year, I will probably look for a new job outside this organization', and Cronbach's alpha was .890.

Organizational commitment was measured with six items (Meyer, Allen, & Smith, 1993) that respondents were asked to rate on a 7-point Likert scale. Sample items included 'I feel a strong sense of belonging to this organization', and Cronbach's alpha was .932.

Job satisfaction was measured using a single-item measure ('How satisfied are you with your current job overall?') that respondents were asked to rate on a 7-point Likert scale. A global evaluation of job satisfaction was sought, rather than evaluations of different facets (pay, promotion opportunities, supervision etc.). Previous studies have indicated high reliability for single-item measures of satisfaction, and shown that they may, depending on the aims of the study, be good substitutes for multi-item measures (Nagy, 2002).

Results

Before proceeding to test the mediation hypothesis put forward in H2, we note that Study 2 confirmed the effects of witnessing bullying found in Study 1 (See Table 2). The analysis of the differences between the three groups 'neither witness nor target' (68.9%), 'only witness' (21.6%), and 'target' (9.5%) showed that those who had experienced bullying had significantly more negative scores than those who had only witnessed bullying, and the witnesses in turn had significantly more negative scores than those who were neither witness nor target.

- Insert Table 2 approximately here -

In testing our mediation hypothesis H2, the assumption that psychological contract violation acts as a mediator between witnessing and outcomes, we focused on employee attitudes since our results indicated that witnessing impacted attitudes but not necessarily stress outcomes.

Cross-tabulation of the responses to the bullying measures revealed the more frequently witnessing or experiencing bullying was reported, the stronger the overlap between the two. The contingency coefficient was 0.614 in Study 2. This overlap between witnessing and an individual's own exposure to bullying clearly indicates it is difficult to study the consequences of witnessing without taking exposure into consideration. We must therefore control for experience of bullying when explaining why witnessing has negative consequences for employees.

Table 3 presents the correlations between the study variables. The correlations showed the predictors, mediator and outcome variables were significantly related to each other, which according to Baron and Kenney (1986) is necessary to proceed with mediation analysis. The correlation table also showed that in the mediation analyses we should control only for gender and the organization through which the respondents were recruited to the study. Contrary to what might be expected, organizational position was not substantially related to the bullying variables.

- Insert Table 3 approximately here -

In line with current views on mediation and moderation (Preacher & Hayes, 2004), we conducted a mediation analysis using the PROCESS macro v2.13 developed by Hayes (2013) for SPSS. Socio-demographic variables, predictors, mediators and outcome are analysed in a single step. Thereafter, mediation is assessed by decomposing the total effect of the predictor variable on the outcome in an indirect effect (through the mediator) and a direct effect. While doing so, the user can opt to bootstrap the indirect effect. To examine whether psychological contract explains the relationship between witnessing bullying and the three outcome variables, we need to estimate three regression models because PROCESS only allows for one outcome. Table 4 shows the direct effect between witnessing bullying and outcome variables was no longer significant. The bootstrap of the indirect effect in PROCESS showed that the indirect effects were significant. Hence, even

when controlling for the respondents' own bullying experience, psychological contract mediated the relationship between witnessing bullying and the three employee attitude outcomes, which is in concordance with our second research hypothesis.

- Insert Table 4 approximately here -

Discussion

The aim of this study was to analyse the effects of witnessing bullying on employee well-being and attitudes. The study extends our understanding of bullying by showing the relationship between witnessing bullying and employee attitudes is mediated by psychological contract, even when controlling for witnesses' own experiences of bullying.

First, the study confirms the negative effects of witnessing bullying, shown on employee attitudes, such as job satisfaction, organizational commitment and turnover intentions. This held for both samples, providing cross-cultural evidence for this relationship, and is also in line with the previous research (D'Cruz & Noronha, 2011; Hoel & Cooper, 2000; Lutgen-Sandvik et al., 2007; Sims & Sun, 2012). While the previous research has already indicated effects on employee attitudes, this study explicitly analysed whether that holds when those who have also been bullied themselves are excluded. In comparing those who have not been affected at all by bullying with those who have merely witnessed it, we see a significant difference in terms of work-related attitudes, indicating witnessing itself is a negative experience. This supports the notion that not only being the target of unethical behaviour, but also witnessing others being targeted, seems to negatively impact employees (cf. Meier, Semmer, & Spector, 2013).

Although witnessing bullying resulted in somewhat worse scores for recovery need, sleep quality and worrying, the latter two outcomes did not achieve statistical significance in our study.

As such, the study does not clearly corroborate earlier findings on witnessing having clear stress outcomes. Yet, the finding that simply witnessing bullying resulted in higher recovery need, is in line with the proposition of the demand-resources model that demands lead to exhaustion (Bakker & Demerouti, 2007). Although witnessing bullying may be taxing, our results seem to suggest it is not necessarily perceived as a personal threat, which would result in increased worrying or sleep problems. That witnesses did not differ significantly in this respect from the unaffected group is in line with Nielsen and Einarsen (2013), who reported the relationship between witnessing bullying and subsequent depressive symptoms disappeared on controlling for experiencing workplace bullying. Hence, the inconsistency of the results points to the possibility that some previous research findings on witnessing, not controlling for witnesses' experiences, may have overestimated strain effects and the topic thus warrants further investigation.

Finally, we extend the prior work on witnessing, by drawing attention to a possible mechanism between witnessing bullying and negative work-related attitudes. This study shows that psychological contract violation acts as a mediator between witnessing bullying and poorer work-related attitudes. It provides support for Parzefall and Salin's (2010) hypothesis that non-intervention in bullying, that is, the mere fact that organizations allow it to happen, may be perceived also by bystanders as a non-fulfilment of obligations, who then develop feelings of betrayal and anger. As discussed later, this suggests witnessing bullying leads employees to reevaluate their relationship not only with the perpetrator, but with the organization itself.

Practical Implications

The findings reported in this study are important for several reasons. First, they provide additional evidence for the ripple effect of bullying, showing that bullying has impacts at work

beyond those experienced directly by targets (cf. Cooper-Thomas et al., 2014; Lutgen-Sandvik et al., 2007). This means a much higher number of employees than targets alone is affected by bullying behaviour, signalling it concerns a more considerable proportion of the workforce. That suggests it can be deeply detrimental, if human resource managers, line managers, or occupational health care professionals adopt a passive attitude.

Second, the findings challenge conceptualizations of bullying as a purely interpersonal problem, and demonstrate how it can permeate and infect the broader workplace (cf. Cooper-Thomas et al., 2014). Bullying impacts the general workplace atmosphere by affecting the attitudes not only of targets, but also witnesses, who on seeing others mistreated report lower job satisfaction and commitment, and higher turnover intentions. This further highlights the need for efficient measures to combat bullying, to avoid downward adjustments in both target and bystander attitudes. Managers and human resource professionals must treat this as an organizational problem, rather than focus only on the perpetrator(s) and direct target(s).

Some authors have argued there might be instrumental reasons to bully certain employees to achieve higher productivity (e.g. Ferris, Zinko, Brouer, Buckley, & Harvey, 2007), or that bullying may sometimes be 'personnel work' through other means, that is, to expel certain employees who it may be difficult to lay off due to national legislation (e.g. Zapf & Wart, 1997). The current results point to the dangers and greater possible implications of engaging in such behaviour. Both the attitudes of other employees and organizational well-being may suffer as the witnesses, too, feel the organization is failing to live up to its obligations.

That witnessing bullying can be seen as a violation of the psychological contract has important implications for the employee-organization relationship. It suggests witnesses not only feel upset with the perpetrator, but also betrayed by the organization. Even if the perpetrator were

voluntarily to leave, witnesses may still hold a grudge against the organization. Unless organizational representatives take deliberate steps to restore and repair trust, openly addressing bullying, witnesses may never feel attempts have been made to restore justice and keep perceived promises.

Moreover, if witnesses feel betrayed by the organization, it may affect their behaviour, not merely their attitudes towards the organization. The research on psychological contract violation suggests perceptions of violation are associated with higher levels of withdrawal and neglect (Turnley & Feldman, 1999), and lower in-role performance and organizational citizenship behaviour (Zhao et al, 2007). As such, bullying may lead to additional costs in terms of reducing the productivity not only of targets, but also of witnesses. This is an important managerial implication that merits further research.

Limitations and Suggestions for Further Research

When data are based on self-reporting, there is always an increased risk of common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To study the extent to which common method bias threatens validity, we conducted a Harman's one-factor test to assess whether a one-factor model would fit the data better than a confirmatory factor model. We thus compared the $\chi 2$ and degrees of freedom of both models for both samples. For Study 1, a confirmatory factor model with eight factors (six for the criterion related measures, and two for witnesses and targets) showed a $\chi 2$ of 4495 with 1253 degrees of freedom. A model with a single factor (Harman test) had a worse fit: the $\chi 2$ was 15778.364 with 1274 degrees of freedom. For Study 2, we could not measure the entire model, as both the bullying measures and job satisfaction were measured with single items. However, an analysis of the remainder of the items showed a similar pattern. The four-factor

model had a $\chi 2$ of 1017 with 62 degrees of freedom, while the one-factor model had a $\chi 2$ of 1356 with 65 degrees of freedom. The $\Delta \chi 2$ test in both samples comparing the one-factor model with the confirmatory factor model was significant at the .000 level. It is thus suggested that common method variance is not a major problem in this study.

To deal with common method variance, scholars often advise triangulation with other measurement methods. However, applying observational methods, peer nomination methods and multimodal approaches to collect data on sensitive psychosocial hazards, such as workplace bullying, may entail ethical challenges (Cowie, Naylor, Rivers, Smith and Pereira (2002). There are also other challenges. For instance, peers may be unable or unwilling to perceive and label a social process as bullying until it reaches the stage of direct aggression. Bullying may take quite subtle or indirect forms, for example through gossiping or withholding information, and these behaviours may be difficult for peers to recognize as bullying. Also, with respect to the measurement of strains, alternative approaches exist but are rarely used. For example, company records and medical data can be valuable to achieve triangulation (Notelaers, 2011). However, some of these data are very difficult to obtain because organizations do not easily grant access to strategic, sensitive information. For these reasons, we have considered self-report measures the most reliable option, despite their shortcomings. Future studies may, however, wish to include items to control for social desirability tendencies.

Another possible limitation is the use of single-item measures. In psychological science, measures are most often latent variables comprising a number of items measuring an underlying construct. In the workplace bullying research, it is common practice to use single-item measures to identify targets and witnesses of bullying (see e.g. Nielsen et al., 2010; Nielsen et al., 2011 for

overviews). This research tradition argues that this formative measurement approach is valid, as the assessment of bullying lies in the eye of the beholder.

Our studies used cross-sectional research designs, which do not allow for inferring causality. Strictly speaking, we do not know whether witnessing bullying leads to a higher recovery need and lower levels of job satisfaction and organizational commitment, or being exhausted, dissatisfied and less committed make employees more prone to see and perceive interactions as bullying. Therefore, future research should use a longitudinal design to investigate the implied direction of the relationships.

Although studies 1 and 2 both examine the effects of witnessing bullying, they have used different definitions of bullying, different measures of employee attitudes, and different samples. For instance, whereas all employees in sample 2 have a university level education and many hold managerial positions, sample 1 includes a high proportion of low-skilled employees as well. Thus, it is important to note that differences between the two samples, for instance with respect to the size of the witness and target groups, cannot necessarily be ascribed to cross-cultural differences, although the data were collected in two different countries. On the other hand, the fact that both studies, despite using different measures and samples, still find that witnessing bullying has negative effects on employee attitudes, points to the robustness of this key finding.

This study has looked at psychological contract violation as a mediator, and found it mediates the relationships between witnessing bullying and downward adjustments in attitudes. However, that does not mean this perception of violation is the only route through which witnessing results in negative outcomes. In addition to the perception of broken promises and subsequent feelings of betrayal, other processes may be at play, too. For instance, Kane and Montgomery (1998) discussed 'vicarious disempowerment', whereby negative attitudes and

behaviours that an individual experiences following workplace disrespect and mistreatment can spread to others in the workplace. In line with this, Salin (2013) speculated that negative outcomes may arise because witnessing bullying shatters the observer's world view or beliefs in a just world. These complementary, albeit partly overlapping, explanations should also be examined.

Conclusion

The aim of this paper was to analyse the effects of witnessing bullying on employee well-being and attitudes. The results confirm the existence of a ripple effect, and show that bullying has impacts at work beyond those experienced directly by targets. Even when controlling for witnesses' own experiences of being a target of bullying, witnessing bullying is associated with more negative employee attitudes than is not witnessing. However, our study finds only some effects on recovery need and not on other stress outcomes, suggesting the previous studies that have not controlled for individuals' own experiences of bullying may possibly have reported effects that may not be true, i.e. false positives. Finally, the results draw attention to the role of psychological contract violation as a mediator between witnessing bullying and poorer employee attitudes. This suggests witnessing bullying makes employees re-evaluate their relationship with the organization itself. Showing how bullying negatively affects broader work communities, rather than merely individual targets and perpetrators, highlights the importance of organizational action against bullying.

References

- Bakker, A.B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, 22, 309-328. Doi:10.1108/02683940710733115
- Baron, R.M., & Kenny, D.A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182. Doi:10.1037/0022-3514.51.6.1173
- Boroff, K.E., & Lewin, D. (1997). Loyalty, voice, and intent to exit a union firm: A conceptual and empirical analysis. *Industrial & Labor Relations Review*, 51, 50-63. Doi:10.1177/001979399705100104
- Chrobot-Mason, D., Ragins, B.R., & Linnehan, F. (2013). Second hand smoke: ambient racial harassment at work. *Journal of Managerial Psychology*, 28, 470-491. Doi: 10.1108/JMP-02-2012-0064
- Conway, J.M., & Lance, C.E. (2010). What reviewers should expect from authors regarding common method bias in organizational research. *Journal of Business and Psychology*, 25, 325.334. Doi: 10.1007/s10869-010-9181-6
- Cooper-Thomas, H., Bentley, T., Catley, B., Gardner, D., O'Driscoll, M., & Trenberth, L. (2014).

 The impact of bullying on observers and targets. *New Zealand Journal of Human Resource Management*, 14(2), 82-95.
- Coyne, I., Farley, S., Axtell, C., Sprigg, C., Best, L., & Kwok, O. (2017) Understanding the relationship between experiencing workplace cyberbullying, employee mental strain and job satisfaction: a dysempowerment approach. *The International Journal of Human Resource Management*, 28, 945-972. Doi: 10.1080/09585192.2015.1116454
- Cowie, H., Naylor, P., Rivers, I., Smith, P.K., & Pereira, B. (2002). Measuring workplace bullying.

 Aggression and Violent Behavior, 7, 33-51. Doi:10.1016/s1359-1789(00)00034-3

- D'Cruz, P., & Noronha, E. (2011). The limits of workplace friendship: Managerialist HRM and bystander behaviour in the context of workplace bullying. *Employee Relations*, *33*, 269-288. Doi:10.1108/01425451111121777
- Edwards, J.C., Rust, K.G., McKinley, W., & Moon, G. (2003). Business ideologies and perceived breach of contract during downsizing: The role of the ideology of employee self-reliance. *Journal of Organizational Behaviour*, 24, 1-23. Doi:10.1002/job.177
- Einarsen, S., Hoel, H., Zapf, D., & Cooper, C. L. (2011). The concept of bullying and harassment at work: the European tradition. In S. Einarsen, H. Hoel, D. Zapf, & C.L. Cooper (Eds.), *Bullying and harassment in the workplace: Developments in theory, research, and practice* (pp. 3-39). London: Taylor and Francis. Doi:10.1201/ebk1439804896-3
- Emdad, R., Alipour, A., Hagberg, J., & Jensen, I.B. (2013). The impact of bystanding to workplace bullying on symptoms of depression among women and men in industry in Sweden: an empirical and theoretical longitudinal study. *International Archives of Occupational and Environmental Health*, 86, 709–716. Doi:10.1007/s00420-012-0813-1
- Ferris, G.R., Zinko, R., Brouer, R.L., Buckley, M.R., & Harvey, M. (2007). Strategic bullying as a supplementary, balanced perspective on destructive leadership. *The Leadership Quarterly*, 18, 195–206. Doi:10.1016/j.leaqua.2007.03.004
- Glomb, T., Richman. W.L., Hulin, C.L., Drasgow, F., Schneider, K.T., & Fitzgerald, L.F. (1997).

 Ambient sexual harassment: An integrated model of antecedents and consequences.

 Organizational Behavior and Human Decision Processes, 71, 309-328.

 Doi:10.1006/obhd.1997.2728
- Gouldner, A.W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25, 161–178. Doi:10.2307/2092623

- Griffin, B. (2010). Multilevel relationships between organizational-level incivility, justice and intention to stay. *Work & Stress*, 24, 309-323. Doi:10.1080/02678373.2010.531186
- Hauge, L.J., Skogstad, A., & Einarsen, S. (2010). The relative impact of workplace bullying as a social stressor at work. *Scandinavian Journal of Psychology*, 51, 426-433. Doi:10.1111/j.1467-9450.2010.00813.x
- Hayes, A.F. (2013). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. NY: Guilford Publications, Inc.
- Hoel, H., & Cooper, C (2000). *Destructive conflict and bullying at work*. Manchester: Manchester School of Management.
- Hogh, A., Mikkelsen, E., & Hansen, Å-M. (2011). Individual consequences of workplace bullying/mobbing. In S. Einarsen, H. Hoel, D. Zapf, & C.L. Cooper (Eds.), *Bullying and Harassment in the Workplace: Developments in Theory, Research and Practice* (pp. 107-128). London: Taylor and Francis.
- Kakarika, M., Gonzalez, H., & Dimitriades, Z. (2017). That wasn't our deal: A psychological contract perspective on employee responses to bullying. *Journal of Vocational Behavior*, 100, 43-55. Doi:10.1016/j.jvb.2017.02.005
- Kane, K., & Montgomery, K. (1998). A framework for understanding dysempowerment in organizations. *Human Resource Management*, *37*, 263-275. Doi:10.1002/(sici)1099-050x(199823/24)37:3/4<263::aid-hrm8>3.0.co;2-u
- Keashly, L., & Neuman, J.H. (2008). Workplace behavior project survey: Final report. Mankato:

 Minnesota State University.
- Kets de Vries, M.F.R. & Balazs, K. (1997). The downside of downsizing. *Human Relations*, 50, 11-50. Doi:10.1177/001872679705000102

- Lutgen-Sandvik, P., Tracy, S.J., & Alberts, J.K. (2007). Burned by bullying in the American workplace: Prevalence, perception, degree and impact. *Journal of Management Studies*, 44, 837-862. Doi:10.1111/j.1467-6486.2007.00715.x
- Meier, L.L., Semmer, N.K., & Spector, P. (2013). Unethical work behavior as a stressor. In R.A. Giaclaone & M.D. Promislo (Eds.), *Handbook of unethical work behavior: Implications for individual well-being* (pp. 168-179). Armonk, NY: M.E. Sharpe.
- Meyer, J. P., Allen, N. J. & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78, 538-551. Doi:10.1037/0021-9010.78.4.538
- Morrison, E.W., & Robinson, S.L. (1997). When employees feel betrayed: A model of how psychological contract violation develops. *Academy of Management Review*, 22, 226-256. Doi:10.2307/259230
- Nagy, M.S. (2002). Using a single-item approach to measure facet job satisfaction. *Journal of Occupational and Organizational Psychology*, 75, 77–86. Doi:10.1348/096317902167658
- Nielsen, M.B., & Einarsen, S. (2012). Outcomes of exposure to workplace bullying: A metaanalytic review. *Work & Stress*, 26, 309-332. Doi:10.1080/02678373.2012.734709
- Nielsen, M.B., & Einarsen, S. (2013). Can observations of workplace bullying really make you depressed? A response to Emdad et al. *International Archives of Occupational and Environmental Health.* 86, 717-721. Doi:10.1007/s00420-013-0868-7
- Nielsen, M.B., Matthiesen, S-B., & Einarsen, S. (2010). The impact of methodological moderators on prevalence rates of workplace bullying. A meta-analysis. *Journal of Occupational & Organizational Psychology*, 83, 955-979. Doi:10.1348/096317909x481256
- Nielsen, M.B., Notelaers, G., & Einarsen, S. (2011). Measuring exposure to workplace bullying.

 In S. Einarsen, H. Hoel, D. Zapf, & C.L. Cooper (Eds.), *Bullying and Harassment in the*

- Workplace. Developments in Theory, Research and Practice (pp. 149-175). London: Taylor & Francis.
- Notelaers, G. (2011). Workplace Bullying: a risk control perspective. Bergen: University of Bergen.
- Park, J.H., & Ono, M. (2016): Effects of workplace bullying on work engagement and health: the mediating role of job insecurity. *The International Journal of Human Resource Management*. Advance online publication. Doi: 10.1080/09585192.2016.1155164
- Parzefall, M.-R., & Salin, D. (2010). Perceptions of and reactions to workplace bullying: A social exchange perspective. *Human Relations*, 63, 761-780. Doi:10.1177/0018726709345043
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y., & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies.

 *Journal of Applied Psychology, 88, 879-903. Doi:10.1037/0021-9010.88.5.879
- Preacher, K.J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers, 36*, 717-731. Doi:10.3758/bf03206553
- Robinson, S.L. (1996). Trust and breach of the psychological contract. *Administrative Science Quarterly*, 41, 574-599. Doi: 10.2307/2393868
- Robinson, S.L., & Morrison, E.W. (2000). The development of psychological contract breach and violation: a longitudinal study. *Journal of Organizational Behavior*, 21, 525-546. Doi: 10.1002/1099-1379(200008)21:5<525::AID-JOB40>3.0.CO;2-T
- Rousseau, D.M. (1995). Psychological contracts in organizations: Understanding written and unwritten agreements. Thousand Oaks, CA: SAGE Publications.

- Salin, D. (2013). Bullying and well-being. In R.A. Giacalone & M.D. Promislo (Eds.), *Handbook* of unethical work behavior: Implications for individual well-being (pp. 73-88). Armonk, NY: M.E. Sharpe
- Sims, R.L., & Sun P. (2012). Witnessing workplace bullying and the Chinese manufacturing employee. *Journal of Managerial Psychology*, 27, 9-26. Doi:10.1108/02683941211193839
- Trépanier, S-G., & Fernet, C. & Austin, S (2016). Longitudinal relationships between workplace bullying, basic psychological needs, and employee functioning: A simultaneous investigation of psychological need satisfaction and frustration. *European Journal of Work and Organizational Psychology*, 25, 690-706. Doi: 10.1080/1359432X.2015.1132200
- Turnley, W. H., & Feldman, D. C. (1999). The impact of psychological contract violations on exit, voice, loyalty, and neglect. *Human Relations*, 52, 895-922. Doi: 10.1177/001872679905200703
- Van Veldhoven, M. (1996). Psychosociale arbeidsbelasting en werkstress. [Psychosocial work factors and work stress]. Groningen: Swets & Zeitlinger.
- Van Veldhoven, M., & Meijman, T. F. (1994). Het meten van psychosociale arbeidsbelasting met een vragenlijst: de vragenlijst beleving en beoordeling van de arbeid (VBBA) [The measurement of psychosocial job demands with a questionnaire: The questionnaire on the experience and evaluation of work (QEEW)]. Amsterdam: Nederlands Instituut voor Arbeidsomstandigheden.
- Vartia, M. (2001). Consequences of workplace bullying with respect to the well-being of its targets and the observers of bullying. *Scandinavian Journal of Work, Environment & Health*, 27, 63-69. Doi:10.5271/sjweh.588

- Vie, T. L., Glasø, L., & Einarsen, S. (2011). Health outcomes and self-labeling as a victim of workplace bullying. *Journal of Psychosomatic Research*, 70(1), 37-43. doi: https://doi.org/10.1016/j.jpsychores.2010.06.007
- Zapf, D. & Warth, K. (1997). Mobbing: Subtile Kriegsführung am Arbeitsplatz. *Psychologie Heute*, 24(8), 20-29.
- Zhao, H., Wayne, S. J., Glibkowski, B. C., & Bravo, J. (2007). The impact of psychological contract breach on work-related outcomes: A meta-analysis. *Personnel Psychology*, 60, 647-680. Doi:10.1111/j.1744-6570.2007.00087.x

Table 1. Study 1: Comparison of the mean scores for different employee groups on six indicators of employee attitudes and stress (z -values).

	neither witness	witness	targets	F	Partial
	nor target	only			Eta ²
Study 1					
%	67.8%	12.8%	19.4%		
Job satisfaction	.189	047	616	76.652	0.091
Organizational commitment	.204	257	549	73.223	0.096
Turnover intentions	164	.134	.505	48.603	0.071
Recovery need	185	.053	.593	70.211	0.092
Worrying	110 ^a	.0351 ^a	.388	24.447	0.037
Sleep quality	.177ª	.001ª	616	64.088	0.096

All F-values have 3 df for the factor and at least 1203 df for the error term, all p < .000.

Note. Identical superscript (a) indicates that the pairs of means are not significantly different. Means with no identical superscripts differ significantly from each other, p < .05.

Table 2. Study 2: Comparison of the mean scores for different employee groups on three indicators of employee attitudes (z -values).

Study 2	neither witness	witness	target	F	Partial
	nor target	only			Eta ²
%	68.9%	21.6%	9.5%		
Job satisfaction	.109	075	631	28.242	0.048
Organizational commitment	.110	098	586	25.534	0.044
Turnover intentions	092	.104ª	.449 ^a	15.811	0.028

All F-values have 3 df for the factor and at least 1119 df for the error term, all p < .000.

Note. Identical superscript (a) indicates that the pairs of means are not significantly different. Means with no identical superscripts differ significantly from each other, p < .05.

Table 3. Correlations between study variables in Study 2 $\,$

	Mean	1	2	3	4	5	6	7	8	9	10	11	12
1. Top	[%] (sd) [16.4%]	_											
manager/other	[10.470]	_											
(pos1)													
2. Middle manager/other (pos2)	[23.2%]	242**	-										
3. Expert/other (pos3)	[50.2%]	440**	547**	-									
4. Prof. org. ^a (Niord)	[33.4%]	.102**	012	161**	-								
5. Gender (female)	[62%]	153**	025	.068*	114**	-							
6. Tenure	-	.044	.111**	099**	.181**	007	-						
7. Year of birth	1969 (10.210)	209**	088**	.196**	212**	.015	459**	-					
8. Being subject to bullying	-	053	.045	.018	064*	.043	.014	068*	-				
9. Witnessing	-	063*	.024	.045	045	.086**	.030	046	.490**	-			
10. Psychological contract violation	2.346 (1.408)	136**	008	.114**	017	.032	.040	003	.321**	.247**	-		
11. Job satisfaction	5.280 (1.22)	.154**	.072*	126**	.095**	049	.072*	137**	215**	183**	537**	-	
12. Org. Commitment	4.328 (1.481)	.219**	.062*	171**	.086**	043	.241**	251**	198**	182**	509**	.665**	-
13. Turnover Intentions	3.191 (1.935)	140**	004	.106**	095**	008	139**	.290**	.153**	.154**	.530**	606**	653**

Legend: *: $0.01 = \langle p \langle .05, **: 0.001 = \langle p \langle .01, ***: p \langle 0.001, a \rangle$ Professional organization through which respondent recruited

Table 4. Mediation analysis in PROCESS: unstandardized regression coefficients.

	Job Satisfaction	Org. Commitment	Turnover Intentions
Intercept	28.477	44.825	-100.989
1. Top manager/other	.461**	.640***	015 ^{ns}
(pos1)			
2. Middle manager/other (pos2)	.469**	.373**	079 ^{ns}
3. Expert/other (pos3)	.282*	.184 ^{ns}	034 ^{ns}
4. Prof. org. through which	.152*	.006 ^{ns}	088 ^{ns}
resp. recruited			
6. Tenure	.014 ^{ns}	.191***	040*
7. Year of birth	011***	020***	.052***
8. Being a target of bullying	032 ^{ns}	077 ^{ns}	121 ^{ns}
9. Witnessing	055 ^{ns}	112 ^{ns}	.121 ^{ns}
10. Psychological contract	442***	498***	.725***
violation			
Total Effect	141*	201**	261**
Direct Effect	055 ^{ns}	.112 ^{ns}	121 ^{ns}
Indirect Effect	086*	098*	.140*
R2	31.93%	36.08%	36.64%

Legend: not significant (ns): $p \ge .05$, *: 0.01 = , **: <math>0.001 = , ***: <math>p < 0.001

APPENDIX A

ITEMS FROM THE QEEW (Van Veldhoven, 1996; Van Veldhoven & Meijman, 1994) used in Study 1

Job satisfaction

I can admit that I dread going to work.

I do my work because I have to, and that says it all.

Mostly, I am pleased to start my day's work.

After five years, I've seen it all as far as the job goes.

I still find my work stimulating, every day on the go.

I find the thought that I will have to do this job until I retire very oppressive.

I really enjoy my work.

I have to continually overcome my resistance in order to do my work.

I often have to force myself to perform a task.

Organizational commitment

I find that my own views correspond closely to those of the organisation.

It is important to me that I can make a contribution to the organisation's business.

I really feel very closely involved with this organisation.

I feel very at home working for this organisation.

I have put so much of myself into this organisation that I would find it extremely hard to leave.

With respect to this organisation, I really feel obliged to stay on several more years.

If the minimum negative change were to be implemented in this organisation, I would leave.

Working for this organisation is very appealing, especially in comparison with most other jobs that I could get.

Turnover intentions (Changing jobs)

I sometimes think about changing my job.

I sometimes think about seeking work outside this organisation.

Next year, I plan to change jobs.

Next year, I plan to look for a job outside this organisation.

Recovery need

I find it difficult to relax at the end of a working day.

By the end of the working day, I feel worn out.

Because of my job, at the end of the working day I feel absolutely exhausted.

After the evening meal, I generally feel in good shape.

In general, I start to feel relaxed on the second non-working day.

I find it difficult to concentrate in my free time after work.

I cannot really show any interest in other people when I have just come home myself.

Generally, I need more than an hour before I feel completely recuperated after work.

When I get home from work, I need to be left in peace.

Often, after a day's work I feel so tired that I cannot get involved in other activities.

During the last part of the working day, a feeling of tiredness prevents me from doing my work as well as I normally would.

Worrying

When I leave my work, I continue to worry about work problems.

I can easily detach myself from my work.

During my free time, I often worry about work.

I often lie awake at night ruminating about things at work.

Sleep quality

I often do not get a wink of sleep at night.

I often get up during the night.

At night, more often than not, I am tossing and turning.

I often wake up several times during the night.

I find that, in general, I sleep very badly.

I have the impression that I only get a few hours sleep.

I rarely sleep more than five hours.

I find that, in general, I sleep well at night.

Usually, I fall asleep very easily.

In general, I have the impression that I do not get enough sleep.

I am often awake for a half an hour in bed before I fall asleep.

When I wake up during the night, I find it very difficult to fall asleep again.

After I get up, I often have the feeling that I am tired.

After I get up, I generally feel well rested.