High-Involvement Work Practices and Conflict Management Procedures as Moderators of the Bullying-Wellbeing Relationship

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ABSTRACT

Despite the serious consequences of exposure to workplace bullying for the wellbeing of individuals and functioning of organizations, few studies have investigated how organizational practices could reduce the negative impact of bullying on employee wellbeing. In the present study, we investigate the longitudinal association of exposure to workplace bullying with depressive symptoms and sleep problems, and whether high-involvement work practices (HIWP) and conflict management (CM) procedures moderate these associations. The data for the study were drawn from the Swedish Longitudinal Occupational Survey of Health (SLOSH). The final sample comprised 21,029 individuals with 45,678 person-observations from 4 waves. Longitudinal multilevel models (with study waves nested under individuals) showed that exposure to workplace bullying increased depressive symptoms and sleep problems. Furthermore, both HIWPs and CM procedures were moderators of the association between exposure to bullying and depressive symptoms and sleep problems. The results support previous findings, suggesting that workplace bullying has severe consequences for subsequent wellbeing. Moreover, it extends previous research by showing that organizational practices, such as high-involvement work practices and collaborative conflict management procedures, may act as organizational resources that buffer the negative effects of exposure to bullying on wellbeing.

Keywords: conflict management procedures; depressive symptoms; high-involvement work practices; sleep problems; workplace bullying; panel data

Introduction

Bullying is a pervasive social stressor in the work environment, with detrimental effects on those exposed and on the organization (Nielsen & Einarsen, 2012). There is a growing body of literature on the outcomes of exposure to workplace bullying, which shows victims of bullying report more psychological and physiological health problems (Conway, Hogh, Balducci, & Ebbesen, 2020; Hansen, Garde, Nabe-Nielsen, Grynderup, & Høgh, 2020), and higher sickness absence than non-victims (Hogh et al., 2020; Nielsen, Indregard, Krane, & Knardahl, 2019). Comparisons with other psychosocial exposures show that workplace bullying appears to be one of the greatest risk factors for health problems (Schütte et al., 2014). The consequences of bullying include, but are not limited to, psychological and physiological stress responses, anxiety, depression, burnout, and suicidal ideation (Conway et al., 2020; Hansen et al., 2020; Hogh et al., 2020; Nielsen & Einarsen, 2012). However, we still know little about how organizations through their practices may reduce some of these adverse effects.

Although previous research demonstrates that bullying has negative consequences, it is important to note there might be conditions that affect the extent to which targets are affected by negative behaviour at work (S. Einarsen, Hoel, Zapf, & Cooper, 2011). In order to develop effective secondary interventions looking to reduce the impact of bullying that has already occurred, it is important to examine the conditions that can alleviate the detrimental effects of bullying. Theoretical models (e.g. the job demands-resources model) and the previous research suggest that both individual level factors and organizational resources may influence how employees perceive and can withstand negative behaviour at work (Nielsen & Einarsen, 2018).

With regard to individual level factors, it has, for example, been shown that social anxiety (Moreno Jiménez, Rodríguez Muñoz, Moreno López, & Garrosa Hernández, 2007) may exacerbate the relationship between bullying and health, whereas assertiveness (Moreno Jiménez et al., 2007), psychological capital (Laschinger & Nosko, 2015), self-efficacy (Laschinger & Nosko, 2015), and a high sense of coherence (Nielsen, Matthiesen, & Einarsen, 2008) may cushion the relationship. Similarly, the target's coping style (Reknes et al., 2016), has been found to affect how bullying impacts target health. However, researchers have repeatedly found that whereas certain individual dispositions may have a protective effect at low levels of bullying, the effect appears to diminish or disappear at higher levels of bullying (e.g. Laschinger & Nosko, 2015; Nielsen & Einarsen, 2018; Nielsen et al., 2008; Reknes et al., 2016).

As for organizational resources, comparatively few studies have investigated how organizational policies and practices can reduce the negative impact of bullying on wellbeing (for a review, see Rai & Agarwal, 2018), although they are to a greater extent under management control. The existing research suggests that perceived organizational support (Cooper-Thomas et al., 2013), social support (Gardner et al., 2013; Warszewska-Makuch, Bedyńska, & Żołnierczyk-Zreda, 2015), the psychosocial safety climate (Law, Dollard, Tuckey, & Dormann, 2011), and authentic leadership (Warszewska-Makuch et al., 2015) may act as moderators. However, findings have been mixed, with for instance Nielsen et al. (2019) detecting no effect of leader behaviour on the association between bullying and medically certified sick leave.

Moreover, despite the serious implications of workplace bullying for the wellbeing of individuals and functioning of organizations, few studies have employed prospective designs to examine the associations over time. Longitudinal studies on these associations have generally utilized data with two measurements of the exposure and of the outcome (Nielsen & Einarsen, 2012). Bullying

might result in depressive symptoms and sleep problems instantaneously, but bullying is not a short-lived phenomenon (Einarsen et al., 2011), and the repercussions of exposure to it might be long-lasting. In order to increase our understanding of the association between workplace bullying and health and wellbeing, we need prospective designs with several time-lags.

In the present study, we seek to address the shortcomings listed above, i.e. the lack of studies on the role of organizational moderators of the bullying-wellbeing relationship, and the overreliance on cross-sectional and two-wave study design. More specifically, we investigate whether high-involvement work practices and conflict management moderate the association between exposure to bullying and two important wellbeing indicators, namely depressive symptoms and sleep problems. High-involvement work practices are human resource practices that seek to increase employee motivation, commitment and empowerment, by emphasizing information sharing, employee participation in decision-making, rewards, and continuous competence development (Guthrie, 2001; Macky & Boxall, 2008). The contribution to bullying research is two-fold. First, building on the Job Demands-Resources Model (Bakker & Demerouti, 2007), we examine how certain resources may attenuate the effects of bullying. As most studies on moderators of the bullying-wellbeing relationship to date have focused on individual dispositions, we examine whether organizational practices may act as buffer against the negative consequences. This study brings new knowledge by showing that high-involvement work practices and a constructive conflict management style alleviate the negative effects of bullying, even when targets are exposed to regular and systematic maltreatment. Secondly, in order to understand the effects of bullying on wellbeing, we employ a prospective, truly longitudinal design. With panel data from over 20 000 individuals, we add to the existing literature on the longitudinal relationship between workplace bullying and wellbeing.

Workplace Bullying, Depressive Symptoms and Sleep Problems

Workplace bullying is defined as situations "where an employee repeatedly and over a prolonged time period is exposed to harassing behaviour from one or more colleagues (including subordinates and leaders) and where the targeted person is unable to defend him-/herself against this systematic mistreatment" (Nielsen & Einarsen, 2018, p. 73). It is a form of psychosocial stressor at work with consequences for both the individual and organization. Prolonged and frequent exposure to a psychosocial work stressor such as bullying contributes to the development of several health-related consequences. First, exposure to bullying increases depressive symptoms and the risk of new-onset depression (e.g. Gullander et al., 2014; Theorell et al., 2015; Verkuil, Atasayi, & Molendijk, 2015). Second, employees experiencing workplace bullying are more likely to report sleep problems. Exposure to bullying is associated with both concurrent and subsequent sleep problems, specifically with difficulties falling asleep, interrupted sleep, fatigue during the day, and early morning awakening (Hansen et al., 2016, 2014; Lallukka, Rahkonen, & Lahelma, 2011; Nielsen, Harris, Pallesen, & Einarsen, 2020). However, the evidence on this association is scarce.

One explanation used by previous literature for the adverse health consequences of exposure to workplace bullying is provided by the cognitive activation theory of stress (CATS; Ursin & Eriksen, 2004), where a person's negative expectations of their ability to cope with a stressor elicits psychological and physiological stress reactions. Workplace bullying situations are characterized by persistent feelings of not being in control, and these feelings are translated into negative expectations of the ability to handle the situation (Reknes et al., 2016). According to CATS, persistent exposure to these stressors leads to cognitive activation and increased arousal. In line with this, studies have shown that exposure to workplace bullying is associated with altered hypothalamic-pituitary-

adrenocortical (HPA) -axis functioning (Hansen, Hogh, & Persson, 2011; Vaillancourt et al., 2008), and increased inflammatory processes (Rajalingam, Jacobsen, Nielsen, Einarsen, & Gjerstad, 2019). Heightened arousal due to frequent exposure to workplace bullying may prolong physiological activation, which, in turn, leads to depression and difficulties in initiating and maintaining sleep (Hansen et al., 2011).

In sum, the previous research and theoretical model imply that prolonged arousal following frequent exposure to workplace bullying, are involved in the development of depressive symptoms and sleep problems. Since there are so far few prospective studies examining these associations over long periods of time, especially the association between bullying and sleep, we still do have limited knowledge about how exposure to workplace bullying prospectively impacts health. We therefore test if there is support for the following hypotheses:

Hypothesis 1a: Exposure to workplace bullying predicts depressive symptoms, so that individuals who are frequently exposed to workplace bullying will exhibit more depressive symptoms.
Hypothesis 1b: Exposure to workplace bullying predicts sleep problems, so that individuals who are frequently exposed to workplace bullying will exhibit more sleep problems.

High-Involvement Work Practices and Conflict Management Procedures as Moderators

Although previous research suggests that exposure to bullying predicts both depressive symptoms and sleep problems, it is possible that certain individual level factors and organizational factors may to some extent buffer against these negative effects (e.g. Cooper-Thomas et al., 2013; Gardner et al., 2013; Laschinger & Nosko, 2015; Moreno Jiménez et al., 2007; Warszewska-Makuch et al., 2015). Research has suggested that resources at the interpersonal level may be more effective

than at the individual level in alleviating the negative effects of bullying on health and wellbeing (Nielsen & Einarsen, 2018). In a similar vein, Einarsen and colleagues (2011) suggest that organizational factors and effective support systems for victims of bullying might moderate the reactions of the victim. Examples of such resources include social support (Gardner et al., 2013) and authentic leadership (Warszewska-Makuch et al., 2015), although evidence is still scarce. In this paper, we argue that high-involvement work practices (HIWP) and conflict management procedures represent examples of such factors and systems.

HIWPs are work and employment practices designed to "enhance employees' levels of skill, motivation, information, and empowerment" (Guthrie, 2001, p. 180). Participation in decision-making, information sharing, rewards, and development practices are thus at the core of the concept (Kilroy, Flood, Bosak, & Chênevert, 2017; Macky & Boxall, 2008). This means, among other things, that employees are consulted about issues important to them, that they are kept informed about important developments, that continuous learning is encouraged so that employees feel competent in their role, and that performance management is implemented to ensure that rewards and career progression are dependent upon performance relative to expected goals (e.g. Kilroy et al., 2017).

The PIRK-framework (Lawler, 1986; Vandenberg, Richardson, & Eastman, 1999) summarizes HIWPs in four mutually reinforcing dimensions: the power to act and make decisions about work (P), information about all aspects of work (I), rewards tied to results (R), and knowledge of the total work system (K). As a result, employees have discretion and opportunity to use their skills; and at the same time the incentive structure enhances motivation and commitment (Batt, 2002).

Research has identified several positive outcomes associated with HIWPs, including higher organizational performance (Guthrie, 2001; Vandenberg et al., 1999), higher retention (Batt, 2002; Guthrie, 2001; Vandenberg et al., 1999), higher job satisfaction (Macky & Boxall, 2008;

Vandenberg et al., 1999) and higher commitment (Vandenberg et al., 1999). Research also suggests that HIWPs may lower job-induced stress and burnout (Kilroy, Flood, Bosak, & Chênevert, 2016; Macky & Boxall, 2008). These effects on well-being are hypothesized to stem from the empowering effect of HIWPs, that is, from the increased autonomy and control they provide. We argue that HIWPs may simultaneously buffer against other stressors in the workplace, such as bullying.

The idea that practices that increase autonomy, control, and support may buffer against poor psychosocial work conditions resonates with existing theoretical frameworks. For instance, in the job demands-resources (JDR) model, job resources help employees cope with demands and therefore alleviate their negative effect on wellbeing (Bakker & Demerouti, 2014). In the demand-control(-support) (JDCS) model (Johnson, Hall, & Theorell, 1989; Karasek, 1979; Karasek & Theorell, 1990), support plays a key role in reducing the negative effect of job strain on wellbeing. Control and autonomy also play a large part in alleviating the negative effects of strain and demands in both the JDR and the JDCS models. A high degree of control might enable employees to engage in active problem-focused coping (Daniels, Tregaskis, & Seaton, 2007). When employees experience autonomy, they can adjust their social interactions to avoid further bullying (Aquino, Tripp, & Bies, 2001). If they are already being bullied, autonomy might help them defend themselves more assertively (Rousseau, Eddleston, Patel, & Kellermanns, 2014). Furthermore, as low power may sensitize employees to perceived threat and victimization (Anderson & Berdahl, 2002; Keltner, Gruenfeld, & Anderson, 2003), autonomy and empowerment may in contrast lead employees to perceive ambivalent acts as less threatening.

Based on the JDR and JDCS theoretical models, the increased autonomy and control that HIWPs elicit should moderate the association between exposure to workplace bullying and depressive symptoms and sleep problems. There are to date no studies on this association, but studies

on the moderating role of control and autonomy on the association between bullying and other forms of employee wellbeing might provide some guidance. For example, Van Schalkwyk, Els and Rothmann (2011) indicated that perceived organizational support in the form of providing "role clarity", "participation in decision making" (and thereby greater job control), and "supervisory support", attenuated the association between workplace bullying and intention to leave. In addition, Livne and Goussinsky (2018) showed that autonomy and occupational self-efficacy moderated the association between workplace bullying and burnout.

The theoretical models and empirical studies mentioned above have guided us in advancing the following hypotheses:

Hypothesis 2a: HIWPs moderate the association between exposure to bullying and depressive symptoms, so that the effect of bullying on depressive symptoms will be weaker if HIWPs are perceived as high.

Hypothesis 2b: HIWPs moderate the association between exposure to bullying and sleep problems, so that the effect of bullying on sleep problems will be weaker if HIWPs are perceived as high.

Conflict management procedures refer to management interventions in interpersonal conflict. When organizational representatives, such as line managers, actively engage in conflict management it has been shown to have several positive outcomes, including lower staff turnover, a more positive employment relations climate, lower absence rates, and higher labour productivity (Teague & Roche, 2012). In line with this, the previous research has shown that effective conflict management - both the way employees themselves deal with conflicts and the way managers handle conflict - has the potential to reduce the risk of bullying (Baillien, Notelaers, de Witte, & Matthiesen, 2011; Einarsen, Skogstad, Rørvik, Lande, & Nielsen, 2018; Vartia, 1996).

However, that managers actively engage in conflict management may not only directly affect employee well-being and reduce the risk of bullying but may also alleviate the effect that bullying has on employees. Conflict management reflects specific actions of organizational support and might therefore help victims of bullying to cope by allowing them to see bullying as separate from their work experiences. This separation can help reduce the negative impact of bullying on wellbeing (Parzefall & Salin, 2010).

The extent to which managers engage in conflict management activities, and are seen as successful in this, might thus have a greater effect on wellbeing than simply reducing the risk that the conflict escalates into bullying. For example, Einarsen and colleagues (2018) showed that when employees experience that the organization handles conflicts well, it reduces the negative effects of workplace bullying on work engagement. When employees trust that they will not be left to their own devices, but that they can count on management to intervene and provide support, this is likely to reduce perceived stress. When organizations actively take measures to manage conflicts, this can thus be assumed to increase perceived support and predictability (cf. Einarsen et al., 2018), which may to some extent buffer against the negative effects of bullying. Again, this aligns with the JDCS-model and the JDR-model (Bakker & Demerouti, 2014; Karasek & Theorell, 1990), which suggest that support is a resource that can help employees cope with demands.

However, not only is the presence of conflict management procedures of importance, but also the form of conflict management procedures matters. When policies and practices are perceived as fair, they can help the employee cope with demands in the workplace (e.g. Proost, Verboon, & Van Ruysseveldt, 2015). The previous research has highlighted the importance of employee voice for perceptions of fairness (McFarlin & Sweeney, 1996; Thibaut & Walker, 1975).

In other words, when employees feel they are heard and have a say they are more likely to perceive procedures as fair, which can attenuate the effect of demands as discussed above.

This highlights the importance of implementing participatory conflict management procedures to buffer against the negative effects of workplace bullying. If conflicts are managed by using authority, that is without giving employees voice in the process, it might send a message that fairness is not of key importance to the employer. In fact, lack of voice has been associated with psychological health problems and exhaustion (Conway, Fu, Monks, Alfes, & Bailey, 2016). In contrast, giving employees voice, by involving them in the process, may in addition to increasing feelings of justice also make employees feel empowered and in control, something that may alleviate the negative effects of other job stressors. In line with the JDR-model, Conway et al. (2016) found support for such a buffering effect, suggesting that employee voice can be seen as a resource buffering the negative effects of demands on outcomes by giving employees a sense of control over events. Participatory conflict management procedures, where employees feel they have voice, may thus be particularly effective in protecting employees against the negative consequences of bullying.

Based on the theoretical models and research outlined above, we advance the following hypotheses:

Hypothesis 3a: Conflict management procedures moderate the association between exposure to bullying and depressive symptoms; if conflicts are managed through participatory procedures, the effect of bullying on depressive symptoms will be lower than if they are not managed at all or managed using authority.

Hypothesis 3b: Conflict management procedures moderate the association between exposure to bullying and sleep problems; if conflicts are managed through participatory procedures, the effect of

bullying on sleep problems will be lower than if they are not managed at all or managed using authority.

Our conceptual model including all the hypothesized associations is presented in Figure 1.

[Insert Figure 1 about here]

Methods

Participants and Procedure

The participants in this study were drawn from the Swedish Longitudinal Occupational Survey of Health (SLOSH) study, which follows up originally nationally representative samples. SLOSH started in 2006 with a follow-up on participants from the Swedish Work Environment Survey (SWES) from 2003. The SLOSH cohort was then expanded in 2008, 2010, and 2014, including participants also from SWES 2005, 2007, 2009, and 2011, and comprises 40,877 individuals. Once included in the cohort, all eligible cohort participants are asked to respond to self-completion questionnaires every other year. In total, 29,676 individuals (73%) have responded to a SLOSH questionnaire (for more information, see Magnusson Hanson et al., 2018). The SLOSH study has been approved by the Regional Research Ethics Board in Stockholm and informed consent has been obtained from all participants.

The present study focused on respondents from waves 4–7 (2012–2018), because those waves include the variables of interest for the present study. Inclusion criteria were that the participants: 1) were working at least 30% full-time, 2) had participated in at least one wave, and 3) had no missing values in at least one wave. The final sample size was 21,029 individuals with 45,678

person-observations. There were 7108 participants with data from a single wave, 5728 with two waves, 5928 with three waves and 2355 with four waves.

Measures

Exposure to workplace bullying was measured with one item: "*Are you subjected to personal persecution in the form of unkind words or behaviour from your superiors or fellow workers?*" In the literature, workplace bullying is defined as persistent exposure to negative behaviours during at least the past 6 months (Einarsen et al., 2011). We therefore used the bullying variable as a categorical variable with values 0 = no, 1 = sometime during the past 6 months, 2 = yes, once or more per month, and 3 = yes, once or more per week.

Depressive symptoms were measured with a short subscale from the Hopkins Symptom Checklist (SCL-90), the SCL-CD (Magnusson Hanson et al., 2014). The participants were asked to rate (0 = not at all; 4 = extremely) their experience of: feeling blue, feeling no interest in things, feeling lethargic or low in energy, worrying too much about things, blaming oneself for things, and feeling everything is an effort. This scale has been validated and found to have good psychometric properties in the SLOSH sample. Previous research has shown that the items are suitable for combination into an overall score of depression severity (Magnusson Hanson et al., 2014). The internal consistency of the depression scale at baseline was alpha = .90.

Sleep problems were measured with four items on disturbed sleep from the Karolinska Sleep Questionnaire (Åkerstedt et al., 2002). The questions related to how often during the past three months the participant had experienced: difficulty falling asleep, repeated awakenings, early awakening, and disturbed sleep. The response options ranged from 1 = never, to 6 = always/five times a week. The Cronbach's alpha at baseline was .85.

Conflict management was measured with one question ("*How are differences of view mainly settled in your work unit?"*). The response options were 1 = by discussing and negotiating; 2 = by using authority, prestige or order; 3 = not at all. The response "not at all" was coded 0 in the analyses.

A measure of HIWPs was constructed based on the PIRK model by Lawler (1992), using six items, such as: "*Do you have a choice in deciding how you do your work?"* and "*Everyone is entitled to give their opinion in matters of immediate personal concern"*. Response options were 1 = totally agree to 4 = totally disagree, and 1 = yes, often to 4 = no, never. A mean score was created and reversed so that higher scores are indicative of higher HIWP. The internal consistency of the HIWP scale at baseline was alpha = .72.

Age and gender were used as control variables in our analyses because previous research has shown they have an association with bullying and health (Notelaers, Vermunt, Baillien, Einarsen, & De Witte, 2011; Salin, 2020). We also controlled for changing jobs, since exposure to bullying will most likely stop if a person changes their job.

Statistical Analyses

Due to the nature of our data, that is, repeated-measurement panel data, time-points were nested under individuals. Thus, in order to take the dependencies of the measurements into account, we employed multilevel techniques to analyse the data (Singer, Willett, & Willett, 2003). More specifically, we used random coefficients models, where the intercepts were allowed to vary. The random coefficients model was compared with a likelihood test against the fixed effects model. The results showed that the random intercepts improved the model compared to the fixed effects model ($p < .001$).

Because multilevel models of dynamic panel data do not require balanced data, it is not a problem if not all measurements are available for all participants, providing there is at least one wave of data available for all participants (Hox, 2002; Raudenbush & Bryk, 2002). Depressive symptoms and sleep problems were standardized in the analyses. We tested the hypotheses in different models. In the first model, for each outcome, we included exposure to bullying, and the control variables. In the second model, we added the interaction effect of HIWPs, and in the third model, that of CM. The interaction terms were calculated as the product of bullying and HIWPs and bullying and CM. We calculated R^2 at each of the two levels using the formula recommended by Snijders and Bosker (1994), which indicates the explained variance at each level as a proportion of the total variance. All statistical analyses were conducted using Stata version 16 statistical software.

Results

Frequencies, means, standard deviations, ranges, and intraclass correlations are shown in Table 1, and the results from the random coefficients models in Table 2. The results show that, compared with not being exposed to bullying at all during the follow-ups, those who were exposed once a week or more had more depressive symptoms and sleep problems. Thus, hypotheses 1a and 1b were confirmed.

[Insert Table 1 about here]

[Insert Table 2 about here]

We also found that both HIWPs and CM were significant moderators of the association between bullying and depressive symptoms and sleep problems. In order to understand the interaction results better, we visualized the interaction effects with 95% confidence intervals in Figure 2 (HIWPs) and Figure 3 (CM). When HIWPs are high (+2 SD), the effect of bullying on depressive symptoms (Figure 2a) is significantly lower than when HIWPs are low (-2 SD). For sleep problems (Figure 2b), the difference between high and low HIWPs is less pronounced. However, for the group that experiences the most bullying, high HIWPs buffers the effect of bullying on sleep problems. Therefore, hypothesis 2a was supported and 2b partially supported.

[Insert Figure 2 about here]

[Insert Figure 3 about here]

Managing conflicts through negotiation significantly alleviated the association between exposure to bullying and depressive symptoms (Figure 3a). In the group where conflicts were not managed at all, and the group where conflicts were managed through authority, increased exposure to workplace bullying increased depressive symptoms. However, when conflicts were managed through negotiation, this detrimental effect was not present. For sleep problems (Figure 3b), the results were similar, but we only found an effect in the most bullied group: when conflicts are managed through negotiation, the effect on sleep problems decreases in the group most frequently exposed to bullying. The 95% confidence intervals of negotiation and no conflict management in the group with the most frequent exposure to bullying did not overlap. Therefore, hypothesis 3a was supported and hypothesis 3b partially supported.

Discussion

This study sought to investigate the effect of exposure to workplace bullying on depressive symptoms and sleep problems, and whether high-involvement work practices (HIWP) and participatory conflict management (CM) procedures moderate those associations. The contributions of the present study are two-fold, providing support for longitudinal associations between workplace bullying and employee wellbeing, and showing that organisational factors act as potential buffers in these relationships.

Using panel data of more than 20,000 individuals, our study adds to the understanding of negative effects of workplace bullying, confirming that bullying leads to more depressive symptoms and sleep problems, and can thus be seen as a severe social stressor. Our results can be explained by previous research showing that bullying influences wellbeing through heightened cognitive activation (Reknes et al., 2016), and increased physiological arousal (Hansen et al., 2011).

Furthermore, this study adds to our understanding of how organizational factors might buffer the detrimental effects on wellbeing of exposure to workplace bullying. It has to date been assumed that organizational factors might influence the association, but the evidence is scarce when it comes to depressive symptoms and sleep problems (Nielsen & Einarsen, 2018). Our study provides empirical support for the importance of HIWPs and participatory CM procedures in organisations when tackling bullying. The results align with theoretical models showing that resources and support buffer poor psychosocial work conditions (Bakker & Demerouti, 2014; Johnson et al., 1989). By increasing autonomy, control, and support, organizations can help employees cope with the effects exposure to bullying has on subsequent wellbeing.

The results of our study further show that organizational factors are protective especially at high levels of bullying. This contrasts with research showing individual level factors are effective only at low levels of bullying (e.g. Laschinger & Nosko, 2015; Nielsen & Einarsen, 2018; Nielsen et al., 2008). Thus, there are ways of intervening in even systematic bullying, by developing effective secondary interventions at the organisational level. These results answer a recent call for more research on the mechanisms explaining the relationship between bullying and wellbeing, and the conditions in which the effects of bullying might be mitigated (Nielsen & Einarsen, 2018).

Practical Implications

This study has several implications for practice. First, our results on the detrimental effects of bullying on health and wellbeing highlight the need for organisations to be aware of the issue and make sure that there are HR processes in place to prevent workplace bullying. Preventive procedures include anti-bullying policies and an explicit commitment to a bullying-free environment, awareness training and an easily accessible process to report bullying, as well as sanctions against perpetrators (Einarsen, Mykletun, Einarsen, Skogstad, & Salin, 2017). More generally, investing in leadership training and building a healthy work environment that fosters a positive team climate and moral courage can also act as a preventive measures (Salin, 2013). Prevention is necessary both to protect the employee and to reduce the operational costs related to sickness absences and voluntary employee turnover. Second, our study shows that organisations can help buffer the negative effects of bullying by investing in and implementing HIWPs. Managers should focus on empowering their employees by increasing their autonomy, resources, support, and participation in decision making. This could be achieved, for example, by designing jobs so that employees have more control, encouraging regular feedback, setting clear goals, and implementing flexible work hours. Third, the present study draws attention to

how conflicts are handled in an organisation and the repercussions of authoritarian or missing CM procedures. Increasing employee voice and perceptions of fairness by implementing participatory conflict management procedures can help organisations increase employee wellbeing, thus decreasing sickness absences, increasing performance and making careers longer. Organisations need to train managers in conflict management, provide incentives for them to engage in conflict management, and also hold them accountable for this in performance appraisal processes, something that previous research has found is often not the case (Teague & Roche, 2012).

Limitations and Suggestions for Further Research

The present study has several strengths. We employed a large-scale, nationally representative sample with several waves of data on the study variables. Hence, we were able to contribute to the literature on the longitudinal effects of bullying on wellbeing. In addition, we applied validated scales for our outcomes, thus increasing the reliability of the results. Despite these strengths, our study also has some weaknesses that need to be considered when interpreting the results. First, we used self-reported data for all our measures. However, our longitudinal design may have mitigated some of the issues surrounding the use of self-reported data (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In addition, employee-rated human resource practices, rather than management-rated practices, are now the norm (Beijer, Peccei, van Veldhoven, & Paauwe, 2019), because the perceptions of the phenomena of interest lie in the eye of the beholder. Due to the sensitivity of these issues, the use of medical diagnoses or doctor-rated scales on health variables is limited. Second, our measures of exposure to workplace bullying and conflict management procedures were single item rather than validated instruments. Using a single-item measure for bullying, raises the question of whether HIWPs and CM are equally effective for all forms of bullying. The single-item measure might have

underestimated exposure to bullying and consequently, underestimated the effect bullying has on wellbeing. It also meant we could not test for reverse causality in the bullying-wellbeing relationship, i.e. that those with poorer wellbeing are also more likely to become subject to bullying, an alternative pathway that has been suggested in some previous literature (Nielsen & Einarsen, 2012, 2018). Future studies should therefore investigate these associations further using validated measures for bullying, such as the Negative Acts Questionnaire (Einarsen et al., 2009). In addition, future studies should use a broader instrument to measure CM to understand which forms of CM are the most effective at reducing the negative effects of workplace bullying on wellbeing. Third, since we used data from only one country, generalizability to other, especially non-Western, countries might be limited. Culture has been found to moderate the association between bullying and health (see e.g. Loh, Restubog, & Zagenczyk, 2010), and that warrants more research on the differential effects national culture might have on whether organisational factors buffer the effects of exposure to workplace bullying. Fourth, we were not able to distinguish whether the perpetrator was a peer or a supervisor. In the Scandinavian context, employees often report being bullied by peers, whereas in most cultural contexts supervisory bullying is by far the most typical (Zapf, Einarsen, Hoel, & Vartia, 2011). Future research should therefore investigate whether organisational factors protect employees differentially from supervisory and peer bullying.

Conclusions

This study highlighted the longitudinal effect of exposure to workplace bullying on depressive symptoms and sleep problems. Further, it demonstrated that high-involvement work practices and participatory conflict management procedures based on negotiation buffered the negative effects. Future studies should examine the influence of other organisational factors on the association

between bullying and wellbeing, and look at other measures of wellbeing, to get a broader picture

of how and when exposure to bullying influences the wellbeing of the targets.

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Table 1. Descriptives of the study variables (N = 21029)

	Frequency (%)	Mean	SD	Range	ICC
Gender					
Male	9310 (44.27)				
Female	11719 (55.73)				
Age		52.27	10.29	20-80	
Changed jobs					
No	18734 (89.09)				
Yes	7519 (35.76)				
Bullying					
No	20178 (95.95)				
Yes, sometime during the past 6 months	2372 (11.28)				
Yes, once or more per month	515 (2.45)				
Yes, once or more per week	203 (0.97)				
HIWP		1.76	0.52	0-3	.61
CM					
Not at all	3306 (15.72)				
By negotiating	18337 (87.20)				
By using authority	4143 (19.70)				
Depressive symptoms		1.85	0.83	1-5	.59
Sleep problems		2.63	1.04	1-6	.68

Note. SD = standard deviation; ICC = intraclass correlation. HIWP = High-involvement work practice; CM = conflict management
The frequencies for Changed jobs, Bullying, and CM also contain those who have changed between the categories during the follow-ups.

Table 2. Results from multilevel regression analyses on the direct effect of bullying on depressive symptoms and sleep problems and the moderating effect of HIWPs and conflict management

	Depressive symptoms						**Sleep problems**					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 4	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Exposure to workplace bullying												
Yes, sometime during the past 6 months	.37***	.02	.29***	.02	.25***	.03	.21***	.01	.16***	.02	.18***	.03
Yes, once or more per month	.52***	.03	.35***	.04	.45***	.06	.32***	.03	.23***	.04	.29***	.06
Yes, once or more per week	.74***	.06	.50***	.07	.75***	.09	.50***	.05	.24***	.07	.69***	.08
High-involvement work practices (HIWP)			-.19***	.00					-.14***	.00		
Conflict management (CM)												
Negotiating					-.29***	.02					-.15***	.01
By using authority					-.06**	.02					.01	.02
Bullying*HIWP												
*Yes, sometime during the past 6 months * HIWP*			-.00	.02					.01	.01		
*Yes, once or more per month * HIWP*			-.08**	.03					.02	.03		
*Yes, once or more per week * HIWP*			-.09*	.05					-.15***	.04		
Bullying*CM												
*Yes, sometime during the past 6 months * By using authority*					.11*	.05					-.01	.04
*Yes, once or more per month * By using authority*					.16	.09					-.02	.08
*Yes, once or more per week * By using authority*					.14	.13					-.14	.12
*Yes, sometime during the past 6 months * Negotiating*					.07	.04					-.00	.04
*Yes, once or more per month * Negotiating*					-.14	.08					-.04	.08
*Yes, once or more per week * Negotiating*					-.47***	.13					-.63***	.12
Control variables												
Gender (0=male; 1=female)	.21***	.01	.18***	.01	.21***	.01	.26***	.01	.24***	.01	.26***	.01
Age	-.01***	.00	-.01***	.00	-.01***	.00	.01***	.00	.01***	.00	.01***	.00
Changed jobs (0=no; 1=yes)	-.04***	.00	-.00	.00	-.03**	.01	-.03***	.01	.00	.00	-.02**	.00
Constant	.51***	.03	.50***	.03	.74***	.03	-.42***	.03	-.43***	.03	-.31***	.03
$R^2_{level\ 1}$	.06		.11		.08		.03		.07		.04	
$R^2_{level\ 2}$	.07		.12		.09		.04		.07		.05	

Note. Reference group for Exposure to workplace bullying is "No"; Reference group for Conflict management is "No conflict management"; SE = standard error
HIWP, depressive symptoms and sleep problems are standardized
*** $p < .001$
** $p < .01$
* $p < .05$

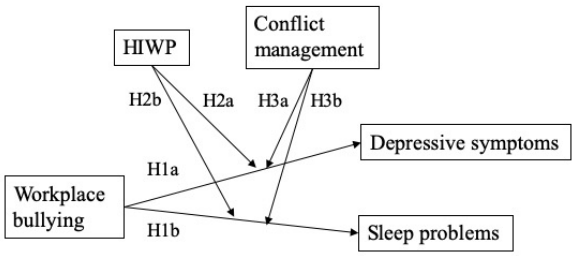

Figure 1. Conceptual model of the present study showing the study's hypotheses. HIWP = high involvement work practices.

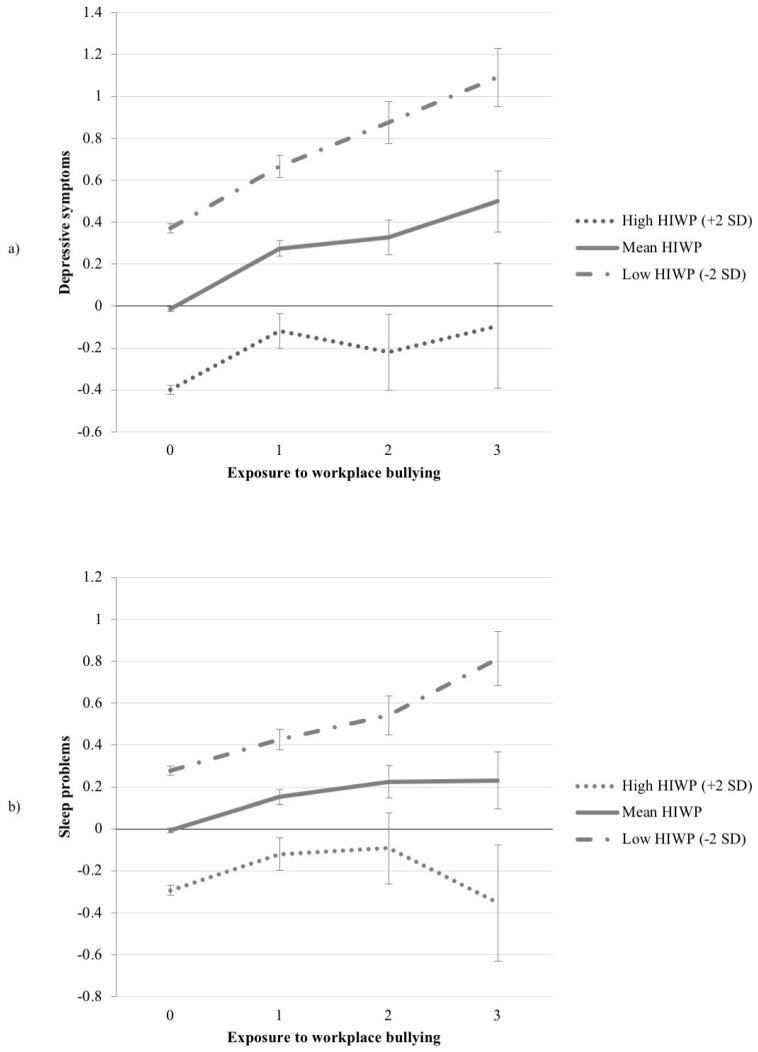

Figure 2. Interaction effects with 95% confidence intervals of high-involvement work practices (HIWP) and exposure to workplace bullying on (a) depressive symptoms, and (b) sleep problems. Exposure to workplace bullying is measured as 0 = no bullying, 1 = sometime during the past 6 months, 2 = yes, once or more per month, and 3 = yes, once or more per week.

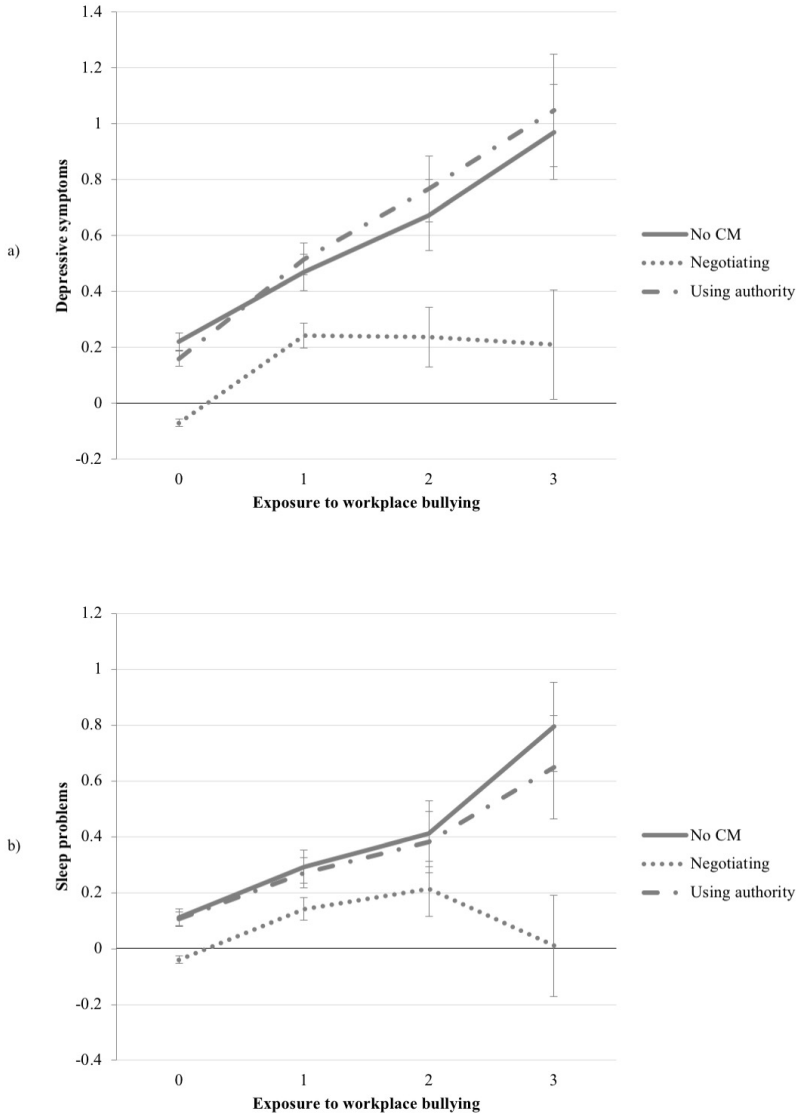

Figure 3. Interaction effects with 95% confidence intervals of conflict management procedures (CM) and exposure to workplace bullying on (a) depressive symptoms, and (b) sleep problems. Exposure to workplace bullying is measured as 0 = no bullying, 1 = sometime during the past 6 months, 2 = yes, once or more per month, and 3 = yes, once or more per week.