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To cite this article: Øystein Løvik Hoprekstad, Jørn Hetland, Arnold B. Bakker, Olav Kjellekvold Olsen, Roar Espevik, Martin Wessel & Ståle Valvatne Einarsen (2019): How long does it last? Prior victimization from workplace bullying moderates the relationship between daily exposure to negative acts and subsequent depressed mood, *European Journal of Work and Organizational Psychology*, DOI: [10.1080/1359432X.2018.1564279](https://doi.org/10.1080/1359432X.2018.1564279)

To link to this article: <https://doi.org/10.1080/1359432X.2018.1564279>



Published online: 03 Jan 2019.



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How long does it last? Prior victimization from workplace bullying moderates the relationship between daily exposure to negative acts and subsequent depressed mood

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ABSTRACT

The aim of the present study was to examine the relationships between daily exposure to negative acts and depressed mood on the same day and on the days following the exposure, and to test the hypothesis that these relationships would be stronger among those who have recently gone through a process of victimization from workplace bullying. The sample comprised 110 naval cadets participating in two different eleven-week tall ship voyages from Northern Europe to North America. Victimization from workplace bullying the last six months was measured one day prior to the voyages. Exposure to negative acts and depressed mood was measured daily during the first 33 consecutive days of the voyages. The results of multilevel modelling indicated that exposure to negative acts was related to higher levels of depressed mood on the same day as the exposure among all cadets, regardless of victimization status. However, exposure to negative acts predicted higher levels of depressed mood one and two days following the exposure among victims only. The theoretical and practical implications of these findings are discussed.

ARTICLE HISTORY

Received 1 December 2017

Accepted 8 December 2018

KEYWORDS

Workplace bullying; depressed mood; negative acts; vulnerability; diary study

Workplace bullying, defined as repeated and systematic exposure to negative behaviours over time, which the target has difficulties defending against (Einarsen, Hoel, Zapf, & Cooper, 2011), has consistently been found to have a negative impact on the health and well-being of its targets (Nielsen, Magerøy, Gjerstad, & Einarsen, 2014; Verkuil, Atasayi, & Molendijk, 2015). Such victimization from workplace bullying has been conceptualized as a phenomenon where victims end up in a sensitized state, depleted of resources and unable to defend against subsequent exposure to bullying behaviours (e.g., Einarsen, 1999; Leymann, 1990, 1996). Accordingly, victimization from workplace bullying may not only have detrimental main effects on the health and well-being of the victimized employees, but may also make victims more vulnerable to the affective impact of subsequent exposure to negative acts at work. In line with this, it has been claimed that the impact of any current interpersonal mistreatment at work is contingent on an individual's past experiences with interpersonal mistreatment, and that a temporal lens should be applied to understand the impact of mistreatment (Cole, Shipp, & Taylor, 2016). However, to the best of our knowledge, the assumption that prior victimization acts as a moderator of the relationship between subsequent exposure to bullying behaviours and affective outcomes has never been tested empirically using appropriate research designs. Although a recent study showed that victims of bullying experience conflict incidents qualitatively differently compared to non-victims (Baillien, Escartín, Gross, & Zapf, 2017), it is still not known whether victims of bullying subsequently also experience

more affective distress on days with higher exposure to negative acts at work, compared to non-victims. Consequently, Baillien et al. (2017) called for future research to examine differential effects of conflict incidents on relevant outcomes such as health and well-being among victims and non-victims.

The aim of the present study is to test the moderating effect of recent victimization from workplace bullying on the concurrent and lagged relationships between daily exposure to negative acts and daily depressed mood, using a quantitative daily diary design. By doing so, the present study contributes to the existing literature in several ways. First, bullying research has largely depended on between-person designs (Neall & Tuckey, 2014), limiting our knowledge on how fluctuations in exposure to bullying behaviours relate to intra-individual fluctuations in health and well-being. Although a few within-person investigations of the effects of exposure to bullying behaviours have been carried out using a weekly (Tuckey & Neall, 2014) or daily (Rodriguez, Antino, & Sanz-Vergel, 2017) diary design, there is still a need for more within-person and multilevel research on workplace bullying (Nielsen & Einarsen, 2018; Rai & Agarwal, 2018). Importantly, no studies to date have examined how within-person fluctuations in exposure to bullying behaviours relate to within-person fluctuations in depressed mood, despite depression being one of the most well-known outcomes of exposure to workplace bullying in between-person studies (Verkuil et al., 2015). Acknowledging that stressor-strain relationships at the between-person level are not necessarily similar to stressor-strain relationships at the within-person level (Pindek, Arvan, &

Spector, 2018), we provide, to the best of our knowledge, the first examination of the relationship between daily exposure to bullying behaviours and daily depressed mood to date. In the present study, we utilize a daily diary design following a sample of naval cadets during the first 33 consecutive days of a sailing ship voyage across the Atlantic, enabling us to examine how fluctuations in daily exposure to negative acts relate to fluctuations in daily depressed mood.

Second, the importance of examining lagged relationships between daily stressors and daily affective strain outcomes in diary studies has recently been underlined, as lagged relationships may capture affective straining effects better than concurrent relationships (Pindek et al., 2018). However, to date, studies have not explored whether employees experience affective distress both on the same days as they are exposed to bullying behaviours and on the days following the exposure. Thus, the persistency of the impact of daily exposure to bullying behaviours on affective strain has not yet been investigated empirically. We go beyond testing concurrent relationships, and explore whether individuals experience higher levels of depressed mood not only on days when they experience higher exposure to negative acts at work, but also on the days following the exposure. We thus provide the first test to date of the lagged relationship between daily exposure to negative acts and subsequent daily depressed mood.

Finally, the present study is the first to test whether individuals who have gone through a process of victimization from workplace bullying are more vulnerable to the immediate and short-term persistent impact of daily levels of exposure to bullying behaviours on daily depressed mood, as compared to non-victims. Consequently, the present study provides a thorough empirical test of the sensitization effects and resource loss spirals that have been argued to occur for individuals who have experienced victimization from workplace bullying, and answers the recent calls to test differential reactivity to negative acts as a function of past mistreatment experiences (Baillien et al., 2017; Cole et al., 2016). By doing so, we explore the notion that victimization from bullying not only has detrimental outcomes for victims in terms of main effects on health and well-being, but may also induce a heightened affective reactivity to subsequent exposure to negative acts at a day-to-day level. We apply Affective Events Theory (AET; Weiss & Cropanzano, 1996) as the main theoretical framework and integrate notions from workplace bullying research, Conservation of Resources (COR) theory (Hobfoll, 1989, 2002) and Job Demands-Resources (JD-R) theory (e.g., Bakker & Demerouti, 2017; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) to test this loss cycle of bullying.

Theoretical background

The damaging effects of workplace bullying and harassment on the target's mental health and well-being were first described in pioneering qualitative works (Brodsky, 1976; Leymann, 1990), and have later been confirmed in a range of empirical studies employing both cross-sectional and longitudinal between-person research designs (for an overview, see Nielsen & Einarsen, 2012; Verkuil et al., 2015). Yet, the existing studies have largely failed to adopt research designs that

capture the day-to-day dynamics of this relationship (Cole et al., 2016). For instance, meta-analyses of studies reporting prospective associations between exposure to workplace bullying and subsequent mental health problems have identified a mean time-lag between measurement points of 28 months (Verkuil et al., 2015) or reported the most common time lags to be between 12 and 24 months (Nielsen & Einarsen, 2012). Consequently, although the distal, long-term outcomes of aggregated exposure to bullying behaviours are well known, there is a need for studies utilizing within-person designs with shorter time lags to elucidate the immediate or proximal effects of fluctuations in exposure to bullying behaviours (Nielsen & Einarsen, 2018). Similarly, several scholars have more generally called for the use of more intra-individual, multilevel and dynamic perspectives on employee well-being (Bakker, 2015; Cropanzano & Dasborough, 2015; Ilies, Aw, & Pluut, 2015). Moreover, research on between-person differences in the strength of intra-individual affective reactions to mistreatment at work is scarce, and little is known about the role of an individual's past experiences or chronic work conditions. In the current paper, we aim to explore whether the within-person relationships between exposure to negative acts and depressed mood on a daily basis may be contingent on between-person differences in prior victim status, through the lens of Affective Events Theory as the overarching framework (Weiss & Beal, 2005; Weiss & Cropanzano, 1996).

Daily exposure to negative acts and daily depressed mood

AET is particularly well suited as a framework for understanding the within-person relationship between exposure to negative acts and depressed mood in a daily diary study. Fundamental to AET is the notion that affective states fluctuate within persons over time, and affective states should thus be studied using within-person designs. Of interest in the present study is depressed mood (i.e., feeling depressed, hopeless, and dejected), which has been shown to fluctuate substantially within persons from day to day (Cranford et al., 2006). Hence, employees' daily depressed mood is likely to vary, as a function of their daily experiences, and it is possible for an employee to experience high depressed mood on a given day without being in a more chronic and stable state of depression. Moreover, depressed mood has been linked to higher levels of negative work behaviours, such as effort withdrawal and lowered task performance (Warr, Bindl, Parker, & Inceoglu, 2014), and may accordingly ultimately be detrimental to the organization's goal achievement. Existing research has shown that employees who face a work environment where they are exposed to high levels of bullying behaviours over a longer time period (e.g., the last six months) tend to have higher scores on depression and depressive symptoms (Verkuil et al., 2015). That is, the between-person relationship between accumulated exposure to bullying behaviours at work and depression is well established. However, most theories used to explain this relationship and other stressor-strain relationships are inherently within-person focused (Pindek et al., 2018), such as AET, leaving the predictions derived from these theories concerning the impact of exposure to

bullying behaviours largely untested at the appropriate level of analysis.

Importantly, AET holds that events are the proximal predictors of affective states (Weiss & Cropanzano, 1996). In particular, negative events at work have been found to evoke negative affective reactions (Weiss & Beal, 2005). With regards to exposure to bullying behaviours, we may assume that even single incidents of exposure may trigger immediate negative affective reactions, as such exposure may pose a threat to, for instance, the target's basic psychological needs (Trépanier, Fernet, & Austin, 2016), or personal resources such as self-efficacy or optimism (Tuckey & Neall, 2014). In line with AET, several studies have found support for negative affective states as mediators of the relationship between exposure to bullying behaviours and various health and attitudinal outcomes, albeit using cross-sectional between-person designs (e.g., Casimir, McCormack, Djurkovic, & Nsubuga-Kyobe, 2012; Glasø & Notelaers, 2012; Vie, Glasø, & Einarsen, 2012). Theoretical support for the relationship between daily levels of exposure to bullying behaviours and daily levels of depressed mood can also be found in other prominent theories of employee stress and well-being that complement the propositions of AET. For instance, COR theory (Hobfoll, 1989, 2002) proposes that stress occurs when the individual faces threat of or actual resource loss. Similarly, within the framework of JD-R theory (e.g., Bakker & Demerouti, 2017; Demerouti et al., 2001), daily levels of exposure to bullying behaviours can be seen as a demand that negatively affects the target's daily levels of well-being, be it both directly through a strain process, or indirectly through reducing the target's resources. Overall, both existing theory and empirical findings on the long-term effects of accumulated exposure to bullying behaviours suggest that daily levels of exposure to bullying behaviours is likely to affect daily depressed mood.

Although the use of diary studies has long been non-existing in the harassment literature (Neall & Tuckey, 2014), there are some notable exceptions. Among the few within-person studies of workplace bullying, Tuckey and Neall (2014) demonstrated that weekly exposure to negative acts was positively related to weekly levels of emotional exhaustion, while Rodriguez et al. (2017) reported daily exposure to negative acts to be positively related to anxious mood on the same day as the exposure. Thus, consistent with both AET and COR theory, these studies support the notion that within-person fluctuations in exposure to bullying behaviours may inflict resource losses and evoke affective distress. Yet, neither studies investigated depressed mood as an outcome, which differs from exhaustion (Bakker et al., 2000) and anxious mood (Warr et al., 2014). Further, a handful of existing studies have utilized diary designs to explore the day-to-day relationships between negative affective outcomes and concepts that to some extent overlap with exposure to bullying behaviours at work. For instance, Zhou, Yan, Che, and Meier (2015) reported daily workplace incivility to be positively related to end-of-work negative affect, while daily incivility was negatively related to both recovery and vigour in another diary study with a comparable design (Nicholson & Griffin, 2016). Similarly, Martinez-Corts, Demerouti, Bakker, and Boz (2015) found daily levels of

both task conflict and relationship conflict to predict strain-based work-nonwork conflict, in terms of feeling emotionally drained and too stressed. Finally, Ilies, Johnson, Judge, and Keeney (2011) found negative affect to be higher when employees had experienced interpersonal conflicts during the three hours preceding the measurement of negative affect. Support for immediate, negative reactions to exposure to bullying behaviours is also found in the many studies linking experimentally induced social exclusion to damaged or reduced mood (for an overview, see Hartgerink, van Beest, Wicherts, & Williams, 2015).

Still, to date, there appear to be no studies examining the relationship between daily exposure to bullying behaviours and daily depressed mood. That is, while employees who retrospectively report higher levels of exposure to negative acts over a longer time period (e.g., the last six months) tend to report more symptoms of depression (between-person level), it is still not known whether employees experience higher levels of depressed mood on days where they are exposed to more negative acts than usual (within-person level). As relationships at the between-person level and within-person level admittedly have different meanings, it is not given that they are of similar magnitude or even in the same direction (Pindek et al., 2018), rendering it important to examine relationships at both levels in order to advance our understanding of the workplace bullying phenomenon.

Based on the theoretical reasoning and empirical studies presented above, we propose the following hypothesis:

Hypothesis 1: Daily exposure to bullying behaviours is positively related to depressed mood on the same day.

Persistent effects of daily exposure to bullying behaviours

In addition to having immediate effects on the target's depressed mood, daily exposure to bullying behaviours is likely to have sustained short-term effects lasting up to several days beyond the day of exposure. However, to date, this has not been tested empirically. This notion of lagged effects of an event on subsequent affective states is consistent with the AET framework (Weiss & Cropanzano, 1996). Moreover, in a meta-analysis of diary studies examining daily stressor-strain relationships, Pindek et al. (2018) concluded that lagged relationships may be just as strong as or even stronger than concurrent relationships between stressors and strain outcomes, and of particular interest when the strain outcomes are affective. Naturally, the between-person studies reporting prospective relationships between exposure to bullying behaviours and the target's well-being and health support such a notion of sustained effects of exposure to bullying behaviours. On a day-to-day level, the concept of perseverative cognition (Brosschot, Gerin, & Thayer, 2006) may elucidate how sustained cognitive activation in terms of rumination may prolong the impact of a stressor such as exposure to negative acts.

According to the perseverative cognition hypothesis, a stressor may continue to have a profound impact on the

individual in terms of sustained stress activation even, and perhaps mostly, beyond the point of actual exposure. Similarly, rumination has been proposed as a key mechanism explaining predictive or lagged relationships between daily stressors and affective strains (Pindek et al., 2018). In support of the perseverative cognition hypothesis, Pereira, Meier, and Elfering (2013) reported that daily social exclusion assessed shortly after leaving work was positively related to daily work-related worry assessed before going to sleep, while Wheeler, Halbesleben, and Whitman (2013) reported that daily levels of abusive supervision predicted emotional exhaustion the following day. Similarly, Wang et al. (2013) reported rumination to mediate the relationship between exposure to customer mistreatment and next morning negative mood. Furthermore, cognitive activation in terms of worry and need for recovery has been shown to mediate the bullying-sleep relationship (Rodríguez-Muñoz, Notelaers, & Moreno-Jiménez, 2011). Thus, having been exposed to bullying behaviours on one day may continue to affect the target on following days, through mechanisms of conscious repetitive or sustained mental representations of the exposure or through unconscious perseverative cognitions (Brosschot, Verkuil, & Thayer, 2010). This would constitute a temporal carryover, or lagged effect, as described by Wickham and Knee (2013). Such a lagged effect is in line with the proposition by Cole et al. (2016) that exposure to mistreatment on one day is likely to continue to have a negative impact on the individual's well-being on subsequent days through a mechanism of temporal influence. Based on the above, we propose the following hypothesis:

Hypothesis 2: Daily exposure to bullying behaviours is positively related to depressed mood on days following the given exposure.

Victimization and subsequent vulnerability

According to AET, the extent to which a certain event elicits an affective reaction depends on how the individual interprets the event (Weiss & Cropanzano, 1996). Central to the present study is the claim that the affective reactivity to present-day mistreatment at work is contingent on an individual's past experiences (Cole et al., 2016). Following that claim, between-person differences in individuals' past experiences with workplace bullying is likely to influence the interpretation of daily exposure to negative acts, resulting in differences in the extent to which the negative acts elicit a state of depressed mood. This is in line with the core assumption in the literature on workplace bullying that the systematic and repetitive nature of being victimized from bullying is a process that makes the target increasingly more susceptible to the negative effects of subsequent exposure to bullying behaviours (e.g., Einarsen, 1999; Leymann, 1996). This assumption is also evident in commonly cited definitions of workplace bullying (e.g., Einarsen et al., 2011, p. 22) that emphasize the repeated and systematic nature of the bullying experience where victims risk ending up in inferior positions where they are unable to defend themselves. However, existing research on workplace bullying, and on workplace mistreatment in general, has failed to adopt a temporal lens where the past experiences of targets have been taken into account (Cole et al., 2016).

In the present study, we provide the first test to date of whether the relationship between daily exposure to negative acts and daily depressed mood is contingent on whether an individual has already gone through a process of victimization from bullying. This is made possible by employing a quantitative diary study, using a measure of prior victimization from a general questionnaire in conjunction with subsequent daily reports of exposure to negative acts and depressed mood. Specifically, just prior to the diary study period, the respondents in the present study were presented with a definition of bullying and asked to report the extent to which they perceived that they had been bullied at work over the last six months, providing a between-person measure of victim status. Thus, self-perceived victim status just prior to the diary study period was assessed using the self-labelling method, which covers cumulative exposure as well as the cognitive appraisal of the situation and the individual's perception of being victimized (Nielsen, Notelaers, & Einarsen, 2011). In the following daily diary study period, the respondents faced a new work context, as they embarked on a sailing ship voyage. In the daily questionnaires, the behavioural experiences method was used to assess daily levels of exposure to negative acts, which taps into mere perceived frequency of exposure to negative acts. Consequently, in the present study, we combine the self-labelling method (victim status) and the behavioural experience method (daily exposure to negative acts), but use them at different levels and with reference to different timeframes. That is, in the present study, self-identified victim status varies between persons and is regarded as a measure of chronic exposure to bullying experienced in the past (the six months prior to the diary period), while daily exposure to negative acts are fluctuating events that vary within persons during the subsequent diary period. We argue that the within-person relationship between daily exposure to negative acts and daily depressed mood will be stronger among individuals who have already gone through a process of victimization from workplace bullying, and contend that this notion has sound theoretical foundation in AET and other contemporary theories of employee stress and well-being.

Within the AET framework (Weiss & Cropanzano, 1996), an individual's reaction to a certain affect-eliciting event must be interpreted in light of the overarching "emotion episode" (Frijda, 1993) which that event is perceived to be a part. Moreover, experiencing an event as a part of an overarching "emotion episode" is likely to exacerbate the affective reactions to the event (Weiss & Cropanzano, 1996). Thus, there may be qualitative differences in how two individuals perceive the very same event, and, consequently, individual differences in their reactions to these events. This notion of differential reactivity to daily stressors has also been proposed elsewhere (e.g., Almeida, 2005; Rudolph, Clark, Jundt, & Baltes, 2016). In our instance, prior victims of bullying may be more likely to interpret exposure to negative acts in light of their pre-existing bullying experiences and thus part of an existing bullying "emotion episode", subsequently evoking strong negative emotions. Non-victims, however, may be more likely to attribute the negative acts to other factors that to a lesser degree evoke negative emotions. Thus, single instances of exposure to negative acts may be more detrimental to the affective

well-being of individuals who perceive these acts to be part of an overarching bullying episode, compared to individuals who might experience the negative acts as anomalies in an otherwise bullying-free existence. That is, an individual's past experiences of mistreatment at work may provide the context in which any current exposure to mistreatment is experienced (Cole et al., 2016).

Interestingly, Baillien et al. (2017) found significant differences in how victims of workplace bullying and non-victims experienced conflict incidents. Using an event-based diary design, the authors found that victims of workplace bullying attributed significantly more hostile and malicious intent to the other party and experienced more inferiority and less control in conflict incidents compared to non-victims. These findings thus support the notion that victims may experience negative events differently compared to non-victims, consequently resulting in differences in affective reactions. Although Baillien et al. (2017) did not explore it in their own paper, they called for future research to test whether conflict events had differential effects on the health and well-being of victims versus non-victims. Overall, in an AET framework, it is likely that the relationship between daily exposure to negative acts and daily depressed mood will be stronger among individuals who have already gone through a process of victimization from bullying, due to how these individuals interpret the events. Moreover, we contend that the notion of resource loss is particularly important for understanding the impact of victimization on subsequent reactivity.

Exposure to workplace bullying has been proposed as a resource-draining process that threatens to deplete the targets of vital coping resources (e.g., Leymann, 1990). This view has recently been supported in studies using within-person designs, where exposure to bullying behaviours has been linked to lower self-efficacy and optimism and higher exhaustion and affective distress (Rodriguez et al., 2017; Tuckey & Neall, 2014). Individuals who have gone through a process of victimization of from bullying, characterized by repeated and long-term exposure to negative acts, are thus likely to have experienced significant resource losses. According to COR theory (Hobfoll, 1989, 2002), resource losses beget further resource losses through loss spirals, and make individuals less able to offset future resource loss and more vulnerable to the negative impact of such resource losses. Consequently, victimized individuals may be at risk of experiencing stronger strain reactions when subsequently facing daily stressors, such as daily exposure to negative acts, as the target finds it increasingly difficult to mobilize the resources required to cope with and recover from such exposure. The above line of reasoning based on COR theory also fits well with JD-R theory (e.g., Bakker & Demerouti, 2007, 2017; Demerouti et al., 2001). In a JD-R perspective, victimization from bullying, with its repeated and continuous exposure to negative acts, may be considered a job demand that is likely to be related to a depletion of both job resources and personal resources for the target. Accordingly, if faced with the demands of new incidents of exposure to negative acts, a person who has already gone through a process of victimization from bullying will have fewer resources available to buffer the negative impact of the exposure, compared to non-victims who have

not gone through the same process of resource loss (cf. Bakker & Costa, 2014). More generally, having experienced a chronic stressful work situation is likely to deplete the individual's resources, consequently increasing the affective reactivity to daily stressors (Almeida, 2005; Bakker, 2015). Overall, there are firm theoretical arguments to claim that daily levels of exposure to negative acts affects the daily well-being of victims more strongly than for non-victims.

Despite convincing theoretical arguments, only a few studies have examined the moderating effects of victim status on the relationship between exposure to negative acts and well-being outcomes (see Hewett, Liefooghe, Visockaite, & Roongrungsuke, 2016; Out, 2005; Vie, Glasø, & Einarsen, 2011). Furthermore, these studies have all employed cross-sectional designs and studied retrospective accumulated exposure to negative acts and the perception of being bullied with reference to the same timeframe, limiting the ability to test whether prior victimization is related to heightened reactivity towards subsequent exposure to negative acts. In contrast, employing a quantitative diary design and a multilevel framework differentiating between trait-like and state-like variables makes it possible to test this interaction hypothesis in a more appropriate manner. We propose that self-identified status as a victim of bullying with reference to the six months prior to the diary period can be considered a trait-like level between-person level variable that may moderate the subsequent daily relationships between exposure to negative acts and depressed mood at the within-person level through a cross-level interaction. This approach allows for a more dynamic perspective on the effects of exposure to negative acts at work, and is consistent with suggestions of testing sensitization effects of accumulated job demands or accumulated resource losses on the subsequent relationships between daily job demands and well-being (e.g., Almeida, 2005; Bakker, 2015; Ilies et al., 2015; Wickham & Knee, 2013). Based on the theoretical frameworks presented above, we expect the daily relationships between exposure to negative acts and depressed mood to be affected by what Cole et al. (2016, p. 285) termed "temporal comparison", described as "moderating effects in which the relationship between current perceived mistreatment and the focal outcome are contingent on retrospectively or anticipated levels of mistreatment". Thus, we propose the following hypothesis:

Hypothesis 3: The relationship between daily exposure to bullying behaviours and depressed mood on the same day will be stronger among those who have recently gone through a process of victimization from workplace bullying (vs. non-victims).

Furthermore, we propose that the mechanisms described above may not only sensitize the victims to the immediate effect of exposure to negative bullying behaviours on depressed mood within the same day, but also sensitize them to the persistent or lagged effects lasting past the day of exposure. For instance, it is likely that individuals who have recently experienced victimization from bullying subsequently to a greater extent engage in perseverative cognitions (Brosschot et al., 2006) during the days following exposure to bullying behaviours. Additionally, victims are presumably

more likely to find themselves in loss cycles (Hobfoll, 2002) and lacking the resources needed to recover quickly from the exposure to negative acts. Thus, our final hypothesis is:

Hypothesis 4: The relationship between daily exposure to bullying behaviours and depressed mood on days following the given exposure will be stronger among those who have recently gone through a process of victimization from workplace bullying (vs. non-victims).

Method

Participants and procedure

The sample consisted of naval cadets from a Norwegian Military University College, who participated in an eleven weeks sea voyage from Northern Europe to North America as a part of their mandatory training. In the present study, we combine data collected during two different voyages. We utilize data collected from 54 cadets in the autumn of 2010 and 61 cadets in the autumn of 2011, yielding a total sample of 115 cadets. During the voyage, the cadets followed a shift schedule of four hours work followed by eight hours rest. Each day at 5 pm during the first 33 days of the voyage, the cadets were requested to fill out a standardized questionnaire, with various questions about their work situation and their well-being the past 24 h. The questionnaires were kept in a binder, one for each cadet. On the day before the voyage, all cadets filled out a general questionnaire, with questions about personality and other trait-like variables, including a question on workplace bullying. The total sample consisted of 95 male participants (82.6%) and fifteen female participants (13.0%). Five participants did not report their gender (4.3%). The mean age of the participants was 23.5 years, with a range from 19 to 33 years ($SD = 3.0$ years). The response rate was 96% on the general questionnaire, yielding 110 person-level observations at Level 2. These 110 cadets answered 76% of the daily questionnaires, yielding 2771 day-level observations at Level 1 (out of 3630 possible day-level observations; 110 cadets \times 33 days).

Measures

Day-level depressed mood

Daily levels of depressed mood was measured using three items from the IWP Multi-affect Indicator (Warr, 1990; Warr et al., 2014), adapted to the daily level. The three items tapped into the extent to which the respondents felt “depressed”, “dejected” and “hopeless”. The participants rated themselves on a 5-point scale, ranging from 1 (not at all) to 5 (almost all of the time), indicating the degree to which the participant felt the various emotions in the present moment. Reliability of the daily measures was calculated using the approach described by Geldhof, Preacher, and Zyphur (2014), by estimating omega (ω) at the within-person level and between-person level using a two-level CFA. Depressed mood had acceptable reliability both at the within-person level ($\omega = .69$) and at the between-person level ($\omega = .87$).

Day-level negative acts

Daily levels of exposure to negative acts was measured with four items adapted from the Norwegian version of the Short Negative Acts Questionnaire (SNAQ; Notelaers, Van der Heijden, Hoel, &

Einarsen, 2018), which is based on the Negative Acts Questionnaire – Revised (NAQ-R; Einarsen, Hoel, & Notelaers, 2009). The timeframe reference provided to the respondents was adapted to the daily diary design, and changed from the original “the last six months” to “today”. We selected items that we deemed likely to occur on a day-to-day basis among the sample of cadets in the sailing ship voyage setting, and made sure that the items were drawn from the three different types of bullying behaviours that have been described for the SNAQ (i.e., work-related, person-related, and social exclusion). The items were “Been ignored or excluded”, “Unpleasant reminders of errors or mistakes”, “Practical jokes carried out by people you don’t get along with” and “Been shouted at or been the target of spontaneous anger”. The participants rated their experiences on a 4-point frequency scale, ranging from 1 (not at all) to 4 (many times). Although all four items are meaningful indicators of daily frequency of exposure to negative acts, they need not be inter-related within the same day. For instance, while the daily frequency of social exclusion contributes to the overall daily exposure to negative acts, it does not make sense to argue that experiencing social exclusion must also be accompanied by being shouted at. Similarly, an increase in daily exposure to negative acts is unlikely to result in a subsequent simultaneous increase in all four indicators. Consequently, daily exposure to negative acts may constitute a measure with formative rather than reflective properties (Bollen, 1984). Although the NAQ-R has been validated as a scale with reflective indicators, this assumption has been challenged for the NAQ-R in particular (e.g., Balducci, 2009; McCormack, Djurkovic, Nsubuga-Kyobe, & Casimir, 2018) and for measures of mistreatment at work in general (e.g., Hershcovis & Reich, 2013; Nixon & Spector, 2015; Tarraf, Hershcovis, & Bowling, 2017). It has also been shown that behavioural measures used in diary studies may retain their reflective properties at the between-person level, whilst being more appropriately operationalized as formative indicators of transient events at the within-person level (Hox & Kleiboyer, 2007). The focus on frequency of past events rather than present states or capacities also suggests that the measure may be considered formative rather than reflecting a latent state (Wilcox, Howell, & Breivik, 2008). Thus, we used the four items of daily exposure to negative acts to create a single index, in line with the established practice of combining the NAQ items into a single index of exposure to negative acts (e.g., Einarsen et al., 2009; Nielsen et al., 2011). For the sake of transparency, we also report the reliability estimates for daily exposure to negative acts, although we consider it a measure with substantial formative properties. Daily exposure to negative acts had relatively low reliability at the within-person level ($\omega = .44$) and acceptable reliability at the between-person level ($\omega = .76$), indicating that experiencing a negative act on a given day was not necessarily accompanied by other negative acts on the same day.

Victimization from workplace bullying

Seeing oneself as a victim of workplace bullying over the six months prior to the voyage was measured with a well-established single-item measure of victimization (Einarsen & Skogstad, 1996; Nielsen et al., 2011; Solberg & Olweus, 2003), provided to the cadets in the general questionnaire one day prior to the voyage. Thus, prior victimization from bullying constitutes a person-level variable in this study, enabling us to examine whether the day-level relationships between exposure to negative acts and

depressed mood are contingent on the cadet's past victimization experiences. The participants read the following definition of bullying (Einarsen & Skogstad, 1996; Olweus, 1993), and were then asked if they had been bullied over the last six months:

Bullying (such as harassment, teasing, exclusion or hurtful jokes) is when an individual is repeatedly exposed to unpleasant, degrading or hurtful treatment at work. For a situation to be labelled bullying, it has to occur over a certain time period, and the target has to have difficulties defending himself or herself against the actions. It is not bullying if two equally "strong" persons are in conflict or if it is a one-off incident.

The participants rated themselves on a five-point scale, ranging from 1 (no) to 5 (yes, daily). For our analyses, we created a dichotomized variable where all cadets who adopted the victimization label were categorized as self-defined victims of bullying, while those who answered "no" were categorized as non-victims, in line with the approach followed in other studies (e.g., Hoel, Cooper, & Faragher, 2001; Persson et al., 2016; Vie, Glasø, & Einarsen, 2010).

Strategy of analysis

The repeated measurement of the cadets, where the days are nested within persons, made it necessary to perform multi-level-analyses on the data. We have a two-level model with days at the first level (Level 1; $N = 2771$) and persons at the second level (Level 2; $N = 110$). The multilevel structure of the data violates the independence assumption underlying many statistical techniques, which may adversely affect estimates and statistical inferences if this multilevel structure is not taken into account in the analyses.

To perform analyses where day-level depressed mood and day-level exposure to negative acts were measured at different days, lag-variables were created for the variable depressed mood according to the formula: n lag (depressed mood) $_t = (\text{depressed mood})_{t+n}$, where n is number of days lagged and t is the number of the day.

We performed the multilevel-analyses using the software MLwiN 2.36 (Rasbash, Charlton, Browne, Healy, & Cameron, 2009). Depressed mood, both as measured the same day as exposure to negative acts (day t) and as measured one or more days lagged (day $t + n$, where n represents number of days lagged), was used as dependent variables. Further lags were incorporated in the dependent variable if some of the relevant estimates reached statistical significance in the analysis, as our hypotheses do not specify the duration of the persistent effects. We used person-mean centring for daily levels of exposure to negative acts in our multilevel-analyses, thus removing all the between-person variance in this day-level measure, as we were interested in isolating the within-person effects (Ohly, Sonnentag, Niessen, & Zapf, 2010). We also included each cadet's aggregated mean exposure to negative acts as a grand mean centred Level 2 control variable. Consequently, we incorporated between-person differences in exposure to negative acts in our model, while Level 1 coefficients still represented strictly within-person effects (Tabachnick & Fidell, 2013; West, Ryu, Kwok, & Cham, 2011), an approach also taken in previous studies examining the effects of daily mistreatment (e.g.,

Beattie & Griffin, 2014; Meier, Gross, Spector, & Semmer, 2013; Zhou et al., 2015). Age and gender were included as control variables, and retained in the multilevel analyses if they showed significant bivariate associations with daily depressed mood. For each analysis, we performed a three-step procedure. First, a null model containing no predictors was tested to see how much of the variance in depressed mood that resided at the day-level and how much of the variance that resided at the person-level. Second, depressed mood was regressed upon day-level negative acts, victimization status and our control variables to test for the main effect of day-level negative acts on depressed mood. Third, we added the interaction term, day-level negative acts \times victimization status, to the equation to test for victimization status as a possible moderator of the day-level relationship between negative acts and depressed mood. Significant interaction effects were probed using the tools provided by Preacher, Curran, and Bauer (2006).

In order to establish that the two day-level measures could be distinguished empirically, we tested two different measurement models using multilevel confirmatory factor analyses (MLCFA) in Mplus version 7.4. The different models were evaluated against commonly used fit criteria (Hu & Bentler, 1999). In the first model, we modelled depressed mood and exposure to negative acts as latent factors reflecting their respective indicators both at the within-person and between-person level. The two latent factors were allowed to co-vary both on the within-person and between-person level. The model showed an overall good fit to the data ($\chi^2 = 103.07$, $DF = 27$, $RMSEA = 0.032$, $CFI = 0.97$, $TLI = 0.95$), and the fit specific to the within-level ($SRMR^{\text{within}} = 0.032$) and between-level ($SRMR^{\text{between}} = 0.085$) was good and acceptable, respectively. At the within-level, the factor loadings ranged from 0.51 to 0.76 for depressed mood, and from 0.36 to 0.57 for exposure to negative acts, while the corresponding between-level factor loadings ranged from 0.74 to 0.99 and from 0.63 to 0.94. The two factors correlated positively at both the within-level (0.18) and the between-level (0.53). As expected based on previous research (e.g., Bakker, Sanz-Vergel, Rodríguez-Muñoz, & Oerlemans, 2015), the within-person factor loadings were lower than the between-level factor loadings. Finally, we tested a one-factor model with all indicators loading on the same latent factor. The model showed poor overall fit to the data ($\chi^2 = 754.41$, $DF = 29$, $RMSEA = 0.095$, $CFI = 0.71$, $TLI = 0.59$), and poor fit at the within-level ($SRMR^{\text{within}} = 0.099$) and between-level ($SRMR^{\text{between}} = 0.188$). Moreover, the one-factor model showed a significantly worse fit to the data than the two-factor model ($\Delta\chi^2 = 651$, $DF = 2$, $p < .001$). Hence, daily exposure to negative acts and daily depressed mood could be distinguished empirically.

Results

Descriptive statistics and inter-correlations

Table 1 shows the descriptive statistics and inter-correlations among the study variables. As can be seen in Table 1, daily levels of exposure to negative acts were positively related to daily levels of depressed mood at the within-level ($r = .14$, $p < .001$), providing initial support for hypothesis 1.

Table 1. Descriptive statistics and inter-correlations for study variables ($N = 2771$ occasions, $N = 110$ respondents).

Variable	%	\bar{x}	SD	1.	2.	3.	4
1. Daily depressed mood	-	1.19	0.41	-	.14***		
2. Daily exposure to negative acts	-	1.07	0.19	.39***	-		
3. Age	-	23.46	2.97	-.14	-.28**	-	
4. Gender (female)	13.0%	-	-	.23*	.15	-.13	-
5. Victimization status (victim)	7.3%	-	-	.13	.18	-.13	.20*

Gender coded as 0 = male and 1 = female. Victimization status coded as 0 = non-victim and 1 = victim. Person-level correlations are below the diagonal and day-level correlations above the diagonal.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Altogether, 7.3% of the cadets ($n = 8$ of 110) who answered the question identified as victims of workplace bullying prior to the start of the daily diary period. Victimization status prior to the voyage did not correlate with daily levels of exposure to negative acts or daily levels of depressed mood. As the female cadets tended to experience slightly higher levels of daily depressed mood, we retained gender as a control variable in subsequent analyses. Furthermore, the results show that 78% of the variance in exposure to negative acts and 64% of the variance in depressed mood was explained by daily fluctuations within persons, supporting the appropriateness of utilizing multilevel analysis.

Hypothesis testing

Hypothesis 1 predicted that daily levels of exposure to negative acts would be positively related to depressed mood on the same day. The results of the multilevel analyses predicting day t depressed mood are shown in Table 2. In support of hypothesis 1, there was a significant main effect of day t levels

of negative acts on day t levels of depressed mood ($B = 0.277$, $p < .01$).

Hypothesis 2 stated that daily levels of exposure to negative acts would be positively related to depressed mood one or more days following the exposure. That is, day t exposure to negative acts was expected to positively predict day $t + n$ depressed mood, with n representing number of days lagged. The results of the multilevel analyses predicting day $t + 1$ depressed mood are displayed in Table 2. As indicated by the results of the main model, day t exposure to negative acts was a significant predictor of day $t + 1$ depressed mood ($B = 0.093$, $p < .05$), supporting Hypothesis 2. Thus, we continued with additional analyses, testing further days lagged. As evident in Table 2, day t exposure to negative acts also predicted day $t + 2$ depressed mood ($B = 0.074$, $p < .05$). However, day t exposure to negative acts did not predict day $t + 3$ depressed mood ($B = -0.040$, ns).

Hypothesis 3 stated that victimization from bullying prior to the voyage would moderate the positive relationship between daily levels of exposure to negative acts and depressed mood on the same day. More specifically, we predicted the relationship between day t exposure to negative acts and day t depressed mood to be stronger among the cadets who identified as victims of workplace bullying prior to the voyage, as compared to the non-victims. As shown in Table 2, the interaction term between victimization from bullying and day t exposure to negative acts did not predict day t depressed mood ($B = 0.170$, ns). Thus, Hypothesis 3 was not supported.

Hypothesis 4 predicted that the relationship between day t exposure to negative acts and day $t + n$ depressed mood would be stronger for those who identified as victims of workplace bullying prior to the voyage, as compared to the non-victims. As shown in Table 2, the results indicate that

Table 2. Multilevel estimates for the prediction of depressed mood.

	Depressed mood day t		Depressed mood day $t + 1$		Depressed mood day $t + 2$	
	B	SE	B	SE	B	SE
Null model						
Intercept	1.192**	.025	1.186**	.025	1.183**	.025
Variance level 1 (day level)	.112 (64%)	.003	.099 (60%)	.003	.093 (59%)	.003
Variance level 2 (person level)	.063 (36%)	.009	.065 (40%)	.009	.065 (41%)	.009
-2 Log likelihood	2084.35		1702.76		1501.59	
Main model						
Intercept	1.175**	.025	1.164**	.026	1.170**	.027
Negative acts (aggregated)	.946**	.249	.988**	.257	1.040**	.263
Gender	.125	.069	.143*	.071	.131	.072
Victimization status	.034	.092	.053	.094	.019	.097
Day t negative acts	.277**	.039	.093*	.036	.074*	.037
Variance level 1 (day level)	.109	.003	.090	.003	.091	.003
Variance level 2 (person level)	.054	.008	.057	.008	.060	.009
-2 Log likelihood	1986.91		1361.42		1294.70	
Interaction model						
Intercept	1.175**	.025	1.164**	.026	1.170**	.027
Negative acts (aggregated)	.945**	.249	.989**	.257	1.045**	.263
Gender	.125	.069	.142*	.071	.132	.072
Victimization status	.034	.092	.052	.094	.019	.097
Day t negative acts	.238**	.044	.053	.042	.035	.042
Day t negative acts \times victimization	.170	.092	.171*	.086	.178*	.090
Variance level 1 (day level)	.109	.003	.090	.003	.090	.003
Variance level 2 (person level)	.054	.008	.057	.008	.060	.009
-2 Log likelihood	1983.49		1357.51		1290.77	

Gender coded as 0 = male and 1 = female. Victimization coded as 0 = non-victim and 1 = victim. $N = 110$ respondents, $N = 2759$ measurement occasions day t , $N = 2465$ measurement occasions day $t + 1$, $N = 2314$ measurement occasions day $t + 2$.

* $p < .05$, ** $p < .01$.

victimization from bullying prior to the voyage moderated the relationship between day t exposure to negative acts and day $t + 1$ depressed mood in the expected direction ($B = 0.171$, $p < .05$). As evident in Table 2, victimization status prior to the voyage also moderated the relationship between day t exposure to negative acts and day $t + 2$ depressed mood in the expected direction ($B = 0.178$, $p < .05$). Thus, Hypothesis 4 was supported. Victimization from bullying did not moderate the relationship between day t exposure to negative acts and day $t + 3$ depressed mood ($B = -0.028$, ns). Thus, no further days lagged were investigated. Additional examination of the significant interaction effects was carried out by graphically plotting the interactions and performing simple slope tests for the groups of victimized and non-victimized cadets.

As illustrated in Figure 1, the relationship between day t exposure to negative acts and day $t + 1$ depressed mood was stronger among the cadets who identified as victims prior to the voyage. Simple slope tests indicated a non-significant slope among the non-victims (simple slope = 0.053 (0.042), $z = 1.27$, $p = .20$) and a positive and significant slope among the victims (simple slope = 0.22 (0.096), $z = 2.33$, $p = .02$). The same pattern was evident for day $t + 2$ depressed mood, as illustrated in Figure 2. The relationship between day t exposure to negative acts and day $t + 2$ depressed mood was non-significant among the non-victims (simple slope = 0.035 (0.042), $z = 0.83$, $p = .41$), but was positive and significant among the victims (simple slope = 0.21 (0.079), $z = 2.70$, $p = .007$).

Discussion

The aims of the present study were to explore the dynamics of the relationship between daily levels of exposure to bullying behaviours and daily levels of depressed mood in a sample of naval cadets participating in a sailing ship voyage, and to test whether these relationships would be stronger for cadets who identified as victims of workplace bullying prior to the voyage. Exposure to bullying behaviours was positively related to depressed mood on the same day, supporting the hypothesis regarding immediate affective reactions to exposure to

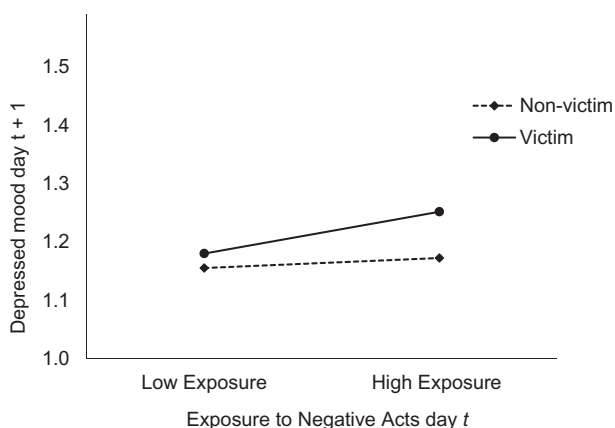


Figure 1. The moderating effect of victimization status prior to the voyage on the relationship between daily levels of exposure to negative acts and depressed mood one day after the exposure.

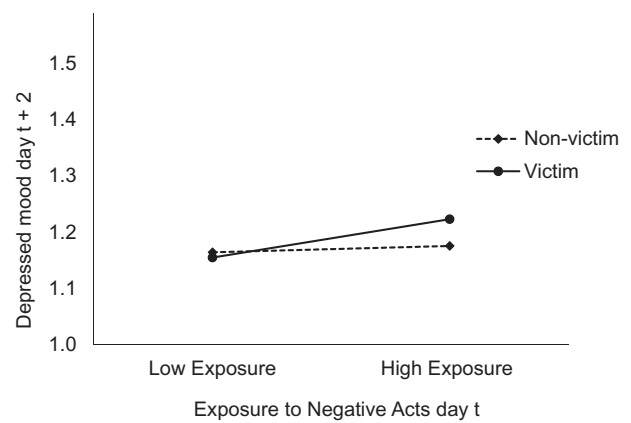


Figure 2. The moderating effect of victimization status prior to the voyage on the relationship between daily levels of exposure to negative acts and depressed mood two days after the exposure.

bullying behaviours. The results also supported the proposed sustained short-term impact of daily levels of exposure to bullying behaviours, as exposure to bullying behaviours on one day was positively related to depressed mood both one and two days following the exposure. As predicted, victimization from bullying prior to the voyage moderated the relationship between exposure to bullying behaviours and depressed mood one and two days following the exposure. The results indicate that while victims of workplace bullying and non-victims are equally affected by exposure to bullying behaviours in terms of increased depressed mood on the day of exposure, this increase in depressed mood is only sustained beyond the day of exposure among the victims. In what follows, we discuss these findings in more detail.

Theoretical contributions

As predicted, the results indicated that the cadets felt more depressed, dejected and hopeless on days where they experienced more exposure to negative acts from other crewmembers. The present study is, to the best of our knowledge, the first to date to test this within-person relationship between daily exposure to bullying behaviours and daily depressed mood. Supporting the basic tenets of AET (Weiss & Cropanzano, 1996), the results indicate that daily fluctuations in exposure to negative acts is related to increased daily depressed mood. The results corroborate a range of studies that have found detrimental consequences of bullying on employee's mental health, and especially so depression, using a between-person perspective (see Verkuil et al., 2015), and extend these by taking a much needed intra-individual approach that has long been ignored in research on harassment and mistreatment (Cole et al., 2016; Neall & Tuckey, 2014). Combined with the study of Rodriguez et al. (2017) showing that daily exposure to bullying behaviours was positively related to daily anxious mood, the results indicate that employees experience more affective distress on days where they experience higher levels of exposure to bullying behaviours. The findings also fit well with previous daily diary studies on affective reactions to related concepts, such as incivility and interpersonal conflicts (e.g., Ilies et al.,

2011; Nicholson & Griffin, 2015). Moreover, the results are in line with the broader meta-analytical findings that daily hindrance demands (including interpersonal conflicts, bullying and social exclusion) are positively related to daily affective strains (Pindek et al., 2018), in support of AET. Overall, the findings contribute to our understanding of how the bullying process may unfold, as victims of bullying may incur repeated and accumulated resource losses as they experience systematic exposure to negative acts, eventually resulting in loss spirals and resource depletion consistent with COR theory (Hobfoll, 1989, 2002).

Contrary to our expectations, victimization from bullying prior to the diary study period did not moderate the positive relationship between exposure to bullying behaviours and depressed mood on the same day. This may suggest that exposure to negative social acts is a situational demand that is inherently potent and universally distressing to such an extent that its immediate impact on employee well-being is resistant to presumed protective factors, such as the employee's psychological resources. For instance, such exposure may pose a threat to the target's basic psychological needs (Trépanier et al., 2016), making the adverse immediate impact of exposure to negative social situations universal across individuals and situations. The findings are consistent with a range of studies on experimentally induced social exclusion using the Cyberball paradigm. In those studies, the immediate negative reactions to exclusion in terms of reduced fundamental need satisfaction have been shown to be resistant to moderators, whereas any delayed reactions to a larger extent are affected by both individual differences and situational factors (Hartgerink et al., 2015). For instance, Zadro, Boland, and Richardson (2006) reported that the negative effect of ostracism on need satisfaction was more persistent among socially anxious individuals. Consequently, the latter authors suggested that the duration of the ostracism effects, rather than the immediate reactions, should be the focus in studies aiming to explore potential moderators. Although the operationalization of immediate and persistent effects in the Cyberball studies admittedly differs from the ones used in the present study, the proposed mechanisms are likely to be similar.

As expected, exposure to bullying behaviours on one day positively predicted depressed mood both one and two days following the exposure among those who had experienced victimization from bullying during the six months prior to the voyage, whereas these relationships were non-significant among non-victims. Consistent with our theoretical framework, victimization from workplace bullying prior to the diary study period thus acted as a person-level moderator of the lagged relationship between daily exposure to negative acts and subsequent daily depressed mood. To the best of our knowledge, the present study is the first to test this sensitizing effect of victimization from workplace bullying using an appropriate research design, and thereby contributes to the field by testing a core assumption about the bullying phenomenon. The findings suggest that not only are victims of workplace bullying worse off than non-victims in terms of health and well-being at the between-person level, but they may also subsequently be affected for longer by day-to-day negative

social interactions in new contexts, as indicated by the sustained relationship between daily exposure to negative acts and depressed mood on the following days. The results support AET (Weiss & Cropanzano, 1996) and other frameworks exploring between-person differences in affective reactivity towards daily stressors (e.g., Almeida, 2005), and highlight the importance of taking an individual's past experiences into account when attempting to understand reactions to subsequent mistreatment (Cole et al., 2016). Moreover, the findings illustrate the importance of investigating lagged relationships in daily diary studies (Pindek et al., 2018), as such lagged relationships may indicate persistent effects and thus constitute a straightforward measure of lack of recovery (Smyth et al., 2018).

In an AET perspective (Weiss & Cropanzano, 1996), our results suggest that appraising exposure to negative behaviours at work in light of a recent overarching bullying situation may prolong the negative impact of such exposure on employees' depressed mood. Whereas victims may be more likely to connect the exposure to their recent bullying situation, non-victims may be more inclined to interpret the exposure to negative acts as an isolated event or a coincidence attributable to situational factors. In line with this, victims of workplace bullying have been shown to experience conflict incidents differently than non-victims, for instance in terms of experiencing more inferiority in the situation and perceiving more malicious intent from the other party (Baillien et al., 2017). Similarly, it is likely that victimization induces a hostile attribution bias among the victims, which has been shown to amplify the relationship between daily exposure to incivility and daily negative affect (Zhou et al., 2015). The appraisal of the negative acts as a part of an overarching bullying-situation is likely to be linked to higher levels of perseverative cognitions (Brosschot et al., 2006), thereby prolonging the effects of the negative acts on well-being among the victims. Accordingly, a possible mechanism explaining the sustained increase in depressed mood may be that victims engage in perseverative cognitions following exposure to negative acts, whereas non-victims do not. In line with this, rumination has been suggested as a key mechanism for lagged relationships between stressors and affective strains in diary studies in general (Pindek et al., 2018). Still, some caution is warranted regarding this interpretation, as perseverative cognitions was not measured or tested as a mediator in the present study.

In a resource loss perspective, the findings suggest that exposure to workplace bullying becomes increasingly detrimental to the victim's health over time through a resource depletion process (Hobfoll, 2002), leaving the victims less able to recover from subsequent daily levels of exposure to bullying behaviours compared to non-victims. While all employees may experience immediate increases in dejected mood and feelings of hopelessness following exposure to negative acts, non-victims probably have the necessary resources to recover, whereas victims may lack these vital resources. As such, these findings support the well-established notion in the workplace bullying literature of workplace bullying as a resource draining process that makes the victims increasingly more unable to defend themselves, and,

consequently, increasingly susceptible to the negative effects of exposure to bullying behaviours. In line with this notion of resource depletion, weekly levels of exposure to negative acts have been shown to be detrimental to weekly self-efficacy and optimism (Tuckey & Neall, 2014). Moreover, the results support the validity of popular theoretical frameworks of employee well-being, such as COR (Hobfoll, 1989, 2002) and JD-R theory (e.g., Bakker & Demerouti, 2007, 2017; Demerouti et al., 2001), which contend that employees who lack resources are more vulnerable to strain effects when exposed to job demands, compared to those high in resources. However, it would seem as though the resource depletion and loss cycles adversely affect the recovery abilities of victims, rather than enhancing their initial reactions.

Taken together, prior victimization from bullying seems to attenuate the ability to recover from subsequent adverse negative social interactions. As such, our findings and the integration of AET, COR and JD-R support the notion that the effects of exposure to mistreatment can only be “understood in the context of past mistreatment” (Cole et al., 2016, p. 292). The findings are also in line with the notion that stable or chronic psychosocial work environment factors, such as long-term victimization from bullying, may act as vulnerability factors that enhance the impact of daily stressors on daily health and well-being (Almeida, 2005). On a more general note, the findings underline the importance of investigating sensitization effects when attempting to understand employee well-being, for instance by examining cross-level interactions between day-level job demands and person-level trait-like variables, or by testing load effects or sensitization effects of previous day’s job demands (e.g., Bakker, 2015; Ilies et al., 2015; Wickham & Knee, 2013). As an example of testing sensitization effects of previous day’s experiences, Bormann (2017) showed that the positive relationship between daily ethical leadership and employee work engagement was stronger when the employee had experienced more abusive supervision the previous day. Thus, it may seem as though past mistreatment not only sensitizes employees to the negative effects of subsequent mistreatment, but also sensitizes employees to the beneficial effects of daily social uplifts.

Strengths and limitations

The present study is not without limitations. First, the use of self-report single-source data comes with the risk of common method bias, which may result in inflated effect sizes. Still, the temporal separation between measurements, with a general questionnaire followed by daily questionnaires over the course of 33 consecutive days, is likely to reduce the unwanted impact of this bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Additionally, the use of person-mean centring in the multilevel analyses effectively reduces the impact of common rater effects, as the respondents serve as their own controls (see Ilies et al., 2011; Smyth et al., 2018).

Second, the uneven distribution in victimization status in our sample, with eight victims and 102 non-victims, could result in too low statistical power to detect any actual differences between the groups (i.e., increased risk of type II error). However, the repeated measurements across 33 days

remedies this issue to some extent, as it provides a sufficient number of daily observations of the relationship between the variables in question in each group, given that days form the level of analysis for the daily relationships. Notably, simulations have shown number of Level 1 observations to have a relatively greater impact on statistical power to detect cross-level interaction effects than number of Level 2 observations (Mathieu, Aguinis, Culpepper, & Chen, 2012).

Third, as the cadets were confined to the same sailing ship for the whole diary study period, surrounded by their fellow cadets and other crew, the study context may have influenced the results. On the one hand, we contend that this somewhat unusual context is especially well suited to study the dynamics of the day-to-day relationships between exposure to bullying behaviours and well-being in a work context. The cadets were in a controlled and limiting setting during the study period, all living, working and sleeping on the same sail ship. Thus, compared to a more typical work setting, it is less likely that any after work experiences and activities affected the cadets’ daily reports of depressed mood. Moreover, the sailing ship voyage constituted a new and substantially different work context for the cadets compared to their work context the six months prior to the voyage. Consequently, we were able to test whether prior victimization experienced in one context moderated subsequent relationships between daily exposure to negative acts and depressed mood experienced in a new context. On the other hand, the sailing ship voyage context also comes with the drawback of possibly reducing the generalisability of the results to other, more typical, work contexts. For instance, workers who are able to go home after work, engage in their usual leisure activities, and seek social support from their network, are probably in a better position to recoup and recover their resources, potentially attenuating any persistent effects of exposure to negative acts on next days’ depressed mood.

Fourth, as the majority of the cadets were young males, we cannot be certain that we would have obtained the same results in a more gender- and age-balanced sample. Furthermore, the naval cadets under study have presumably been through a thorough selection process aimed at identifying the most skilled and resilient candidates. Accordingly, one might question the generalizability of the results to populations that are more normal in terms of their skills and resilience. However, when the reported relationships are found in a presumably highly resilient sample, a plausible assumption is that these relationships would be even stronger in more normal, representative samples. It is also noteworthy that victims were identified even in this highly selected sample, suggesting that bullying may occur in any social context, regardless of the individual’s resilience.

Finally, it is important to take into account the measures used when interpreting the findings of any study. As suggested for diary studies, the daily questionnaires were kept short in order to reduce the burden on the respondents and to ensure a high response rate (Ohly et al., 2010). As expected in diary studies (Nezlek, Krejtz, Rusanowska, & Holas, 2018), the measures showed higher reliability at the between-person level compared to the within-person level. The within-person reliability and factor loadings of depressed mood were

acceptable, indicating that this was reliably measured on a daily basis. Daily exposure to negative acts, however, showed rather low within-person reliability. This indicates that exposure to a particular type of negative act on a given day was not necessarily related to exposure to other negative acts on the same day. Rather than invalidating the daily measure of exposure to negative acts, we believe this illustrates that scales can change psychometric properties when adopted to a daily level (i.e., from reflective to formative), and especially so when the measure concerns the frequency of exposure to transient events (Hox & Kleiboer, 2007; Ohly et al., 2010). Finally, victim status prior to the voyage was measured with a commonly used self-labelling item with high content validity (Nielsen et al., 2011) at the start of the diary study period. Thus, prior victim status was considered a time-invariant variable not likely to change during the diary study period, and thus only measured once (Hoffman & Stawski, 2009). Consequently, it is possible that some of the cadets who were classified as non-victims prior to the voyage developed a perception of being bullied during the voyage, which could increase the likelihood of making a type II error in the moderation analyses as cadets having a newly developed perception of having being bullied would then be in the non-victim group. However, given the relatively low frequency of exposure to negative acts during the diary study period, and the fact that bullying has been conceptualized as a phenomenon that takes a long time to develop (e.g., six months), we do not consider it very likely that cadets developed a perception of being bullied during the 33 days of the voyage. Yet, future studies may consider having both pre and post measures of victimization, enabling a distinction between prior victims, persistent victims and new victims (Baillien et al., 2017).

Practical implications

The results in the present study have several practical implications. First, a rather large proportion of the variance in depressed mood resided at the day-level as opposed to the person-level. These daily fluctuations suggest that employee well-being to a larger extent may be determined by what the employees experience and are exposed to on any given day, than by stable trait-like characteristics. Furthermore, it is striking to note that the cadets were exposed to negative acts even though they participated in a structured training setting where the focus on relational competence and ethical leadership was high. Consequently, the results highlight the importance of continuously monitoring the work environment of employees in order to limit negative social interactions that may reduce employee well-being. This is especially important in high-reliability organizations, such as the military university college in the present study, where employee errors may have fatal consequences.

Second, the relationship between exposure to bullying behaviours and depressed mood on the same day did not differ between victims and non-victims. Consequently, our results provide firm arguments for preventive measures against exposure to negative acts at work for all employees, as such exposure seems to have an immediate negative impact on employee well-being

regardless of prior victim status. This highlights the importance of fostering a psychosocial safety climate in organizations, which has been shown to reduce employees' psychological health problems through reduced job demands in general (Dollard & Bakker, 2010) and through reduced bullying in particular (Law, Dollard, Tuckey, & Dormann, 2011). Similarly, fostering a climate for conflict management is likely to reduce both the occurrence and negative effects of exposure to bullying behaviours (Einarsen, Skogstad, Rørvik, Lande, & Nielsen, 2016). A key part of fostering such a climate would for instance entail making sure that leaders deal with interpersonal conflicts in a timely manner so they do not escalate into bullying situations (Ågotnes, Einarsen, Hetland, & Skogstad, 2018).

Third, the lagged relationships between daily exposure to negative acts and depressed mood one and two days after the exposure were only evident among those who had been bullied the last six months prior to the voyage. These results indicate that managers, HR practitioners and therapists should acknowledge the vulnerability produced by long-term victimization. In addition to taking preventive measures against bullying and putting a stop to it when it occurs, ways of strengthening the victim's resources should be explored. Taking such measures might promote new gain cycles among the victims, potentially helping the victims regain the psychological resources they may have lost during the bullying process and thereby making them less vulnerable to the effects of future exposure to social stressors. As higher affective reactivity to daily stressors has been shown to predict future chronic health problems (Piazza, Charles, Sliwinski, Mogle, & Almeida, 2013), such measures may have important long-term implications for the health and work ability of victims.

Conclusion

The present study sheds light on the role of time in the bullying process, by applying a daily diary design among a sample of naval cadets. Overall, the results support the notion of victimization from workplace bullying as an escalating process that eventually leaves the victim more vulnerable to the detrimental effects of subsequent exposure to negative acts, as indicated by the results that the persistent relationships between exposure and depressed mood on days following the exposure were only evident among the victims. The results thus provide support for the proposed processes of resource depletion, loss cycles, and subsequent vulnerability among victims of workplace bullying. Still, daily exposure to bullying behaviours was positively related to depressed mood on the same day for the sample as a whole, suggesting that exposure to negative acts is distressing for all employees, regardless of victim status. Thus, in order to protect employee well-being, organizations should acknowledge the detrimental effects of even daily levels of negative social interactions, and promote a safe psychosocial climate in which employees are not exposed to such negative behaviours.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the Norwegian Research Council – NFR [grant number 250127].

Geolocation information

The data used in this paper was collected from Norwegian naval cadets travelling on a sailing ship from Northern Europe to North America.

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