Antecedents and developmental pathways to workplace bullying

The role of individual, situational and contextual factors

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Scientific Environment

The present PhD-project has been carried out at the Department of Psychosocial Science, Faculty of Psychology, University of Bergen, where the author as well as the supervisors are members of the Bergen Bullying Research Group (BBRG), also known as FALK (Forskningsgruppe for Arbeidsmiljø, Ledelse og Konflikt). The present thesis has been a part of the overarching research project "Workplace bullying: From mechanisms and moderators to problem treatment", headed by Professor Ståle Valvatne Einarsen and founded by the Research Council of Norway (NFR) and the University of Bergen, under grant number 250127. The doctoral education was carried out at the Graduate School of Human Interaction and Growth (GHIG) throughout the PhD period.

The thesis has been conducted under supervision from Associate Professor Jørn Hetland, and co-supervised by Professor Ståle Valvatne Einarsen.

The thesis relies on data from three larger data collections. In Paper 1 we employed data collected in a Norwegian marine transport company. This data collection was conducted by the FALK research group, and with Professor Ståle Valvatne Einarsen and Professor Emeritus Anders Skogstad as the main contributors. In Paper 2 we utilised data collected at a European University. This data collection was conducted by a statistical consulting agency, with Professor Guy Notelaers as the main contributor. In Paper 3 we employed data from the Bergen Sail Ship Study, which is a collaborative project between the Norwegian Royal Naval Academy, the University of Bergen and Erasmus University Rotterdam. Professor Olav Kjellevold Olsen, Associate Professor Roar Espevik, Associate Professor Jørn Hetland and Professor Arnold B. Bakker are the main contributors behind the study. Thanks to everyone who have contributed to these data collections.

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Abstract

The overall aim of this thesis is to fill some of the gaps in the existing literature regarding why workplace bullying occurs. Workplace bullying refers to repeated, unwelcome, and harmful behaviours directed toward an individual in a workplace setting. These behaviours can take various forms and may be perpetrated by colleagues, supervisors, or even subordinates. Workplace bullying is often described as "an escalating process in the course of which the person confronted ends up in an inferior position and becomes the target of systematic negative social acts" (Einarsen et al., 2020, p. 26). Since workplace bullying is understood as an escalating process, understanding its antecedents and developmental pathways is key to also better our understanding of how it can be prevented. Although there has been an increasing amount of research investigating antecedents of workplace bullying during the last couple of decades, there is still a lack of more complex studies investigating how potential risk factors from different organizational levels interact in causing a risk for being exposed to bullying at work. This thesis comprises three empirical studies that all examine the role some situational-, contextual-, and individual factors play in the workplace bullying process, applying group-level and within-person research designs.

Paper 1 reports on data from a cross-sectional convenience sample of Norwegian employees working in a marine transport company. The data had a hierarchical structure where respondents were nested within teams, enabling us to apply multilevel analysis. The aim of Paper 1 was to investigate whether team-level perceptions of conflict management climate moderate the relationships between three well-established work-related situational risk factors (role conflict, workload, cognitive demands) and perceived exposure to bullying behaviours in the workplace, respectively. The findings showed role conflict and cognitive demands, but not workload, to be substantial predictors of exposure to bullying behaviours at the individual-level. Further, the findings showed that team-level conflict management climate moderated the relationship between role conflict and exposure to bullying, as well as the relationship between cognitive demands and exposure to bullying. More specifically, the positive relationships between the two predictors and exposure to

bullying behaviours were stronger for employees working in teams with a weak, versus a strong, conflict management climate. The findings of Paper 1 contribute to the bullying research field by showing that conflict management climate may buffer the impact of stressors on bullying, most likely by preventing interpersonal frustration from escalating into bullying situations.

Paper 2 reports on data from a cross-sectional convenience sample of employees at a European university. The data had a multilevel structure where respondents were nested within departments, enabling us to apply group-level and multilevel analysis. The aim of Paper 2 was to investigate whether department-level perceptions of hostile work climate moderate the relationship between two work-related situational risk factors (role conflict and workload) and exposure to bullying behaviours in the workplace, respectively. The findings showed positive relationships between the presence of role conflict and workload and exposure to bullying behaviours at the individual-level. Further, the findings showed a strengthening effect of department-level hostile work climate on the relationship between role conflict and exposure to bullying behaviours at the individual-level. More specifically, the positive relationship between role conflict and exposure to bullying behaviours was stronger among employees working in departments characterized by a pronounced hostile work climate. In contrast to our predictions, a positive relationship existed between workload and exposure to bullying behaviours, yet only among individuals in departments with low hostile work climate. The findings of Paper 2 contribute to the bullying research field by showing that hostile work climate may strengthen the impact of stressors on bullying behaviours, most likely by posing as an additional distal stressor, which may fuel a bullying process and weaken the social resources available to targets-to-be.

Paper 3 reports on data from a quantitative diary study. The aim of the study was to investigate the possible moderating role of trait anger and trait anxiety in the link between daily interpersonal conflicts and daily exposure to bullying behaviours in the initial phase of a potential escalation. The sample consisted of naval cadets from the Royal Norwegian Naval Academy, who participated in a sea voyage on board a tall ship sailing from Northern Europe to North America. The cadets responded to a general

questionnaire prior to the voyage, as well as a daily questionnaire over a period of 30 days. The hierarchical structure of the data enables us to nest the daily measurements within persons, applying multilevel analysis investigating both day-level and person-level predictors. The findings showed that daily interpersonal conflicts predicted next-day interpersonal conflicts and same-day exposure to bullying behaviours. Further, the findings showed that trait anger, but not trait anxiety moderated the relationship between daily interpersonal conflicts in the prediction of next-day interpersonal conflicts as well as same-day exposure to bullying behaviours. The findings of Paper 3 implies that interpersonal conflicts persist and have an immediate effect on exposure to bullying behaviours, and that this is particularly the case for individuals high, versus low, on trait anger.

In conclusion, the findings of this thesis contribute to shed light on several aspects of the initial phases of the complex bullying process and how it is affected by various risk factors at different levels. Interpersonal conflict, role conflict, workload, and cognitive demands are all situational factors experienced at the individual level found to be decisive factors in predicting reports of exposure to workplace bullying. At the same time, the present findings show how both contextual factors and individual factors can influence the role that these situational risk factors potentially play in relation to bullying. The findings from Paper 1 and 2 highlight the importance of contextual factors at the group-level as moderators in the antecedent–bullying relationship, as the organizational climate is found to play a critical role in both accelerating and preventing workplace bullying, at least in relation to some antecedents. The findings from Paper 3 bring about new insight regarding the short-time dynamic in the relationship between interpersonal conflicts and exposure to bullying behaviours, as it is found to exist already within the same day. Further, the findings from Paper 3 also show how individual factors may intervene in the antecedent–bullying relationship, as employee trait-characteristics are found to influence the relationship between interpersonal conflicts and exposure to bullying, here on a daily level. Future research aimed at explaining why workplace bullying occurs is also likely to benefit from implementing multilevel approaches and to simultaneously investigate situational-, contextual-, and individual factors. Obtaining a better understanding of the risk factors,

possible protective factors and how these different factors may interact with each other in predicting exposure to workplace bullying, have important implications both for theoretical and applied reasons.

List of Publications

Paper I

Zahlquist, L., Hetland, J., Skogstad, A., Bakker, A. B., & Einarsen, S. V. (2019). Job demands as risk factors of exposure to bullying at work: The moderating role of team-level conflict management climate. *Frontiers in Psychology, 10,* 2017. https://doi.org/fc8r

Paper II

Zahlquist, L., Hetland, J., Notelaers, G., Rosander, M., Einarsen, S. V. (2023). When the going gets tough and the environment is rough: The role of departmental level hostile work climate in the relationship between job stressors and workplace bullying. *International Journal of Environmental Research and Public Health, 20(5),* 4464. https://doi.org/jzfd

Paper III

Zahlquist, L., Hetland, J., Einarsen, S. V., Bakker, A. B., Hoprekstad, Ø. L., Espevik, R., Olsen, O. K. (2022). Daily interpersonal conflicts and daily exposure to bullying behaviors at work: The moderating roles of trait anger and trait anxiety. *Applied Psychology: An International Review,* 1-22. https://doi.org/jhj3

Contents

1. INTRODUCTION

Exposure to workplace bulling and harassment has been documented to be a severe psychosocial stressor in contemporary workplaces, potentially having detrimental negative consequences for the health and well-being of the targeted employees (Boudrias et al., 2021; Mikkelsen et al., 2020; Nielsen et al., 2014; Verkuil et al., 2015), as well as for bystanders and for the organization where it occurs (Hoel et al., 2020; Holm et al., 2023; Nielsen et al., 2021). Workplace bullying has been described as an escalating process consisting of repeated and systematic exposure to negative social behaviours while at work, a treatment that over time makes it ever more difficult for the target to defend oneself in the actual situations (Einarsen et al., 2020). Despite extensive knowledge about the negative consequences of exposure to workplace bullying, less is known about the possible developmental pathways and antecedents of becoming a target of workplace bullying (Baillien et al., 2009; Nielsen & Einarsen, 2018; Rai & Agarwal, 2018). In order to prevent workplace bullying and its damaging consequences, there is a need to understand both risk factors and protective factors, and the mechanisms involved in the bullying process. Although workplace bullying is claimed to be the result of a complex process, found to be influenced by a range of person-related, work-related and contextual factors (Samnani & Singh, 2012), few studies have yet investigated this complexity (Rai & Agarwal, 2018), at least this was the case at the onset of this project.

To date, the work environment hypothesis (Einarsen et al., 1994; Einarsen et al., 2020; Leymann, 1996) has been the prevailing overarching theoretical framework for studying antecedents of bullying, with a parallel stream of research looking at personality and other individual characteristics of those involved (see Zapf & Einarsen, 2020). The work environment hypothesis claims that a poorly organized work environment in the department/work-unit may lead to bullying by creating stress, frustration and conflicts among employees, often in combination with the lack of adequate management (Tuckey et al., 2022; Ågotnes et al., 2018) and in the presence of a prevailing destructive organizational climate within the working group. In support of this proposition, several situational factors, like role conflict, excessive workloads

and high cognitive demands are consistently documented as predictors of self-reported exposure to workplace bullying (Baillien & De Witte, 2009; Bowling & Beehr, 2006; Einarsen et al., 1994; Notelaers et al., 2013). Although the link between such situational factors has been firmly substantiated (Janssens et al., 2016; Notelaers et al., 2013; Salin & Hoel, 2020), knowledge regarding whether specific contextual factors or individual factors may contribute to strengthen or buffer these relationships, has been less investigated. Such studies of the moderators in bullying–stressor relationships have been strongly called for in the literature (Nielsen & Einarsen, 2018; Rai & Agarwal, 2018; Samnani & Singh, 2016). When examining the antecedents of workplace bullying empirically, previous research has mainly focused on situational factors experienced directly by individuals, such as to what extent employees experience role conflict or a high workload, and whether these are directly related to experiencing exposure to bullying behaviours. However, a central assumption in the present thesis is that risk factors may exist on different levels of the organization and that these may interact to reinforce the individuals' risk of exposure to bullying, hence taking a target perspective in this respect.

At the onset of this project, such interactional effects of potential risk factors were relatively poorly understood (Samnani & Singh, 2016). Hence, scholars in the field requested that situational factors, contextual factors and individual factors should be investigated in combination, revealing both potential additive and interactional effects (Nielsen & Einarsen, 2018). Approaching workplace bullying in this manner, by investigating different sets of variables from different levels may help to get a better understanding of the workplace bullying process and help identify the key moderating conditions across multiple levels (Leon-Perez et al., 2021; Rai & Agarwal, 2018; Samnani & Singh, 2016).

In aiming to bring about more systematic knowledge as to why bullying occurs in workplaces, focusing on those targeted, the three studies constituting the present thesis are explicitly aimed at investigating the interaction of risk factors and mechanisms in predicting exposure to bullying, including individual-level risk factors and group- and

departmental factors as moderators. More specifically, under which conditions, when and for whom will the presence of risk factors be related to exposure to bullying behaviours. In the present thesis, the interaction of several previously known situational risk factors and two main mechanisms, are investigated. The first mechanism is a contextual factor, as we test whether the perceived organizational climate on a group-level, by comparing different work-units, moderate the relationship between well documented situational antecedents and stressors on the one hand and exposure to workplace bullying on the other. Different organizational climate constructs are investigated in this respect since an organizational climate may both serve as an organizational resource and as a distal stressor and additional demand. Here we look at the role of a hostile work climate in the department, where interpersonal conflicts and aggression prevails, as a potential additional stressor, and a conflict management climate as a potential resource and protective factor. These are among the first studies to empirically test the potential role that department/work-unit-level organizational climates can play in accelerating or preventing workplace bullying when employees are exposed to individual-level stressors in the psychosocial work environment. Organizational climate, e.g., psychosocial safety climate, has been related to the occurrence of workplace bullying in some studies, as well as acting as a moderator in bullying–outcome relationships (Dollard et al., 2017; Escartín et al., 2021; Plimmer et al., 2022). An important contribution of the present studies is to study both the possible buffering and accelerating effect of the work-related situational factors and exposure to bullying relationships when taking into account the immediate department/work-unit climate.

The second moderating mechanism investigated in the present thesis is an individual individual-level factor, as we examine whether two personality traits, trait anger and trait anxiety respectively, may affect the relationship between being involved in interpersonal conflicts and exposure to bullying behaviours. Whereas the personality of targets of workplace bullying has mainly been studied in order to explain why bullying may occur (Coyne et al., 2000; Glasø et al., 2007; Reknes et al., 2021), few studies have examined the potential moderating role of personality in the development

and escalating process of workplace bullying (Rai & Agarwal, 2018). An additional contribution is that we here study these relationships on a daily basis, employing a diary study and a within-person design.

Finally, all three studies constituting the present thesis employ multilevel research designs, both when individuals are nested within departments/work-units and when we address timepoints within persons. Nesting individuals within departments/work-units provide us with important information about constructive and destructive differences across departments and work-units that can affect the relationship between known risk factors and exposure to bullying, while person-centred studies may provide us with information concerning the daily dynamics of the studied relationships. The wide use of static cross-sectional designs, not considering the dynamic nature of studied constructs and their interrelationships, has been noted as a general limitation within the research on workplace bullying (Cole et al., 2016). Taken together, I believe that knowledge capturing this complexity in the development, continuity and context of the workplace bullying process is important to further our understanding of how to detect, prevent, and manage escalating workplace bullying at an early stage.

1.1 The Concept of Workplace Bullying

1.1.1 Historical background

As a research field, workplace bullying is still a relatively young field, with the first empirical publications in the late 1980s (Matthiesen et al., 1989). These first publications have their origin in Scandinavia and were in part influenced by the pioneering work of Peter-Paul Heinemann (1972) and Dan Olweus (1978) on bullying among schoolchildren, employing the Scandinavian term mobbing . While Heinemann was most interested in the situation and context where bullying occurred, Olweus focus was primarily on the role of those involved. Hence, the term bullying originates from research on school bullying and was used for the first time to describe bullying among adults in the workplace in the book *Mobbing: Psychological Violence at Workplaces* by the Swedish-German psychologist Heinz Leymann (1986). Leymann proposed that bullying, or mobbing as he named it, had little to do with the characteristics of those involved and highlighted organizational factors and the psychosocial work environment as important contributors to the bullying process. Inspired by Leymann's work and a lot of public interest and debate, several major research projects were initiated in Norway, Sweden, and Finland in the onset of the 1990s and were led by researchers such as Svein M. Kile, Maarit Vartia and Ståle V. Einarsen (see Einarsen et al., 2020). Still, the first publication that describes the phenomenon of workplace bullying had already been published much earlier by the American psychiatrist Carroll M. Brodsky (1976) in his book entitled *The Harassed Worker*. Although Brodsky never used the term bullying in this book, but rather harassment, what he describes fits well with how workplace bullying is characterized. Over many years Brodsky did a thorough job in his work with more than thousand patients who claimed to be socially "injured" at work and who experienced serious mental and psychosomatic health problems as a result. This formed the basis for his book where he describes the patterns he saw among his patients, the process of this harassment, how it was manifested in the work situation and how it affected the worker, colleagues, family, and the society around them.

The pioneering work of Olweus, Leymann, and Brodsky has made important contributions in terms of how the bullying phenomenon is understood and treated in more recent research. From the late 1990s until today there has been a steady increase in publications and the interest in workplace bullying has spread all over the world (Einarsen et al., 2020). While the main emphasis of the early bullying research naturally was aimed at understanding bullying as a phenomenon, as well as documenting its prevalence and consequences, the focus has later gradually shifted towards antecedents and mechanisms in the bullying process (Nielsen & Einarsen, 2018; Rai & Agarwal, 2018).

1.1.2 Definition

A well-established definition of workplace bullying is the one presented by Einarsen et al. (2020, p. 26), building on the work of Olweus and Leymann:

> "Bullying at work means harassing, offending, socially excluding someone or negatively affecting someone's work. In order for the label bullying (or mobbing) to be applied to a particular activity, interaction or process it has to occur repeatedly and regularly (e.g., weekly) and over a period of time (e.g., about six months). Bullying is an escalated process in the course of which the person confronted may end up in an inferior position becoming the target of systematic negative social acts. A conflict cannot be called bullying if the incident is an isolated event or if two parties of approximately equal 'strength' are in conflict."

Hence, workplace bullying is about exposure to negative unwanted and illegitimate behaviour at work, mainly from co-workers and superiors. According to this definition the concept of workplace bullying is however characterized by three central criteria (Einarsen et al., 2020), the first of which are that the said negative acts are repeated regularly. Bullying is therefore not about single and isolated episodes or events, but behaviours that are repeatedly and persistently directed towards one or more targets from other organizational members. The second criterion is the prolonged nature of this exposure to negative acts and other unwanted social experiences. In line with this, Leymann (1996) suggested that in order to be considered as a victim of workplace

bullying, one should be exposed to at least one negative act on a weekly basis, and that the duration of the bullying behaviours should last for a period of six months or longer. The last central characteristic of workplace bullying is an imbalance of power between the parties (Einarsen et al., 1994; Leymann, 1996), where the victim perceives that he or she has few resources, to defend against the negative acts. Hence, it is not considered as bullying, but rather a conflict, if the parties are of equal strength (Olweus, 1993). Yet, the presented definition focuses mainly on long term and severe victimization from systematic and frequent negative acts.

The negative social acts, in the present thesis referred to as exposure to bullying behaviours, can either be work-related, such as withholding of information that affect the target's work performance, having key areas of responsibility removed or replaced with more trivial or unpleasant tasks, or they can be person-related, such as gossip and rumours about you being spread or being the target of spontaneous anger (Notelaers & Einarsen, 2013). Bullying also tend to include acts of social exclusion and non-inclusion, as well as more physical acts of intimidation (Einarsen et al., 2009).

Workplace bullying is further described theoretically to be a process that gradually escalates (see Einarsen et al., 2020), as it has shown to manifest itself in low as well as high intensities (Conway et al., 2018; Notelaers & Einarsen, 2013). This implies that one may study bullying as an end state of severe long-term exposure, where exposure to bullying is seen as an either-or situation. However, we may also see exposure to bullying as a gradually escalating process on a continuum, from the systematic, yet occasional exposure, to intense, frequent and long-term exposure and victimization. Lastly, we may also study specific events and situations that can be studied individually and as they happen (e.g., on a daily basis).

The research on workplace bullying has traditionally, and especially in the European tradition, focused on the target, who may be exposed to such acts from a range of sources and perpetrators, and where the total exposure and the total burden put on the target is at the hearth of the experience. In the present thesis we therefor follow the European tradition and investigate the targets exposure to bullying behaviours, where

we investigate exposure to workplace bullying as occurring on a dimension from occasional to severe levels of exposure (Einarsen et al., 2020). In addition, we investigate exposure to bullying behaviours as they play out on a day-to-day basis (see also Ågotnes et al., 2021). This is not to say that research on individual perpetrators and bullies are not important but falls outside of the scope of the present research.

Assessment

Today, after more than 30 years of research on workplace bullying, the field, at least in the Western world, has come a long way in terms of having a well-established definition of the concept, a clear idea of what kind of behaviours and experiences that are involved, as well as having validated measurements of these behaviours and experiences. In general, workplace bullying research has been dominated by the use of quantitative methods and especially so self-report surveys (Neall & Tuckey, 2014). Today the two most common measurement strategies to assess exposure to workplace bullying are *the self-labelling method* and *the behavioural experience method* (Nielsen et al., 2020). When applying the self-labelling method, the respondents are asked a single question which is to indicate whether they consider themselves as targets of workplace bullying or not, within a specific time period. In some studies, a definition of workplace bullying is presented alongside with this question (e.g., Einarsen & Skogstad, 1996; O'Moore et al., 2003), while in other studies, the question is not asked including a preceding definition (e.g., Lewis, 1999; Rayner, 1997).

When applying the behavioural experience method, the respondents are asked whether and how often they have been exposed to different negative social acts typical of workplace bullying scenarios, often by presenting a list of bullying behaviours and refereeing to a given timespan, often six or 12 months.

Several different scales have been developed to measure exposure to bullying behaviours, such as the Generalized Workplace Harassment Questionnaire (GWHQ; Rospenda & Richman, 2004) and the Leymann Inventory of Psychological Terror (LIPT; Leymann, 1990). However, the inventory that is most frequently used, both in the Norwegian context and internationally (Nielsen et al., 2020), is the Negative Act

Questionnaire-Revised (NAQ-R; Einarsen et al., 2009) and its shorter version the S-NAQ (Notelaers, Van der Heijden, Hoel, et al., 2018). The NAQ-R describes different types of behaviours, being both personal and work-related, as well as intimidating, that can be perceived as bullying if they occur at regular intervals and with a certain frequency. In this questionnaire the word bullying is never mentioned, which may make this a more objective and behaviour focused measurement of exposure to bullying than are the self-labelling method.

In the three studies constituting the present thesis we apply the behavioural experience method and scales based on the NAQ-R. This was deemed most appropriate considering the aim of the present thesis which is to obtain a better understanding of the risk factors associated with exposure to bullying. In doing this we investigate the whole range of experienced exposure to bullying, from the initial phase of the bullying process with low intensity of unwanted negative acts up to full-blown cases of bullying where the bullying behaviours consolidate and become a stable situation. Hence, we conceptualized this whole range as exposure to bullying behaviours.

1.1.3 Prevalence and consequences

On a global level it is estimated that approximately 15% of the workforce are exposed to some level of workplace bullying at any given time (Nielsen et al., 2010). Still, there is great variation in the reported prevalence rates when comparing different parts of the world and the measurement methods applied. For instance, it is found that studies applying the behavioural experience method report an average rate of 14.8% bullying, while studies using the self-labelling method with a definition in average report a rate of 11.3% bullying (Nielsen et al., 2010). Further, when comparing different parts of the world, Scandinavian countries seem to have considerably lower bullying rates compared to other European countries and the US (León-Pérez et al., 2021; Nielsen et al., 2010; Van de Vliert et al., 2013; Zapf et al., 2020). Lastly, prevalence rates are also found to be related to demographical factors such as gender and occupation. More specifically, studies have shown that gender-balance at the workplace may be a potential protective factor for bullying (e.g., Eriksen & Einarsen, 2004; Nielsen & Einarsen, 2018; Rosander et al., 2022; Salin, 2003a) and that high prevalence of

bullying has for instance been associated with organizations with many employees and unskilled workers in some countries (e.g., Einarsen & Skogstad, 1996; Ortega et al., 2009). Regardless of the variety in prevalence, bullying at work is still perceived as a severe workplace stressor, being related to a range of negative outcomes (Boudrias et al., 2021; Nielsen & Einarsen, 2012).

Over the last decades, workplace bullying research has thoroughly documented its detrimental consequences for those exposed, for bystanders and even for organizations and societies at large (Hoel et al., 2020; Mikkelsen et al., 2020; Nielsen et al., 2021). Being a target of workplace bullying is found to be associated with a range of both mental and physical health problems (Nielsen & Einarsen, 2012). Although workplace bullying is found to be most strongly associated with psychological health outcomes, such as post-traumatic stress symptoms, depression, anxiety (Nielsen & Einarsen, 2012), it is also found to have a negative impact on physical health, such as headache (Tynes et al., 2013), chronic neck pain (Kääriä et al., 2012) and fibromyalgia (Kivimaki et al., 2004). In addition, targets of bullying are found to have more negative job attitudes, as well as increased intentions to leave their employment (Rodríguez-Muñoz et al., 2009; Aarestad et al., 2020). Further, a recent longitudinal study among Swedish workers, found that employees who observe colleges being bullying, without being exposed themselves and without intervening, also report increased mental health problems (Nielsen et al., 2021). Subsequently, due to these effects on health and job attitudes, which may result in reduced productivity, higher sick leave and turnover, expenses in relation to legal processes and mental health treatment for victims (Hoel et al., 2020; Nielsen & Einarsen, 2012), organizations and societies will ultimately suffer financial loss. Hence, although the prevalence of bullying is relatively low, at least in Scandinavia, the consequences can be vast, which is why a better understanding of potential risk factors and protective factors related to the onset of workplace bullying is so important.

1.2 Antecedents and Developmental Pathways to Workplace Bullying

Research on antecedents of workplace bullying has for many years been divided between studies either merely focusing on situational and contextual factors (e.g., Einarsen et al., 1994; Meriläinen & Kõiv, 2018; Skogstad et al., 2011) or individual factors (e.g., Coyne et al., 2000; Nielsen & Knardahl, 2015). The prevailing theory for studying antecedents of bullying has been the work environment hypothesis (Einarsen et al., 1994; Leymann, 1996), claiming that negative and poorly organized work environments may lead to bullying of exposed individuals, by creating stress and conflicts among employees, especially so when combined with the lack of active leadership intervention and/or in situations of a hostile work climate. In support of this proposition, the work environment factors that most consistently have been found in relation to employees reporting exposure to bullying are high levels of role stressors (e.g., Bowling & Beehr, 2006; Van den Brande et al., 2016), heavy workloads (e.g., Agervold, 2009; Salin, 2003b), high cognitive demands (e.g., Notelaers et al., 2010; Van den Brande et al., 2016), a poor social climate (e.g., Einarsen et al., 1994; Vartia, 1996) and poor management styles (e.g., Hauge et al., 2011; Tuckey et al., 2022; Ågotnes et al., 2018). The work environment hypothesis is also a central theoretical framework in the present thesis, as most of the studied antecedents are situational work-related factors and contextual factors in the form of social climates.

On the other hand, a parallel explanation and stream of research, known as the individual characteristics hypothesis (Aquino & Thau, 2009; Zapf & Einarsen, 2020), claims that individual characteristics, such as personality, increase the risk of being bullied or acting out perpetrator behaviour. Although individual factors alone, are found not to be as strong risk factors as work environment factors (Nielsen & Einarsen, 2018), recent studies indicate that there are vulnerability factors that may, in combination with unfavourable working conditions, make some employees more vulnerable for exposure to bullying (e.g., Reknes et al., 2019; Van den Brande et al., 2020).

In line with this, it is currently more common to perceive the development of bullying as a complex and dynamic process, influenced by a range of different situational-, contextual- and individual factors (Samnani & Singh, 2016). Yet, there is still a scarcity of empirical studies taking such an interactionist approach and, not the least, theories and frameworks that integrate different perspectives when explaining the occurrence of workplace bullying. Based on the aim to integrate these different lines of research in explaining how antecedents may develop into workplace bullying, Baillien et al. (2009) conducted a comprehensive study where 87 real-life bullying cases were analysed, resulting in an empirical model called the three-way model (see Figure 1). The three-way model suggests that workplace bullying seems to results out of three tracks or pathways within a global model (Baillien et al., 2009). In track one, workplace bullying is a result of frustrations or strains, in track two it is a result of interpersonal conflict and in track three it is a consequence of aspects within the team or organization, such as the social climate in the department. In addition, work-related antecedents, team- and individual characteristics may influence these pathways either by causing frustration or conflict, directly encourage bullying or affecting the targets coping possibilities. However, as the three-way model is based on qualitative case studies, Baillien et al. (2009) encourage components of the different tracks, and factors that may influence the different tracks, to be empirically tested with quantitative research designs as well.

For the present thesis, the three-way model serves as an overarching theoretical framework, that complements and extends the work environment hypothesis, as it incorporates situational-, contextual- and individual factors in explaining the developmental pathways to workplace bullying. Subsequently, all three studies constituting the present thesis, can be placed within the three-way model, as they all investigate different parts of the proposed model. Overall, this is a complex model, and in the present thesis we chose to examine the first two pathways starting either with frustrations or strains, or interpersonal conflict. In addition, we tested whether factors either related to the team/work-unit or to the individual would affect these pathways. In the following, the three categories of antecedents and potential mechanisms

investigated in the present thesis will be clarified, as well as their role and how they are studied in the three papers.

Figure 1

The three-way model of workplace bullying.
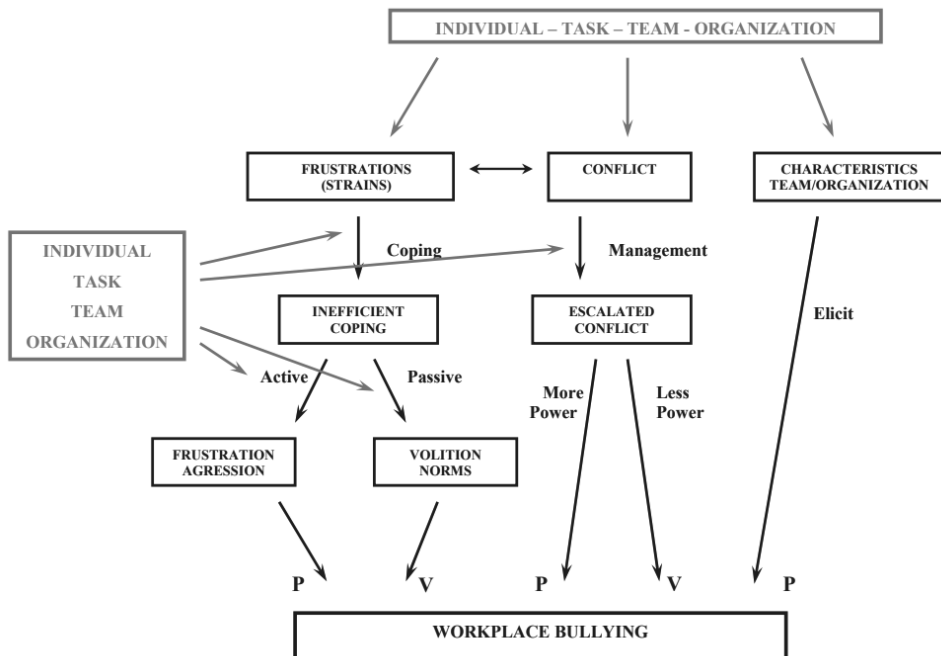
1.2.1 The role of situational factors

Situational factors are factors at the individual-level that employees experience during their workday and that may vary for instance from day to day, such as interpersonal conflicts. It may also be work-related factors such as role conflict, workload, and cognitive demands that makes it burden gradually over time. The work-related risk factors are described by the work environment hypothesis (Einarsen et al., 1994; Leymann, 1996) and thought to cause frustration and strain in both targets and

perpetrators alike, further causing interpersonal conflicts, and potentially escalating into acts and perceptions of workplace bullying. These work-related situational risk factors are further associated with the first bullying pathway in the three way model, as these factors may be the origin of the frustration or strain (Baillien et al., 2009), but may also be underlying factors causing interpersonal conflicts in the second pathway to bullying. Interpersonal conflict is also incorporated in the work environment hypothesis since the link between work-related factors and bullying is assumed to go thru escalating conflicts. According to the three-way model, interpersonal conflict is considered both to be related to frustration and strain, but is also in itself the starting point of the second pathway to bullying (see Figure 1) (Baillien et al., 2009).

Role conflict

Role requirements are requirements and expectations that for instance supervisors, colleges and subordinates, and even customers and clients, have towards us. When these expectations are either unclear, ambiguous, conflicting, or overwhelming we may feel unable to meet these requirements and expectations, and role stress occurs. Role stressors include mainly role ambiguity, role conflict, and role overload. Out of these, role conflict is generally the one with the strongest relationship with exposure to bullying (Balducci et al., 2012). Additionally, when comparing role conflict with other work-related situational factors, it is again found to be among the strongest predictors of bullying (Baillien & De Witte, 2009; Bowling & Beehr, 2006; Einarsen et al., 1994). Role conflict can be defined as the simultaneous existence of two or more sets of expectations toward the same person, such that compliance with one makes compliance with the other difficult (Beehr et al., 1995; Kahn et al., 1964). Experiencing high degrees of conflicting expectations and demands from leaders or colleges is found to be associated with stress and frustration, as it may hinder efficient goal attainment at work (Kahn & Byosiere, 1992). Having several and incompatible roles may also create frustration in relation to others in the working environment, which can cause interpersonal conflicts to arise and escalate. This further aligns with the work environment hypothesis (Einarsen et al., 1994; Leymann, 1996), claiming that the association between role conflict and workplace bullying is due to the creation of strain

and frustration in the working group or at least the target-to-be, which may then escalate into harsh conflicts and potentially bullying. According to the three-way model of workplace bullying, role conflict may be an underlying factor that can contribute to the onset of both track one, frustration and strain, and track two, instigating interpersonal conflict, which again may escalate into bullying episodes.

There may be several explanations for the association between role conflict and bullying, either that role conflicts serve as an ambient stressor that both targets and potential offenders perceive, or that the perceived stress cause behavioural changes in the target, that further elicit reactions from other employees against the target (Einarsen et al., 1994; Elias, 1986; Samnani & Singh, 2016). Building on the conservation of resources theory (Hobfoll, 1988, 1989), employees who already experience high levels of role conflict may have less resources to cope when exposed to negative behaviours, hence making them more vulnerable. As both job demands and exposure to bullying behaviours are stressors that involve resource loss, this may initiate a reinforcing cycle of further resource loss (Hobfoll, 2002).

Workload

In addition to role conflict, experiencing high workload is found to be another important precursor of exposure to bullying (e.g., Baillien & De Witte, 2009; Hauge et al., 2007; Ågotnes et al., 2021). The term workload can be described as the amount and speed of work to be performed, which is whether you need to work fast or extra hard to get your tasks done (Van Veldhoven & Meijman, 1994). In line with the three-way model and the work environment hypothesis, experiencing high workload over time, and especially without sufficient resources, may result in strain and conflict escalation, potentially resulting in real or perceived bullying (Baillien & De Witte, 2009; Hauge et al., 2007). As with the role conflict–bullying relationship, the relationship between workload and exposure to bullying has been explained in similar ways, for instance that workload either serves as an ambient stressor, effecting both targets and bullies, or that employees who experience high workload become stressed and act in ways that irritate colleagues and superiors, which further trigger or fuel a bullying process (Einarsen et al., 1994; Elias, 1986; Samnani & Singh, 2016). It has also been argued

that being exposed to high workload over time can be a risk factor for conflict escalation, since those involved have sparse time and limited resources for conflict resolution (Knorz & Zapf, 1996). This further aligns well with the underpinnings of the conservation of resources theory, that those being exposed to high levels of job demands will be more vulnerable and less able to defend when exposed to bullying behaviours (Hobfoll, 1988, 1989; Rousseau et al., 2014), which again may lead to a more negative perception of one's social working environment.

Cognitive demands

While workload is a quantitative job demand, experiencing high levels of qualitative job demands, in the present thesis termed cognitive demands, may also serve as a situational risk-factor for bullying exposure. Cognitive demands can be described as the need to concentrate one's attention on several things at the same time, persistently be concentrated and careful in one's work, or having many things to remember while conducting the work (Van Veldhoven & Meijman, 1994). Although cognitive demands have received far less research attention, it may be as stressful as time constraints and influences how one behaves and interacts with colleges (Notelaers et al., 2010). What distinguishes cognitive demands from workload is perhaps first and foremost that cognitive demands are not as visible as having high workloads, and because of that, others may neither see nor understand your reactions. Accordingly, Hoel et al. (2002) argue that cognitive demands are positively related to workplace bullying and argue that stressed out employees may voice their concern about the high cognitive demands, which may result in negative reactions and in some cases in conflict escalation, finally even resulting in acts of bullying (Baillien et al., 2009). Additionally, as with role conflict and workload, the association between cognitive demands and exposure to bullying behaviours may also be a consequence of cognitive demands serving as an ambient stressor, affecting both targets and bullies, or that those involved will have sparse time and limited resources for conflict resolution and management (Knorz & Zapf, 1996). Again, this aligns well with the underpinnings of the conservation of resources theory, that those being exposed to high levels of job demands will be more

vulnerable and less able to defend when exposed to bullying behaviours (Hobfoll, 1988, 1989; Rousseau et al., 2014).

Interpersonal conflict

Conflict and disagreement are a natural part of working life and can even be a source of development and learning if they are task-related (De Dreu, 1997; De Dreu & Gelfand, 2008). However, when conflicts escalate and become interpersonal, they can be harmful. According to the three-way model of workplace bullying (Baillien et al., 2009) and the work environment hypothesis (Leymann, 1996), interpersonal conflict is a central situational antecedent of workplace bullying (Einarsen et al., 1994; Zapf & Gross, 2001). An interpersonal conflict can be defined as "a negative interpersonal encounter characterized by a contentious exchange, hostility or aggression" (Ilies et al., 2011, p. 46). The relationship between conflict and bullying is theorized to be a process where the conflict gradually escalates into bullying over time, if not managed properly (Einarsen, 1999; Zapf & Gross, 2001). However, even though interpersonal conflict and workplace bullying are strongly interrelated, recent studies have demonstrated that they are conceptually and empirically different phenomenon (Baillien et al., 2017; Notelaers, Van der Heijden, Guenter, et al., 2018).

Although interpersonal conflicts are found to be one of the strongest risk factors for exposure to workplace bullying (e.g., Baillien et al., 2016; Leon-Perez et al., 2015; Ågotnes et al., 2018), most of these studies have applied either cross-sectional or longitudinal designs over a longer period of time, which means that little is still known about how this escalation occurs and especially the short-time dynamics in this relationship (Cole et al., 2016). Since the aim of the present thesis is to better our understanding of antecedents and risk factors related to the onset of workplace bullying, we chose to investigate the initial phase of the interpersonal conflict–bullying pathway. Subsequently, according to the three-way model, interpersonal conflict is the only episodic factor at work that may alone lead to workplace bullying. As both interpersonal conflicts and workplace bullying are constructs with a dynamic nature, the relationship between these variables may differ not only at a person-level, but also on the day-level (Kozlowski & Klein, 2000). Conflicts are events that can occur quickly

and be fleeting, but at the same time have the potential to escalate and even turn into or elicit acts of bullying while also making those involved vulnerable and anxious as the outcomes of conflicts are generally difficult to predict (see also Van de Vliert, 1998). Hence, to investigate the short-term dynamics and whether these relationships even play out on a day-to-day basis can provide not only a better theoretical understanding of the bullying process, but also valuable knowledge in a bullying prevention perspective.

1.2.2 The role of contextual factors

Contextual factors are factors which reflect a particular context, such as characteristics unique to a particular organization or workgroup. This can for instance be the culture or the climate in the organization or workgroup. Already in the very first publication that addressed bullying and harassment in working life, the psychiatrist Brodsky (1976), claimed that for harassment to occur there needs to be a culture or climate that permits or rewards it. Subsequently, a poor social climate was found to be one of the strongest risk factors for bullying in one of the first studies that tested the work environment hypothesis (Einarsen et al., 1994). The work environment hypothesis has also proposed the social climate in the work group as an important risk factor, in itself or in combination with the above stressors.

The concepts of organizational culture and climate are to some extent overlapping perspectives for understanding the experiences people have at work (Denison, 1996). However, the culture is considered to be closer related to the organizational level and the perceptions of top management, while the climate is associated with the team/department/work-unit-level and is considered to be more tangible and closer related to the actual behaviours carried out by the organizational members (Schneider et al., 2013). More precisely, the organizational climate can be defined as the shared perceptions of and the meaning attached to the policies, practices, and procedures employees experience and the behaviours they observe getting rewarded, supported and expected (Schneider et al., 2013; Schneider & Reichers, 1983). One may also see climate as the perceptions of the prevailing attitudes, emotions and social relations characterizing a given work group or department (Ekvall, 1996). Additionally, it is

more common to study specific types of climate, meaning that the given climate concept has a focus, something we think off, act and react to, such as safety climate, climate for creativity etc. (Schneider, 2000). Lastly, although the concept of organizational climate is described as employees shared perception of a particular aspect of the work setting (Schneider, 1975; Schneider & Reichers, 1983), most studies on climate are still conducted on the individual-level, leaving the potential role of organizational climate in strengthening workplace bullying underdeveloped in current research and theory (Hutchinson et al., 2010; Neall & Tuckey, 2014).

Hence, with the aim of being consistent with the theoretical foundation of the climate concept, the two climate constructs studied in the present thesis (i.e., conflict management climate and hostile work climate) are investigated at the group-level by applying a multilevel design, in the present thesis. According to the three-way model (Baillien et al., 2009), the climate in the team or department may either directly lead to workplace bullying (track three) or it can serve as a moderator in the other pathways to bullying (track one and two) (see Figure 1). In the present thesis we test whether the two climate concepts, conflict management climate and hostile work climate, interact with situational factors in predicting exposure to bullying behaviours, yet also in this implicitly looking at any direct link between such climates and individual-level reports of exposure to workplace bullying.

Conflict management climate

A conflict management climate can be described as the employees' assessments of the organization's conflict management procedures and practices, and of how fair and predictable the interactions between leaders and followers in this regard are perceived to be (Einarsen et al., 2018; Rivlin, 2001). Hence, if the conflict management climate is considered to be strong, it indicates that the workers experience that interpersonal conflicts in their organization is generally managed in a fair and good manner (Rivlin, 2001). In the context of workplace bullying, such a climate may serve as an important organizational resource, as it may prevent interpersonal frustrations, irritations and confrontations, potentially arising from stressful working conditions or mere interpersonal issues, to escalate into bullying scenarios (Einarsen et al., 2018). In

addition to the general request for research on moderators in the antecedents–bullying relationship (Rai & Agarwal, 2018), there has especially been a call for studies on possible protective factors, that is, factors that may influence the occurrence and the impact of other work-related risk factors (Rai & Agarwal, 2018). Consequently, during the last years there has been an increased interest for the concept of conflict management climate and related climate constructs, such as psychosocial safety climate (Dollard et al., 2017) in this regard.

Although a strong conflict management climate is found to be related to less self-reported exposure to bullying behaviours (Einarsen et al., 2018), it had, at the onset of present project, yet to be tested as a buffer in the relationship between situational factors and exposure to workplace bullying. According to the job demands-resources theory (Bakker & Demerouti, 2007), all jobs have specific demands and resources, that in sum contribute to stress or motivation (Bakker & Demerouti, 2017). Experiencing high levels of job demands, such as role conflict, workload or cognitive demands, may over time lead to strain (Bakker & Demerouti, 2007), which further may cause interpersonal frustration and potentially bullying behaviours. However, if sufficient contextual or individual resources are present, the job demands-resources theory claims that these will buffer the potential negative effects of high job demands (Bakker & Demerouti, 2007). According to the conservation of resources theory (Hobfoll, 1988, 1989), some factors can act as resource passageways that enable or restrict employees' ability to access, accumulate, or protect valuable resources, influencing the effect of both resources and demands on workplace stress (Hobfoll, 2011; Rousseau et al., 2014). In line with this, a strong conflict management climate may serve as a resource passageway which buffer job demands at the individual-level, as it presumably leads to an increased sense of control and available social resources, probably in combination with effective management interventions (Einarsen et al., 2018; Hobfoll, 2011). Although job resources are often considered to be of a physical, psychological or social nature, organizational climate is proposed as a particularly strong resource in regard to interpersonal and social relations (Bakker & Demerouti, 2007). Hence, in the present thesis we investigate whether a strong team-level conflict management climate buffer

the impact of the above mentioned situational work-related risk factors on exposure to bullying behaviours.

Hostile work climate

Instead of serving as a resource, like a strong conflict management climate, the workgroup climate can also become an additional burden or stressor (Mawritz et al., 2014), as proposed by the work environment hypothesis. A hostile work climate can be described as a climate where the interaction between colleagues is permeated by escalated interpersonal conflicts and aggression. Employees who work in the same department may then watch and learn patterns of interpersonal misbehaviour from each other (Robinson & O'Leary-Kelly, 1998). This can then become a breeding ground for destructive behaviour, and especially so when employees already are exposed to a high level of other stressors (Mawritz et al., 2014).

Theoretically this can be explained by the social information processing theory (Salancik & Pfeffer, 1978), claiming that people will seek information from the social context surrounding them when they make choices and carry out various actions. Hence, how employees experience the working group's norms, practices and procedures regarding social interaction can have a significant impact on how they react to stress, as this may function as a frame of reference for acceptable behaviour in stressful situations (Robinson & O'Leary-Kelly, 1998). Destructive employee behaviour can thus be more likely to occur if such behaviour is "common practice" in the work environment (Robinson & O'Leary-Kelly, 1998) and especially so under strain from other stressors, such as role conflicts or high workload. In addition, working in a department permeated with conflicts and aggression, employees are likely to receive less social support, which is needed and may serve as a resource when exposed to stress, thereby potentially strengthening the antecedents–bullying relationship. Following the conservation of resource theory (Hobfoll, 1988, 1989), this would imply that there may be a multiplying effect of situational and contextual demands (Loh et al., 2018; Vranjes, Notelaers, et al., 2022). More specifically, a hostile climate may act as a resource passageway as it may detract, undermine, obstruct, or impoverish peoples or groups resource reservoirs (Hobfoll, 2011; Loh et al., 2018), which further will

increase their stress levels, decrease their resources and hence increase their vulnerability. Therefore, in line with the conservation of resources theory, the work environment hypothesis (Einarsen et al., 1994; Leymann, 1996) and the three-way model (Baillien et al., 2009), the present thesis investigate whether department-level hostile work climate strengthen the relationship between situational work-related risk factors and exposure to bullying behaviours.

1.2.3 The role of individual factors

Individual factors are factors related to individuals' characteristics, such as personality dispositions. Although the individual factors of both targets and bullies are likely to be relevant as antecedents of bullying (e.g., Fernández-del-Río et al., 2021), the focus in the present thesis is on the role of targets personality when exposed to bullying. As bullying often occurs in situations with multiple perpetrators and it is the total burden on the target which makes the predicament, target factors are of great relevance. While the idea that there exists a so-called "victim personality", explaining why some become targets of bullying, has not gained much support in previous research (Glasø et al., 2007; Glasø et al., 2009; Reknes et al., 2019), recent studies do indicate that some personality dispositions seem to act as vulnerability factors when already exposed to other stressors (Reknes et al., 2019). Along similar lines of reasoning, the three-way model of workplace bullying (Baillien et al., 2009), suggests that personality dispositions can influence how interpersonal conflicts are managed and by that play a role in the model´s second pathway, where bullying is the result of escalating interpersonal conflict (see Figure 1). Such an approach must however not be turned into a victim-blaming perspective, as the main antecedents are still the situational factors and of course the behaviours of the perpetrators (see also Cortina, 2017 for a more thorough discussion).

Today the most prominent model of personality is the five factor model (McCrae & Costa, 1987), which describes five broad bandwidth personality traits describing an individual's tendency to think, feel, and act in consistent and certain ways over situations (McCrae & John, 1992); extraversion, conscientiousness, agreeableness, neuroticism, and openness to experience. A meta-analysis by Nielsen et al. (2017)

regarding the relationship between workplace bullying and these five dimensions found neuroticism to be the strongest correlate of exposure to workplace bullying. Neuroticism refers to adjustment versus emotional instability and provides an indication of whether an individual tends to be relaxed and stable, or anxious and easily upset (Pervin, 1993). While individuals with high scores on neuroticism are more likely to experience emotional reactions such as anger, anxiety, jealousy, guilt, and depression, individuals at the opposite end of this dimension are more emotionally stable and less reactive to challenging situations. Neuroticism is further divided into six underlying narrow bandwidth facets, where recent studies indicate that especially the sub-facets trait anger and trait anxiety seem to be important in the development of workplace bullying (e.g., Reknes et al., 2021). Additionally, several scholars argue that these two traits should be studied separately and not collapsed into a broader neuroticism trait, as these sub-concepts may act differently in relation to the bullying process (e.g., Kant et al., 2013; Reknes et al., 2021). Hence, in the present thesis we investigate whether having a high score on either trait anger or trait anxiety strengthens the relationship between interpersonal conflicts and exposure to bullying behaviours on a daily level in the initial phase of a potential conflict escalation or de-escalation.

Trait anger and trait anxiety

According to the three-way model, the way people react in conflict situations may influence further escalation or de-escalation (Baillien et al., 2009; Zapf & Einarsen, 2020), which implies that conflicts quickly can change expression and intensity (Van de Vliert, 1984). This means that interpersonal conflicts can be regarded as dynamic processes where perceptions, immediate reactions, and behaviours of one or more parties influence each other (Van de Vliert, 1984). Further, the trait activation theory (Tett & Burnett, 2003; Tett & Guterman, 2000), proposes that personality traits are latent potentials to behave (think, feel) in certain ways, but that they require trait-relevant situations to be expressed. As trait anger and trait anxiety are considered to be affective traits (Costa & McCrae, 1980), we believe they are likely to be triggered in a conflict situation. While studies have found that individuals with a low score on neuroticism are less likely to appraise stressful situations as threats (Gallagher, 1990),

individuals with a high score on neuroticism are more sensitive in relation to others' emotions and emotional displays (Doherty, 1997), which may increase the likelihood that they will respond inappropriately in difficult social situations, such as interpersonal conflicts. Hence, according to trait activation theory (Tett & Burnett, 2003), trait anxiety will only appear in situations that the employee finds threatening (Judge & Zapata, 2015; Kenrick & Funder, 1988; Tett & Guterman, 2000). Being involved in interpersonal conflicts may from an evolutionary perspective raise a fear of being socially excluded as well as created uncertainty in those involved of what happens next and what the outcome may be. This again may evoke feelings of uneasiness and anxiousness, which may be particularly triggered in employees with a high score on trait anxiety. In parallel, employees with a high score on trait anger should be particularly activated when perceiving to be unfairly and disrespectfully treated, which may make them react with spontaneous escalating conflict behaviour (Van de Vliert, 1984). Additionally, such conflict behaviour may irritate the other part and thereby potentially trigger aggressive and angry responses in return. Although individual dispositions for several decades have been theorized to influence conflict behaviour (Van de Vliert, 1984), only a few studies have so far examined personality traits as moderators in the antecedents–bullying relationship (Rai & Agarwal, 2018) and, to the best of our knowledge, no study has investigated this in the interpersonal conflict–bullying relationship. Hence, based on the three-way model (Baillien et al., 2009) and the trait activation theory (Tett & Burnett, 2003; Tett & Guterman, 2000), the present thesis investigates the potential moderating roles of target trait anger and target trait anxiety, in the day-to-day relationship between interpersonal conflicts and reported exposure of bullying behaviours.

1.3 Aims and Hypotheses of the Thesis

Aim 1

The first aim of the thesis is to investigate whether the three work-related situational factors; role conflict, workload, and cognitive demands, are related to perceived

exposure to bullying behaviours (Paper 1 and Paper 2). To address this aim, three hypotheses are tested:

Hypothesis 1. There is a positive relationship between role conflict and exposure to bullying behaviours at work (Paper 1 and Paper 2).

Hypothesis 2. There is a positive relationship between workload and exposure to bullying behaviours at work (Paper 1 and Paper 2).

Hypothesis 3. There is a positive relationship between cognitive demands and exposure to bullying behaviours at work (Paper 1).

Aim 2

The second aim of the thesis is to investigate whether the expected positive relationships between the three work-related situational factors (i.e., role conflict, workload, and cognitive demands) and exposure to bullying are negatively moderated by team-level conflict management climate and positively moderated by department-level hostile work climate (Paper 1 and Paper 2). To address this aim, the following hypotheses are tested:

Hypothesis 4. The positive relationship between role conflict and bullying behaviours is moderated by conflict management climate. Specifically, the relationship between role conflict and exposure to bullying behaviours is weaker in teams with a strong (vs. weak) conflict management climate (Paper 1).

Hypothesis 5. The positive relationship between workload and bullying behaviours is moderated by conflict management climate. Specifically, the relationship between workload and exposure to bullying behaviours is weaker in teams with a strong (vs. weak) conflict management climate (Paper 1).

Hypothesis 6. The positive relationship between cognitive demands and bullying behaviours is moderated by conflict management climate. Specifically, the

relationship between cognitive demands and exposure to bullying behaviours is weaker in team with a strong (vs. weak) conflict management climate (Paper 1).

Hypothesis 7. The positive relationship between role conflict and bullying behaviours is moderated by hostile work climate. Specifically, the relationship between role conflict and exposure to bullying behaviours is stronger among employees working in departments characterized by a pronounced hostile work climate (Paper 2).

Hypothesis 8. The positive relationship between workload and bullying behaviours is moderated by hostile work climate. Specifically, the relationship between workload and exposure to bullying behaviours is stronger among employees working in departments characterized by a pronounced hostile work climate (Paper 2).

Aim 3

The third aim of the thesis is to investigate the day-to-day within-person relationship between involvement in interpersonal conflict and exposure to bullying behaviours (Paper 3). To address this aim, the following hypothesis is tested:

Hypothesis 9. Daily involvement in interpersonal conflicts is positively related to daily exposure to bullying behaviours, after controlling for reported exposure to bullying behaviours the previous day (Paper 3).

Aim 4

The fourth aim of the thesis is to investigate if these day-to-day within-person relationships between interpersonal conflict and exposure to bullying behaviours is moderated by the individual factors; trait anger and trait anxiety (Paper 3). To address this aim, two hypotheses are tested:

Hypothesis 10. The positive relationship between daily interpersonal conflicts and daily exposure to bullying behaviours is stronger for respondents high (vs. low) on trait anger (Paper 3).

Hypothesis 11. The positive relationship between daily interpersonal conflicts and daily exposure to bullying behaviours is stronger for respondents high (vs. low) on trait anxiety (Paper 3).

2. METHODS

2.1 Procedures and Samples

The aim of Paper 1, "*Job demands as risk factors of exposure to bullying at work: The moderating role of team-level conflict management climate*", was to investigate three work-related situational factors as possible antecedents of workplace bullying at the individual-level, and to test whether team-level conflict management climate moderates these relationships. For Paper 1, we employed a sample of Norwegian employees in a major transport company, working on board ferries along the Norwegian coastline. The study was conducted as a part of an internal work environment survey, where a questionnaire was distributed to 837 employees on all their ferries. Participation was voluntary. Altogether, 462 questionnaires were returned, resulting in a response rate of 55.2%. The mean age of the sample was 45 years (SD = 11.8), where 82% (n = 379) were males. Most of the sample were in full-time employment (93.2%). The sample was naturally clustered, as individual crew members belonged to teams sharing a particular captain, ferry, and shift, where associations within and across levels can be modelled using multilevel analysis. Each vessel had 3-4 teams working in respective shifts, and each team consisted of 2-10 respondents. The final sample consisted of 147 teams with an average of 2.7 employees per team.

The aim of Paper 2, *"When the going gets tough and the environment is rough: The role of departmental level hostile work climate in the relationship between job stressors and workplace bullying"*, was to investigate two work-related situational factors (role conflict and workload) as possible antecedents of workplace bullying at the individual-level, and to test whether department-level hostile work climate moderates these relationships. For Paper 2, a sample of employees working at a Belgian university were used. The data were collected in 2013 by a statistical consulting agency that specializes in the measurement of occupational stress for a Belgian Health and Safety Executive. The response rate was 48.8% and the total sample consisted of 1354 employees working in 134 units. We only retained units consisting of 4 or more respondents resulting in the omission of 26 units. Hence, the final sample consisted of 1290

employees employed in 108 units. The size of the units varied between 4 and 54 with an average of 12. The mean age of the sample was 39.4 years (SD = 11.4), where 53% (n = 684) were females. Approximately 28% of participants held a managerial position and 79% worked full-time.

The aim of Paper 3, "*Daily interpersonal conflicts and daily exposure to bullying behaviours at work: The moderating roles of trait anger and trait anxiety*", was to investigate the day-to-day relationship between interpersonal conflicts and bullying behaviours, and to test whether trait anger and trait anxiety moderate this relationship. For Paper 3, a sample of 57 naval cadets from the Royal Norwegian Naval Academy where used. The study took place in the autumn of 2017, during a ten-week training mission on board a tall ship, sailing from Northern Europe to North America. During the first 30 days of the voyage, the cadets filled out a standardized questionnaire, with various questions about the work situation that day, including interpersonal conflicts and exposure to bullying behaviours. The cadets answered the daily questionnaires every day at the same time (5 pm). Two days before the voyage, the cadets also filled out a general questionnaire, containing questions regarding personality and other trait-like variables, including trait anger and trait anxiety. The sample comprised of 50 male cadets (87.7%) and six female cadets (10.5%). One participant did not report gender (1.8%). The mean age of the cadets was 23 years (SD = 2.6). Among the 66 cadets who were invited to take part in the study, 57 cadets (86.4 %) accepted the invitation and completed both the general questionnaire and daily questionnaires. These 57 cadets answered 83.5% of the daily questionnaires, yielding 1428 day-level observations (out of 1710 possible day-level observations; 57 cadets x 30 days).

2.2 Measures

2.2.1 Predictors

In the present thesis a range of different work-related situational factors were tested as predictors throughout the three papers: role conflict (Paper 1 and 2), workload (Paper 1 and 2), cognitive demands (Paper 1) and interpersonal conflict (Paper 3).

Role conflict was measured with five items from the Role Questionnaire (Rizzo et al., 1970). Examples of items are: "I receive incompatible requests from two or more people" and "I do things that are apt to be accepted by accepted by one person and not accepted by others". The items were evaluated by the respondents using a seven-point scale ranging from 1 (very false) to 7 (very true). Reliability analyses revealed that the internal stability of this measure was acceptable ($\alpha = .82$). This measure of role conflict was used in Paper 1. In Paper 2, role conflict was measured with four items from the from the Short Inventory to Monitor Psychosocial Hazards (SIMPH; Notelaers et al., 2007). The four items are: 1) "Do you receive contradictory instructions?"; 2) "Do you have to do your work in a way which differs from the method of your choice?"; 3) "Do you have conflict with your colleagues about the content of your tasks?"; 4) "Do you have conflict with your boss about the content of your tasks?". The items were evaluated by the respondents using a four-point scale ranging from 1 (never) to 4 (always). The scale showed acceptable reliability ($\alpha = .78$).

Workload was measured with four items from the Questionnaire on the experience and assessment of work (Van Veldhoven & Meijman, 1994). Examples of items are: "Do you have to work very fast?" and "Do you work under time pressure?". The response categories range from 1 (never) to 4 (always), Reliability analyses revealed that the internal stability of this measure was good ($\alpha = .84$). This measure of workload was used in Paper 1. In Paper 2, workload was measured with three items from the Short Inventory to Monitor Psychosocial Hazards (SIMPH; Notelaers et al., 2007). The three items are: 1) "Do you have to work extra hard in order to complete something"; 2) "Do you work under time pressure?"; 3) "Do you have to hurry?". The items were evaluated by the respondents using a four-point scale ranging from 1 (never) to 4 (always). The scale showed good reliability ($\alpha = .89$).

Cognitive demands was measured with three items from the Questionnaire on the experience and assessment of work (Van Veldhoven & Meijman, 1994). The three items are: 1) "Do you have to be attentive to many things at the same time?" 2) "Do you have to give continuous attention to your work?"; 3) "Do you have to remember many things in your work?". The items were evaluated by the respondents using a four-

point scale ranging from 1 (never) to 4 (always). The scale showed acceptable reliability ($\alpha = .68$). This measure served as a predictor in Paper 1.

Interpersonal conflict was measured at the day-level using a five-item checklist developed by Ilies et al. (2011). The measurement was especially developed to capture daily reports of interpersonal conflicts at work. Examples of items are: "Over the past 24 hours I have been in an argument with another cadet, civilian crew or military staff about the execution of tasks" and "Over the past 24 hours I had to explain an improper behaviour or action to another cadet or leader". The items were evaluated by the respondents using a four-point scale ranging from 1 (has not happened) to 4 (three or more times). Since this was a daily measure, the reliability was calculated using the approach described by Geldhof et al. (2014), by estimating omega (ω) at the within-person level using a two-level CFA. The scale showed acceptable reliability ($\omega = .70$). This measure served as a predictor in Paper 3.

2.2.2 Moderators

Conflict management climate was measured with four items adapted from the Conflict Management Climate Scale regarding perceived fairness of dispute resolution in the organization (Einarsen et al., 2018; Rivlin, 2001). The four items are: 1) "If I have a serious disagreement with someone at work, I know who I should talk to about it"; 2) "The way we deal with disagreements between employees in my unit works well"; 3) "My superiors deal with conflicts in a good manner"; 4) "We have good procedures and methods for raising disagreements and conflicts in my workplace". The items were evaluated by the respondents using a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scale showed adequate reliability ($\alpha = .81$). Prior to the multilevel analysis, the items were computed into a sum-score, and a team average score was used at the team-level in the analysis. This measure served as a moderator variable in Paper 1.

Hostile work climate was measured with four items from the Short Inventory to Monitor Psychosocial Hazards (SIMPH; Notelaers et al., 2007). The overall starting sentence was: "How often have you been confronted with the following… during the

last six months?". The four items are: 1) "…aggressiveness from colleagues?"; 2) "…aggressiveness from your boss?"; 3) "…conflicts with your colleagues?"; 4) "…conflicts with your boss?". The items were evaluated by the respondents using a four-point scale ranging from 1 (never) to 4 (always). Reliability analyses revealed that the internal stability of this measure was acceptable ($\alpha = .71$). Prior to the multilevel analysis, the items were computed into a sum score, and a department average score was used at the between-level in the analysis. This measure served as a moderator variable in Paper 2.

Trait anger and *trait anxiety* were measured with the State-Trait-Anger Expression Inventory (STAXI) and the State-Trait-Anxiety Inventory (STAI) (Spielberger, 1983, 1988). Trait anger was measures with 12 items (e.g., "I get angry when I'm slowed down by others' mistakes", "I have a fiery temper"), while trait anxiety was measured using 20 items (e.g., "I feel nervous and restless", "I am inclined to take things hard"). On both scales, the items were evaluated by the respondents using a four-point scale ranging from 1 (almost never) to 4 (almost always). Reliability analyses revealed that the internal stability of these measures was acceptable for trait anger ($\omega = .75$) and good for trait anxiety ($\omega = .86$). These measures served as moderator variables in Paper 3.

2.2.3 Outcome

Exposure to workplace bullying was the outcome variable in all three papers constituting the present thesis, hence focusing on target experiences, in line with the tradition in European bullying research (see Einarsen et al., 2020). We chose *the behavioural experience approach* to measure exposure to workplace bullying behaviours in all three papers, which means that the frequency of exposure to different negative acts experienced by the respondents is measured, without the mentioning of words such as "bullying" and "harassment". To measure exposure to bullying behaviours short versions of the standardized scale Negative Acts Questionnaire-Revised (NAQ-R; Einarsen et al., 2009) was applied. Hence, the Negative Acts Questionnaire-Revised measures perceived exposure to bullying behaviours while at work, describing different kinds of behaviour that may be perceived as bullying if they occur on a systematic and regular basis. The scores on all items were summed to form

an overall index of exposure to bullying behaviours. Different versions of the questionnaire were used in the three papers. While the original NAQ-R scale has 22 items, a 12-item version was used in Paper 1, a 9-item version in Paper 2 (SNAQ) and a 5-item version in Paper 3.

In Paper 1, exposure to bullying behaviours was measured with the twelve-item version of the Negative Acts Questionnaire-Revised (NAQ-R; Einarsen et al., 2009; Glasø et al., 2010; Notelaers, Van der Heijden, Hoel, et al., 2018). The overall starting sentence was: "Which unwanted actions or negative situations have you been exposed to in your workplace during the last six months?". Examples of items are: "Someone withholding information which affects your performance", "Spreading of gossip and rumours about you," and "Being shouted at or being the target of spontaneous anger". The items were evaluated by the respondents using a five-point scale ranging from 1 (never) to 5 (daily). The scale showed good reliability ($\alpha = .91$).

In Paper 2, exposure to bullying behaviours was measured with the Short Negative Acts Questionnaire (SNAQ; Notelaers, Van der Heijden, Hoel, et al., 2018), which consists of nine items from the full version of the Negative Acts Questionnaire-Revised (NAQ-R; Einarsen et al., 2009). The items followed an introductory text stating: "How many times have you been the target of following behaviours during the last six months?". Example items are: "Repeated offensive remarks about you or your private life", "Silence or hostility as a response to your questions or attempts at conversations" and "Social exclusion from co-workers or workgroup activities". The items were evaluated by the respondents using a four-point scale ranging from 1 (never) to 4 (once a week or more). The scale showed good reliability ($\alpha = .86$).

In Paper 3, bullying behaviour was measured with five items adapted from the Negative Acts Questionnaire–Revised (NAQ-R; Einarsen et al., 2009). To fit the daily diary design applied in Paper 3, the timeframe reference provided in the questionnaire was changed from the original "the last six months" to "today". The items that were selected where the ones considered most likely to occur on a daily basis among the sample of cadets in their actual setting. Still, the five items cover the three different types of

bullying behaviours that have been described for the NAQ-R (i.e., work-related, person-related, and social exclusion). The five items are: 1) "Been ignored or excluded"; 2) "Unpleasant reminders of errors or mistakes"; 3) "Practical jokes carried out by people you don't get along with"; 4) "Been shouted at or been the target of spontaneous anger"; 5) "Had your opinions ignored". The items were evaluated by the respondents using a five-point scale ranging from 1 (not at all) to 5 (to a very large extent). Reliability of this daily measure was calculated by estimating omega (ω) at the within-person level using a two-level CFA (Geldhof et al., 2014). The scale had acceptable reliability ($\omega = .70$).

2.2.4 Control variables

Gender, age, and *tenure* served as control variables in all analyses in Paper 1 and 2.

Exposure to bullying behaviours the previous day served as a control variable in all analysis predicting exposure to bullying behaviours the same day in Paper 3. This was done to ensure that what was measured was an increase in exposure to bullying behaviours.

2.3 Statistical Analysis

To utilize the multilevel structure of the data, all analysis in the present thesis were performed using the software package MLwiN version 2.20 (Paper 1) and version 3.01 (Paper 2 and 3). Pre-analysis and descriptive statistics were conducted using the software package Mplus version 7.0 (Paper 1) and version 7. 4 (Paper 2 and 3). In all three papers constituting the present thesis, cross-level interactions were tested, whereupon simple slope tests for hierarchal linear models were used to examine whether the slopes were significantly different from zero (Preacher et al., 2006). The slopes were tested at +/-1 SD for the predictors and moderators, and calculations were based on the asymptotic covariance matrix from the respective multilevel models using R version 3.4.3.

2.3.1 Paper I

In Paper 1, we had individual scores (individual-level) that were nested within teams (team-level), that is crews onboard ferries. In the analysis, individual-level predictors were centred on the team mean, while team-level predictors were centred on the grand mean. To test our hypotheses, we ran three models predicting exposure to bullying behaviours. First, we tested a model where the intercept was included as the only predictor (Null Model). In the next model (Main effect Model), we included the predictor variables (role conflict, workload, cognitive demands) and the moderator variable (climate for conflict management climate). In the third model (Interaction Model), the two-way interactions between climate for conflict management climate and the three predictors were included.

2.3.2 Paper II

In Paper 2, individual scores (individual-level) were nested within departments (department-level). In the analysis, individual-level predictors were centred on the department mean, while department-level predictors were centred on the grand mean. To test our hypotheses, we ran five models predicting exposure to bullying behaviours. First, we ran a null model where the intercept was included as the only predictor. Second, we tested a main effect model by adding the hypothesized individual-level predictors (role conflict and workload). In the third model, to examine possible random effects of the individual-level predictors on the higher department-level, we allowed the slopes of the relationships between the predictors (role conflict and workload) and the outcome (bullying behaviours) to vary randomly. In the fourth model, we added the hypothesized department-level predictor (hostile work climate), explaining department-level variance in exposure to bullying behaviours. Finally, in the fifth model, we tested the hypothesized cross-level interactions between hostile work climate and the two individual-level predictors by including their respective interactional effects.

2.3.3 Paper III

In Paper 3, the daily measures (interpersonal conflict and bullying behaviour) constituted the within-level of analysis, while trait anger and trait anxiety constituted the between-level of analysis. In the analysis, daily observations (within-level; $N = 1428$) where nested within individual cadets (between-level; $N = 57$). To test our hypotheses, we ran two sets including three models predicting both our outcomes of interpersonal conflicts the next day and daily bullying behaviours. In the first set, to investigate whether interpersonal conflicts persist, we predicted interpersonal conflicts the next day. First, we tested a model where the intercept was included as the only predictor (Null Model). In the next model (Main effect Model), we included the explanatory variable (daily interpersonal conflict) and the moderator variables (trait anger and trait anxiety). In the third model (Interaction Model), the two-way interaction between the moderators and daily interpersonal conflict were included. In the second set, we predicted exposure to daily bullying behaviours the same day. Again, we first tested a model where the intercept was included as the only predictor (Null Model). In the next model (Main effect Model), we included the explanatory variable (daily interpersonal conflict), the moderator variables (trait anger and trait anxiety) and control variable (previous-day exposure to bullying behaviours). In the third model (Interaction Model), the two-way interaction between the moderators and interpersonal conflict were included.

2.4 Ethical Considerations

The collection of data employed in Paper 1 and 3 were both approved by the Norwegian Social Science Data Services/Norwegian Centre for Research Data. The data employed in Paper 2 were collected by a Belgian statistical agency and met with the Belgian data protection regulations. Respondents in all three studies constituting the present thesis were given written informed consent, meaning that they were informed prior to participating in the studies that participation was voluntary and that they could resign from the study at any time. The participants were also informed that all information

provided would be threated confidentially and that they would remain non-identifiable in the research. The present project has worked with anonymous data only.

3. RESULTS

In the following we will answer the overall aims and hypothesis in the thesis.

3.1 Paper I

Zahlquist, L., Hetland, J., Skogstad, A., Bakker, A. B., & Einarsen, S. V. (2019). Job demands as risk factors of exposure to bullying at work: The moderating role of team-level conflict management climate. *Frontiers in Psychology, 10,* 2017. https://doi.org/fc8r

The results of multilevel analyses showed support for hypothesis 1 and 3, as there was a significant positive relationship for both role conflict and exposure to bullying (B = .103, $p < .01$) and cognitive demands and exposure to bullying (B = .105, $p < .05$). However, hypothesis 2 was not supported as the relationship between workload and bullying behaviours was not significant (B = .019, n.s.). In support of hypotheses 4 and 6, we found that team-level conflict management climate moderated the relationship between role conflict and exposure to bullying (B = -.071, $p < .05$) and cognitive demands and exposure to bullying behaviours (-.174, $p < .05$). The interaction between team-level conflict management climate and workload was on the other hand not significant, indicating that hypothesis 5 was not supported. The significant interactions imply that the relationship between the two situational risk factors, role conflict and cognitive demands, and exposure to bullying behaviours are weaker for employees working in teams with a strong conflict management climate. In accordance with hypothesis 4 and 6, a visual examination showed that both the relationship between role conflict and exposure to bullying behaviours, and the relationship between cognitive demands and exposure to bullying behaviours, were stronger in teams characterized by a weak conflict management climate.

3.2 Paper II

The results of multilevel analyses showed support for hypothesis 1 and 2, as there was a significant positive relationship for both role conflict and exposure to bullying (B = .474, $p < .001$) and workload and exposure to bullying (B = .071, $p < .001$). Next, the higher-level random slopes for both predictors were estimated. The random slope of the relationship between role conflict and exposure to bullying behaviours was significant (μ_{1j} = .035, $p < .01$), while the corresponding random slope for the relationship between workload and exposure to bullying behaviours was not (μ_{2j} = .000, n.s.). This suggests that only the relationships between role conflict and exposure to bullying behaviours systematically differs across departments, while this is not the case for the relationship between workload and exposure to bullying behaviours. Further, and in support of hypothesis 7, we found that the positive interactional effect between role conflict and department-level hostile work climate in the prediction of exposure to bullying behaviours was significant (B = .981, $p < .001$). In accordance with hypothesis 7, a visual examination showed that the relationship between role conflict and exposure to bullying behaviours was stronger in departments with high hostile work climate. However, and opposite to our expectation, there was a negative interactional effect between workload and department-level hostile work climate in the prediction of exposure to bullying behaviours (B = -.420, $p < .001$). When visually examining the plot, we found that the relationship between workload and exposure to bullying behaviours was only significant in departments with low hostile work climate. This is a somewhat surprising result that will be interpreted further in the discussion. Hence, hypothesis 8 was not supported.

3.3 Paper III

Zahlquist, L., Hetland, J., Einarsen, S. V., Bakker, A. B., Hoprekstad, Ø. L., Espevik, R., Olsen, O. K. (2022). Daily interpersonal conflicts and daily exposure to bullying behaviors at work: The moderating roles of trait anger and trait anxiety. *Applied Psychology: An International Review,* 1-22. https://doi.org/jhj3

The results of multilevel analyses showed support for hypothesis 9, as there was a significant positive relationship between daily interpersonal conflicts and exposure to bullying behaviours the same day (B = .548, *p* < .001). In support of hypothesis 10, we found that trait anger moderated the relationship between daily interpersonal conflict and exposure to bullying the same day (B = .469, *p* < .001). When visually examining the relationship between daily interpersonal conflict and exposure to bullying behaviours the same day, we could see that it was stronger for cadets with a high level of trait anger, further supporting hypothesis 10. However, the interaction effect between trait anxiety and daily interpersonal conflict was not significant (B = -.074, n.s.), implying that hypothesis 11 was not supported.

4. DISCUSSION

4.1 Discussion of Findings

The overall aim of the present thesis was to investigate the role of situational, contextual, and individual factors in the workplace bullying process, applying group-level and within-person research designs. More specifically, based on the three empirical studies conducted, work-related situational factors (role conflict, workload, and cognitive demands) were investigated as potential risk factors in relation to perceived exposure to bullying behaviours. Next, we tested the potential moderating effects of two group-level contextual factors (conflict management climate and hostile work climate) in these relationships. Further, the relationship between involvement in interpersonal conflict and exposure to bullying behaviours was investigated at a day-to-day within-person level. In this we further tested the potential moderating effect of two individual factors (trait anger and trait anxiety) in this relationship. The findings of this thesis have important theoretical, methodological and practical implications, which will be highlighted in the following.

4.1.1 The relationship between work-related situational factors and bullying

In line with the first aim of the thesis, findings from Paper 1 and Paper 2 showed that the three work-related situational factors role conflict, workload, and cognitive demands were related to reports of exposure to bullying behaviours. Taken together, these findings are in support of the main findings from previous individual-level studies on antecedents and risk factors of exposure to workplace bullying (Van den Brande et al., 2016). In both Paper 1 and Paper 2, role conflict is found to have the strongest relationship with bullying exposure, which also aligns well with previous research findings in the field (Hauge et al., 2007; Notelaers et al., 2010; Reknes et al., 2019). However, when it comes to workload, the findings are more mixed. While there is a significant main effect of workload on employees' exposure to bullying behaviours in Paper 2, this relationship is not significant in Paper 1. One explanation for this may be found in the very nature of the studied stressors. In the literature, role conflict, workload

and cognitive demands are considered to be different kinds of stressors (LePine et al., 2005; Van den Broeck et al., 2010). While role conflict is considered to be a hindrance demand or a "bad" stressor, that inhibit an employee's ability to achieve valued goals, workload and cognitive demands are termed by some as challenge demands or a "good" stressor, with the potential to promote personal growth and achievement (Podsakoff et al., 2007). This distinction between the studied stressors, may at least be a part of the explanation for why the workload–bullying relationship seem to be more uncertain.

Still, in sum, the findings of the present thesis support the work environment hypothesis (Einarsen et al., 1994; Einarsen et al., 2020; Leymann, 1996), claiming that bulling is related to stressors in the psychosocial work environment creating stress, frustration and interpersonal conflicts among employees. Given that the stressors act as ambient stressors also affecting perpetrators to be, the findings are also consistent with the frustration-aggression hypothesis (Berkowitz, 1989; Dollard et al., 1939), postulating that stress and frustration may lead to aggressive outlets, which then also encourage perpetrators to engage in bullying behaviours. It is anyhow in line with a social interactionist perspective on aggression, proposing that such aggressive outlets may follow from retaliation and aggressive outlets from perpetrators against stressed out targets (Einarsen, 1999; Felson & Tedeschi, 1993). Being exposed to high job demands over time, without sufficient resources, is related to negative outcomes such as sleep problems, fatigue and impaired health (Bakker & Demerouti, 2007). These indirect health effects, as well as the direct stress triggered by role conflict, high workload and cognitive demands can, according to social interactionist perspective, also lead to behavioural changes in targets to be, such as violation of social norms, which may provoke frustration and aggressive behaviour from colleagues, subordinates and superiors, who then may target the stressed-out employee (Felson & Tedeschi, 1993; Leymann, 1996; Skogstad et al., 2011). In line with the conservation of resources theory (Hobfoll, 1988, 1989), a stressed-out employee may also be more vulnerable and less able to defend when involved in escalated bullying situations or when being under attach of an aggressive perpetrator. However, the exact mechanisms involved has been out of the scope of the present thesis and must therefore be investigated in future research.

4.1.2 The moderating role of workgroup climate in the stressor–bullying relationship

Additionally, and in line with the second aim of the thesis, these relationships between the stressors and exposure to bullying are further influenced by aspects of the social climate in the employee's department or team. Paper 1 showed that the positive relationships between role conflict, cognitive demands and bullying behaviours, respectively, are either weaker or no longer significant for employees working in teams with a strong conflict management climate. In Paper 2, the positive relationship between role conflict and bullying behaviours was stronger for employees working in departments with a pronounced hostile work climate. As such, these studies are, to our knowledge, the first ones to empirically demonstrate the buffering and the strengthening effect of workgroup climate in the link between stressors and bullying.

Hence, in teams where employees report a strong conflict management climate, the relationship between increased levels of role conflict and exposure to bullying behaviours is weaker, and even more interesting, there is no association between increased levels of cognitive demands and exposure to bullying behaviours. This supports the notion that this climate may not only serve as a resource in its own right, but also as a resource passageway that contribute to protect employee resources, in line with the conservation of resources theory (Hobfoll, 1988, 1989; Rousseau et al., 2014). Further, there may be several explanations for why a strong conflict management climate has such a buffering effect on these relationships. First, it is likely that a strong conflict management climate promotes the actual handling of interpersonal frustration and conflicts at an early stage, and by that prevent further escalation. Working in a team with a strong conflict management climate probably makes workers feel safe to voice their concerns and by that initiate support from the organization and one's immediate managers in order to resolve the antecedent situation or the bullying in an early phase. We know from previous studies that choosing to wait and handle bullying later in the process, is associated with unsuccessful outcomes, probably because the bullying then has escalated too far (Kwan et al., 2016). Another explanation may be that conflict management climate works by reducing insecurity and by promoting predictability and perceived control (Einarsen et al., 2018). Rivlin (2001) argue that a

strong conflict management climate implies that employees perceive managers to intervene in conflicts that arise and the conflict management procedures of their organization to be fair. A strong conflict management climate also provides workers with confidence regarding where to go and what to do when conflictual situations arise. Increased perception of control can further increase the likelihood that other stressors at work are handled and more easily being coped with (Karasek, 1979). In addition to having a buffering effect, the findings in Paper 1 showed that team-level conflict management climate also have a main effect on exposure to bullying behaviors, as there are fewer bullying behaviours reported in teams characterized by a strong conflict management climate. Hence, the findings from the present thesis indicate that conflict management climate is an important organizational-level resource with the ability to prevent bulling both directly and by playing a protective role, by reducing the impact of other known risk factors.

In opposite to a strong conflict management climate, we further investigate the effect of working in a department with a pronounced hostile work climate, and how such a climate may affect stressor–bullying relationships on the individual level. The findings in Paper 2 show that in departments where employees report a hostile work climate, the relationship between increased levels of role conflict and exposure to bullying behaviours is stronger. Theoretically, this finding is in line with the work environment hypothesis, as a hostile work climate may serve as an additional distal stressor, interacting negatively with other work-related stressors (Einarsen et al., 1994; Einarsen et al., 2020; Leymann, 1996; Mawritz et al., 2012). Hence, in departments where there are several risk factors at different levels being present at the same time, unfortunate synergetic effects may occur, severely increasing the total burden put on employees, increasing the risk of bullying scenarios emerging. This aligns well with the conservation of resources theory (Hobfoll, 1988, 1989) and supports the notion that this climate may not only serve as a stressor in its own right, but also as a resource passageway that contribute to boost the job demands–bullying relationship (Hobfoll, 2002). Furthermore, it is likely that employees who work in a climate where the interaction between colleges is permeated by interpersonal conflicts and aggression have poorer social relations with less possibilities for social support from colleagues.

In this regard, several studies have shown that employees who lack social support from their colleges, tend to cope less effectively in response to stressful situations (DeLongis & Holtzman, 2005; Sloan, 2012), making those who work in hostile climates more likely to experience their work-related stressors as demanding, severely taxing their resources. In a study by Mawritz et al. (2014), employees working in hostile climates had a tendency to cope with their environment by psychologically withdrawing. Such withdrawal may then cause employees to not intervene or voice when mistreatment and unfairness is taking place at work. Subsequently, if bullying incidents go unchecked, there is a heightened risk of bullying behaviours becoming "normalized" (Liefooghe & Mac Davey, 2001). In a climate where such behaviours are unlikely to be sanctioned or have any form of negative consequences, the threshold for frustration to turn into aggression and bullying behaviours may also be lowered, an assumption also in line with the social information processing theory (Salancik & Pfeffer, 1978).

At last, and contrary to our expectations, the results in Paper 2 showed no significant strengthening effect of department-level hostile work climate on the relationship between workload and bullying behaviour. Still, the results clearly show that more exposure to bullying behaviours is reported in departments characterized by a hostile work climate, independent of the experienced workload. This effect also seems so strong that any effect of high workloads on bullying exposure may be concealed by this highly problematic climate, which may indicate a ceiling-effect.

4.1.3 The relationship between interpersonal conflicts and bullying

In line with the third aim of the thesis, a fourth situational antecedent of workplace bullying, namely interpersonal conflicts, was investigated in Paper 3. As the relationship between interpersonal conflicts and workplace bullying is well-established, the contribution of the present thesis is to expand our knowledge regarding this at a microlevel. By investigating the daily within-person dynamic in the early phase of a potential escalation, we contribute to our understanding of what is happening at the actual time of an occurring conflict situation. The findings in Paper 3 show that involvement in daily interpersonal conflicts is related to exposure to bullying behaviors on the very same day, even when controlling for one's exposure the day before. As

such, this finding is in line with the work environment hypothesis (Einarsen et al., 1994; Hauge et al., 2011; Leymann, 1996), stating that bullying is the result of stressors in the psychosocial working environment, such as interpersonal conflicts. However, as existing research mainly investigated the relationship between ongoing interpersonal conflict and accumulated exposure to bullying behaviors over longer time periods (e.g., Baillien et al., 2016; Leon-Perez et al., 2015; Ågotnes et al., 2018), an important contribution of the present thesis is that we find that this does not necessarily take weeks or even months to develop, but rather starts immediately when interacting in an interpersonal conflict. Hence, by employing a repeated-measures design and studying the relationship at the within-person level on a daily basis, we provide new insight into the daily dynamics between interpersonal conflict and exposure to bullying behaviors. Although not explicitly hypothesized in the aims of the thesis, the findings in Paper 3 also show that involvement in interpersonal conflicts one day is related to experiencing interpersonal conflicts the next day, indicating an escalation or at least a continuation of conflict episodes from one day to another. However, when it comes to the interpersonal conflict–bullying behaviour relationship, no lagged relationship is found. Accordingly, as argued in Paper 3, this may indicate that bullying episodes sometimes happen as immediate reactions "in the heat of the moment," in contrast to being a result of accumulated frustration from lasting interpersonal conflicts.

4.1.4 The moderating role of individual factors in the interpersonal conflicts–bullying relationship

Further, individual factors may also influence how individuals react when facing interpersonal conflicts at work. In line with the fourth aim of the thesis, the findings in Paper 3 showed that the day-to-day within-person relationship between interpersonal conflicts and exposure to bullying behaviours is moderated by an individual factor in targets, namely their level of trait anger. More specifically, respondents who are high in trait anger tend to experience more instances of exposure to bullying on days where one is involved in interpersonal conflicts, as compared with respondents who score lower on this trait. Additionally, the findings from Paper 3 showed that for respondents with a high score on trait anger, involvement in daily interpersonal conflicts are a strong predictor of interpersonal conflicts persisting the next day. Despite the lack of empirical

studies on these relationships, the findings from Paper 3 align well with early observations and assumptions in the field, that those who react more strongly and active when in conflict situations are at greater risk of becoming victims of bullying as well as being less likely to experience a de-escalation of the situation (Reknes et al., 2021; Thylefors, 1987). Theoretically, these findings are in line with the trait activation theory (Tett & Burnett, 2003), as having a high score on trait anger is associated with being more reactive to interpersonal challenging situations and situations with some kinds of provocation and potential triggers of anger, such as interpersonal conflicts (Pervin, 1993). This may affect both the interpretation of the conflict situation and choice of coping strategy, for instance by perceiving the behaviours and responses of others as being more hostile or by responding with fury, which then may worsen the further course of the conflict (Spector et al., 2000). The findings in Paper 3 also align with previous cross-sectional studies showing an enhancing effect of traits in similar relationships (Fox et al., 2001; Ilie et al., 2012; Reknes et al., 2019). Still, although trait anger is claimed to be a provocation-sensitive trait (Bettencourt et al., 2006), both Reknes et al. (2019) and the findings in Paper 3 imply that trait anger mainly trigger bullying when other risk factors are present. Hence, an important finding in the present thesis is that on days with low levels of conflict there is low occurrence of bullying behaviours, regardless of the respondent's trait anger score. Yet, on days with higher levels of interpersonal conflict, there is a significant increase in exposure to bullying behaviours among all employees, although it is even stronger for those with high trait anger scores.

Lastly and contrary to our predictions, trait anxiety neither moderated the stability in interpersonal conflict levels from day to day nor the relationship between interpersonal conflict and exposure to bullying behaviours the same day. Hence, this finding from Paper 3 is in contradiction to previous studies that found trait anxiety to have an enhancing effect in similar cross-sectional studies (Fox et al., 2001; Reknes et al., 2019). One possible explanation for this inconsistency may be that the studies have different timespans and that there are different mechanisms at work in the short versus long term. As Paper 3 explores the early stage of a potential conflict–bullying process, those with a high score on trait anxiety may in the short run contribute to de-escalation

by avoiding or withdrawing from the situation (Van de Vliert, 1984). This further aligns with recent studies that found a positive association between trait anxiety and coping-related strategies such as avoidance- and escape behaviours (Fung et al., 2019; Sege et al., 2018). Although avoiding conflicts, or using a yielding conflict management style, may be satisfactory in the short run, it is found to be related to conflict escalation in the long term, as conflicts remain unresolved (Behfar et al., 2008; Janssen & Van de Vliert, 1996). Hence, some support exists regarding our speculation that trait anxiety will be a stronger risk factor over a longer time perspective. Still, taken together, the results of Paper 3 indicate that both the specific conflict episode and how one tends to perceive and respond to such an episode may interact when predicting exposure to bullying behaviours.

4.2 Theoretical Implications

An important theoretical contribution of the present thesis is to provide empirical support to both the three-way model (Baillien et al., 2009), as well as the work environment hypothesis (Einarsen et al., 1994; Leymann, 1996). Further, we show how risk factors from different levels are related to bullying exposure, as well as showing their cross-level interactions. In this we document how both a climate for conflict management and a hostile work climate may not only be important protective- or risk-factors in their own right, respectively. These climates also moderate the effect of individual-level risk factors. Additionally, we demonstrate how trait anger facilitate the relationship between interpersonal conflict and exposure to bullying behaviours in the initial part of a potential bullying pathway. Taken together, the findings from the three studies constituting the present thesis support all three tracks or pathways within the three-way model (see Figure 1) (Baillien et al., 2009).

The findings in Paper 1 and Paper 2 mainly gain support for track one in the three-way model, as the work-related situational risk factors can be the origin of the frustration or strain, further leading to bullying. However, these risk factors may also serve as underlying factors causing interpersonal conflicts in the second pathway to bullying. According to the three-way model, interpersonal conflict is considered both to be

related to frustration and strain, but is also in itself the starting point of the second pathway to bullying (Baillien et al., 2009). Further, the climate in the team or department may either directly lead to workplace bullying (track three) or it can serve as a moderator in the other pathways to bullying (track one and two). In Paper 1 and Paper 2 we find support for conflict management climate and hostile work climate, respectively, to interact with situational factors in predicting exposure to bullying behaviours. Although the main focus in the present thesis is on track one and two in the three-way model, we do find a direct link between the studied climates and individual-level reports of exposure to workplace bullying, hence providing support for track three in the model as well (Baillien et al., 2009). Despite that organizational climate has been relatively little investigated in the bullying literature, a long-held proposition in the work environment hypothesis is that bullying will thrive in departments with hostile work climates (Einarsen et al., 1994; Einarsen et al., 2020; Leymann, 1996). Considering this, the present study also makes an important theoretical contribution to the work environment hypothesis, as it provides additional validation by showing the interactional effects among its proposed risk factors. Ågotnes et al. (2018; 2020) have previously shown how interpersonal conflict and work-related stressors may interact with the lack of leadership to predict exposure to workplace bullying.

In line with track two in the three-way model (Baillien et al., 2009), the findings in Paper 3 support the well-established theoretical link between interpersonal conflicts and exposure to bullying behaviours, by demonstrating that this relationship occurs already in the initial phase of conflict escalation, that is on a day-to-day basis. While previous studies mainly investigate this pathway by testing the relationship between conflict and accumulated exposure to bullying behaviours over a longer time span, we were interested in the dynamics between interpersonal conflict and bullying behaviors in the initial phase of conflict escalation, in order to better understand where in the developmental process this relationship occurs. Thus, the present study suggests that interpersonal conflicts have an immediate effect on exposure to bullying behaviours. Additionally, the multilevel confirmatory factor analyses conducted in Paper 3 contribute to underpin that interpersonal conflicts and exposure to bullying behaviours

can be empirically distinguished, even at a daily level. This is in line with other recent empirical studies of the theoretical and empirical differences and similarities between conflicts and bullying at work (Baillien et al., 2017; Notelaers, Van der Heijden, Guenter, et al., 2018).

According to the three-way model, the way people react in conflict situations may also influence the potential escalation or de-escalation (Baillien et al., 2009). This was tested and found support for in Paper 3, showing that the association between interpersonal conflict and exposure to bullying behaviours is stronger for those with a high score on trait anger, compared to those with a low score on this disposition. As such, Paper 3 contributes to a greater theoretical understanding of the interaction of situational- and individual antecedents in predicting bullying behaviours on a day-to-day basis. However, when it comes to trait anxiety, this trait did not moderate the relationship between interpersonal conflict and exposure to bullying behaviours the same day. These different findings for trait anger and trait anxiety again call for some caution when looking at the broader bandwidth trait of neuroticism. Based on this, future studies should differentiate between these two traits, and maybe other similar narrow traits, at least in bullying research. This theoretical contribution aligns with the trait activation theory (Tett & Burnett, 2003), as well as several empirical studies (e.g., Kant et al., 2013; Reknes et al., 2021).

Although the three studies in the present thesis test large parts of the three-way model, there are still several parts of the model not being covered. For instance, in the present thesis we only focus on the pathways to becoming a victim of workplace bullying. However, an important aspect of the three-way model is that it describes the development towards becoming both a victim and a perpetrator of bullying (Baillien et al., 2009). Although there have generally been few studies capturing the perpetrator and the mechanisms in the bullying process affecting who becomes victims and who becomes perpetrators, there has been a few studies published concerning this just within the last year. For instance, a recent longitudinal study by Vranjes, Salin, et al. (2022) found support for what they call the reciprocal nature of bullying behaviour, by showing that employees who tended to cope actively and instrumentally with being

exposed to bullying had a higher chance of later engaging in bullying themselves. Conversely, employees who tended to disengage from their problems and talk to others, had a lower chance of becoming a perpetrator of bullying behaviour as a consequence of being victimised. Hence, the distinction between victim and perpetrator in the bullying development as described by the three-way model (Baillien et al., 2009) hopefully will receive more attention in the years to come, increasing our knowledge on this so far rather unexplored distinction.

4.3 Methodological Limitations, Strengths and Implications

4.3.1 Sample and generalizability

Throughout the three papers constituting this thesis, we employed three different samples. The three samples represent three different occupations and two nationalities, potentially giving the thesis some restrictions regarding the generalizability of the findings to the general working population. Thus, we encourage some caution when generalizing our results.

In Paper 1, we applied data from a work environment survey conducted among all employees in a large Norwegian transport company, in which we analyzed data from the ferries segment of the company. There are numerus characteristics regarding the work conditions for crew members on ferries that are not applicable to other working populations. For instance, the studied teams live closely together for 2-7 days in a row. Still, the chosen sample had some advantages considering our aim to study organizational climate at a group-level, as these teams work together in fixed shifts and crews, often for several days in a row and over longer time periods, which offers a unique opportunity for control when measuring teams. In most companies, it would be more difficult to measure the actual climate in the team, as it is common that employees work across teams, or even belong to several teams, making it hard to measure the climate variable.

In Paper 2, we relied on data collected among all employees at a Belgian university. The data collection was carried out by a consulting agency, which is by Belgian law

entitled to guide organizations and employers with respect to their prevention policies regarding safety, ergonomics, health, and well-being. Like the sample in Paper 1, this sample is not representative of the general workforce, as it diverges for instance in educational level. However, as the study design and variables in Paper 1 and Paper 2 have several similarities, it is interesting to study the present aims and issues in two quite different professions and within two different nationalities. Compared to the sample in Paper 1, which is highly male dominated (82% men), the sample in Paper 2 have a good gender balance (47% men), increasing the generalizability of the findings. Further, the sample size in both Paper 1 and Paper 2 are relatively large, with 462 employees across 147 teams, and 1354 employees across 134 departments, respectively. A larger sample size can also increase the generalizability of the findings, as it allows for more variability in the data, which can help to increase the statistical power of the study and reduce the impact of sampling error (Tabachnick & Fidell, 2013).

In Paper 3 we used data collected from the Royal Norwegian Naval Academy. The sample consisted of naval cadets taking part in a 10-week training mission on board a tall ship. The cadets are employed by the Norwegian Armed Forces and the voyage is a part of their mandatory officer training. Of the three samples used in the thesis, this is probably the one with the least generalizable findings, as this sample consists of very thoroughly selected cadets working in a 24-h military work setting. The sample consists of predominantly young males (87.7% men, mean age 23 years), potentially restricting the generalizability of the findings to other occupational groups that are more gender and age balanced. Although this military work setting is quite different from the common context for a general working population, it does offer a unique study context as it limits the influence of other factors while on board the tall ship. In addition, it can also be argued that when the day-to-day relationship between involvement in interpersonal conflict and exposure to workplace bullying is found in this seemingly highly resilient sample, it is plausible that this relationship is even stronger in more ordinary work contexts, e.g., in representative samples.

Finally, the response rates in all three surveys employed in this thesis are quite high (Baruch & Holtom, 2008), strengthening the robustness of the findings. Taken together, we believe the results of the present thesis are useful for the broader workforce, as most of the findings are in line with theoretically derived hypotheses. Still, there is a need for further validation of our findings in other work contexts.

4.3.2 Study design and instruments

A strength of the present thesis is that all three studies consist of multilevel designs. By applying group-level and within-person research designs, we get to examine daily fluctuations, as well as interactions between situational-, contextual-, and individual factors, in the prediction of perceived exposure to workplace bullying. By approaching workplace bullying in this manner, we aim to improve our understanding of the workplace bullying process and identify the key moderating conditions across multiple levels (Leon-Perez et al., 2021; Rai & Agarwal, 2018; Samnani & Singh, 2016). Nevertheless, some limitations regarding the study designs and instruments still need to be considered.

First, although the data employed in Paper 1 and Paper 2 both have a hierarchical structure, allowing multilevel analysis, these are cross sectional data. This means that all the data is collected at the same time and consequently that causal relationships cannot be drawn. Hence, in order to examine the direction of the observed relationships between the studied variables, longitudinal studies are necessary. However, a considerable strength in Paper 1 and Paper 2 is that we measure and analyse the two organizational climate constructs at the group-level, which is, based on the definition of an organizational climate, the appropriate level to study this concept (James & James, 1989). To rightfully capture the organizational climate structure it is argued that two criteria ideally should be fulfilled (Schneider et al., 2013). First, statistical procedures should be conducted to aggregate the data to the group-level of analysis (Glick, 1985), and second, the wording of the items in the scale should represent the group-level (LeBreton & Senter, 2008). Although we fulfill both criteria when measuring conflict management climate in Paper 1, we only fulfilled the first criteria

in Paper 2 when measuring hostile work climate. Hence, the findings in Paper 2 should be replicated with appropriate level items in the measurement of hostile work climate.

In Paper 3 we applied a different design, namely a daily diary design. This design has several strengths, for instance that diary studies allow us to investigate more causal processes, by measuring relationships from one day to the next and by controlling for previous days influence. Since most of the variables that are of interest in the present thesis are dynamic in nature, this approach may be more suited to capture the complexity of these phenomena, as well as the short-term dynamic between these variables (Demerouti & Bakker, 2011; Neall & Tuckey, 2014; Spector & Pindek, 2016). In addition, as workplace bullying is conceptualized as a process, it is a clear strength that the element of time is accounted for in the design. Lastly, diary studies also have the advantage that they take place in a real-world setting, which provides high ecological validity. However, like any research method, diary studies also have potential flaws. In a recent study by Gochmann et al. (2022), they found that insufficient effort when responding can be a distortion in daily reporting on social interactions at work. Insufficient effort responding is a phenomenon that occurs when an individual does not put forth the necessary effort to provide accurate or meaningful responses to a questionnaire. This may occur for a variety of reasons, including lack of motivation, fatigue, boredom, or the desire to appear socially desirable or avoid negative consequences. Hence, insufficient effort responding may have impacted the validity of the findings in Paper 3, as this can cause bias and reduce the accuracy of the data.

When it comes to the instruments employed in the present thesis, it is a strength that only well-established scales with acceptable to high levels of reliability are used. Hence, problems due to reliability are not likely to substantially affect the validity of the findings. However, a potential limitation is that we rely solely on self-report questionnaires. Gathering all information from the same source involves a risk of common-method biases (Podsakoff & Organ, 1986), such as respondents answering the questionnaire in a socially desirable way. One way to combat such response biases is to collect data from multiple sources or analyze data with statistical techniques that

account for common-method biases. Considering that the aim of this thesis mainly is to measure different work stressors and the whole specter of bullying exposure, using external sources to measure this is not ideal, as these are largely subjective perceptions, not necessarily possible for others to observe. Especially in the beginning of a bullying process, the exposure to negative acts is typically subtle and may come from several colleges, therefore making it difficult for others to even notice. Still, we do not expect this to be a prominent problem in our study since common-method bias generally decreases when studying interactions (Siemsen et al., 2010).

At last, a challenge in Paper 1 and Paper 2, is that we measure workplace bullying and environmental stressors by asking respondents to recall behaviours that have occurred over several months (Jex & Bayne, 2017). As noted by Spector (2019), retrospective measures of events that occurred in the past may be affected by recall bias and subsequently threaten the validity of the findings. Although this may affect the findings in Paper 1 and Paper 2, the daily diary design applied in Paper 3 has the advantage that respondents report on experiences closer to the time at which they occurred, thereby minimizing retrospective bias (Bolger et al., 2003; Ohly et al., 2010; Reis & Gable, 2000). Still, the drawback with this approach is that we only get a "snapshot" of that day. Hence, there are strengths and limitations connected to all measurement methods, which is why it is important to apply a wide range of study designs that include both longitudinal and "shortitudinal" designs to better capture the whole picture.

4.4 Practical Implications

Given the scarcity of studies investigating the interaction of risk factors and protective factors of bullying at different organizational layers, we believe the three studies constituting the present thesis add important knowledge from an applied bullying prevention perspective. According to the findings, exposure to workplace bullying do not seem to appear out of nothing, but rather to be a sign of a work environment where a range of unfavourable factors are likely to co-exist at the individual-level, as well as the group-level. First, the findings from all three papers provide additional support to the well-established link between the psychosocial factors interpersonal conflict, role

conflict, workload and cognitive demands, and the risk of exposure to bullying behaviours. Hence, in order to prevent workplace bullying, it is important that the organization and work tasks are well organized, that all roles and role expectations are clarified, and that sufficient resources are available to cope with the job demands workers are faced with.

Second, and more interestingly, the findings from Paper 1 and Paper 2 show that the effect of these psychosocial risk-factors on exposure to bullying, can be strengthened, alleviated, or even eliminated by the organizational climate existing within the workgroup. While a hostile work climate in the workgroup serves as a catalyst for the stressor–bullying relationship, a strong conflict management climate in the workgroup serves as a buffer, implying that workers can withstand more stress without increasing the risk of bullying exposure. Hence, the potential implications of a strong conflict management climate are probably the most important practical implication of this thesis, as it seems to reduce the effect of other known risk factors of workplace bullying. Besides, creating such a climate is something «all» organizations can achieve regardless of industry, economy etc.

Additionally, as an organizational climate is modifiable, it can actively be shaped by people with power and influence (Dollard & Bailey, 2021; James & James, 1989; Plimmer et al., 2022). Therefore, HR personnel, managers and leaders should be trained in conflict management procedures. Further, they should communicate guidelines for where and whom employees should contact and which actions to take if they are involved in disputes, stressful work situations and interpersonal conflicts, as well as how conflicts will be managed (see also Einarsen & Hoel, 2008). Establishing such clear guidelines for what to do when conflict arises can help promote predictability and perceived control, in addition to an experience of fair and effective conflict management. It is also important to make clear that before the organization starts working on improving the conflict management climate it is essential that the organizational infrastructure to handle complaints of bullying are in place, such as relevant policies and procedures (see also Ferris et al., 2021; Zapf & Vartia, 2020). In a recent longitudinal study by Hamre et al. (2022), further support for the protective

effect of a strong conflict management climate is provided, as it is found to neutralize the escalation and development of workplace bullying. More specifically, they found that exposure to bullying behaviours at the first timepoint explained nearly half of the new and increased instances of bullying behaviours at the second timepoint, but only for those employees working in a weak conflict management climate (Hamre et al., 2022).

Lastly, in Paper 3, we find that also individual factors can serve as additional risk factors when involved in episodes of interpersonal conflicts, as those who are high on trait anger were more likely to experience exposure to bullying behaviours the same day as they reported being in an interpersonal conflict. However, having a high trait anger score was not in itself a risk factor when not involved in interpersonal conflicts. This again stresses the importance of having well-organized working conditions, in order to minimize the breeding ground for frustrations and conflicts, combined with early and efficient conflict management. At the end of the day, leaders are responsible to ensure the well-being of their subordinates in stressful situations (Rayner & Lewis, 2020).

5. CONCLUSION

Workplace bullying, although being a low-frequent phenomenon, does have detrimental consequences when it occurs. It is therefore important to uncover its root causes, as this knowledge in turn can be utilized to develop effective preventive measures. In this respect, the findings from the present thesis contribute to shed light on several aspects of the complex bullying process and how it is affected by various risk- and protective factors across different levels. Interpersonal conflict, role conflict, workload, and cognitive demands are all situational risk factors found to be decisive factors in predicting exposure to workplace bullying. Hence, while these findings substantiate the previous empirical evidence that prevailing problems in the work environment are important risk factors for workplace bullying, the main contribution to the literature is that both contextual factors and individual factors can influence the role that these situational risk factors potentially play in relation to bullying. More specifically, the organizational climate in the workgroup appears to play a critical role in both accelerating and preventing workplace bullying. While a hostile work climate may strengthen the impact of stressors on bullying behaviours and/or targets perceptions and vulnerability, a conflict management climate may buffer the impact of stressors on bullying. Finally, the thesis also brings about new insight regarding the short-time dynamic in the relationship between interpersonal conflicts and bullying, as it is found to exist already within the same day. In addition, employee trait anger is found to influence the relationship between interpersonal conflicts and exposure to bullying, here on a daily level. Taken together the findings from the three papers constituting the present thesis contribute to enhance our knowledge regarding under which conditions bullying may arise and develop.

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Job Demands as Risk Factors of Exposure to Bullying at Work: The Moderating Role of Team-Level Conflict Management Climate

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Conflict management climate is an important organizational resource that is theorized to prevent interpersonal frustration from escalating into harsh interpersonal conflicts and even workplace bullying. The present study investigates whether team-level perceptions of conflict management climate moderate the relationship between previously investigated psychosocial predictors of workplace bullying (i.e., role conflicts, workload, cognitive demands) and perceived exposure to bullying behaviors in the workplace. We collected data from crews on ferries operating on the Norwegian coastline consisting of 462 employees across 147 teams. As hypothesized, multilevel analyses showed positive main effects of role conflict and cognitive demands (but not workload) on exposure to bullying behaviors. Also, the hypothesized moderation effect of team-level conflict management climate on the relationship between individual-level job demands and exposure to bullying behaviors was significant for role conflict and cognitive demands, but not for workload. Specifically, the positive relationships between the two job demands and exposure to bullying behaviors were stronger for employees working in teams with a weak (vs. a strong) conflict management climate. These findings contribute to the bullying research field by showing that conflict management climate may buffer the impact of stressors on bullying behaviors, most likely by preventing interpersonal frustration from escalating into bullying situations.

Keywords: cognitive demands, conflict management climate, role conflict, workload, workplace bullying

INTRODUCTION

Although exposure to workplace bullying has been documented to be of a relatively low prevalence, it has shown to be a psychosocial stressor with severe negative consequences for the health and well-being of those targeted (Bowling and Beehr, 2006; Nielsen et al., 2014; Verkuil et al., 2015), as well as for the social environment where it occurs (Einarsen et al., 1994; Vartia, 2001). Despite extensive studies and knowledge about the detrimental outcomes of workplace bullying, including a long-term negative impact on mental health, increased risk for disability retirement, and personnel turnover, less is known about its possible risk factors (Baillien et al., 2009), and especially so regarding possible preventive factors that may

influence the occurrence and the impact these risk factors may have on employee motivation, health, and well-being (Rai and Agarwal, 2018).

Among the risk factors that have been identified for workplace bullying, work-related strain factors are the most robust predictors (Bowling and Beehr, 2006). In accordance with the "work environment hypothesis" (Leymann, 1990, 1996; Einarsen et al., 1994), which claims that bullying is a consequence of work-related factors, previous studies have identified employees who have contradictory expectations and relatively high levels of job demands to be more often subjected to such bullying behaviors at work (Notelaers et al., 2010; Van den Brande et al., 2016; Nel and Coetzee, 2019). In line with this, job demands-resources (JD-R) theory states that every occupation and every job has specific demands and resources that in sum contribute to job-related stress or motivation (Bakker and Demerouti, 2017). A central assumption of JD-R theory is that, over time, high job demands may lead to strain and energy depletion (Bakker and Demerouti, 2007). Job strain, in turn, may lead to interpersonal frustration and bullying behaviors (Notelaers et al., 2013; Janssens et al., 2016). However, another central assumption of JD-R theory is that the presence of sufficient contextual and personal resources can buffer the energy depleting effects that high job demands potentially have (Bakker and Demerouti, 2007). Accordingly, such preventive resources may be job-related, such as autonomy, skill variety, and support from colleagues, or may be person-related, such as hardiness and self-efficacy. Resources may exist on different levels of the organization, and may also take the form of a conflict management climate in a specific department. A central assumption in the present study is therefore that conflict management climate constitute an important higher-level resource that may influence the potential job demands – bullying relationship.

Conflict management climate (CMC) refers to employees' assessments of the organization's conflict management procedures and practices, and of how fair and predictable the interactions between leaders and followers in this regard are perceived to be (Rivlin, 2001; Einarsen et al., 2018). In recent years, the concept of conflict management climate has gained growing interest as a promising mechanism, explaining why and when bullying occurs in a work environment. Bullying researchers have suggested and substantiated that conflict management climate is an important organizational resource that may prevent interpersonal frustration arising from stressful working conditions to escalate into workplace bullying (Einarsen et al., 2018). Since the concept of organizational climate has been defined as organizational members' shared perceptions of a workplace phenomenon (James and James, 1989), we will apply a multilevel design with team-level perceptions of conflict management climate, also addressing the general request for more multilevel studies in the field of workplace bullying (Hauge et al., 2011; Skogstad et al., 2011). There is a strong need in the literature for adequate information from group level analyses in order to make appropriate interventions in groups and departments.

The aim of the present study is therefore to test the relationship between three identified individual level predictors

of bullying (i.e., role conflict, workload, and cognitive demands), and reported exposure to bullying behaviors, yet add team-level conflict management climate in the equation. We will investigate whether this climate interacts with job stressors in predicting bullying-related outcomes. By integrating conflict management climate as a moderator, we aspire to obtain a more nuanced and better understanding of the antecedents and mechanisms explaining escalating bullying behaviors and the end-state of victimization from workplace bullying. In this, we address the general request for research on moderators in the job demands – bullying relationship (Rai and Agarwal, 2018), and also aspire to contribute valuable and nuanced knowledge on how to prevent workplace bullying from developing from other work-related stressors.

Theoretical Background

Workplace bullying refers to the repeated and systematic exposure to negative behaviors in situations where the one targeted has difficulties defending him/herself in the actual situation (Einarsen et al., 2011). Hence, bullying is about the systematic mistreatment of a co-worker or a subordinate, often by psychological rather than physical means (Einarsen and Raknes, 1997; Keashly, 1997). The most frequently reported negative behaviors are withholding of information that affect the target's work performance, having one's opinions ignored, having key areas of responsibility removed or replaced with more trivial or unpleasant tasks, or being the target of spontaneous anger (Notelaers and Einarsen, 2013). Being a gradually escalating process, workplace bullying has been shown to manifest itself in low as well as high intensities (Leon-Perez et al., 2012, 2015; Notelaers and Einarsen, 2013; Conway et al., 2018). Low-intensity bullying has been referred to as incivility or mistreatment at work (Cortina et al., 2001). In light of its preventive focus, the present study will investigate the whole range of exposure to bullying, from low intensity unwanted negative acts up to and including full-blown cases of victimization from bullying; conceptualized as exposure to bullying behaviors.

Situational Antecedents of Workplace Bullying
Role conflict
Role stressors, and particularly role conflict, represents one of the most studied and most important psychosocial risk factors at the workplace. Role conflict has consistently been found to predict reports of workplace bullying (Bowling and Beehr, 2006). Role conflict represents the simultaneous existence of two or more sets of expectations toward the same person, such that compliance with one set of expectations makes compliance with the other set difficult (Kahn et al., 1964; Beehr et al., 1995). Interestingly, role conflict was also one of the first work environment factors found to be linked to reports of exposure to workplace bullying (Einarsen et al., 1994; Vartia, 1996). Later studies have confirmed this relationship and identified role conflict to be among the strongest of all work-related predictors of workplace bullying (Hauge et al., 2007; Baillien and De Witte, 2009; Moreno-Jiménez et al., 2009). Accordingly, researchers have tried to theoretically explain why role conflicts are associated with workplace bullying. Einarsen et al. (1994) argue that the association between role

conflict and workplace bullying is due to the creation of strain and frustration in the team, which may then elicit or fuel a bullying process. This aligns with JD-R theory, stating that role conflict is as a job demand that potentially can lead to energy-depleting strain (Bakker and Demerouti, 2007). Role conflict may also lead to frustration and stress in the focal person. Employees who experience role conflict become stressed, and may act in ways that irritate and annoy colleagues and superiors, and by that trigger a further process of incivility, interpersonal conflict, and mistreatment (Einarsen et al., 1994). This process is delineated in the extended "victim precipitation theory" (Elias, 1986; Samnani and Singh, 2016), proposing that when employees get stressed, they may act in ways that irritate and annoy colleagues and superiors, and by that trigger or fuel a bullying process. The following hypothesis is proposed:

Hypothesis 1. There is a positive relationship between role conflict and exposure to bullying behaviors at work.

Workload and cognitive demands

Next to role conflict, increased workload or work pressure has been suggested as an important precursor of bullying (Hauge et al., 2007; Baillien and De Witte, 2009). Although work pressure is a natural and necessary part of all working life, high work pressure over time, without sufficient recourses to cope with them, has been related to workplace bullying (Hauge et al., 2007; Parchment and Andrews, 2019). In fact, in the seminal work of Brodsky (1976), work pressure was proposed as a type of harassment by and in itself – when consistently being directed to one or more subordinates with the aim or likely outcome of punishing the target(s). However, the results of empirical studies have been mixed. While early studies failed to demonstrate such a relationship, more recent studies support the notion of a relationship between work pressure and bullying (Baillien and De Witte, 2009; Moreno-Jiménez et al., 2009). Quantitative demands, in the present study termed workload, have so far received most attention in research (Van den Brande et al., 2016). By workload, we refer to the amount and speed of work to be performed, which is whether you need to work fast or extra hard to get your tasks done (Van Veldhoven and Meijman, 1994). Niedl (1996) found, in his studies in Austria and Germany, a relationship between hectic work and reports of bullying at work. This finding has later been replicated in Norway (Hauge et al., 2007), Netherlands (Huber et al., 2001), and Belgium (Notelaers and De Witte, 2003).

Qualitative or cognitive demands, on the other hand, have received far less research attention. By cognitive demands, we refer to the need to concentrate one's attention on several things at the same time, persistently be concentrated and careful in one's work, or having many things to remember while conducting the work (Van Veldhoven and Meijman, 1994). Having high cognitive demands may be as stressful as time constraints and influences how one behaves and interacts with those around (Notelaers et al., 2010). Accordingly, Hoel et al. (2002) argue that cognitive demands are positively related to workplace bullying. They argue that workers under strain may voice their concern about the high cognitive demands, which may result in negative reactions and in some cases in conflict escalation, finally resulting

in bullying (Baillien et al., 2009). Accordingly, Knorz and Zapf (1996) argued that high workload and cognitive demands can lead to conflict escalation, because those involved will have sparse time and limited resources for conflict resolution and management. As with role conflict, we expect in line with JD-R theory and victim precipitation theory, work pressure to be positively related to bullying behaviors. Thus, we propose:

Hypothesis 2. There is a positive relationship between workload and exposure to bullying behaviors at work.

Hypothesis 3. There is a positive relationship between cognitive demands and exposure to bullying behaviors at work.

Conflict Management Climate

Based on interviews with more than 1000 targets of work harassment, Brodsky (1976) claimed that for harassment to occur there needs to be a culture and climate that permits and rewards it. The concepts of organizational culture and climate offer to some extent overlapping perspectives for understanding the experiences people have in work settings (Denison, 1996), where organizational climate can be defined as organizational members' shared perceptions of the workplace, in particular regarding its procedures, practices, prevailing behaviors, and its support and reward systems (James and James, 1989). In the present study, we will focus on the subjective perception of employees regarding how well the organization handles interpersonal conflicts based on their observations of how organizational procedures work in this area, of the habits managers have in such cases, as well as observations of consistent behaviors portrayed by managers when handling these kinds of interpersonal conflicts and claims of mistreatment. An element of trust is a natural ingredient in this and exchange of views and experiences between organization members will also to some extent shape the perceptions and attitudes involved. The perceptions are inherently subjective but are expected to be shared by those belonging to the same department or work group. To the extent that such perceptions are shared, we may talk about an organizational climate and not only a psychological climate, which again may affect the individual behavior and reactions of organization member, for example when involved in actual cases of interpersonal stress, frustration and escalating conflicts (James and Jones, 1980; Schneider et al., 1998). Such a climate may also be perceived as an organizational resource that affects the behaviors and reactions of employees and thus being consistent with the JD-R theory, proposing that the potential detrimental effect of job demands on the social relationships at work, may be prevented or litigated by resources in the organization and in the psychosocial working environment (Bakker and Demerouti, 2007). Although such job resources may be of a physical, psychological, social or organizational nature, organizational climate is proposed as a particularly strong resource in regard to interpersonal and social relations (Bakker and Demerouti, 2007).

In contemporary organizational research, it is common to study such specific types of climate, like climate for creativity, safety climate (Schneider, 2000), and in our case climate for conflict management. Hence, climate has an object, something

we focus on, think off and act and react to. Regarding workplace bullying and prior empirical studies, some studies exist on the concept of psychosocial safety climate, with promising findings. In a recent longitudinal study, Dollard et al. (2017) found that a strong psychosocial safety climate predicted reduced bullying 4 years later, mediated by enacted psychosocial safety climate. These findings suggest that organizations with a strong psychosocial safety climate have a decreased likelihood of bullying through its influence on procedures implemented in the following three areas; (a) procedures directly addressing bullying; (b) procedures addressing reducing demands; and (c) procedures addressing the management of conflicts. In line with this perspective, Kwan et al. (2016) found that employees experiencing high psychosocial safety climate were more likely to choose an active coping strategy and voice bullying early, which prevented bullying incidents from further escalation.

Since conflict management climate is thought of as a sub facet of enacted psychosocial safety climate (Einarsen et al., 2018), we expect similar effects of conflict management climate on bullying. Consequently, we hypothesize that a strong conflict management climate, defined as employees' beliefs that interpersonal conflicts are generally managed well and fairly in their organization (Rivlin, 2001), play an important role in preventing that a psychosocial work environment ripe with frustration poses a risk for workplace bullying. In a cross-sectional survey among employees in an on-shore transport company, Einarsen et al. (2018) found that conflict management climate was related to lower frequency reports of bullying as well as being a buffer in the bullying – work engagement relationship. The present study expands this research by testing whether perceived conflict management climate at the team-level can buffer the relationship between work-related factors and exposure to workplace bullying. We believe that the individual's immediate work group is the primary group of interest in this regard, because this group in general is likely to exert more influence on the individuals involved than are larger more peripheral groups such as the entire organization (Bliese and Jex, 2002). On the background of JD-R theory and previous research, we propose that a strong conflict management climate, as a prevailing perception in the immediate work group, will buffer the impact of job demands on job strain, in our case perceived exposure to bullying behaviors. Hence, the three following hypotheses are presented:

Hypothesis 4a. The positive relationship between role conflict and bullying behaviors is moderated by conflict management climate. Specifically, the relationship between role conflict and exposure to bullying behaviors is weaker in teams with a strong (vs. weak) conflict management climate.

Hypothesis 4b. The positive relationship between workload and bullying behaviors is moderated by conflict management climate. Specifically, the relationship between workload and exposure to bullying behaviors is weaker in teams with a strong (vs. weak) conflict management climate.

Hypothesis 4c. The positive relationship between cognitive demands and bullying behaviors is moderated by conflict

management climate. Specifically, the relationship between cognitive demands and exposure to bullying behaviors is weaker in team with a strong (vs. weak) conflict management climate.

MATERIALS AND METHODS

Procedure and Sample

The present study was conducted using a sample of Norwegian employees in a major transport company, working on board ferries in regular service along the Norwegian coastline. As a part of a work environment survey, a questionnaire was distributed to 837 employees on all their ferries. Altogether, 462 questionnaires were returned, resulting in a response rate of 55.2%. The mean age of the sample was 45.04 years (SD = 11.77), ranging from 17 to 66 years, where 82% (n = 379) were males. The majority of the sample reported to be in a full time employment (93.2%). The sample was naturally clustered, as individual crew members belonged to teams sharing a particular captain, ferry and shift, creating a multi-level research design. The sample consisted of 147 teams with an average of 2.7 employees per team. Each vessel had 3–4 teams working in respective shifts, and each team consisted of a crew of 2–10 members.

The study was approved by the Norwegian Social Science Data Services/Norwegian Center for Research Data. An information letter was included with the request. Informing that participation was voluntary, that participants could resign from the study at any time, that the information provided would be threated confidentially and that the participants could ask later to have the information deleted.

Instruments

Exposure to bullying behaviors at work was measured using the twelve-item version of the Negative Acts Questionnaire-Revised ("NAQ-R"; Einarsen et al., 2009; Glasø et al., 2010; Notelaers et al., 2018). The NAQ measures perceived exposure to bullying behaviors while at work, describing different kinds of behavior that may be perceived as bullying if they occur on a systematic and regular basis. The overall starting sentence was: "Which unwanted actions or negative situations have you been exposed to in your workplace during the last 6 months?" Example items are: "Someone withholding information which affects your performance," "Spreading of gossip and rumors about you," and "Being shouted at or being the target of spontaneous anger," with response categories ranging from 1 (never) to 5 (daily). The scores on all items were summed to form an overall index of exposure to bullying behaviors. The scale showed good reliability, Cronbach's α = 0.91.

Role conflict was measured using five items from the Role Questionnaire (Rizzo et al., 1970). An example item is: "I receive incompatible requests from two or more people," with response categories ranging from 1 (very false) to 7 (very true). The scale showed adequate reliability, Cronbach's α = 0.82.

Workload was measured using four items from the Questionnaire on the experience and assessment of work (Van Veldhoven and Meijman, 1994). An example item is: "Do

you have to work very fast?" The response categories range from 1 (never) to 4 (always), and the scale showed good reliability, Cronbach's α = 0.84.

Cognitive demands was measured using three items from the Questionnaire on the experience and assessment of work (Van Veldhoven and Meijman, 1994). An example item is: "Do you have to be attentive to many things at the same time?" The response categories range from 1 (never) to 4 (always), and the scale showed acceptable reliability, Cronbach's α = 0.68.

Conflict management climate was measured with four items adapted from the Conflict Management Climate Scale regarding perceived fairness of dispute resolution in the organization (Rivlin, 2001; Einarsen et al., 2018). The wordings of the four items are as follows: (1) "If I have a serious disagreement with someone at work, I know who I should talk to about it"; (2) "The way we deal with disagreements between employees in my unit works well"; (3) "My superiors deal with conflicts in a good manner"; (4) "We have good procedures and methods for raising disagreements and conflicts in my workplace." The response categories range from 1 (strongly disagree) to 5 (strongly agree). The scale showed good reliability, Cronbach's α = 0.81. Prior to the multilevel analysis, the items were computed into a sum-score, and a team average score was used at the team-level in the analysis.

Analyses

In order to acknowledge and analyze the multilevel structure of the data, implying that individual scores (individual-level) were nested within teams (team-level), we conducted multilevel analysis using MLwiN 2.20. In the analysis, individual-level predictors were centered on the team mean, while team-level predictors were centered on the grand mean. To test our hypotheses, we ran three models predicting bullying behaviors (NAQ-R). First, we tested a model where the intercept was included as the only predictor (Null Model). In the next model (Main effect Model), we included the explanatory demands variables (role conflict, workload, cognitive demands) and the moderator variable (conflict management climate). In the third model (Interaction Model), the two-way interactions between conflict management climate and the three demands were included. Simple slope tests for hierarchal linear models were used to examine whether the slopes in cross-level interactions were significantly different from zero (Preacher et al., 2006). The slopes where tested at ±1 SD for the predictors and moderators, and calculations were based on the asymptotic covariance matrix from the respective multilevel models using R version 3.4.3.

RESULTS

Preliminary Confirmatory Factor Analyses

Prior to aggregating the conflict management climate scores to team-level, we performed a set of confirmatory factor analyses using Mplus 7.0 in order to assure that there is sufficient discriminant validity across the study constructs. In order to test this, we first modeled bullying behavior, role conflict,

workload, cognitive demands and conflict management climate as five correlated latent factors using their respective observed indicators. The model showed acceptable fit (χ^2 (df) = 887.24 (368), CFI = 0.91, TLI = 0.90, and RMSEA = 0.055), and revealed acceptable factor loadings in the range of 0.44 to 0.86. Moreover, correlations between the different latent constructs range from -0.47 to 0.50, all in the expected direction. Secondly, the constructs with the highest correlations (role conflict and bullying behaviors) where collapsed into one structure resolving in a four factor model. However, this resulted in a deteriorated fit ($\Delta\chi^2$ (Δdf) = 518.25 (4), $p < 0.01$, CFI = 0.81, TLI = 0.80, and RMSEA = 0.078). In sum, preliminary CFA analyses indicate that the constructs can be empirically distinguished.

Descriptive Statistics

Means, standard deviations, Inter Class Correlations (ICC) for within-level variables, and within- and between-level correlations for all study variables are presented in **Table 1**. For conflict management climate, the estimated ICC2 (Bliese, 2000) was calculated to be 0.53. Correlational analysis showed that at the within-level, significant positive correlations between all three job demands and exposure to bullying behaviors, respectively, with the strongest relationship between role-conflict and exposure to bullying. Furthermore, role-conflict was positively related to workload, while workload was also positively related to cognitive demands. On the between-level, strong negative correlations exist between conflict management climate and bullying and role-conflict. Conflict management climate was not related to workload and cognitive demands.

Multilevel Analysis

As can be seen in **Table 2**, the initial unpredicted null model revealed that 3% of the total variance in bullying behaviors existed on the team-level while 97% of the variance appeared at the individual level. This suggests that most of the variance in bullying behaviors is explained by individual factors, rather than by team affiliation, which is consistent with our hypotheses trying to predict individual employees' exposure to bullying behaviors. In hypotheses 1, 2, and 3, we hypothesized a positive association between (a) job demands in the form of role conflict, workload, and cognitive demands, and (b) exposure to bullying behaviors. In support of hypothesis 1 and 3, significant positive relationships were found for both role conflict (B = 0.103, $p < 0.01$) and cognitive demands (B = 0.105, $p < 0.05$) in the main effect model. Thus, when role conflicts or cognitive demands were higher, employees were more likely to report having been exposed to negative acts. However, the association between workload and bullying behaviors was not significant (B = 0.019, n.s.). Hence, hypothesis 2 was not supported. Finally, the main effect model reveals a significant negative relationship between conflict management climate and perceived bullying behaviors (B = -0.185, $p < 0.05$). This means that bullying behaviors are less likely in teams with a strong conflict management climate.

We further hypothesized, in hypotheses 4a, 4b, and 4c, that conflict management climate moderates the positive relationships between job demands and exposure to

TABLE 1 | Mean, standard deviation, ICC, and within- and between-level correlations for all study variables (N = 462 participants, N = 147 teams).

	$\bar{X}$	SD	ICC1/ICC2	S^2 between	S^2 within	1	2	3	4
Within-level									
(1) Bullying behaviors	1.287	0.436	0.056[a]	0.021*	0.135**	–	0.402**	0.136*	0.131*
(2) Role conflict	3.194	1.334	0.077[a]	0.170	1.578**	0.887**	–	0.209***	0.102
(3) Workload	2.302	0.530	0.028[a]	0.007	0.248**	0.729	0.655	–	0.353**
(4) Cognitive demands	2.997	0.588	0.040[a]	0.015	0.327**	0.137	−0.187	0.466	–
Between-level									
(5) CMC	3.749	0.611	0.535[b]	0.560**	–	−0.957**	−0.786**	−0.658	−0.220

CMC, conflict management climate; [a]ICC1, within-level correlations; [b]ICC2, between-level correlations; Correlations below the diagonal are correlations on the between-level. Correlations above the diagonal are correlations on the within-level. *p < 0.05, **p < 0.01, ***p < 0.001.

bullying behaviors. In support of hypotheses 4a and 4c, we found significant interactions between team-level conflict management climate and both role conflict (B = -0.071, p < 0.05) and cognitive demands (B = -0.174, p < 0.05) in the interaction model. However, the interaction effect between workload and conflict management climate was not significant (B = 0.060, n.s.). Hence, hypothesis 4b was not supported.

The two significant interactions are visualized in **Figures 1**, **2**. As can be seen in **Figure 1**, there is a stronger positive association between role conflict and exposure to bullying behaviors among respondents in teams characterized by a weak (i.e., low level) conflict management climate, compared to those working in teams with a strong (i.e., high level) conflict management climate. Despite these differences, a formal test of the slopes at ±1 SD of the moderator revealed significant slopes for both teams characterized by a weak conflict management climate (Slope = 0.058, z = 2.185, p < 0.05), and teams characterized by a strong conflict management climate (Slope = 0.144, z = 5.395, p < 0.01).

Inspection of **Figure 2** reveals that while a clear positive effect between cognitive demands and exposure to bullying behaviors is found among individuals in teams with a weak conflict management climate, the slope among individuals in teams characterized by a strong conflict management climate is almost flat. Accordingly the simple slope test reveals a significant positive slope among those in teams with a weak conflict management climate (slope = 0.225, z = 3.631, p < 0.01), while the slope among individuals in teams with a strong conflict management climate (slope = 0.013, z = 0.248, n.s.) was not significant.

In order to rule out the possibility that the relationships can be explained by relevant third variables, we ran all the analyses while controlling for gender, age, and tenure. However, the analyses showed that none of the control variables significantly predicted exposure to bullying behavior. Based on this, we decided to only report the most parsimonious analyses excluding the control variables, in line with the suggestions of Cohen et al. (2013).

DISCUSSION

Based on the work environment hypothesis and job demands-resources theory, we hypothesized that role conflict, workload, and cognitive demands would be positively related to exposure to bullying behaviors at work. Psychosocial demands at work, such as role conflict, workload and cognitive demands are consistently found to predict experiences of being exposed to bullying behaviors in the workplace. In this study, we further examined to what extent team-level perceptions of conflict management climate buffer the potential relationship between these job demands and exposure to bullying behaviors at work. Being an organizational resource, conflict management climate provides workers with information on and confidence regarding where to go and what to do when strain arises, and frustration and conflicts appear. Furthermore, it provides guidelines of how to handle such situations and trust in the organization's ability to act constructively if the situation would escalate. Hence, we predicted that the relationships between these stressors and exposure to bullying behaviors would be weaker in teams with a strong conflict management climate.

As hypothesized, the results of multilevel analyses showed positive main effects of role conflict and cognitive demands on exposure to bullying behaviors. Hence, employees who

TABLE 2 | Multilevel estimates for the prediction of bullying behaviors.

	Null model		Main effect model		Interaction model	
	B	**SE**	**B**	**SE**	**B**	**SE**
Intercept	1.272**	0.020	1.275**	0.018	1.275**	0.018
Role conflict			0.103**	0.018	0.101**	0.017
Workload			0.019	0.047	−0.003	0.046
Cognitive demands			0.105*	0.041	0.119*	0.041
CMC			−0.185*	0.028	−0.189*	0.028
CMC × Role conflict					−0.071*	0.033
CMC × Workload					0.060	0.078
CMC × Cognitive demands					−0.174*	0.065
Variance level 1 (individual level)	0.145 (97%)	0.008	0.115	0.010	0.108	0.010
Variance level 2 (team-level)	0.004 (3%)	0.013	0.001	0.006	0.004	0.006
−2 Log likelihood	361.70		256.66		242.77	

CMC, conflict management climate. N = 147 departments; N = 462 respondents. *p < 0.05, **p < 0.01.
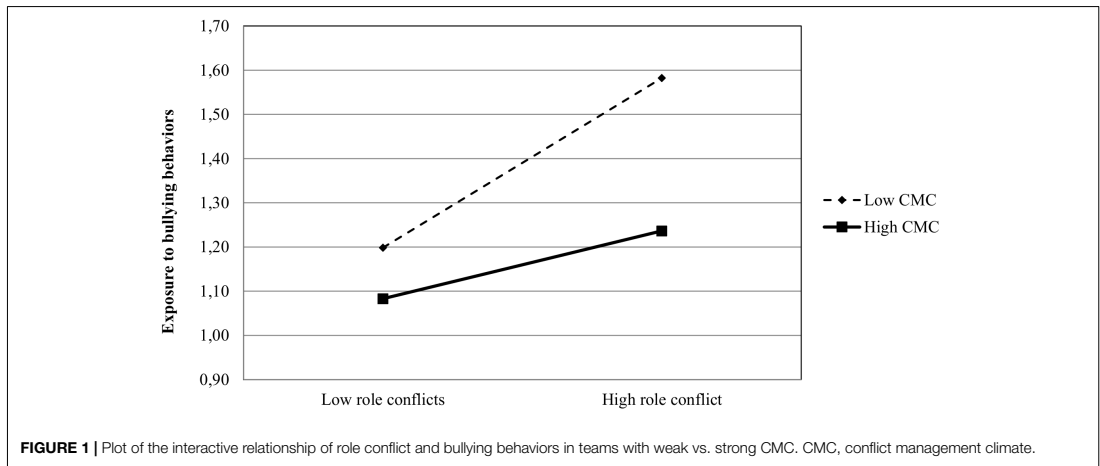
FIGURE 1 | Plot of the interactive relationship of role conflict and bullying behaviors in teams with weak vs. strong CMC. CMC, conflict management climate.
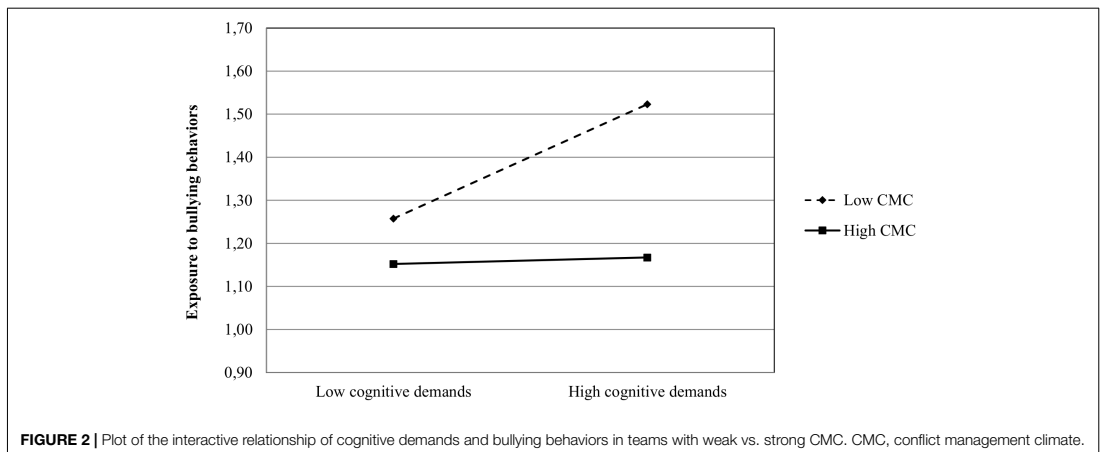
FIGURE 2 | Plot of the interactive relationship of cognitive demands and bullying behaviors in teams with weak vs. strong CMC. CMC, conflict management climate.

experience elevated levels of role conflict and cognitive demands in their work tend to report more exposure to bullying behaviors. In line with our findings, several studies have found that employees who experience high levels of role conflict and cognitive demands are more often exposed to bullying behaviors (Van den Brande et al., 2016). Our finding of role conflict as the most important predictor of workplace bullying aligns with previous research findings (Hauge et al., 2007; Notelaers et al., 2010). Across different professions, studies consistently find that role conflicts are a strong stressor (Einarsen et al., 1994; Hauge et al., 2007). In a Danish study, Agervold (2009) found that departments with the highest incidents of workplace bullying experienced more role conflicts and cognitive demands as compared to departments with the lowest incidents of bullying. The findings in the present study are therefore in support of the work environment hypothesis, which states that bullying is the result of stressors in the psychosocial working environment

creating a fertile soil for frustration, irritation and accompanying episodes of interpersonal conflict (Leymann, 1990; Einarsen et al., 1994). These findings are also consistent with the extended victim precipitation theory, stating that when people get stressed, they are more likely to act in ways that provoke others, and by that evoke bullying behavior from potential perpetrators. Along similar lines, Salin (2003) argues that stress increases job dissatisfaction, lowers aggression thresholds and does not allow time for conflict solving. Additionally, the tendency to not take time for polite and friendly interactions at work when we are under stress (Pearson et al., 2000), can together with the other factors potentially increasing the risk for harsh and spiraling interpersonal conflicts, which may turn into bullying.

Contrary to our predictions and to previous research there was, however, no significant main effect of workload on employees' exposure to bullying behaviors. In this regard, it is important to state that job demands are not necessarily

something negative. LePine et al. (2005) distinguish between job demands as hindrance stressors and challenge stressors. They describe hindrance stressors as "bad" stressors that interfere with or inhibit an individual's ability to achieve valued goals (Cavanaugh et al., 2000). While challenge stressors are considered as "good" stressors potentially promoting the personal growth and achievement of the employee. In line with this, workload has been termed as challenge stressors (Podsakoff et al., 2007). Although Van den Broeck et al. (2010) found support for the differentiation between challenge and hindrance demands, there is still not sufficient empirical evidence on this issue (Demerouti and Bakker, 2011). What one finds exhausting or not may also be dependent upon the said job.

The present study is, to our knowledge, the first to empirically demonstrate the buffering effect of conflict management climate on the link between these job demands and exposure to bullying behaviors. The results showed that a strong conflict management climate was related to lower reports of bullying behaviors in its own right as seen in the direct effect of climate and more so in the presence of role conflicts and cognitive demands. More specifically, the positive relationships between these job demands and bullying behaviors were stronger for employees working in teams with a weak conflict management climate. In line with recent research, our findings support that conflict management climate is an important organizational-level resource with the ability to prevent bulling both directly and indirectly by reducing the impact of other known risk factors (Einarsen et al., 2018).

Initially, it seems apparent that a strong conflict management climate contributes to the actual handling of interpersonal frustration and conflicts at an early stage. Choosing an active coping strategy and voicing the conflict early has been found to prevent bullying from future escalation (Kwan et al., 2016). Kwan et al. (2016) found that workers who chose a more passive strategy and neglected the bullying were more likely to experience that the bullying escalated. Those who then chose to voice later in the process often still experienced unsuccessful outcomes. One reason for this could be that the bullying then had escalated too far. In addition, they found that the likelihood of choosing an active coping strategy was dependent on the climate, in their case psychosocial safety climate (Kwan et al., 2016). When psychosocial safety climate was high, workers felt safe to voice their concerns and by that initiate support from organization and management in order to resolve the bullying. It seems that active coping strategies, such as voice, are not likely to be effective unless the climate is right (Kwan et al., 2016). Considering the similarities between psychosocial safety climate and conflict management climate, we might expect that by establishing a strong conflict management climate, teams and organizations can potentially foster active coping strategies in the face of conflicts and by this reinforce a positive cycle.

Further, and as argued by Einarsen et al. (2018) it is conceivable that conflict management climate works by reducing insecurity and by promoting predictability and perceived control. Rivlin (2001) argue that a strong conflict management climate implies that employees perceive managers to intervene in conflicts that arise and the conflict management procedures of their organization to be fair. A strong conflict management climate also provides workers with confidence regarding where to go and what to do when conflicts appear. Increased perception of control can further increase the likelihood that demands, as conflicts, are handled and more easily coped with (Karasek, 1979). To perceive control in conflict situations can then reduce the likelihood of frustration evolving and becoming interpersonal conflicts. A strong conflict management climate may imply the trust that negative behavior will be addressed, thereby preventing and stopping such behavior which otherwise may happen under stress. The experience of social support might also be an explanatory mechanism, as impartial and respectful attitudes of superiors is an important aspect of the experience of organizational justice, which may further promote employees' perception of social support in the workplace (Fujishiro and Heaney, 2009).

Although not explicitly hypothesized, we found that team-level conflict management climate, in addition to having a buffering effect, also had a main effect on bullying behaviors. This finding also contributes to validate the concept of conflict management climate, indicating that work environments characterized by a strong conflict management climate are characterized by fewer bullying behaviors and a lower risk of bullying, irrespectively of such stressors. Alternatively, the direct negative relationship between conflict management climate and bullying may mean that environments with few bullying behaviors contribute to the perception of a strong conflict management climate.

Practical Implications

The results of the present study have important practical implications for HR personnel, managers, and leaders, as the findings from this study indicate that developing teams and organizations characterized by strong conflict management climate can be beneficial in order to prevent destructive conflicts and bullying. This knowledge should be taken into consideration when developing evidence-based prevention-focused interventions. Taking into consideration the potential costs of bullying being related to reduced productivity, and increased likelihood of sickness absence and turnover (Sheehan et al., 2001), preventive interventions are considered to be far more cost-effective than strategies that aim to repair the consequences of bullying (Rivlin, 2001). Further, interventions should be directed against factors in the organization, like job demands or climate, as factors in the work environment have consistently been found to be strong antecedents of workplace bullying (Einarsen et al., 1994; Van den Brande et al., 2016). The finding that such a climate moderates more than one risk factor indicates that focusing on conflict management climate may be particularly efficient as a preventive measure. However, we still find a relationship between role conflict and bullying behavior in teams with strong conflict management climate. This supports the notion that role conflicts are the strongest psychosocial predictor of workplace bullying, and stresses the need to simultaneously continue to enhance role clarity.

Furthermore, one advantage of studying specific climate dimensions is that actions targeted at addressing these elements

of organizational climate are more manageable and effective, than actions more broadly focused (Giorgi, 2009). It is the management's responsibility to create such a climate that is responsive to these interpersonal issues, hence, the focal group to address here is leaders. As climate can actively be shaped by people with power and influence (James and James, 1989), leaders should be trained in conflict management procedures. They should then communicate to their employees directions for whom they should contact and which actions to take if they are involved in disputes and conflicts, as well as how management will act to solve such cases (see also Einarsen and Hoel, 2008). Establishing clear guidelines for what to do when conflict occur can foster security and self-control. Implementation of such procedures may further promote the experience of fair conflict management when disputes and conflicts develop. These interventions should then be directed groups and departments in the organization, as our results show that conflict management do exist on team-level.

Taken together, the findings of the present study provide additional support to the well-established link between psychosocial factors, such as role conflict and cognitive demands, and the risk for exposure to bullying behaviors. Yet, and more interestingly, our findings demonstrate that the effect of these risk-factors may be alleviated or even eliminated by organizational teams' or departments' ability to manage conflicts and employees' trust in this. As such, our findings have important theoretical and practical implications.

Strengths and Limitations

A strength of the present study is the use of recognized scales with satisfactory validity and reliability. The accidental finding that conflict management climate is directly related to less reports of exposure to bullying speaks to the validity of the scale. Further, a considerable strength of the present study is that we measured conflict management climate at the appropriate level, as the concept of organizational climate is defined as organizational members' shared perceptions of the workplace and therefore ideally exist on a group level (James and James, 1989). Integrating multilevel constructs can help capture the complexity of organizational phenomena and develop more sophisticated theoretical models (Demerouti and Bakker, 2011). There is, however, a further need for validating our findings in other work contexts. Regarding future research, it would be interesting to investigate the role of conflict management climate in other antecedents – workplace bullying relationships, as well as looking more closely at the involved mechanisms.

However, some limitations of the present study need to be considered. First, the study is based on cross sectional data, which means that all the information was collected at the same time. Causal relationships can therefore not be drawn based on our findings. Longitudinal studies are necessary in order to confirm the direction of the relationships between the studied variables. Another possible limitation of the current study is the problem of common method variance. Because we only use self-report questionnaires, we cannot rule out that some associations are biased by common method. Nevertheless, we

do not expect this to be a prominent problem in our study as common method bias generally decreases when studying interactions (Siemsen et al., 2010).

Further, we encourage some caution when generalizing our results. The sample in our study consist of crews on ferries in a Norwegian transport company. Thus, the findings are not necessarily generalizable to all other occupational groups, as there may be factors in this work context that is not typical for all workplaces, influencing the results. For instance, the fact that these teams live closely together for 2–7 days in a row, could conceivably create a greater need for a strong conflict management climate. On the other hand, they also have longer periods off work, which could potentially make it harder to establish such a team-climate.

Lastly, it should be mentioned that the sample we chose had some clear advantages in regard to studying climate at a group level. These teams work together in fixed shifts, often for several days in a row, living, working, and sleeping at the ferry, which offers a unique opportunity for control when measuring teams. In most companies, it would be more difficult to measure the actual climate in the team, as it is common that employees work across teams, or even belong to several teams, making it hard to measure the climate variable.

CONCLUSION

The present study was conducted for both theoretical, methodological and applied reasons and with findings with important implications. First, it provides a new and broader theoretical understanding of organizational risk factors and typical antecedents of workplace bullying in its focus on how conflict management climate buffer the relationships between job demands and workplace bullying. Methodologically, it is important as it answer a call in the literature for multilevel designs in the study of workplace bullying and further substantiate the usefulness of such a design. In terms of practice, we proposed a new factor within the work environment hypothesis which can be addressed by practitioners, and which may have both direct and indirect preventive effects. In this, our findings show that conflict management climate may serve as an important preventive tool against workplace bullying.

DATA AVAILABILITY

The datasets generated for this study are available on request to the corresponding author. Any inquiries regarding the dataset can be addressed to Ståle Einarsen (stale.einarsen@uib.no).

ETHICS STATEMENT

This study was approved by the Norwegian Social Science Data Services/Norwegian Centre for Research Data. An information letter was included with the request, informing that participation was voluntary, that participants could resign from the study any time and that the participants could ask later to have the

information deleted. Thus, the response itself was seen as an informed consent.

AUTHOR CONTRIBUTIONS

All authors have been responsible for the study concept and design, actively involved in the writing process,

and are collectively responsible for the final completion of the manuscript.

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Article

When the Going Gets Tough and the Environment Is Rough: The Role of Departmental Level Hostile Work Climate in the Relationships between Job Stressors and Workplace Bullying

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Abstract: In line with the work environment hypothesis, the present study investigates whether department-level perceptions of hostile work climate moderate the relationship between psychosocial predictors of workplace bullying (i.e., role conflicts and workload) and exposure to bullying behaviours in the workplace. The data were collected among all employees in a Belgian university and constitutes of 1354 employees across 134 departments. As hypothesized, analyses showed positive main effects of role conflict and workload on exposure to bullying behaviours. In addition, the hypothesized strengthening effect of department-level hostile work climate on the relationship between individual-level job demands and individual exposure to bullying behaviours was significant for role conflict. Specifically, the positive relationship between role conflict and exposure to bullying behaviours was stronger among employees working in departments characterized by a pronounced hostile work climate. In contrast to our predictions, a positive relationship existed between workload and exposure to bullying behaviours, yet only among individuals in departments with low hostile work climate. These findings contribute to the bullying research field by showing that hostile work climate may strengthen the impact of role stress on bullying behaviours, most likely by posing as an additional distal stressor, which may fuel a bullying process. These findings have important theoretical as well as applied implications.

Keywords: role conflict; workload; hostile work climate; workplace bullying

1. Introduction

Over the last decades, a growing body of workplace bullying research has thoroughly documented its detrimental consequences for those exposed, yet also for bystanders and even for organizations and societies at large [1–3]. Targets of workplace bullying tend to suffer a range of mental and physical health problems, negative job attitudes, and increased intentions to leave their employment [4,5]. In addition, organizations and societies may suffer direct economic losses, due to reduced productivity, lowered workability, and increased health problems among all those involved [2,6]. In order to prevent workplace bullying and its damaging consequences, there is a need to understand potential risk factors, as well as maintaining and escalating factors and the possible social mechanisms involved, as workplace bullying is a complex process theorized to be influenced by a range of person-related, work-related and contextual factors [7].

To date, the work environment hypothesis [8,9] has been the prevailing overarching theoretical framework for studying antecedents of bullying. The hypothesis claims that a poorly organized and stressful work environment may lead to bullying by creating stress, frustration, and conflicts among employees, often in combination with a lack of adequate management interventions [10], and in situations where there is a prevailing hostile climate in the working group [11]. In support of this proposition, work-related stressors and the

social climate are found to be the most robust predictors of workplace bullying, in particular job demands in the form of role stressors and heavy workloads [12,13].

Heightened levels of stress from taxing job demands may lead some employees to misbehave and break the social norms of polite behaviour, fuelling interpersonal conflicts, as also proposed by the social interactionist perspective on aggression [14,15]. Furthermore, being under such stressors may increase one's vulnerability in negative interpersonal relationships, which again may lead to a more negative perception of one´s social working environment.

Although the link between such strains and exposure to bullying has been firmly substantiated [16,17], the main proposition and novel assumption investigated here is that there may also be specific contextual and departmental conditions, e.g., a hostile climate, under which such frustration caused by perceived stressors will be even more likely to result in spiralling interpersonal conflicts and increased vulnerability in targets-to-be. Based on the conservation of resources theory, we may see such a hostile climate as a resource passageway: organizational environmental conditions that detract, undermine, obstruct, or impoverish people's or group's resource reservoirs [18,19], which will increase their stress levels, decrease their resources and hence increase their vulnerability.

The present study therefore adds to the literature by testing the propositions in the work-environment hypothesis, namely that the risk of being exposed to bullying is higher when under the influence of psychosocial stressors and particularly so when working in a general hostile working climate where interpersonal conflicts and aggression flourishes. Such a combination of stressors would indicate a perceived demanding work situation which creates stress in the focal person who is also faced with being in a demanding social context characterized by a lack of normal social resources. Thus, working in a social context plagued with interpersonal conflicts, aggression, and hostility may be a taxing demand, yet it also denotes a lack of the ordinary social resources of friendship and social support generally present and available to employees. Following the conservation of resource theory, this would imply that there may be a multiplying effect of situational and contextual demands [19,20]. In addition, this happens in a situation with a loss of contextual resources that would potentially help ones coping with these demands.

Our main assumption to be tested is therefore that job demands such as role stress and taxing workloads are risk factors for exposure to bullying, and particularly so when being in a hostile working climate. In this, the present study has important theoretical, methodological, and applied contributions. Theoretically, we contribute by being the first to test an important proposition in the work environment hypothesis, while also showing how factors at different levels of analysis may interact to heighten the risk of exposure to workplace bullying. In terms of methodology, we contribute by employing a multilevel design in line with the theoretical assumptions. From an applied perspective, we contribute with nuanced information on how to prevent and manage bullying at work.

1.1. The Concept of Workplace Bullying

Workplace bullying is about the systematic and ongoing exposure to mistreatment and harassment by one's colleagues or superiors, which may become "an escalating process in the course of which the person confronted ends up in an inferior position and becomes the target of systematic negative social acts" [21]. These negative social acts constituting workplace bullying can take different forms, and either be work-related, such as the withholding of information that affects the target's work performance, having key areas of responsibility removed or replaced with more trivial or unpleasant tasks, or they can be person-related, such as gossip and rumours about you being spread or being the target of spontaneous anger [22], often also including acts of social exclusion or non-inclusion. Traditionally, research on workplace bullying has a focus on the target, who may be exposed to such acts from a range of sources and perpetrators, where the total exposure is at the heart of the experience. Furthermore, being a gradually escalating process, exposure to workplace bullying has been shown to manifest itself in low as well as high intensities at any given

time-point [22,23]. Since we are interested in understanding the risk factors associated with such bullying, the present study will investigate the whole range of experienced exposure to bullying, from low intensity unwanted negative acts to full-blown cases of bullying; conceptualized as exposure to bullying behaviours.

1.2. Antecedents and Risk Factors of Exposure to Workplace Bullying

When examining the antecedents of workplace bullying, most of the research has focused on more proximal work-related factors experienced directly by individuals, such as the extent employees experience role conflict or high and taxing workloads, as well as the perceived leadership style of one´s immediate superior [10]. However, contextual risk factors may exist on different levels of the organization, e.g., in the form of a hostile work climate in the department as a macro level stressor. However, the risk factors proposed in the work environment hypothesis [11] tends to be tested as independent risk factors. However, a central and novel assumption in the present study is that risk factors at different levels may interact to reinforce the risk of individual exposure to bullying. So far, such mechanisms are relatively poorly understood [24]. Hence, we propose that a hostile work climate in the department constitutes a resource passageway, or rather, the absence of an important resource functions as a stressor that will influence other job demands [25], increasing the risk of exposure to bullying behaviours at the individual level. Following the work environment hypothesis and the conservation of resources theory, we propose that working in a department with a hostile work climate may boost the job demands—bullying relationship in several ways. Firstly, working in a hostile climate may in and of itself serve as an environmental stressor for employees which may come on top of other stressors [26,27]. In a hostile work climate, employees may also experience less social support and less constructive intervention by bystanders such as their peers and superiors [28], leading to a lack of important buffering mechanisms. Being in such an environment may thus also reduce and negatively affect one's coping resources [29]. Secondly, a hostile work climate may trigger similar reactions and negative treatment from a range of peers who all would react to the ambient stressors crated by the hostile working climate and particularly against stressed-out targets in that environment. This will not only amplify the exposure to negative treatment from many sources, but also put the target in a more inferior position of being less able to defend themselves and more prone to perceive social interaction as negative and unwanted. Additionally, perpetrators-to-be may "watch and learn" patterns of interpersonal misbehaviour from their colleagues when they are frustrated by others [30], providing a breeding ground for destructive behaviour and interactions in the workplace and particularly so when under the influence of stressors [29].

1.2.1. Role Conflict

Role stressors, and especially role conflict, is one of the most studied work-related risk factors of workplace bullying and has consistently been found to be among the strongest predictors of perceived bullying [8,12,31]. Role conflict can be described as the simultaneous existence of two or more sets of expectations toward the same person, such that compliance with one makes compliance with the other difficult [32,33]. Experiencing high degrees of conflicting expectations and demands from leaders or colleagues is found to be associated with elevated levels of stress and frustration, as it may hinder efficient goal attainment at work [34]. Holding different and incompatible roles may also create frustration in both the focal person and other role-senders in the working environment, with a risk of conflict escalation and negative reactions toward the focal person.

In line with the work environment hypothesis, Einarsen and colleagues [8] argued that the association between role conflict and workplace bullying is due to the creation of strain and frustration in the working group, which may then escalate into harsh conflicts and potentially bullying. Along similar lines of reasoning, it has been argued that role stressors may act as ambient stressors that are perceived not only by victims, but also by perpetrators. While perpetrators may enact bullying in response to those stressors [12],

they may also retaliate against stressed-out colleagues who may violate the social norms of polite interaction and as a response to the role conflicts of the focal person. Hence, role conflict may fuel escalating conflicts among colleagues, in line with a social interactionist approach to aggression [35]. Such explanations were supported in a longitudinal study by Balducci and colleagues [36], in that role conflict positively predicted both being bullied and bullying enactment. A representative study of Norwegian workers [37] also documented how high levels of role conflict are reported by self-reported bullies. This further aligns with the frustration-aggression hypothesis and the social interactionist perspective, which states that aggression is elicited by negative stressful events [38], by affecting both future perpetrators and targets. Hence, the following hypothesis is proposed:

Hypothesis 1. *There is a positive relationship between role conflict and reported exposure to bullying behaviours at work.*

1.2.2. High Workload

In addition to role conflict, experiencing high workload has been suggested as an important precursor of bullying [31,39]. Although not as consistent as the research findings on role conflict, studies from a variety of countries do point to a relationship between workload and exposure to bullying behaviours [31,39,40]. In the present study, the term workload can be described as the amount and speed of work to be performed, which determines whether you need to work fast or extra hard to get your tasks done [41]. While role conflict is a clear example of a hindrance demand, workload may however be seen as a challenge demand according to the challenge stressors-hindrance stressor framework [42], a fact that may account for the less robust findings in the literature regarding risk of exposure to workplace bullying. However, in line with the work environment hypothesis, a high workload over time, and especially without sufficient resources, may result in strain and conflict escalation, finally resulting in bullying [39,43]. This may either be the result of the workload serving as an ambient stressor, affecting both targets and bullies, or that employees who experience particularly high workloads become stressed out, therefore becoming more vulnerable and acting in ways that irritate and annoy colleagues and superiors, hence further triggering or fueling the bullying process [8,24,44]. Besides, being exposed to high workloads over time is argued to be a risk factor for conflict escalation, since those involved have sparse time and limited resources for conflict resolution [45]. Thus, we do propose:

Hypothesis 2. *There is a positive relationship between workload and reported exposure to bullying behaviours at work.*

1.2.3. Hostile Work Climate

In one of the pioneering studies on antecedents of workplace bullying and in support for the work environment hypothesis, Einarsen and colleagues [8] found that a poor social climate at work was one of the factors that proved to be most strongly associated with bullying, along with role stressors. In the present study, we employed the concept of a hostile climate, which refers to a social environment in the department characterized by escalated interpersonal conflicts and aggressive behaviour. However, such a climate may be more than a mere risk factor. Frustrated, insecure, and stressed out employees will often look for support in his or her immediate work environment [46], as these are normally important resources that may alleviate the effect of a given stressor. Hence, a potentially important factor in predicting whether bullying will occur at the individual-level is the group context in which people may actively condemn bullying behaviours, do nothing to stop it, allow it or even encourage or normalize such behaviours. People tend to seek information from the social context surrounding them when it comes to behaviours and making choices [47]. Employee perceptions of the working group's norms, practices and procedures regarding social interaction can therefore have a significant impact on how em-

ployees react to stress, as this may function as a frame of reference for acceptable behaviour in stressful situations [30]. Destructive employee behaviour can thus be more likely to occur if such behaviour is "common practice" in the work environment [30], e.g., when interacting with colleagues stressed out by conflicting demands and expectations. Hence, in departments with a hostile work climate, where the interaction between colleagues is permeated by conflicts and aggression, there might be increased risk for ongoing interpersonal frustration to evolve into aggression and bullying behaviours. In addition, stressed out employees may become more vulnerable and have less resources to defend oneself in a hostile working climate. An ambient hostile climate consisting of a range of escalated conflicts and aggressive outlets in the department may in and of itself be stressful and create uncertainty. It may be seen as a resource passageway, which is an organizational environmental condition that detracts, undermines, obstructs, or impoverishes the people's or group's resource reservoirs [18,19]. Thus, such a hostile environment will also lack resources in the form of social support from peers and superiors.

To our knowledge, only two studies have tested organizational climate as a moderator in the antecedent–bullying relationship, employing the concept of conflict management climate [48] and high-performance work practices [20]. In the first study, the construct of the conflict management climate was investigated at the group-level and found to have a buffering effect on the relationship between job demands and exposure to bullying behaviours [48]. A conflict management climate was defined as employees having confidence that conflicts will be properly managed and resolved, as the organisation and its managers have proper procedures and routines for constructive conflict management [49,50]. In line with the conservation of resources perspective, a strong conflict management climate served as a resource passageway which buffered demands at an individual level, as it presumably led to an increased sense of control and available social resources, probably in combination with effective management interventions [48,50]. In the second study, the construct of high-performance work systems was modelled at the organizational level with the idea that it would act as a resource passageway. These systems buffered the effect of role conflict on workplace bullying, as it presumably led to a better use of both job and personal resources [20], as employees could draw on these contextual resources to replenish resources that were depleted [51].

Instead of providing such organisational resources, a hostile work climate acts as a demand [25], in that interpersonal conflicts and aggressive behaviour flourishes in the department, hindering the social support people need when exposed to stress, and serving as an additional stressor when exposed to stress because of job demands, thereby strengthening, boosting or increasing the effect of the latter [29]. Therefore, in line with the work environment hypothesis and relying upon the notion of resources passageway in the conservation of resources theory, we believe that a department-level hostile work climate will increase the stress and interpersonal frustration and conflict arising from high job demands [i.e., role conflict and workload), while also reducing the availability of social resources when faced with these demands, subsequently fuelling the bullying process.

Since the concept of organizational climate has been described as the aggregated perceptions of group members regarding a particular aspect of the work setting [52,53], we will apply a multilevel design with group-level perceptions of hostile work climates. Due to the lack of multilevel research needed to address antecedents at the group-level [54,55], the role of the organizational climate in strengthening workplace bullying remains underdeveloped in current research and theory [56]. Given that most organizations are hierarchically structured with systems of social interactions affecting individuals, a multilevel design is essential [57]. In addition, gaining more knowledge regarding the group-level of analysis may also have important practical implications when it comes to developing appropriate organizational policies and interventions in groups and departments [48].

Hence, the present study first replicated findings on the relationship between two individual-level predictors of bullying (i.e., role conflict and workload) and reported exposure to bullying behaviours. Yet, the main aim is to test the hypothesis that these

relationships depend on a department-level hostile work climate as a contextual factor. By integrating department-level hostile work climates as a moderator, we aspire to test, extend, and potentially provide additional validation of the work environment hypothesis, by obtaining a more nuanced and better understanding of the antecedents and mechanisms involved in the workplace bullying process. In this, we also contribute to the general request for research on moderators in the job demands – bullying relationship [58], as well as the request to empirically investigate the effects of the organizational climate in relation to workplace bullying [24]. Working in a hostile climate will make stressed employees more vulnerable to bullying, not only by eliciting more negative acts from any given colleagues or superiors but also by creating exposure from more sources and consequently even putting the target in a more inferior position, hence creating a situation even more in line with the definition of workplace bullying. A hostile working environment may further restrain the social support an employee would normally receive when in a stressful situation.

In order to test our hypotheses, we have chosen an academic context, as it represents a competitive and complex environment which in itself may be a distal risk factor for workplace bullying [59], often also described as borderless work, which is subsequently associated with high job demands [60,61]. Hence, we propose the following:

Hypothesis 3a. *The positive relationship between role conflict and exposure to bullying behaviours is moderated by a hostile work climate. Specifically, the relationship between role conflict and exposure to bullying behaviours is stronger among employees working in departments characterized by a pronounced hostile work climate.*

Hypothesis 3b. *The positive relationship between workload and exposure to bullying behaviours is moderated by a hostile work climate. Specifically, the relationship between workload and exposure to bullying behaviours is stronger among employees working in departments characterized by a pronounced hostile work climate.*

2. Method

2.1. Procedure and Participants

The data were collected among all employees at a Belgian university in 2013 by a statistical consulting agency that specializes in the measurement of occupational stress for a Belgian Health and Safety Executive, providing us with anonymous data for the present study. These external prevention services are by Belgian law entitled to guide organizations and employers with respect to their prevention policies regarding safety, ergonomics, health, and well-being. The response rate was 48.8% and the total sample consisted of 1354 employees working in 134 departments and equivalent work units. All these units are formal scientific departments and formal administrative and technical units. Within these units, there may of course be more informal smaller teams and work groups. Yet, this reflects the official organisational departments and units of the University.

We only retained departments consisting of over 3 respondents to secure a reasonable measure of a department level hostile climate and to reduce the risk of having only targets or perpetrators rating the climate. This resulted in the omission of 26 departments. Hence, the final sample consisted of 1290 employees within 108 departments. The size of the retained departments varied from 4 to 54 people with an average of 12. The sample is heterogenous in terms of tasks, professions, roles and organisational structures in different parts of the university, yet therefore also representative for a typical University. Forty-six percent were administrative or technical personnel, 11% were extra-ordinary academic personnel, 16% were PhD or postdoc students funded by a research fund, 19% were professors (assistant, associate or full) and finally, 8% were research- and teaching assistants. Forty-seven percent of the participants were male (53% female), with the following age distribution: 5% were under 25 years, 36% had ages between 25 and 34 years, 24% between 35 and 44, 22% between 45 and 54, and 13% were over the age of 55. Approximately 28% of participants held a managerial position and 79% worked full-time. 13% had a tenure

of maximum 1 year, 33% have worked between 1 and 4 years at their current employer, 15% between 5 and 9 years, 24% between 10 and 24 years and 15% have worked for the same employer for over 25 years.

2.2. Instruments

To measure exposure to bullying behaviours we used the Short Negative Acts Questionnaire [62], which consists of nine items from the full version of the Negative Acts Questionnaire-Revised [63]. The items followed an introductory text stating: "How many times have you been the target of the following behaviours during the last six months?" Example items are: "Someone withholding necessary information so that your work gets complicated", "Gossip and rumours about you", and "Social exclusion from co-workers or work group activities", with response categories ranging from 1 (*never*) to 4 (*once a week or more*). The scale showed good reliability, Cronbach's $\alpha = 0.86$.

The measurement of role conflict is based on four items from the Short Inventory to Monitor Psychosocial Hazards [64]. The items are: "Do you receive contradictory instructions?", "Do you have to do your work in a way which differs from the method of your choice?", "Do you have conflict with your colleagues about the content of your tasks?" and "Do you have conflict with your boss about the content of your tasks?", with response categories ranging from 1 (*never*) to 4 (*always*). The scale showed acceptable reliability, Cronbach's $\alpha = 0.78$.

The measurement of workload is based on three items from the Short Inventory to Monitor Psychosocial Hazards [64]. The items are: "Do you have to work extra hard in order to complete something", "Do you work under time pressure?" and "Do you have to hurry?", with response categories ranging from 1 (*never*) to 4 (*always*). The scale showed very good reliability, Cronbach's $\alpha = 0.89$.

Hostile work climate was measured using four items from the Short Inventory to Monitor Psychosocial Hazards [64]. The overall starting sentence was: "How often have you been confronted with the following . . . during the last six months?". The items are: " . . . aggressiveness from colleagues?", " . . . aggressiveness from your boss?", " . . . conflicts with your colleagues?" and " . . . conflicts with your boss?", with response categories on a scale from 1 (*never*) to 4 (*always*). Hence, a hostile work climate on the department level is a measure of the extent that all employees in the department report to be involved in interpersonal conflicts and being faced with aggression from co-workers and superiors. The scale showed acceptable reliability, Cronbach's $\alpha = 0.71$. Prior to the multilevel analysis, the items were computed into a sum score, and a departmental average score was used at the between-level in the analysis.

2.3. Analyses

To utilize the multilevel structure of the data, implying that individual scores (level 1) were nested within departments (level 2), we conducted multilevel analysis using MLwiN 3.01. In the analysis, level 1 predictors were centred on the team mean, while level 2 predictors were centred on the grand mean. In order to test our hypotheses, we ran five models predicting exposure to bullying behaviours. In the first step, we ran a null model where the intercept was included as the only predictor. In step two, we tested a main effect model by adding the hypothesized level 1 predictors (i.e., role conflict and workload). In step three, in order to examine possible random effects of the level 1 predictors on the higher level (level 2), we allowed the slopes of the relationships between the predictors (i.e., role conflict and workload) and the outcome (i.e., bullying behaviours) to vary randomly. In step four, we added the hypothesized level 2 predictor (hostile work climate), explaining level 2 variance in individual exposure to bullying behaviours. Finally, in step five, we tested the hypothesized cross-level interactions between hostile work climate and the two level 1 predictors by including their respective interactional effects. Additional simple slope tests for hierarchal linear models were conducted to examine if the slopes in the potential cross-level interactions are significantly different from zero [65]. In the simple slope test, the

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predictors and moderators are tested at ±1 SD, and calculations are based on the asymptotic covariance matrix from the respective multilevel models using R version 3.4.3.

2.4. Research Ethics

The data were collected by an electronic survey distributed to employees' e-mail. Participation was voluntary. No members of the surveyed organization or the Health and Safety Executive had access to any questionnaires, herewith guaranteeing anonymity. E-mail addresses were deleted. Thereby the statistical agency met with the Belgian data protection regulations. Respondents were informed about the purpose of the research and that choosing to participate would indicate their informed consent.

3. Results

3.1. Descriptive Statistics

Table 1 shows the means, standard deviations, inter class correlations (ICC1/ICC2), and within- and between-level correlations for all study variables. Correlational analysis showed that at the within-level, significant positive correlations existed between the two job demands and exposure to bullying behaviours, respectively, with the strongest relationship between role conflict and exposure to bullying. Furthermore, role conflict was positively related to workload. On the between-level, strong positive correlations exist between hostile work climate and bullying, workload, and role conflict.

Table 1. Mean, standard deviation, ICC, and within- and between-level correlations for all study variables (N = 1290 participants, N = 108 departments).

	$\bar{X}$	SD	ICC1/ ICC2	S^2 between	S^2 within	1.	2.	3.
Within-level								
1. Bullying behaviours	1.41	0.47	0.21 [a]	0.05	0.19	-	0.27 ***	0.54 ***
2. Role conflict	1.62	0.49	0.13 [a]	0.03	0.22	0.89 ***	-	0.55 *
3. Workload	1.56	0.66	0.04 [a]	0.02	0.42	0.53 *	0.32 ***	-
Between-level								
4. Hostile work climate	0.24	0.17	0.13 [a] 0.85 [b]	0.05	-	0.99 ***	0.53 *	0.86 ***

Note. Hostile work climate; [a] ICC1, within-level correlations; [b] ICC2, between-level correlations; Correlations above the diagonal are the correlations on the within-level. Correlations below the diagonal are correlations on the between-level. * $p < 0.05$, *** $p < 0.001$.

3.2. Multilevel Analysis

Table 2 presents the results from the multilevel analysis predicting exposure to bullying behaviours. The null model revealed significant variance components on both levels ($\varepsilon_{0ij} = 0.193$, $p < 0.001$; $\mu_{0j} = 0.040$, $p < 0.001$), where 83% of the variance in bullying behaviours exists at level 1 and 17% at level 2 of the analysis. In Hypotheses 1 and 2, we postulate that the two level 1 predictors (role conflict and workload) positively relate to bullying behaviours. The results from the main effect model revealed a significant positive relationship between role conflict and bullying behaviours (B = 0.474, $p < 0.001$) and between workload and bullying behaviours (B = 0.071, $p < 0.001$). Thus, both Hypotheses 1 and 2 were supported.

In order to obtain the correct standard errors for potential cross-level interactional effects, the higher level random slopes for both predictors were estimated in the next model [66]. As can be seen in Table 2, the random slope of the role conflict–bullying relationship was significant ($\mu_{1j} = 0.035$, $p < 0.01$), while the corresponding random slope for the workload–bullying relationship was not significant ($\mu_{2j} = 0.000$, n.s.). This suggests that only the relationship between role conflict and bullying systematically differs across departments, while this is not the case for the relationship between workload and bullying. Moreover, introducing our level 2 predictor hostile work climate revealed a strong and

significant association with individual level exposure to bullying behaviours at the higher level (B = 0.955, $p < 0.001$).

Table 2. Multilevel estimates for the prediction of bullying behaviours.

Level and Variable	Null Model (Step 1)	Main Effect of L1 Predictors (Step 2)	Random Slope (Step 3)	Main Effect of L2 Predictor (Step 4)	Cross-Level Interactions (Step 5)
Level 1					
Intercept (γ_{00})	1.425 (0.024) ***	1.429 (0.025) ***	1.431 (0.024) ***	1.414 (0.013) ***	1.410 (0.012) ***
Role conflict (γ_{10})		0.474 (0.024) ***	0.466 (0.030) ***	0.469 (0.031) ***	0.454 (0.027) ***
Workload (γ_{20})		0.071 (0.017) ***	0.065 (0.017) ***	0.068 (0.017) ***	0.060 (0.017) ***
Level 2					
Hostile work climate (γ_{01})				0.955 (0.065) ***	1.068 (0.068) ***
Cross-level interaction					
Role conflict ∗ Hostile work climate (γ_{11})					0.981 (0.153) ***
Workload ∗ hostile work climate (γ_{12})					−0.42 (0.115) ***
Variance components					
Within-unit (L1) variance (ε_{0ij})	0.193 (0.008) ***	0.135 (0.005) ***	0.128 (0.005) ***	0.127 (0.005) ***	0.126 (0.005) ***
Intercept (L2) variance (μ_{0j})	0.040 (0.008) ***	0.051 (0.009) ***	0.051 (0.009) ***	0.006 (0.002) **	0.005 (0.002) *
Slope (L2) variance role conflict (μ_{1j})			0.035 (0.0011) **	0.035 (0.012) **	0.014 (0.008)
Intercept-slope (L2) covariance role conflict			0.044 (0.008) ***	0.015 (0.004) ***	0.011 (0.003) ***
Slope (L2) variance workload (μ_{2j})			0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Intercept-slope (L2) covariance workload			0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Loglikelihood	1666.63	1247.58	1194.92	1078.87	1041.57

Note. L1 = level 1; L2 = level 2; Robust standard errors of estimates are in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

In Hypotheses 3a and 3b, we expect that a hostile work climate on level 2 positively moderates the positive links between the two level 1 predictors (role conflict and workload) and bullying behaviours. The positive interactional effect between role conflict and department-level hostile work climate in the prediction of bullying behaviours was significant (B = 0.981, $p < 0.001$). However, contrary to our expectations, the interaction model revealed a negative interactional effect between workload and department-level hostile work climate in the prediction of bullying behaviours (B = −0.420, $p < 0.001$). In order to visually inspect if the pattern of the interactional effects were in accordance with our hypothesis, we plotted the slopes of the interactional effects in Figures 1 and 2.
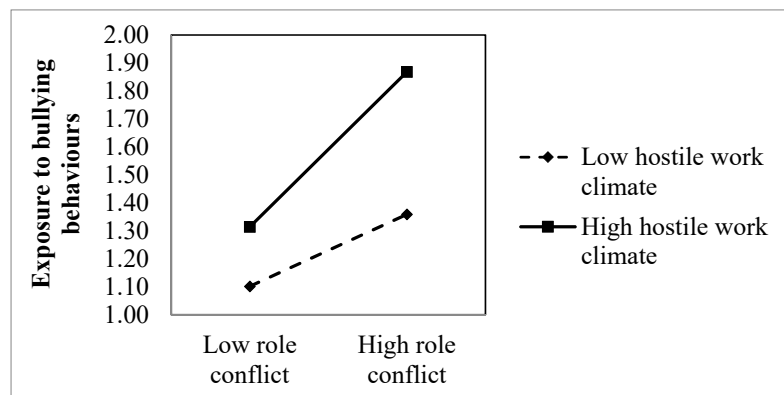
Figure 1. Plot of the interactive relationship of role conflict and bullying behaviours in departments with weak vs. a strong hostile work climate.
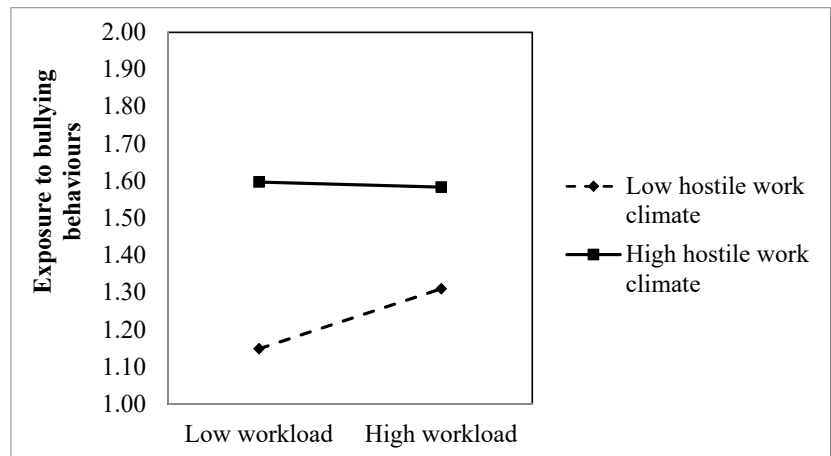
Figure 2. Plot of the interactive relationship of workload and bullying behaviours in departments with weak vs. a strong hostile work climate.

Figure 1 provides a visualization of the significant interaction effect between role conflict and department-level hostile work climates. As seen in the figure, and in accordance with Hypothesis 3a, there is a stronger positive association between role conflict and bullying behaviours among individuals working in departments characterized by a hostile work climate, as compared to individuals working in departments characterized by low levels of hostility. Despite these differences, a formal test of the slopes at ± 1 SD of the moderator revealed a significant slope both for those in a high hostile work climate department (slope = 0.620, z = 17.22, p < 0.001) and for those working in a low hostile work climate department (slope = 0.288, z = 7.50, p < 0.001). Inspection of Figure 2 reveals, surprisingly, that in departments characterized by high hostile work climate, the level of reported bullying behaviours is independent of the experienced workload. Correspondingly, the simple slope test revealed that the relationship between workload and bullying behaviours was not significant in the departments with a high level of hostile work climate (slope = -0.011, z = 0.41, n.s.). Still, the figure shows that more exposure to bullying behaviours are reported in departments characterized by a hostile work climate, independent of the experienced workload. In contrast, a clear positive relationship exists between workload and exposure to bullying behaviours among individuals in departments with low hostile work climates. Accordingly, the simple slope test reveals a significant positive slope among those in departments with a low hostile work climate (slope = 0.131, z = 5.29, p < 0.001). In summary, Hypothesis 3a was supported, while the multilevel analysis did not yield support for Hypothesis 3b.

In order to rule out the possibility that the relationships can be explained by relevant third variables, we ran all the analyses while controlling for gender, age, and tenure. However, the analyses showed that none of the control variables significantly predicted exposure to bullying behaviour. Based on this, we decided to only report the most parsimonious analyses excluding the control variables, in line with the suggestions of Cohen [67].

4. Discussion

The aim of the present study was to extend our understanding regarding work-related antecedents of workplace bullying, by investigating the interaction of potential risk factors at different organizational levels. Based on the work environment hypothesis and the social interactionist approach to aggression, we hypothesized that experiencing high levels of role conflict and workload would be positively related to exposure to bullying behaviours at work. Job demands, such as role conflict and workload, have consistently been found

to predict self-reported exposure to bullying behaviours in the workplace. Based on research on the notion of resource passageways in the conservation of resources theory, we further examined whether the relationship between these job demands and exposure to bullying behaviours would be strengthened by working in a department characterized by a pronounced hostile work climate, that is, a climate where escalated interpersonal conflicts and aggressive outlets prevail in the social environment.

As hypothesized, the results of the analyses showed positive main effects of individual level role conflict and workload on exposure to bullying behaviours, with the strongest relationship with bullying exposure existing for the former. Hence, employees who experience elevated levels of role conflict and workload tend to report more exposure to bullying behaviours. Accordingly, the findings support the work environment hypothesis [8,9], which claims that bullying is related to stressors in the psychosocial work environment that create stress, frustration and conflicts among employees. Yet, they are also in line with a social interactionist perspective on aggression in that such aggressive outlets may follow from retaliation and aggressive outlets from perpetrators against stressed out and vulnerable targets [14,15]. Being exposed to high job demands over time, without sufficient resources, is related to negative outcomes such as sleep problems, fatigue, and impaired health [68]. These indirect health effects, as well as the direct stress triggered by role conflict and high workload can, according to the social interactionist perspective, lead to behavioural changes, such as the violation of social norms, which may provoke frustration and aggressive behaviour from colleagues, subordinates and superiors, who then may target the stressed-out employee [9,15,69]. The results of the present study aligns with several previous studies, showing that employees who experience high levels of role conflict and workload are more often exposed to bullying behaviours [13].

Furthermore, the results showed that the positive relationship between role conflict and bullying behaviours was stronger for employees working in departments with a pronounced hostile work climate. Hence, the present study is, to our knowledge, not the first that supports the notion of resources passageways, but it is the first to empirically demonstrate the strengthening effect of a hostile work climate on the link between role conflicts and exposure to bullying behaviours. Although several previous studies have shown an association between poor organizational climate and exposure to bullying [55,70,71], knowledge regarding the potential intervening effect of the organizational climate, in combination with other stressors, is scarce [72,73]. Despite the fact that organizational climate has been little investigated in the bullying literature, a long-held proposition in the work environment hypothesis is that the risk of exposure to bullying will be high in departments with hostile work climates [8,9,21]. Considering this, the present study makes an important theoretical contribution by providing this additional validation of the work environment hypothesis, showing the interactional effects among its proposed risk factors. Yet, as a hostile climate did not strengthen the relationship between workload and exposure to bullying, this also provides some important nuances in this overarching proposition. In fact, and in line with previous studies, the results indicate that a high workload is a risk factor for exposure to bullying in normal social climates. Yet, high workload is not a risk factor when in an ambient hostile climate.

The strengthening effect of a hostile work climate in relation to role conflict may be explained in several ways. First of all, and in line with the work environment hypothesis, a hostile work climate may serve as an additional distal stressor, interacting negatively with other work-related stressors [74]. In departments where the interaction between colleagues is permeated by conflicts and aggression, employees are likely to have poorer social relations. Studies have shown that employees who lack social support from their colleagues tend to cope less effectively in response to stressful situations [75,76], making those who work in hostile climates more likely to experience their work-related stressors as demanding, taxing one's resources. In a study by Mawritz and colleagues [29], employees working in hostile climates had a tendency to cope with their environment by psychologically withdrawing, which is hampering the replenishment of resources. Such withdrawal

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may then cause employees to not intervene or make their voice heard when mistreatment and unfairness is taking place at work. Hence, it impoverishes the resource reservoirs of employees and groups. Subsequently, if bullying incidents go unchecked, there is a heightened risk of bullying behaviours becoming "normalized" [77]. In a department that lacks inhibiting norms against such behaviour, the threshold for frustration to turn into aggression and bullying behaviours may also be lowered, an assumption in line with the social information processing theory [47]. Along similar lines of reasoning, the concept of emotional contagion [78], described as the tendency to mimic the verbal and behavioural aspects of another person's emotional expression [79], may provide an additional explanation for why bullying behaviours can be a result of, and spread in, a hostile work climate [80], particularly when under the influence of other stressors. These kinds of tendencies have been documented, for instance in a study by Robinson and O'Leary-Kelly [30], who found that individuals' antisocial behaviours at work were shaped by the antisocial behaviour of their co-workers. More recent studies have also shown that if leaders act aggressively, this may have a strong impact on their employees' behaviours [74].

Finally, and contrary to our expectations, the present study results showed no significant strengthening effect of department-level hostile work climates on the relationship between workload and bullying behaviour. Hence, our hypothesis that the relationship between workload and exposure to bullying behaviours would be stronger among employees working in departments characterized by a pronounced hostile work climate was not supported. Still, the results clearly show that more exposure to bullying behaviours are reported in departments characterized by a hostile work climate, independent of the experienced workload. Further, and in contrast to our predictions, a positive relationship between workload and exposure to bullying behaviours was found among individuals in departments with a low hostile work climate. However, the analyses revealed that the random slope for the workload–bullying relationship was not significant, which suggests that the relationship between workload and bullying did not systematically differ across departments. This means that any interpretation of these results should be done with caution. Still, if we are to try and interpret these findings, it may be that in departments characterized by a pronounced hostile work climate, the environment is already so negative and stressful that whether the workload is high does not really matter. On the other hand, in departments with low levels of hostility, there is an increase in exposure to bullying behaviour among those who experience high workload, a finding that is in line with our second hypothesis.

If we further compare the two studied job demands, role conflict and workload, they are considered to be different kinds of stressors in the literature [42,81]. While role conflict is considered to be a hindrance demand or a "bad" stressor that inhibits an employee's ability to achieve valued goals, workload is termed by some as a challenge demand or a "good" stressor, with the potential to promote personal growth and achievement [82]. This distinction between the very nature of the studied stressors may be one explanation for why role conflict and workload seem to have somewhat different effects in a hostile work climate. Yet, these issues still need to be further investigated.

4.1. Practical Implications

We believe that the present study has several important practical implications for leaders and HR personnel working to prevent workplace bullying. Firstly, the results of the present study show that employees who report high levels of role conflict and workload are more prone to be exposed to bullying behaviour, regardless of whether they work in a department with a hostile climate or not. This stresses the importance of having well-organized working conditions, in order to reduce conflicting roles and to strive to make sure that employees have sufficient resources in periods of high workload.

Secondly, managers should pay close attention to the organizational climate. Although it is known that the organizational climate is a driving force in organizational behaviour [83], the present study sheds light on how a hostile work climate may serve as a catalyst in

a stressful environment, and together with other risk factors may increase the risk of bullying behaviours taking place. When it comes to shaping the organizational climate in a working group or department, this will to a great extent depend on the leadership style and supervisory practices, as leaders have the responsibility for the work environment and the power to influence and develop the organizational climate, through both their expectations and standards of behaviour [84,85]. The organizational climate is based on employees' perceptions of the policies, practices, and procedures as in a climate of conflict management, and the behaviours they observe being accepted, rewarded, and encouraged [83,86], as in the case of the hostile working climate in the present study. Hence, it is by shaping these aspects that the organizational climate can be changed.

A recent study by Dollard and Bailey [85] showed that the organizational climate, which in their case was a psychosocial safety climate (PSC) that has been shown to be a salient organisational level predictor of bullying, can be shaped through formal and structured interventions. Training middle management to enact PSC in work-units increased PSC within a 4-month period. A similar climate construct, the conflict management climate, has also been found to have a preventive effect on bullying at a team-level [48]. In a recent prospective study, Hamre and colleagues [87] showed that, by creating a strong conflict management climate in which employees perceive and trust that interpersonal problems are firmly and fairly managed, the escalation of new and existing bullying cases may be prevented. Finally, taking a multilevel approach by investigating the organizational climate at a group-level may also have practical implications, as intervention programs directed at the group-level are found to be more effective than those directed solely at the individual level [88,89].

4.2. Strengths and Limitations

As the present study employed a multilevel design, it aligns with the theoretical foundation of the concept of climate, defining organizational climate as organizational members' shared perceptions of the workplace [90]. Yet, the cross-sectional design with only one measuring point limits our conclusions regarding the direction of causality among the studied individual level variables. Being bullied may have worsened the employees' roles and work tasks, as well as their perceptions of the organizational climate. However, in a study by Skogstad and colleagues [69], both bullied and non-bullied employees reported a poor interpersonal work environment in their department. Additionally, employing a true prospective design, Reknes and colleagues [91] found role conflict to predict subsequent exposure to workplace bullying.

Two criteria should ideally be fulfilled for an organizational climate structure to be appropriately captured [83]. Statistical procedures should then be conducted to aggregate the data to the organizational level of analysis [92], as done in the present study. Yet, the wording of the items should also ideally represent the appropriate level of analysis to which individual perception data will be aggregated [93], which is not the case in the present study, as items in the scale were formulated: "How often have you been confronted with the following ... during the last six months?". Hence, the findings should be replicated with appropriate level items.

There was a high correlation between the outcome and the moderator at the department level. However, our main research question was not whether the bullying rates of departments are related to a hostile climate in those departments. Rather, we focused on whether a contextual group-level factor (a hostile climate) moderates the relationship between work demands and exposure to bullying at work at the individual level (see also Figures 1 and 2). Furthermore, the present study looks at a hostile climate only, and not a broad concept and measure of organisational climate. Hence, we look only at one characteristic of the prevailing organisational climate, which of course also may have other and even much more positive characteristics. Although our measure looks at the extent that the employees in the department are involved in either escalated interpersonal conflicts or being subjected to aggressive outlets from others, we lack detailed information on who

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or how many in the environment are behaving in an aggressive manner and who the opponents are in the perceived conflicts. There may be departments where there is mainly one aggressor, e.g., a manager who is misbehaving towards a range of subordinates, or one main escalated conflict involving many employees.

Further, scales on quantitative demands may be sensitive to the choice of specific items [94]. Kristensen and colleagues [94] argue that if items regarding fast work pace and tempo are included in a scale, several blue-collar jobs will be identified as high-demand jobs. While, on the other hand, items regarding long working hours and overtime will be more relevant for white-collar workers. As our sample consists of academics, hence mainly white-collar workers, it would have been interesting to include questions regarding working hours or whether they think they have time to finish their work tasks, to see whether this would affect the results. However, we did get significant results as hypothesized by using the workload scale in the present study, indicating that the items are not as irrelevant for our sample as argued by Kristensen and colleagues [94].

The present study findings also need further validation in other work contexts, as our sample only consists of employees in one Belgian university. Thus, the findings are not necessarily generalizable to all other occupational groups. Future studies should also include information on the number of perpetrators and the amount of social support received, as these variables were not included in the present dataset.

5. Conclusions

Given the scarcity of studies investigating the interaction of risk factors for bullying at different organizational levels, we believe the present study is important from the perspective of bullying prevention. Findings from the present study shed light on how work-related stressors interact with a hostile work climate in predicting exposure to bullying behaviours. Yet, our results also pinpoint that the role played by a hostile climate may vary between stressors, as a hostile climate played a more important role in relation to perceived role conflicts as compared to perceived high levels of workload.

Based on these results, we encourage both researchers and practitioners to continue to broaden their understanding of the antecedents of workplace bullying by considering the different organizational levels. We believe that this more complex and integrated approach to exploring workplace bullying sets a strong foundation for future research and encourages researchers to further investigate the critical role that the organizational climate can play in accelerating or preventing workplace bullying.

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ORIGINAL ARTICLE

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Daily interpersonal conflicts and daily exposure to bullying behaviors at work: The moderating roles of trait anger and trait anxiety

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Abstract

Building on the three-way model of workplace bullying and its underlying theories, this study investigates the role of trait anger and trait anxiety in the link between daily interpersonal conflicts and daily exposure to bullying behaviors. Using a quantitative diary study design, we approached 57 military naval cadets participating in a tall-ship voyage across the Atlantic, from Europe to North America, in 2017. They responded to a questionnaire on a daily basis over a period of 30 days—yielding 1428 measurement points. Prior to the voyage, participants also responded to a general questionnaire including measures of trait anger and trait anxiety. As hypothesized, multilevel analyses showed positive main effects of daily interpersonal conflicts on interpersonal conflicts the next day and exposure to bullying behaviors the same day. However, daily involvement in interpersonal conflicts did not predict exposure to bullying behaviors the next day. Moreover, and in support of the hypothesized moderating effects, trait anger (but not trait anxiety) interacted positively with daily interpersonal conflicts in the prediction of interpersonal conflicts the next day as well as

exposure to bullying behaviors the same day. The study suggests that interpersonal conflicts persist and have an immediate effect on exposure to bullying behaviors and that this is particularly the case for individuals high (vs. low) on trait anger. We discuss how these findings contribute to the three-way model of workplace bullying, as well as possible practical implications.

KEYWORDS

interpersonal conflicts, trait anger, trait anxiety, workplace bullying

INTRODUCTION

After nearly three decades of research on workplace bullying, it has become clear that there is no single factor explaining its occurrence. Rather, bullying seems to be caused by the interplay of antecedents on multiple levels and their intervening mechanisms (Nielsen & Einarsen, 2018). A comprehensive model for understanding the development of bullying is the three-way model of workplace bullying (Baillien et al., 2009), which is a process-oriented model describing the three main processes through which work-related factors may lead to workplace bullying. These processes originate from (a) dysfunctional team/organization characteristics; (b) frustrations, strains, and ineffective coping; or (c) interpersonal conflicts. These are three independent processes, with the latter being the focus of the present study. While the other two processes may involve a range of different antecedents and risk factor, the present study focus on the process where the focus is on one specific antecedent: Interpersonal conflict. Further, the model also integrates and highlights the potential intervening role that personal characteristics, like personality traits, may have in these three processes. The three-way model builds on several well-established theories in the bullying literature and is one of few theoretical approaches that explicitly integrates work environment factors with individual dispositions when explaining the development of workplace bullying.

Theoretically, it is well established that bullying by nature is a process, which develops and escalates over time (Einarsen, 2000; Einarsen et al., 2020). However, in the study of developmental pathways of workplace bullying, studies typically focus on either environmental or individual antecedents (Zapf & Einarsen, 2020). According to the three-way model and the work environment hypothesis (Leymann, 1996), claiming that bullying is a consequence of problems in the psychosocial work environment, workplace bullying may be triggered by what may otherwise seem as harmless interpersonal conflicts (Einarsen et al., 1994; Zapf & Gross, 2001). An interpersonal conflict can be defined as "a negative interpersonal encounter characterized by a contentious exchange, hostility or aggression" (Ilies et al., 2011, p. 46). Several recent studies have found support for such a relationship (e.g., Ågotnes et al., 2018; Baillien et al., 2016; Leon-Perez et al., 2015), and conflict escalation has been claimed to be a developmental pathway to workplace bullying (Baillien et al., 2009). Yet, few studies have looked at how this escalation actually occurs and the factors affecting the process on a day-to-day basis (see Ågotnes et al., 2021; Hoprekstad et al., 2019, as two of few exceptions). While previous

diary studies have found that prior victimization from workplace bullying moderates the relationship between daily exposure to bullying behaviors and subsequent depressed mood (Hoprekstad et al., 2019) and that laissez-faire leadership moderates the daily relationship between work pressure and bullying behaviors (Ågotnes et al., 2021), the aim of the present study is to investigate the potential role of personality dispositions in the day-to-day relationship between interpersonal conflicts and exposure to bullying behaviors. Due to the limited use of data intense repeated-measures designs, intraindividual variability in the development of workplace bullying remains an important, but relatively unexplored theoretical issue (Neall & Tuckey, 2014).

Hence, in order to fill this void, the first main contribution of the present study is to investigate the relationship between episodes of interpersonal conflicts and exposure to bullying behaviors on a day-to-day basis, by using data from a quantitative diary study among naval cadets on a sail ship voyage across 30 consecutive days. As interpersonal conflicts are assumed to potentially turn into bullying through a gradual escalation process (Baillien et al., 2009), this design offers an unique opportunity to test the initial phase of this potential escalation as it plays out day by day, in a context where it is reasonable to assume that conflicts and acts of bullying may occur. With the timeframe of 30 days, the present study does not measure hardcore bullying cases, but rather a potential increase in exposure to bullying behaviors from 1 day to the next. Experiencing interpersonal conflicts will normally vary on a daily basis, have a tendency to escalate and potentially escalate and trigger negative and bullying-related acts, situations which then over time may escalate into more full-blown cases of workplace bullying (Baillien et al., 2017). Although the three-way model describes the development toward both becoming a victim and a perpetrator of bullying, we chose to measure exposure to bullying behaviors in the present study. This is based on the studies timeframe, as bullying behaviors in the initial phase of a potential escalation are likely to be low frequent and potentially come from several sources.

In addition, the three-way model and trait activation theory (Tett & Burnett, 2003; Tett & Guterman, 2000) further propose that the way people react in conflict situations may influence the potential escalation or de-escalation (Baillien et al., 2009; Zapf & Einarsen, 2020). Personality dispositions, in our case trait anger and trait anxiety, are theoretically likely to influence how individuals react when facing interpersonal conflicts at work, and consequently influence the possible link between interpersonal conflicts and exposure to daily bullying behaviors. Personal dispositions related to negative affect, including neuroticism and its two main components of anger and anxiety, have been found to be the strongest and most consistent individual correlates of exposure to bullying in a meta-analysis conducted by Nielsen et al. (2017). Hence, based on the interpersonal conflict to bullying pathway, described in the three-way model and these theoretical and empirical notions, the second main contribution of the present study is to investigate the potential role of trait anger and trait anxiety, in the day-to-day momentary relationship between interpersonal conflicts and bullying behaviors. Whereas the personality of targets of workplace bullying has mainly been studied in order to explain why bullying may occur (Coyne et al., 2000; Glasø et al., 2007), there is still a lack of research regarding the potential moderating role of personality in the development from interpersonal conflict to workplace bullying. These aims follow recent developments in the field, in which scholars shift toward a greater focus on within-person designs (Neall & Tuckey, 2014; Spector & Pindek, 2016), as well as a call for a greater integration of work-related and situational factors on one hand and dispositional factors on the other, in the study of antecedents of workplace bullying (Nielsen & Einarsen, 2018).

THEORETICAL BACKGROUND

The three-way model of Baillien and De Witte (2009) was developed based on analyses of 87 real-life bullying cases and provides a comprehensive model of how workplace bullying develops. Accordingly, three main processes may contribute to the development of workplace bullying. These "tracks" or "pathways" were found to start with either (a) dysfunctional team/organization characteristics; (b) frustrations, strains, and ineffective coping; or (c) interpersonal conflicts. According to the model, any of these pathways may result in workplace bullying alone or in combination with each other. In the present study we choose to focus on the pathway claiming that conflicts may be the trigger of a pathway leading to workplace bullying. In the three-way model of bullying, interpersonal conflicts are of especial interest because they are the only time isolated (episodic) factor at work that may alone lead to workplace bullying. Further, the model postulates that individual characteristics may affect these processes, either by being the origin of the three processes or by affecting employees' reactions when facing stressors, such as interpersonal conflicts. However, Baillien et al. (2009) clearly state that the specific pathways within this model still need to be tested in quantitative studies, including tests of potential moderating effects of individual factors, like personality (Baillien et al., 2009). In the present study, we chose to focus on the initial phase of the pathway of interpersonal conflict, which is expected to lead to workplace bullying over time through conflict escalation. We propose that this effect will be facilitated by individual dispositions, in the form of trait anger and trait anxiety.

The bullying process

Theoretically, workplace bullying is not seen as an 'either-or' phenomenon, but rather a gradually evolving process where victims in early phases are subjected to indirect or discrete behaviors which may be difficult to pinpoint. However, in later phases more direct aggression may appear (Einarsen & Skogstad, 2000). Accordingly, Einarsen et al. (2020) state that "bullying is an escalating process in the course of which the person confronted ends up in an inferior position and becomes the target of systematic negative social acts" (p. 26). These "systematic negative social acts" include both work-related and person-related acts and are a core element in this definition. Accordingly, one may study bullying as (1) an end state of severe long-term exposure, (2) as a gradually escalating process, and (3) as a situation that plays out through perceptions of specific negative acts taking place on a daily basis (see also Ågotnes et al., 2021). To study bullying as an end state of severe long-term exposure, cross sectional surveys that include health status are often applied (e.g., Løvvik et al., 2021), while to capture bullying as an escalating process, where bullying episodes over time consolidates and becomes full-blown cases, are typically studies by using longitudinal surveys (e.g., Reknes et al., 2021). However, in the present study, the focus is on the latter aspect of bullying, as it investigates the immediate episodes when exposure to bullying-related negative acts are reported on a day-to-day basis. In this regard, the measurement used in the present study does neither take into consideration the prolonged nature of the exposure, nor the imbalance of power across days. Hence, the present study measures perceived daily exposure to typical bullying-related negative acts and how these acts are related to perceived interpersonal conflicts on a daily basis, as proposed by the three-way model.

The Prevention-escalation model of Van de Vliert (1984) describes in more detail both how conflicts arise and how their development are affected by conflict management. This model distinguishes between the background of the conflict, the theme of the conflict and the ways in which individuals handle the conflict. Van de Vliert (1984) further distinguishes between spontaneous and strategic conflict management, with spontaneous conflict management being automatic and unconscious reactions to conflict. Conflict management will cause the conflict to either de-escalate or escalate, which means that conflicts can quickly change expression and intensity (Van de Vliert, 1984). Conflict is thus to be regarded as a dynamic process in which perceptions, immediate reactions, and behaviors of one or more parties influence each other. Such a conceptualization strengthens our understanding of conflicts as events that can occur quickly and be fleeting, but at the same time have the potential to escalate and even turn into acts of bullying. The theoretical issue raised in the present study is to what degree this may happen in a shorter term and hence played out on a day-to-day basis.

Involvement in interpersonal conflicts with colleagues or superiors has been found to be one of the strongest predictors of subsequent reports of exposure to workplace bullying (Ågotnes et al., 2018; Baillien et al., 2016; Hauge et al., 2007). However, previous studies have often relied on cross-sectional or longitudinal between-person designs over a longer time period, which do not take into account the dynamic nature consistent with these constructs (Cole et al., 2016). As interpersonal conflicts and workplace bullying are dynamic constructs, the relationships between these variables may differ on a person-level, but also on the day-level (Kozlowski & Klein, 2000). In the present study, we will use a quantitative diary approach, so that we can capture the short-term dynamics of experiences within and between individuals in the work context (Ohly et al., 2010). In this way, we can test to what extent these relationships even play out on a day-to-day basis, as opposed to only being related over longer time periods and with a process where conflicts slowly escalate into bullying. Hence, we put forward the following hypotheses:

Hypothesis 1a. Daily involvement in interpersonal conflicts is positively related to interpersonal conflicts the next day.

Hypothesis 1b. Daily involvement in interpersonal conflicts is positively related to daily exposure to bullying behaviors, after controlling for bullying behaviors the previous day.

Hypothesis 1c. Daily involvement in interpersonal conflicts is positively related to exposure to bullying behaviors the next day, after controlling for exposure to bullying behaviors the same day.

The moderating role of trait anger and trait anxiety

According to the three-way model (Baillien et al., 2009), individual characteristics may influence how employees cope with existing frustration when being in interpersonal conflict, with the risk of escalating conflicts and eliciting bullying in ones' opponent. This is in line with conflict theory stressing that how disputes are managed by the focal parties plays a pivotal role in the escalation or de-escalation of conflicts (Van de Vliert, 1984). Thus, combining focus on

conflict and conflict management behavior is important when predicting subsequent acts of workplace bullying (Baillien et al., 2016). However, the three-way model does not specify the specific individual characteristics that may affect how one reacts to and manages interpersonal conflicts. In the present study, we chose to investigate two main components of neuroticism, trait anger and trait anxiety, as several studies indicate that target neuroticism is the most important personality trait when explaining exposure to bullying (Fernández-del-Río et al., 2021; Nielsen & Einarsen, 2018; Persson et al., 2009).

Neuroticism consists of six subfacets, which all have been related to workplace bullying (Persson et al., 2009). However, in a recent longitudinal study, the subfacets trait anger and trait anxiety were found to be related to the initial phase of workplace bullying escalation, yet in somewhat different ways (Reknes et al., 2021). More specifically, trait anger seemed to maintain the negative situation, by hindering a de-escalation of the process, but did not turn into a higher risk of escalation for those who were already exposed, while for trait anxiety it was the opposite. Hence, several scholars argue that these two traits should be studied separately and not collapsed into a broader neuroticism trait, as these subconcepts may act differently in relation to the bullying process (e.g., Kant et al., 2013; Reknes et al., 2021).

According to trait activation theory (Tett & Burnett, 2003), personality traits are evoked and triggered by relevant situational and social cues. More specifically, it considers traits as latent potentials to behave in specific ways, in response to trait-relevant situational cues. A situation is relevant to a trait to the degree it offers opportunity for that trait to be expressed (Tett et al., 2021). Because neuroticism is an affective trait (Costa & McCrae, 1980), employees with a high score on this trait are more susceptible to others' emotions (Doherty, 1997) and more likely to appraise stressful situations as threats (Gallagher, 1990), which may increase the likelihood that they will respond inappropriately in difficult social situations. In line with this, both trait anger and trait anxiety should be personality traits that potentially may strengthen the relationship between interpersonal conflicts and bullying behaviors, as they are likely to be activated in conflict situations and further influence the perceptions, behaviors, and social interactions of the parties involved in such situation, in our case focusing on the target.

Following trait activation theory (Tett & Burnett, 2003), anxiety will only appear in situations that the individual finds threatening (Judge & Zapata, 2015; Kenrick & Funder, 1988; Tett & Guterman, 2000). From an evolutionary perspective, being involved in conflicts may raise a basic fear of being socially excluded. This again may evoke feelings of uneasiness and anxiousness as a kind of early-on warning reaction, which may be particularly triggered in employees scoring high on trait anxiety. In parallel, employees high on trait anger should be particularly activated when perceiving to be unfairly and disrespectfully treated, which may make them react with spontaneous escalating conflict behavior (Van de Vliert, 1984). Consequently, this conflict behavior may frustrate and irritate the other part, potentially triggering aggressive and angry responses in return. When it comes to the other subfacets of neuroticism, such as shame, depression, and guilt, these may probably be more related to and activated later in the final stages of an ongoing victimization process, triggered by feelings of loss and sorrow (Reknes et al., 2021).

Further, trait anger and trait anxiety are closely related to the description of the role of targets in the Victim precipitation theory (Elias, 1986). Individuals with a high score on trait anger might respond to conflicts with fury or use forcing on the other part, which may provoke the other part and cause escalation. In contrast, individuals with a high score on trait anxiety

may rather use a yielding style or withdraw in such situations, which makes them come across as easy targets or as someone moaning and overacting to minor annoyances. Using conflict management styles like forcing or yielding, are both found to be associated with conflict escalation, as they may lead to a deterioration in the relationship between the parties (Behfar et al., 2008; Janssen & Van de Vliert, 1996). Although these management styles may satisfy one part in the short run, they still leave conflicts unresolved (Behfar et al., 2008; Janssen & Van de Vliert, 1996). Hence, for cadets high on trait anger and/or trait anxiety, the conflicts may stay unresolved and continue the next day. For individuals with high scores on these traits, there may also be perceptual mechanisms as they may overreact to obnoxious stimuli or merely perceive nonpolite behaviors as over the line aggression (Judge & Zapata, 2015; Kant et al., 2013; Kenrick & Funder, 1988). As a result, interpersonal conflicts may be related to exposure to bullying behaviors on a daily level due to one of these traits.

Still, only few studies have examined personality traits as moderators in the antecedents—bullying relationship (Rai & Agarwal, 2018) and, to the best of our knowledge, no study has investigated this in the interpersonal conflict—bullying relationship. However, in a study by Fox et al. (2001), some support was found for the enhancing effect of trait anger and trait anxiety in the conflict—counterproductive work behavior relationship. In addition, a recent study by Reknes et al. (2019) found that trait anger and trait anxiety strengthened the positive relationship between role conflict and reports of bullying behaviors, pointing out that workplace bullying seem to result from an interaction between situational and individual factors (Reknes et al., 2019). However, Reknes et al. (2019) also showed that trait anger and trait anxiety was only related to bullying when role stressors were present. Hence, personality may mainly trigger bullying episodes when other risk factors are present. The issue in the present study is whether this is also the case on a day-to-day basis, episode for episode, in the initial phase of a potential conflict—bullying escalation process. Thus, we propose:

Hypothesis 2a. The positive relationship between daily interpersonal conflicts and interpersonal conflicts the next day is stronger for cadets high (vs. low) on trait anger.

Hypothesis 2b. The positive relationship between daily interpersonal conflicts and interpersonal conflicts the next day is stronger for cadets high (vs. low) on trait anxiety.

Hypothesis 3a. The positive relationship between daily interpersonal conflicts and daily exposure to bullying behaviors is stronger for cadets high (vs. low) on trait anger.

Hypothesis 3b. The positive relationship between daily interpersonal conflicts and daily exposure to bullying behaviors is stronger for cadets high (vs. low) on trait anxiety.

Hypothesis 3c. The positive relationship between daily interpersonal conflicts and exposure to bullying behaviors the next day is stronger for cadets high (vs. low) on trait anger.

Hypothesis 3d. The positive relationship between daily interpersonal conflicts and exposure to bullying behaviors the next day is stronger for cadets high (vs. low) on trait anxiety.

METHOD

Procedure and participants

The sample consisted of 57 naval cadets from the Royal Norwegian Naval Academy, who took part in a 10-week training mission on board a tall ship, sailing from Northern Europe to North America. The cadets are officers undergoing further leader development training. Hence, they are in a training setting, yet fully employed by the Norwegian Armed Forces. The voyage is a part of the cadets' mandatory officer training and took place within the cadets first semester at the Royal Norwegian Naval Academy, in the autumn of 2017. During the first 30 days of the voyage, the cadets were requested to fill out a standardized questionnaire, with various questions about the work situation that day, including interpersonal conflicts and bullying behaviors. The cadets answered the daily questionnaires every day at the same time (5 pm). Two days before the voyage, the cadets also filled out a general questionnaire, containing questions regarding personality and other trait-like variables, including trait anger and trait anxiety. The sample comprised 50 male cadets (87.7%) and six female cadets (10.5%). One participant did not report gender (1.8%). The mean age of the cadets was 23 years ($SD = 2.6$). Among the 66 cadets who were invited to take part in the study, 57 cadets (86.4%) accepted the invitation and completed both the general questionnaire and daily questionnaires. These 57 cadets answered 83.5% of the daily questionnaires, yielding 1428 day-level observations (out of 1710 possible day-level observations; 57 cadets × 30 days). Prior to the mission, all the cadets chose to sign informed consent forms.

Measures

Trait anger and trait anxiety

Trait anger and trait anxiety were measured with the well-established State–Trait-Anger Expression Inventory (STAXI) and State–Trait-Anxiety Inventory (STAI) (Spielberger, 1983, 1988). Trait anger was measures with 12 items (e.g., "I get angry when I'm slowed down by others' mistakes," "I have a fiery temper"), whereas trait anxiety was measured using 20 items (e.g., "I feel nervous and restless," "I am inclined to take things hard"). These scales are translated and adapted versions previously applied by Kant et al. (2013). On both scales, responses were given on a 4-point scale from with response categories ranging from 1 (*almost never*) to 4 (*almost always*). The reliability for the two scales was $\omega = .75$ (trait anger) and $\omega = .86$ (trait anxiety), respectively.

Day-level exposure to bullying behavior

Bullying behavior was measured with five items adapted from the Negative Acts Questionnaire – Revised (NAQ-R; Einarsen et al., 2009). To fit the daily diary design, we changed the

timeframe reference provided in the questionnaire from the original "the last six months" to "today." Following Hoprekstad et al. (2019), the items we selected where the ones deemed likely to occur on a daily basis among the sample of cadets in this setting. Still, the five items cover the three different types of bullying behaviors that have been described for the NAQ-R (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 do not get along with," "Been shouted at or been the target of spontaneous anger" and "Had your opinions ignored." The participants rated their experiences on a scale ranging from 1 (*not at all*) to 5 (*to a very large extent*). Reliability of the daily measures was calculated using the approach described by Geldhof et al. (2014), by estimating omega (ω) at the within-person level using a two-level CFA. The scale had acceptable reliability ($\omega = .70$).

Day-level interpersonal conflict

Interpersonal conflict was measured using a 5-item checklist developed by Ilies et al. (2011). The measurement was especially developed to capture daily reports of interpersonal conflicts at work. An example item is "Over the past 24 hours I have been in an argument with another cadet, civilian crew or military staff about the execution of tasks," with response categories ranging from 1 (*has not happened*) to 4 (*three or more times*). The scale had acceptable reliability ($\omega = .70$).

Analyses

The repeated measurements made by the cadets, where the days are nested within persons, made it necessary to perform multilevel analyses on the data. We conducted the analysis using the software MLwiN 3.01. We have a two-level model with days at the first level (Level 1; $N = 1428$) and persons at the second level (Level 2; $N = 57$). To test our hypotheses, we ran two sets including three models predicting both our outcomes of interpersonal conflicts the next day and daily bullying behaviors. In the first set, we predicted interpersonal conflicts the next day. First, we tested a model where the intercept was included as the only predictor (Null Model). In the next model (Main effect Model), we included the explanatory variable (daily interpersonal conflict) and the moderator variables (trait anger and trait anxiety). In the third model (Interaction Model), the two-way interaction between the moderators and daily interpersonal conflict were included. In the second set, we predicted exposure to daily bullying behaviors the same day. Again, we first tested a model where the intercept was included as the only predictor (Null Model). In the next model (Main effect Model), we included the explanatory variable (daily interpersonal conflict), the moderator variables (trait anger and trait anxiety), and control variable (previous-day exposure to bullying behaviors). In the third model (Interaction Model), the two-way interaction between the moderators and interpersonal conflict were included. We compared the nested models using likelihood ratio tests, and computed pseudo R^2 at the day-level as the proportion of the residual day-level variance from the null model explained in the given model. In order to examine whether the slopes in the cross-level interactions were significantly different from zero, simple slope tests for hierarchal linear models were used (Preacher et al., 2006). The slopes for the predictors and moderators were tested at ± 1 SD, and calculations were based on the asymptotic covariance matrix from the respective multilevel

models using R version 3.4.3. In all multilevel models, we grand-mean centered our between-person predictors (trait anxiety and trait anger) and person-mean centered our day-level predictors (interpersonal conflicts and exposure to bullying behaviors) around each cadet's individual mean, so that the day-level coefficients would represent strictly within-person relationships (Wang & Maxwell, 2015).

RESULTS

Preanalysis and descriptive statistics

To establish whether the 2-day-level measures of interpersonal conflicts and bullying could be distinguished empirically, we used multilevel confirmatory factor analyses (MLCFA) in Mplus version 7.4. Two different measurement models where tested and evaluated against commonly used fit criteria (Hu & Bentler, 1999). In the first model, we tested daily interpersonal conflict and daily exposure to bullying as two separate factors using their respective observed indicators. The model revealed a marginally acceptable fit to the data (χ^2(df) = 421.80 (68), CFI = .89, RMSEA = .061), as the CFI is just below the recommended cut-off of .90 while the RMSEA is clearly below the recommended cut-off of .08. The fit specific to the within-level (SRMR^{within} = .058) and between-level (SRMR^{between} = .093) were acceptable and poor, respectively. Although the between-level SRMR is not acceptable, the within-level SRMR, which is the main level of analyses in this study, is acceptable. Second, we ran a one-factor model where all the observed indicators loaded on one factor. This model yielded poor to acceptable fit to the data (χ^2(df) = 730.31 (70), CFI = .79, RMSEA = .082). Hence, the model resulted in a deterioration of fit to the data when compared with the two-factor model ($\Delta\chi^2$(df) = 308.51 (2), $p < .001$) and poorer fit at the within-level (SRMR^{within} = .073) and the between level (SRMR^{between} = .103). In sum, multilevel confirmatory factor analyses indicate that daily interpersonal conflicts and daily exposure to bullying behaviors can be empirically distinguished, a finding in line with other recent empirical studies of the theoretical and empirical differences and similarities between conflicts and bullying at work (Baillien et al., 2017; Notelaers et al., 2018).

Means, standard deviations, and within- and between-level correlations for all study variables are presented in Table 1. Correlational analysis showed that at the within-level there was a significant positive relationship between daily levels of interpersonal conflict and daily levels of exposure to bullying behaviors ($r = .46$, $p < .001$). On the between-level, a strong positive

TABLE 1 Means, standard deviation, and intercorrelations for study variables ($N = 1710$ occasions, $N = 57$ respondents)

	$\overline{X}$	SD	1.	2.	3.	4.
1. Bullying behaviors	1.104	0.275	-	.46***		
2. Interpersonal conflict	1.083	0.219	.77***	-		
3. Trait anger	1.533	0.313	.32*	.34*	-	
4. Trait anxiety	1.680	0.319	.36**	.09	.24	-

Note: Person-level correlations are below the diagonal and day-level correlations above the diagonal.
*$p < .05$. **$p < .01$. ***$p < .001$.

correlation exists between interpersonal conflict and exposure to bullying behaviors ($r = .77$, $p < .001$). Further, trait anger was positively related to interpersonal conflict ($r = .34$, $p < .05$) and exposure to bullying behaviors ($r = .32$, $p < .05$). Trait anxiety was positively related to exposure to bullying behaviors ($r = .36$, $p < .01$), but not significantly related to trait anger or interpersonal conflict.

Multilevel analysis

Table 2 presents the results from the first set of multilevel analysis predicting interpersonal conflicts the next day. As shown in Table 2, the unpredicted null model showed that 83% of the total variance in daily interpersonal conflicts existed on the day-level (within-level), whereas 17% of the variance appeared at the person-level (between-level) of analysis. In Hypothesis 1a, we expected a positive relationship between interpersonal conflicts and interpersonal conflicts the next day. In support of Hypothesis 1a, there was a significant positive relationship between interpersonal conflict and interpersonal conflicts the next day ($B = .146$, $p < .001$) in the main effect model. Thus, cadets were more likely to experience interpersonal conflicts when they had experienced interpersonal conflicts the previous day. Compared with the null model, the main effect model fit the data better and reduced the unexplained day-level variance in interpersonal conflict the next day, pseudo $R^2 = .081$, $\chi^2(3) = 75.3$, $p < .001$. In Hypotheses 2a and 2b, we hypothesized that trait anger and trait anxiety would moderate the positive relationship between daily interpersonal conflicts and interpersonal conflicts the next day. In support of Hypothesis 2a, we found a significant interaction between trait anger and interpersonal conflict ($B = .155$, $p < .05$) in the interaction model. However, the interaction effect between trait anxiety and interpersonal conflict was not significant ($B = -.092$, n.s.). Hence, Hypothesis 2b was not supported. Adding the interaction terms between interpersonal conflict and trait anger and between interpersonal conflict and trait anxiety, respectively, reduced the unexplained day-level variance in interpersonal conflict the next day, pseudo $R^2 = .085$, $\Delta R^2 = .004$, although the interaction terms did not significantly improve model fit compared with the main effects model $\chi^2(2) = 5.47$, $p = .065$.

TABLE 2 Multilevel estimates for the prediction of interpersonal conflicts

	Null model		Main effect model		Interaction model	
	B	**SE**	**B**	**SE**	**B**	**SE**
Intercept	1.081***	.013	1.078***	.012	1.078***	.012
Interpersonal conflicts prescore			0.146***	.028	0.124***	.030
Trait anger			0.089*	.040	0.088*	.040
Trait anxiety			0.020	.039	0.020	.039
Trait anger × ICP					0.155*	.066
Trait anxiety × ICP					−0.092	.095
Variance level 1 (day-level)	0.040 (%) (83%)	.002	0.036	.001	0.036	.001
Variance level 2 (person-level)	0.008 (%) (17%)	.002	0.006	.002	0.006	.002
−2 Log likelihood	−453.11		−528.44		−533.91	

Note: ICP = interpersonal conflict previous day. N = 57 respondents, N = 1296 measurement occasions.
*p < .05. ***p < .001.

Additional analyses, however, showed that adding only the interpersonal conflict × trait anger interaction term reduced the unexplained day-level variance of interpersonal conflict the next day and significantly improved model fit compared with the main effects model, pseudo $R^2 = .084$, $\Delta R^2 = .003$, $\chi^2(1) = 4.54$, $p = .033$. The significant interaction between trait anger and daily interpersonal conflict is visualized in Figure 1. As seen in the figure, there is a stronger positive association between interpersonal conflict and interpersonal conflicts the next day among cadets with a higher level of trait anger, compared with cadets with a lower level of trait anger. Further, a formal test of the slopes at ± 1 SD of the moderator revealed a significant slope for those with a high level of trait anger (Slope $= .17$, $z = 5.56$, $p < .001$) but not for those with a low level of trait anger (Slope $= .076$, $z = 1.86$, n.s.).

Table 3 presents the results from the second set of multilevel analysis predicting exposure to bullying behaviors. As can be seen in Table 3, the unpredicted null model showed that 75% of the total variance in exposure to bullying behaviors existed on the day-level (within-level), while 25% of the variance appeared at the person-level (between-level) of analysis. This shows that most of the variance in bullying behaviors is accounted for by intraindividual variances across the 30 days, rather than by between person variances. In Hypothesis 1b, we hypothesized a positive association between daily interpersonal conflict and exposure to bullying behaviors the same day, after controlling for bullying behaviors the previous day. In support of Hypothesis 1b, there was a significant positive relationship between interpersonal conflict and daily exposure to bullying behaviors ($B = .548$, $p < .001$). Thus, on days the cadets experienced interpersonal conflict, they were more likely to report an increase in exposure to bullying behaviors compared with their previous day exposure. The main effect model showed a significantly better fit to the data and reduced the unexplained day-level variance in exposure to bullying behaviors compared with the null model, pseudo $R^2 = .294$, $\chi^2(4) = 441.98$, $p < .001$. In Hypotheses 3a and 3b, we hypothesized that trait anger (3a) and trait anxiety (3b) would moderate the positive relationship between daily interpersonal conflicts and exposure to bullying behaviors the same day. In support of Hypothesis 3a, we found a significant interaction between trait anger and interpersonal conflict ($B = .469$, $p < .001$) in the interaction model. However,
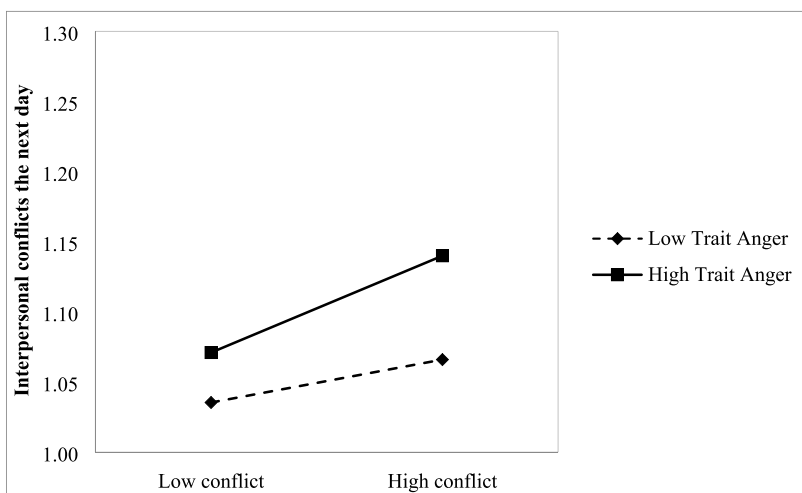
FIGURE 1 Plot of the interactive relationship of daily interpersonal conflicts and interpersonal conflicts the next day for cadets low vs. high on trait anger

TABLE 3 Multilevel estimates for the prediction of bullying behaviors

	Null model		Main effect model		Interaction model	
	B	**SE**	**B**	**SE**	**B**	**SE**
Intercept	1.107***	.020	1.103***	.018	1.103***	.018
Interpersonal conflict (IC)			0.548***	.030	0.464***	.032
Bullying behaviors prescore			0.188***	.024	0.181***	.024
Trait anger			0.117	.060	0.118*	.060
Trait anxiety			0.110	.059	0.109	.059
Trait anger × IC					0.469***	.070
Trait anxiety × IC					−0.074	.102
Variance level 1 (day-level)	0.057 (75%)	.002	0.040	.002	0.038	.002
Variance level 2 (person-level)	0.019 (25%)	.004	0.017	.004	0.017	.003
−2 Log likelihood	83.41		−358.57		−411.13	

Note: IC = interpersonal conflict. $N = 57$ respondents, $N = 1288$ measurement occasions.
*$p < .05$. ***$p < .001$.

the interaction effect between trait anxiety and interpersonal conflict was not significant ($B = -.074$, n.s.). Hence, Hypothesis 3b was not supported. The interaction model showed significantly better fit and reduced the unexplained day-level variance in exposure to bullying behaviors compared with the main effect model, pseudo $R^2 = .324$, $\Delta R^2 = .029$, $\chi^2(2) = 52.56$, $p < .001$. The significant interaction between trait anger and daily interpersonal conflict is visualized in Figure 2. As seen in the figure, there is a stronger positive association between interpersonal conflict and exposure to bullying behaviors on a day-to-day basis among cadets with a higher level of trait anger, compared with cadets with a lower level of trait anger. Despite these differences, a formal test of the slopes at ±1 SD of the moderator revealed significant slopes both for those with a high level of trait anger (Slope $= .61$, $z = 18.58$, $p < .001$) and for those with a low level of trait anger (Slope $= .32$, $z = 7.40$, $p < .001$).

Table 4 presents the results from the final multilevel analysis predicting exposure to bullying behaviors the next day. In Hypothesis 1c, we hypothesized a positive association between daily interpersonal conflicts and exposure to bullying behaviors the next day, after controlling for exposure to bullying behaviors the same day. As seen in the main effect model, the relationship between daily interpersonal conflicts and next day exposure to bulling behaviors was not significant ($B = -.028$, n.s.). Hence, Hypothesis 1c was not supported. In Hypotheses 3c and 3d, we hypothesized that trait anger and trait anxiety would moderate the positive relationship between daily interpersonal conflicts and exposure to bullying behaviors the next day. However, neither the interaction between trait anger and conflicts ($B = -.059$, n.s.) nor the interaction between trait anxiety ($B = .186$, n.s.), were significant. Hence, the results did not yield support to Hypotheses 3c and 3d.

DISCUSSION

The present study explored dynamics in conflict escalation and especially the relationship between daily interpersonal conflict and daily exposure to bullying behaviors, employing a
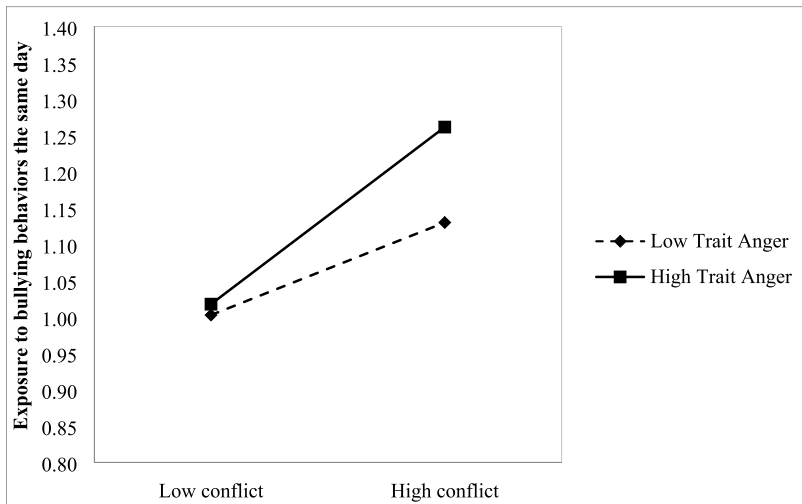
FIGURE 2 Plot of the interactive relationship of daily interpersonal conflicts and exposure to bullying behaviors the same day for cadets low vs. high on trait anger

TABLE 4 Multilevel estimates for the prediction of bullying behaviors the next day

	Null model		Main effect model		Interaction model	
	B	**SE**	**B**	**SE**	**B**	**SE**
Intercept	1.099***	.019	1.103***	.018	1.103***	.018
Interpersonal conflict (IC)			−0.028	.037	−0.034	.039
Bullying behaviors the same day			0.259***	.030	0.260***	.031
Trait anger			0.118	.061	0.118	.061
Trait anxiety			0.109	.060	0.109	.059
Trait anger × IC					−0.059	.080
Trait anxiety × IC					0.186	.114
Variance level 1 (day-level)	0.053 (75%)	.002	0.051	.002	0.051	.002
Variance level 2 (person-level)	0.018 (25%)	.004	0.016	.004	0.016	.004
−2 Log likelihood	−1.34		−60.10		−62.788	

Note: IC = interpersonal conflict. $N = 57$ respondents, $N = 1288$ measurement occasions.
***$p < .001$.

sample of cadets during a sail ship voyage. The results of multilevel analyses showed a positive main effect of daily interpersonal conflicts on interpersonal conflicts the next day, indicating an escalation or at least a continuation of conflict episodes from day to day. Further, daily interpersonal conflicts were related to exposure to bullying behaviors the same day. Hence, cadets who experienced interpersonal conflict at their shift tended to report an increase of exposure to bullying behaviors compared with the previous day. This finding is in support of the three-way model, as it states that workplace bullying can develop from interpersonal conflicts, by taking the "pathway" through conflict escalation (Baillien et al., 2009). In addition, it is in line with

the more general work environment hypothesis, stating that bullying is the result of stressors in the psychosocial working environment, such as interpersonal conflicts (Einarsen et al., 1994; Leymann, 1990; Skogstad et al., 2011). The present finding is also consistent with previous studies investigating this pathway by testing the relationship between interpersonal conflict and accumulated exposure to bullying behaviors over longer time periods (e.g., Ågotnes et al., 2018; Baillien et al., 2016; Leon-Perez et al., 2015). By employing a repeated-measures design and studying the relationship at the within-person level on a daily basis, we provide new insight into the daily dynamics between interpersonal conflict and exposure to bullying behaviors. Although we found that interpersonal conflicts persisted the next day, no lagged effects were found for exposure to bullying behaviors. This indicates that bullying episodes may sometimes happen much as immediate reactions "in the heat of the moment," in contrast to being a result of accumulated frustration from lasting interpersonal conflicts. However, the bullying research has mainly studied escalation, although bullying episodes also may de-escalate—and perhaps even in most cases do. This should at least be investigated further.

Furthermore, the present study is one of the first to empirically test the enhancing effect of trait anger and trait anxiety in the conflict—bullying relationship. The findings showed that daily interpersonal conflicts were a stronger predictor of interpersonal conflicts the next day and exposure to bullying behaviors the same day for cadets with a high (vs. low) score on trait anger. Hence, cadets who are high on trait anger tend to report that conflicts persist from day to day and experience more instances of exposure to bullying on days with conflicts, as compared with their comrades who score lower in this trait. This brings additional support to the three-way model, claiming that individual characteristics may influence how individuals react when facing interpersonal conflicts at work (Baillien et al., 2009). Having a high score on trait anger is likely to affect both appraisal and coping strategies, as this trait is associated with being more reactive to challenging situations (Pervin, 1993). Interestingly, this finding is consistent with what the Swedish researcher Thylefors claimed already in the 1980s based on interviews with targets, namely that it is those who react more strongly and active when in conflict situations that are at risk of becoming victims of bullying (Thylefors, 1987). Along similar lines, the victim precipitation theory (Elias, 1986) claims that some victims may experience bullying because some perpetrators may be provoked by them (Aquino & Lamertz, 2004; Olweus, 1978; Samnani & Singh, 2016). In contrast to those low in trait anger, individuals high in trait anger are likely to respond with fury to conflicts, which may aggravate the impact of daily interpersonal conflicts on new arguments and unpleasant interactions. Another possible explanation is that the negative response to interpersonal conflict is stronger among these employees due to their heightened reactivity, leading them to perceive the behaviors and responses of others as being more hostile (Spector et al., 2000).

In accordance with the present study, previous studies have demonstrated the enhancing effect of trait anger in similar yet cross-sectional studies (Fox et al., 2001; Ilie et al., 2012; Reknes et al., 2019). Still, although trait anger is claimed to be a provocation-sensitive trait (Bettencourt et al., 2006), both Reknes et al. (2019) and our findings indicate that trait anger mainly trigger bullying episodes when other risk factors are present. The present study showed that on days with low levels of conflict there is low occurrence of bullying behaviors, regardless of cadets' trait anger. Notably, on days with higher levels of interpersonal conflict, there is a significant increase in exposure to bullying behaviors among all cadets, although it is even stronger for those with high trait anger scores.

Contrary to our predictions, however, trait anxiety neither moderated the stability in interpersonal conflict levels from day to day nor the relationship between interpersonal conflict

and exposure to bullying behaviors the same day. This outcome is contrary to that of Fox et al. (2001) and Reknes et al. (2019), who found enhancing effects of trait anxiety in similar moderation analyses, yet employing cross-sectional survey data. This inconsistency may be due to the different temporality in these studies—there may be different mechanisms at work in the short versus long term. One possible explanation can be that trait anxiety plays a different role in the early phase of the conflict—bullying escalation process than in more escalated bullying scenarios—and that it is more over a longer time period that this trait may pose a risk factor either for being picked on as an "easy" target or as a risk factor for gloomy perceptions, which is the tendency to perceive the world in more negative terms. This further aligns with the prevention-escalation model, predicting that individuals with a high focus on avoidance will exhibit spontaneous de-escalating strategies in the form of avoiding or withdrawing from situations where loss and risk are prominent (Van de Vliert, 1984). Recent studies have found support for a positive association between trait anxiety and coping-related strategies such as avoidance- and escape behaviors (Fung et al., 2019; Sege et al., 2018). The same tendencies have been found among trait anxious children, which tend to display their distress externally by avoidant behaviors in situations they perceive as threatening (Barlow, 2004). Individuals high in trait anxiety might pull away from conflicts, which may act as de-escalating, at least for some time. However, although using a yielding conflict management style may be satisfactory in the short run, it is found to be related to conflict escalation as they still leave conflicts unresolved (Behfar et al., 2008; Janssen & Van de Vliert, 1996), hence supporting our speculation that trait anxiety will be a stronger risk factor over a longer time perspective. These different findings for trait anger and trait anxiety again call for some caution when looking at the broader bandwidth trait of neuroticism. As such, future studies should differentiate between these two traits, and maybe other similar narrow traits, at least in bullying research. This theoretical contribution aligns with the trait activation theory (Tett & Burnett, 2003), as well as several recent empirical studies (e.g., Kant et al., 2013; Reknes et al., 2021).

Taken together, our findings seem to support the three-way model (Baillien et al., 2009) and increase our knowledge of the daily dynamics between interpersonal conflicts and exposure to bullying behaviors. The results of the present study indicate that both the specific conflict episode and how one tends to perceive and respond to such an episode may interact when predicting exposure to bullying behaviors from the two perspectives.

Strengths and limitations

A strength of the present study is the use of a daily diary design. Diary methods are well suited and recommended for the short-term dynamics between variables and for identifying the points at which escalations in bullying processes occur, along with the work-related and personal factors that cause these changes (Neall & Tuckey, 2014; Spector & Pindek, 2016). Second, combining the study of interpersonal conflicts with personality traits as predictors of workplace bullying also adds to the bullying literature, as scholars in the field have requested that work environmental and individual factors should be combined when investigating antecedents of bullying (Nielsen & Einarsen, 2018). Approaching workplace bullying in this manner, by investigating different sets of variables from different levels may help to get a better understanding of the workplace bullying process and help identify the key moderating conditions across multiple levels (Rai & Agarwal, 2018; Samnani & Singh, 2016).

However, the study also has some limitations. First, our study relies on self-report single-source data and may therefore be subject to common method bias. Still, applying a general questionnaire followed by daily questionnaires over the course of 30 consecutive days, the temporal separation between measurements is likely to reduce the impact of this bias (Podsakoff et al., 2003). A diary approach also has the advantage that respondents report on experiences closer to the time at which they occurred, thereby minimizing recall biases and retrospective errors (Bolger et al., 2003). Second, as the cadets were confined to the same sail ship, with the same people for the entire diary study period, this fact and this context may have influenced the results. On the one hand, this context may be especially well suited to study the daily dynamics in interpersonal conflicts and exposure to bullying behaviors. Due to factors like disrupted or little sleep, potentially harsh weather conditions, and the fact that the cadets interact closely and daily over a long period of time, it is likely that conflicts will arise. On the other hand, to be admitted to the Royal Norwegian Naval Academy, the cadets need to have at least 1 year at Officer training School, which includes training in stress management, interaction, and leadership under pressure. Therefore, the cadet's prior training in coping with stress and their awareness of being in such a challenging condition may at the same time contribute to a greater focus on, and motivation for, dealing with emerging conflicts.

Because the focus in the present study is on episodes taking place in the initial phase of a potential interpersonal conflict—bullying escalation process—the survey was conducted in the cadet's first semester and during the first 30 days of the voyage. However, the cadets start at the Royal Norwegian Naval Academy about 2 months before the voyage. This may be a third potential limitation because it means that some interpersonal conflict between the cadets may have arisen already before starting the voyage. On the other hand, considering the length of a bullying process, we still believe that the episodes measured on the voyage can be considered as the initial phase of a potential interpersonal conflict—bullying escalation process. Furthermore, while this is in an intensive work context, the previous 2 months are in a school context, which may produce much less reasons for conflict to arise. Finally, the present study used a sample composed of very thoroughly selected cadets working in a 24-h military work setting. Moreover, the majority of the cadets were young males. Thus, our findings may not be generalizable to other occupational groups that are more gender and age balanced, which limits the generalizability of the results. Although the findings were in line with theoretically derived hypotheses, there is a need for further validation of our findings in other work contexts. However, when the day-to-day relationship between involvement in interpersonal conflicts and exposure to workplace bullying are found in this seemingly highly resilient sample, it is plausible that these relationships would be even stronger in more common, representative samples.

Practical implications

Based on the results of the present study, it seems clear that the presence of interpersonal conflicts in the workplace may provide a fertile ground for bullying to develop, as increased exposure to bullying behaviors is detected already at the same day. The findings suggest that managers and HR personnel should be aware that acts of bullying may show up in daily conflict episodes and potentially escalate if not managed early on. Hence, management interventions should aim to reduce interpersonal conflicts, for instance, by offering conflict management

training and having conflict management procedures in place. Yet, it is neither realistic nor desirable not to have conflicts at all at the workplace. Results of the present study also show that some employees, due to individual disposition, may be extra at risk in such situations. This information may first and foremost be relevant for those in counseling roles, such as health and safety representatives, who often counsel in such cases, as they may make the involved parties aware that their own responses and behavior also influence whether the conflict escalates or de-escalates. However, managers should handle all such cases in the same way, irrespectively of personality. Lastly, our findings show that even though trait anger may be a risk factor for conflict escalation and bullying, it is particularly so in the presence of interpersonal conflicts at work, which underlines the importance of continuously striving to create and uphold a strong conflict management climate, where conflicts are managed early and in a good and fair manner (Einarsen et al., 2018; Zahlquist et al., 2019). Furthermore, organizations always need to put in place policies and procedures in order to build up a solid organizational infrastructure to handle all individual complaints of bullying in a proper way (Einarsen et al., 2017). Written antibullying policies commonly include a definition of bullying, along with a statement that such behavior is unacceptable, information regarding roles and responsibilities of management and other parties, as well as complaint procedures (see also Einarsen & Hoel, 2008; Rayner & Lewis, 2020; Zapf & Vartia, 2020).

Conclusion

The present study sheds light on the role of time in the conflict–bullying relationship, by applying a daily diary design in a study among naval cadets. The findings support the well-established theoretical link between interpersonal conflicts and exposure to bullying behaviors, by demonstrating that this relationship occurs already in the initial phase of conflict escalation. Thus, the present study suggests that interpersonal conflicts have an immediate effect on exposure to bullying behaviors. In addition, the results show that the association between interpersonal conflict and exposure to bullying behaviors is stronger for those with a high score on trait anger, compared with those with a low score on this disposition. Yet, the risk is there for all. The study contributes to a greater theoretical understanding of the interaction of situational and individual antecedents in predicting bullying behaviors on a day-to-day basis. Hence, in order to ensure employee well-being and prevent workplace bullying, organizations should strive to manage conflicts in the initial phase of escalation, and at the same time be aware that some employees are at particular risk due to individual predispositions.

CONFLICT OF INTEREST
The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

ETHICS STATEMENT
This study was approved by the Norwegian Social Science Data Services/Norwegian Centre for Research Data. The cadets signed informed consent forms before the mission.

DATA AVAILABILITY STATEMENT
The dataset generated for this study is available on request. Any inquiries regarding the dataset can be addressed to Jørn Hetland (joern.hetland@uib.no).

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Doctoral Theses at The Faculty of Psychology, University of Bergen

1980	Allen, Hugh M., Dr. philos.	Parent-offspring interactions in willow grouse (Lagopus L. Lagopus).
1981	Myhrer, Trond, Dr. philos.	Behavioral Studies after selective disruption of hippocampal inputs in albino rats.
1982	Svebak, Sven, Dr. philos.	The significance of motivation for task-induced tonic physiological changes.
1983	Myhre, Grete, Dr. philos.	The Biopsychology of behavior in captive Willow ptarmigan.
	Eide, Rolf, Dr. philos.	PSYCHOSOCIAL FACTORS AND INDICES OF HEALTH RISKS. The relationship of psychosocial conditions to subjective complaints, arterial blood pressure, serum cholesterol, serum triglycerides and urinary catecholamines in middle aged populations in Western Norway.
	Værnes, Ragnar J., Dr. philos.	Neuropsychological effects of diving.
1984	Kolstad, Arnulf, Dr. philos.	Til diskusjonen om sammenhengen mellom sosiale forhold og psykiske strukturer. En epidemiologisk undersøkelse blant barn og unge.
	Løberg, Tor, Dr. philos.	Neuropsychological assessment in alcohol dependence.
1985	Hellesnes, Tore, Dr. philos.	Læring og problemløsning. En studie av den perseptuelle analysens betydning for verbal læring.
	Håland, Wenche, Dr. philos.	Psykoterapi: relasjon, utviklingsprosess og effekt.
1986	Hagtvet, Knut A., Dr. philos.	The construct of test anxiety: Conceptual and methodological issues.
	Jellestad, Finn K., Dr. philos.	Effects of neuron specific amygdala lesions on fear-motivated behavior in rats.
1987	Aarø, Leif E., Dr. philos.	Health behaviour and sosioeconomic Status. A survey among the adult population in Norway.
	Underlid, Kjell, Dr. philos.	Arbeidsløyse i psykososialt perspektiv.
	Laberg, Jon C., Dr. philos.	Expectancy and classical conditioning in alcoholics' craving.
	Vollmer, Fred, Dr. philos.	Essays on explanation in psychology.
	Ellertsen, Bjørn, Dr. philos.	Migraine and tension headache: Psychophysiology, personality and therapy.
1988	Kaufmann, Astrid, Dr. philos.	Antisosial atferd hos ungdom. En studie av psykologiske determinanter.

	Mykletun, Reidar J., Dr. philos.	Teacher stress: personality, work-load and health.
	Havik, Odd E., Dr. philos.	After the myocardial infarction: A medical and psychological study with special emphasis on perceived illness.
1989	Bråten, Stein, Dr. philos.	Menneskedyaden. En teoretisk tese om sinnets dialogiske natur med informasjons- og utviklingspsykologiske implikasjoner sammenholdt med utvalgte spedbarnsstudier.
	Wold, Bente, Dr. psychol.	Lifestyles and physical activity. A theoretical and empirical analysis of socialization among children and adolescents.
1990	Flaten, Magne A., Dr. psychol.	The role of habituation and learning in reflex modification.
1991	Alsaker, Françoise D., Dr. philos.	Global negative self-evaluations in early adolescence.
	Kraft, Pål, Dr. philos.	AIDS prevention in Norway. Empirical studies on diffusion of knowledge, public opinion, and sexual behaviour.
	Endresen, Inger M., Dr. philos.	Psychoimmuniological stress markers in working life.
	Faleide, Asbjørn O., Dr. philos.	Asthma and allergy in childhood. Psychosocial and psychotherapeutic problems.
1992	Dalen, Knut, Dr. philos.	Hemispheric asymmetry and the Dual-Task Paradigm: An experimental approach.
	Bø, Inge B., Dr. philos.	Ungdoms sosiale økologi. En undersøkelse av 14-16 åringers sosiale nettverk.
	Nivison, Mary E., Dr. philos.	The relationship between noise as an experimental and environmental stressor, physiological changes and psychological factors.
	Torgersen, Anne M., Dr. philos.	Genetic and environmental influence on temperamental behaviour. A longitudinal study of twins from infancy to adolescence.
1993	Larsen, Svein, Dr. philos.	Cultural background and problem drinking.
	Nordhus, Inger Hilde, Dr. philos.	Family caregiving. A community psychological study with special emphasis on clinical interventions.
	Thuen, Frode, Dr. psychol.	Accident-related behaviour among children and young adolescents: Prediction and prevention.
	Solheim, Ragnar, Dr. philos.	Spesifikke lærevansker. Diskrepanskriteriet anvendt i seleksjonsmetodikk.
	Johnsen, Bjørn Helge, Dr. psychol.	Brain assymetry and facial emotional expressions: Conditioning experiments.
1994	Tønnessen, Finn E., Dr. philos.	The etiology of Dyslexia.
	Kvale, Gerd, Dr. psychol.	Psychological factors in anticipatory nausea and vomiting in cancer chemotherapy.
	Asbjørnsen, Arve E., Dr. psychol.	Structural and dynamic factors in dichotic listening: An interactional model.

	Bru, Edvin, Dr. philos.	The role of psychological factors in neck, shoulder and low back pain among female hospitale staff.
	Braathen, Eli T., Dr. psychol.	Prediction of exellence and discontinuation in different types of sport: The significance of motivation and EMG.
	Johannessen, Birte F., Dr. philos.	Det flytende kjønnet. Om lederskap, politikk og identitet.
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	Bjaalid, Inger-Kristin, Dr. philos.	Component processes in word recognition.
	Martinsen, Øyvind, Dr. philos.	Cognitive style and insight.
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	Brun, Wibecke, Dr. philos.	Subjective conceptions of uncertainty and risk.
	Aas, Henrik N., Dr. psychol.	Alcohol expectancies and socialization: Adolescents learning to drink.
	Bjørkly, Stål, Dr. psychol.	Diagnosis and prediction of intra-institutional aggressive behaviour in psychotic patients
1996	Anderssen, Norman, Dr. psychol.	Physical activity of young people in a health perspective: Stability, change and social influences.
	Sandal, Gro Mjeldheim, Dr. psychol.	Coping in extreme environments: The role of personality.
	Strumse, Einar, Dr. philos.	The psychology of aesthetics: explaining visual preferences for agrarian landscapes in Western Norway.
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1997	Knivsberg, Ann-Mari, Dr. philos.	Behavioural abnormalities and childhood psychopathology: Urinary peptide patterns as a potential tool in diagnosis and remediation.
	Eide, Arne H., Dr. philos.	Adolescent drug use in Zimbabwe. Cultural orientation in a global-local perspective and use of psychoactive substances among secondary school students.
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2002 V	Ihlebæk, Camilla, Dr. philos.	Epidemiological studies of subjective health complaints.
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	Midthassel, Unni Vere, Dr. philos.	Teacher involvement in school development activity. A study of teachers in Norwegian compulsory schools
	Kallestad, Jan Helge, Dr. philos.	Teachers, schools and implementation of the Olweus Bullying Prevention Program.
H	Ofte, Sonja Helgesen, Dr. psychol.	Right-left discrimination in adults and children.
	Netland, Marit, Dr. psychol.	Exposure to political violence. The need to estimate our estimations.
	Diseth, Åge, Dr. psychol.	Approaches to learning: Validity and prediction of academic performance.
	Bjuland, Raymond, Dr. philos.	Problem solving in geometry. Reasoning processes of student teachers working in small groups: A dialogical approach.
2003 V	Arefjord, Kjersti, Dr. psychol.	After the myocardial infarction – the wives' view. Short- and long-term adjustment in wives of myocardial infarction patients.
	Ingjaldsson, Jón Þorvaldur, Dr. psychol.	Unconscious Processes and Vagal Activity in Alcohol Dependency.
	Holden, Børge, Dr. philos.	Følger av atferdsanalytiske forklaringer for atferdsanalysens tilnærming til utforming av behandling.
	Holsen, Ingrid, Dr. philos.	Depressed mood from adolescence to 'emerging adulthood'. Course and longitudinal influences of body image and parent-adolescent relationship.
	Hammar, Åsa Karin, Dr. psychol.	Major depression and cognitive dysfunction- An experimental study of the cognitive effort hypothesis.
	Sprugevica, Ieva, Dr. philos.	The impact of enabling skills on early reading acquisition.
	Gabrielsen, Egil, Dr. philos.	LESE FOR LIVET. Lesekompetansen i den norske voksenbefolkningen sett i lys av visjonen om en enhetsskole.
H	Hansen, Anita Lill, Dr. psychol.	The influence of heart rate variability in the regulation of attentional and memory processes.
	Dyregrov, Kari, Dr. philos.	The loss of child by suicide, SIDS, and accidents: Consequences, needs and provisions of help.
2004 V	Torsheim, Torbjørn, Dr. psychol.	Student role strain and subjective health complaints: Individual, contextual, and longitudinal perspectives.
	Haugland, Bente Storm Mowatt Dr. psychol.	Parental alcohol abuse. Family functioning and child adjustment.

	Milde, Anne Marita, Dr. psychol.	Ulcerative colitis and the role of stress. Animal studies of psychobiological factors in relationship to experimentally induced colitis.
	Stornes, Tor, Dr. philos.	Socio-moral behaviour in sport. An investigation of perceptions of sportspersonship in handball related to important factors of socio-moral influence.
	Mæhle, Magne, Dr. philos.	Re-inventing the child in family therapy: An investigation of the relevance and applicability of theory and research in child development for family therapy involving children.
	Kobbeltvedt, Therese, Dr. psychol.	Risk and feelings: A field approach.
2004 H	Thomsen, Tormod, Dr. psychol.	Localization of attention in the brain.
	Løberg, Else-Marie, Dr. psychol.	Functional laterality and attention modulation in schizophrenia: Effects of clinical variables.
	Kyrkjebø, Jane Mikkelsen, Dr. philos.	Learning to improve: Integrating continuous quality improvement learning into nursing education.
	Laumann, Karin, Dr. psychol.	Restorative and stress-reducing effects of natural environments: Experiencal, behavioural and cardiovascular indices.
	Holgersen, Helge, PhD	Mellom oss - Essay i relasjonell psykoanalyse.
2005 V	Hetland, Hilde, Dr. psychol.	Leading to the extraordinary? Antecedents and outcomes of transformational leadership.
	Iversen, Anette Christine, Dr. philos.	Social differences in health behaviour: the motivational role of perceived control and coping.
2005 H	Mathisen, Gro Ellen, PhD	Climates for creativity and innovation: Definitions, measurement, predictors and consequences.
	Sævi, Tone, Dr. philos.	Seeing disability pedagogically – The lived experience of disability in the pedagogical encounter.
	Wiium, Nora, PhD	Intrapersonal factors, family and school norms: combined and interactive influence on adolescent smoking behaviour.
	Kanagaratnam, Pushpa, PhD	Subjective and objective correlates of Posttraumatic Stress in immigrants/refugees exposed to political violence.
	Larsen, Torill M. B. , PhD	Evaluating principals` and teachers` implementation of Second Step. A case study of four Norwegian primary schools.
	Bancila, Delia, PhD	Psychosocial stress and distress among Romanian adolescents and adults.
2006 V	Hillestad, Torgeir Martin, Dr. philos.	Normalitet og avvik. Forutsetninger for et objektivt psykopatologisk avviksbegrep. En psykologisk, sosial, erkjennelsesteoretisk og teorihistorisk framstilling.
	Nordanger, Dag Øystein, Dr. psychol.	Psychosocial discourses and responses to political violence in post-war Tigray, Ethiopia.

	Rimol, Lars Morten, PhD	Behavioral and fMRI studies of auditory laterality and speech sound processing.
	Krumsvik, Rune Johan, Dr. philos.	ICT in the school. ICT-initiated school development in lower secondary school.
	Norman, Elisabeth, Dr. psychol.	Gut feelings and unconscious thought: An exploration of fringe consiousness in implicit cognition.
	Israel, K Pravin, Dr. psychol.	Parent involvement in the mental health care of children and adolescents. Emperical studies from clinical care setting.
	Glasø, Lars, PhD	Affects and emotional regulation in leader-subordinate relationships.
	Knutsen, Ketil, Dr. philos.	HISTORIER UNGDOM LEVER – En studie av hvordan ungdommer bruker historie for å gjøre livet meningsfullt.
	Matthiesen, Stig Berge, PhD	Bullying at work. Antecedents and outcomes.
2006 H	Gramstad, Arne, PhD	Neuropsychological assessment of cognitive and emotional functioning in patients with epilepsy.
	Bendixen, Mons, PhD	Antisocial behaviour in early adolescence: Methodological and substantive issues.
	Mrumbi, Khalifa Maulid, PhD	Parental illness and loss to HIV/AIDS as experienced by AIDS orphans aged between 12-17 years from Temeke District, Dar es Salaam, Tanzania: A study of the children's psychosocial health and coping responses.
	Hetland, Jørn, Dr. psychol.	The nature of subjective health complaints in adolescence: Dimensionality, stability, and psychosocial predictors
	Kakoko, Deodatus Conatus Vitalis, PhD	Voluntary HIV counselling and testing service uptake among primary school teachers in Mwanza, Tanzania: assessment of socio-demographic, psychosocial and socio-cognitive aspects
	Mykletun, Arnstein, Dr. psychol.	Mortality and work-related disability as long-term consequences of anxiety and depression: Historical cohort designs based on the HUNT-2 study
	Sivertsen, Børge, PhD	Insomnia in older adults. Consequences, assessment and treatment.
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	Janvin, Carmen Ani Cristea, PhD	Cognitive impairment in patients with Parkinson's disease: profiles and implications for prognosis
	Braarud, Hanne Cecilie, Dr.psychol.	Infant regulation of distress: A longitudinal study of transactions between mothers and infants
	Tveito, Torill Helene, PhD	Sick Leave and Subjective Health Complaints
	Magnussen, Liv Heide, PhD	Returning disability pensioners with back pain to work

	Thuen, Elin Marie, Dr.philos.	Learning environment, students' coping styles and emotional and behavioural problems. A study of Norwegian secondary school students.
	Solberg, Ole Asbjørn, PhD	Peacekeeping warriors – A longitudinal study of Norwegian peacekeepers in Kosovo
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	Svensen, Erling, PhD	WORK & HEALTH. Cognitive Activation Theory of Stress applied in an organisational setting.
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	Eichele, Tom, PhD	Electrophysiological and Hemodynamic Correlates of Expectancy in Target Processing
	Børhaug, Kjetil, Dr.philos.	Oppseding til demokrati. Ein studie av politisk oppseding i norsk skule.
	Eikeland, Thorleif, Dr.philos.	Om å vokse opp på barnehjem og på sykehus. En undersøkelse av barnehjemsbarns opplevelser på barnehjem sammenholdt med sanatoriebarns beskrivelse av langvarige sykehusopphold – og et forsøk på forklaring.
	Wadel, Carl Cato, Dr.philos.	Medarbeidersamhandling og medarbeiderledelse i en lagbasert organisasjon
	Vinje, Hege Forbech, PhD	Thriving despite adversity: Job engagement and self-care among community nurses
	Noort, Maurits van den, PhD	Working memory capacity and foreign language acquisition
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	Johnsen, Grethe E., PhD	Memory impairment in patients with posttraumatic stress disorder
	Sætrevik, Bjørn, PhD	Cognitive Control in Auditory Processing
	Carvalhosa, Susana Fonseca, PhD	Prevention of bullying in schools: an ecological model
2008 H	Brønnick, Kolbjørn Selvåg	Attentional dysfunction in dementia associated with Parkinson's disease.
	Posserud, Maj-Britt Rocio	Epidemiology of autism spectrum disorders
	Haug, Ellen	Multilevel correlates of physical activity in the school setting
	Skjerve, Arvid	Assessing mild dementia – a study of brief cognitive tests.

	Kjønniksen, Lise	The association between adolescent experiences in physical activity and leisure time physical activity in adulthood: a ten year longitudinal study
	Gundersen, Hilde	The effects of alcohol and expectancy on brain function
	Omvik, Siri	Insomnia – a night and day problem
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	Foss, Else	Den omsorgsfulle væremåte. En studie av voksnes væremåte i forhold til barn i barnehagen.
	Westrheim, Kariane	Education in a Political Context: A study of Konwledge Processes and Learning Sites in the PKK.
	Wehling, Eike	Cognitive and olfactory changes in aging
	Wangberg, Silje C.	Internet based interventions to support health behaviours: The role of self-efficacy.
	Nielsen, Morten B.	Methodological issues in research on workplace bullying. Operationalisations, measurements and samples.
	Sandu, Anca Larisa	MRI measures of brain volume and cortical complexity in clinical groups and during development.
	Guribye, Eugene	Refugees and mental health interventions
	Sørensen, Lin	Emotional problems in inattentive children – effects on cognitive control functions.
	Tjomsland, Hege E.	Health promotion with teachers. Evaluation of the Norwegian Network of Health Promoting Schools: Quantitative and qualitative analyses of predisposing, reinforcing and enabling conditions related to teacher participation and program sustainability.
	Helleve, Ingrid	Productive interactions in ICT supported communities of learners
2009 H	Skorpen, Aina Øye, Christine	Dagliglivet i en psykiatrisk institusjon: En analyse av miljøterapeutiske praksiser
	Andreassen, Cecilie Schou	WORKAHOLISM – Antecedents and Outcomes
	Stang, Ingun	Being in the same boat: An empowerment intervention in breast cancer self-help groups
	Sequeira, Sarah Dorothee Dos Santos	The effects of background noise on asymmetrical speech perception
	Kleiven, Jo, dr.philos.	The Lillehammer scales: Measuring common motives for vacation and leisure behavior
	Jónsdóttir, Guðrún	Dubito ergo sum? Ni jenter møter naturfaglig kunnskap.
	Hove, Oddbjørn	Mental health disorders in adults with intellectual disabilities - Methods of assessment and prevalence of mental health disorders and problem behaviour
	Wageningen, Heidi Karin van	The role of glutamate on brain function

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	Bjørkvik, Jofrid	God nok? Selvaktelse og interpersonlig fungering hos pasienter innen psykisk helsevern: Forholdet til diagnoser, symptomer og behandlingsutbytte
	Andersson, Martin	A study of attention control in children and elderly using a forced-attention dichotic listening paradigm
	Almås, Aslaug Grov	Teachers in the Digital Network Society: Visions and Realities. A study of teachers' experiences with the use of ICT in teaching and learning.
	Ulvik, Marit	Lærerutdanning som danning? Tre stemmer i diskusjonen
2010 V	Skår, Randi	Læringsprosesser i sykepleieres profesjonsutøvelse. En studie av sykepleieres læringserfaringer.
	Roald, Knut	Kvalitetsvurdering som organisasjonslæring mellom skole og skoleeigar
	Lunde, Linn-Heidi	Chronic pain in older adults. Consequences, assessment and treatment.
	Danielsen, Anne Grete	Perceived psychosocial support, students' self-reported academic initiative and perceived life satisfaction
	Hysing, Mari	Mental health in children with chronic illness
	Olsen, Olav Kjellevold	Are good leaders moral leaders? The relationship between effective military operational leadership and morals
	Riese, Hanne	Friendship and learning. Entrepreneurship education through mini-enterprises.
	Holthe, Asle	Evaluating the implementation of the Norwegian guidelines for healthy school meals: A case study involving three secondary schools
H	Hauge, Lars Johan	Environmental antecedents of workplace bullying: A multi-design approach
	Bjørkelo, Brita	Whistleblowing at work: Antecedents and consequences
	Reme, Silje Endresen	Common Complaints – Common Cure? Psychiatric comorbidity and predictors of treatment outcome in low back pain and irritable bowel syndrome
	Helland, Wenche Andersen	Communication difficulties in children identified with psychiatric problems
	Beneventi, Harald	Neuronal correlates of working memory in dyslexia
	Thygesen, Elin	Subjective health and coping in care-dependent old persons living at home
	Aanes, Mette Marthinussen	Poor social relationships as a threat to belongingness needs. Interpersonal stress and subjective health complaints: Mediating and moderating factors.
	Anker, Morten Gustav	Client directed outcome informed couple therapy

	Bull, Torill	Combining employment and child care: The subjective well-being of single women in Scandinavia and in Southern Europe
	Viig, Nina Grieg	Tilrettelegging for læreres deltakelse i helsefremmende arbeid. En kvalitativ og kvantitativ analyse av sammenhengen mellom organisatoriske forhold og læreres deltakelse i utvikling og implementering av Europeisk Nettverk av Helsefremmende Skoler i Norge
	Wolff, Katharina	To know or not to know? Attitudes towards receiving genetic information among patients and the general public.
	Ogden, Terje, dr.philos.	Familiebasert behandling av alvorlige atferdsproblemer blant barn og ungdom. Evaluering og implementering av evidensbaserte behandlingsprogrammer i Norge.
	Solberg, Mona Elin	Self-reported bullying and victimisation at school: Prevalence, overlap and psychosocial adjustment.
2011 V	Bye, Hege Høivik	Self-presentation in job interviews. Individual and cultural differences in applicant self-presentation during job interviews and hiring managers' evaluation
	Notelaers, Guy	Workplace bullying. A risk control perspective.
	Moltu, Christian	Being a therapist in difficult therapeutic impasses. A hermeneutic phenomenological analysis of skilled psychotherapists' experiences, needs, and strategies in difficult therapies ending well.
	Myrseth, Helga	Pathological Gambling - Treatment and Personality Factors
	Schanche, Elisabeth	From self-criticism to self-compassion. An empirical investigation of hypothesized change prosesses in the Affect Phobia Treatment Model of short-term dynamic psychotherapy for patients with Cluster C personality disorders.
	Våpenstad, Eystein Victor, dr.philos.	Det tempererte nærvær. En teoretisk undersøkelse av psykoterapautens subjektivitet i psykoanalyse og psykoanalytisk psykoterapi.
	Haukebø, Kristin	Cognitive, behavioral and neural correlates of dental and intra-oral injection phobia. Results from one treatment and one fMRI study of randomized, controlled design.
	Harris, Anette	Adaptation and health in extreme and isolated environments. From 78°N to 75°S.
	Bjørknes, Ragnhild	Parent Management Training-Oregon Model: intervention effects on maternal practice and child behavior in ethnic minority families
	Mamen, Asgeir	Aspects of using physical training in patients with substance dependence and additional mental distress
	Espevik, Roar	Expert teams: Do shared mental models of team members make a difference
	Haara, Frode Olav	Unveiling teachers' reasons for choosing practical activities in mathematics teaching

2011 H	Hauge, Hans Abraham	How can employee empowerment be made conducive to both employee health and organisation performance? An empirical investigation of a tailor-made approach to organisation learning in a municipal public service organisation.
	Melkevik, Ole Rogstad	Screen-based sedentary behaviours: pastimes for the poor, inactive and overweight? A cross-national survey of children and adolescents in 39 countries.
	Vøllestad, Jon	Mindfulness-based treatment for anxiety disorders. A quantitative review of the evidence, results from a randomized controlled trial, and a qualitative exploration of patient experiences.
	Tolo, Astrid	Hvordan blir lærerkompetanse konstruert? En kvalitativ studie av PPU-studenters kunnskapsutvikling.
	Saus, Evelyn-Rose	Training effectiveness: Situation awareness training in simulators
	Nordgreen, Tine	Internet-based self-help for social anxiety disorder and panic disorder. Factors associated with effect and use of self-help.
	Munkvold, Linda Helen	Oppositional Defiant Disorder: Informant discrepancies, gender differences, co-occuring mental health problems and neurocognitive function.
	Christiansen, Øivin	Når barn plasseres utenfor hjemmet: beslutninger, forløp og relasjoner. Under barnevernets (ved)tak.
	Brunborg, Geir Scott	Conditionability and Reinforcement Sensitivity in Gambling Behaviour
	Hystad, Sigurd William	Measuring Psychological Resiliency: Validation of an Adapted Norwegian Hardiness Scale
2012 V	Roness, Dag	Hvorfor bli lærer? Motivasjon for utdanning og utøving.
	Fjermestad, Krister Westlye	The therapeutic alliance in cognitive behavioural therapy for youth anxiety disorders
	Jenssen, Eirik Sørnes	Tilpasset opplæring i norsk skole: politikeres, skoleledefes og læreres handlingsvalg
	Saksvik-Lehouillier, Ingvild	Shift work tolerance and adaptation to shift work among offshore workers and nurses
	Johansen, Venke Frederike	Når det intime blir offentlig. Om kvinners åpenhet om brystkreft og om markedsføring av brystkreftsaken.
	Herheim, Rune	Pupils collaborating in pairs at a computer in mathematics learning: investigating verbal communication patterns and qualities
	Vie, Tina Løkke	Cognitive appraisal, emotions and subjective health complaints among victims of workplace bullying: A stress-theoretical approach
	Jones, Lise Øen	Effects of reading skills, spelling skills and accompanying efficacy beliefs on participation in education. A study in Norwegian prisons.

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	Horverak, Jøri Gytre	Sense or sensibility in hiring processes. Interviewee and interviewer characteristics as antecedents of immigrant applicants' employment probabilities. An experimental approach.
	Jøsendal, Ola	Development and evaluation of BE smokeFREE, a school-based smoking prevention program
	Osnes, Berge	Temporal and Posterior Frontal Involvement in Auditory Speech Perception
	Drageset, Sigrunn	Psychological distress, coping and social support in the diagnostic and preoperative phase of breast cancer
	Aasland, Merethe Schanke	Destructive leadership: Conceptualization, measurement, prevalence and outcomes
	Bakibinga, Pauline	The experience of job engagement and self-care among Ugandan nurses and midwives
	Skogen, Jens Christoffer	Foetal and early origins of old age health. Linkage between birth records and the old age cohort of the Hordaland Health Study (HUSK)
	Leversen, Ingrid	Adolescents' leisure activity participation and their life satisfaction: The role of demographic characteristics and psychological processes
	Hanss, Daniel	Explaining sustainable consumption: Findings from cross-sectional and intervention approaches
	Rød, Per Arne	Barn i klem mellom foreldrekonflikter og samfunnsmessig beskyttelse
2013 V	Mentzoni, Rune Aune	Structural Characteristics in Gambling
	Knudsen, Ann Kristin	Long-term sickness absence and disability pension award as consequences of common mental disorders. Epidemiological studies using a population-based health survey and official ill health benefit registries.
	Strand, Mari	Emotional information processing in recurrent MDD
	Veseth, Marius	Recovery in bipolar disorder. A reflexive-collaborative exploration of the lived experiences of healing and growth when battling a severe mental illness
	Mæland, Silje	Sick leave for patients with severe subjective health complaints. Challenges in general practice.
	Mjaaland, Thera	At the frontiers of change? Women and girls' pursuit of education in north-western Tigray, Ethiopia
	Odéen, Magnus	Coping at work. The role of knowledge and coping expectancies in health and sick leave.
	Hynninen, Kia Minna Johanna	Anxiety, depression and sleep disturbance in chronic obstructive pulmonary disease (COPD). Associations, prevalence and effect of psychological treatment.
	Flo, Elisabeth	Sleep and health in shift working nurses

	Aasen, Elin Margrethe	From paternalism to patient participation? The older patients undergoing hemodialysis, their next of kin and the nurses: a discursive perspective on perception of patient participation in dialysis units
	Ekornås, Belinda	Emotional and Behavioural Problems in Children: Self-perception, peer relationships, and motor abilities
	Corbin, J. Hope	North-South Partnerships for Health: Key Factors for Partnership Success from the Perspective of the KIWAKKUKI
	Birkeland, Marianne Skogbrott	Development of global self-esteem: The transition from adolescence to adulthood
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	Hovland, Anders	Panic disorder – Treatment outcomes and psychophysiological concomitants
	Mortensen, Øystein	The transition to parenthood – Couple relationships put to the test
	Årdal, Guro	Major Depressive Disorder – a Ten Year Follow-up Study. Inhibition, Information Processing and Health Related Quality of Life
	Johansen, Rino Bandlitz	The impact of military identity on performance in the Norwegian armed forces
	Bøe, Tormod	Socioeconomic Status and Mental Health in Children and Adolescents
2014 V	Nordmo, Ivar	Gjennom nåløyet – studenters læringserfaringer i psykologutdanningen
	Dovran, Anders	Childhood Trauma and Mental Health Problems in Adult Life
	Hegelstad, Wenche ten Velden	Early Detection and Intervention in Psychosis: A Long-Term Perspective
	Urheim, Ragnar	Forståelse av pasientaggresjon og forklaringer på nedgang i voldsrate ved Regional sikkerhetsavdeling, Sandviken sykehus
	Kinn, Liv Grethe	Round-Trips to Work. Qualitative studies of how persons with severe mental illness experience work integration.
	Rød, Anne Marie Kinn	Consequences of social defeat stress for behaviour and sleep. Short-term and long-term assessments in rats.
	Nygård, Merethe	Schizophrenia – Cognitive Function, Brain Abnormalities, and Cannabis Use
	Tjora, Tore	Smoking from adolescence through adulthood: the role of family, friends, depression and socioeconomic status. Predictors of smoking from age 13 to 30 in the "The Norwegian Longitudinal Health Behaviour Study" (NLHB)
	Vangsnes, Vigdis	The Dramaturgy and Didactics of Computer Gaming. A Study of a Medium in the Educational Context of Kindergartens.

	Nordahl, Kristin Berg	Early Father-Child Interaction in a Father-Friendly Context: Gender Differences, Child Outcomes, and Protective Factors related to Fathers' Parenting Behaviors with One-year-olds
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	Skotheim, Siv	Maternal emotional distress and early mother-infant interaction: Psychological, social and nutritional contributions
	Halleland, Helene Barone	Executive Functioning in adult Attention Deficit Hyperactivity Disorder (ADHD). From basic mechanisms to functional outcome.
	Halvorsen, Kirsti Vindal	Partnerskap i lærerutdanning, sett fra et økologisk perspektiv
	Solbue, Vibeke	Dialogen som visker ut kategorier. En studie av hvilke erfaringer innvandrerungdommer og norskfødte med innvandrerforeldre har med videregående skole. Hva forteller ungdommenes erfaringer om videregående skoles håndtering av etniske ulikheter?
	Kvalevaag, Anne Lise	Fathers' mental health and child development. The predictive value of fathers' psychological distress during pregnancy for the social, emotional and behavioural development of their children
	Sandal, Ann Karin	Ungdom og utdanningsval. Om elevar sine opplevingar av val og overgangsprosessar.
	Haug, Thomas	Predictors and moderators of treatment outcome from high- and low-intensity cognitive behavioral therapy for anxiety disorders. Association between patient and process factors, and the outcome from guided self-help, stepped care, and face-to-face cognitive behavioral therapy.
	Sjølie, Hege	Experiences of Members of a Crisis Resolution Home Treatment Team. Personal history, professional role and emotional support in a CRHT team.
	Falkenberg, Liv Eggset	Neuronal underpinnings of healthy and dysfunctional cognitive control
	Mrdalj, Jelena	The early life condition. Importance for sleep, circadian rhythmicity, behaviour and response to later life challenges
	Hesjedal, Elisabeth	Tverrprofesjonelt samarbeid mellom skule og barnevern: Kva kan støtte utsette barn og unge?
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	Rønsen, Anne Kristin	Vurdering som profesjonskompetanse. Refleksjonsbasert utvikling av læreres kompetanse i formativ vurdering

	Hoff, Helge Andreas	Thinking about Symptoms of Psychopathy in Norway: Content Validation of the Comprehensive Assessment of Psychopathic Personality (CAPP) Model in a Norwegian Setting
	Schmid, Marit Therese	Executive Functioning in recurrent- and first episode Major Depressive Disorder. Longitudinal studies
	Sand, Liv	Body Image Distortion and Eating Disturbances in Children and Adolescents
	Matanda, Dennis Juma	Child physical growth and care practices in Kenya: Evidence from Demographic and Health Surveys
	Amugsi, Dickson Abanimi	Child care practices, resources for care, and nutritional outcomes in Ghana: Findings from Demographic and Health Surveys
	Jakobsen, Hilde	The good beating: Social norms supporting men's partner violence in Tanzania
	Sagoe, Dominic	Nonmedical anabolic-androgenic steroid use: Prevalence, attitudes, and social perception
	Eide, Helene Marie Kjærgård	Narrating the relationship between leadership and learning outcomes. A study of public narratives in the Norwegian educational sector.
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	Røykenes, Kari	Testangst hos sykepleierstudenter: «Alternativ behandling»
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	Løvvik, Camilla Margrethe Sigvaldsen	Common mental disorders and work participation – the role of return-to-work expectations
	Lehmann, Stine	Mental Disorders in Foster Children: A Study of Prevalence, Comorbidity, and Risk Factors
	Knapstad, Marit	Psychological factors in long-term sickness absence: the role of shame and social support. Epidemiological studies based on the Health Assets Project.
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	Sælør, Knut Tore	Hinderløyper, halmstrå og hengende snører. En kvalitativ studie av håp innenfor psykisk helse- og rusfeltet.
	Mellingen, Sonja	Alkoholbruk, partilfredshet og samlivsstatus. Før, inn i, og etter svangerskapet – korrelater eller konsekvenser?
	Thun, Eirunn	Shift work: negative consequences and protective factors

	Hilt, Line Torbjørnsen	The borderlands of educational inclusion. Analyses of inclusion and exclusion processes for minority language students
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	Slåtten, Hilde	Gay-related name-calling among young adolescents. Exploring the importance of the context.
	Ree, Eline	Staying at work. The role of expectancies and beliefs in health and workplace interventions.
	Morken, Frøydis	Reading and writing processing in dyslexia
2016 H	Løvoll, Helga Synnevåg	Inside the outdoor experience. On the distinction between pleasant and interesting feelings and their implication in the motivational process.
	Hjeltnes, Aslak	Facing social fears: An investigation of mindfulness-based stress reduction for young adults with social anxiety disorder
	Øyeflaten, Irene Larsen	Long-term sick leave and work rehabilitation. Prognostic factors for return to work.
	Henriksen, Roger Ekeberg	Social relationships, stress and infection risk in mother and child
	Johnsen, Iren	«Only a friend» - The bereavement process of young adults who have lost a friend to a traumatic death. A mixed methods study.
	Helle, Siri	Cannabis use in non-affective psychoses: Relationship to age at onset, cognitive functioning and social cognition
	Glambek, Mats	Workplace bullying and expulsion in working life. A representative study addressing prospective associations and explanatory conditions.
	Oanes, Camilla Jensen	Tilbakemelding i terapi. På hvilke måter opplever terapeuter at tilbakemeldingsprosedyrer kan virke inn på terapeutiske praksiser?
	Reknes, Iselin	Exposure to workplace bullying among nurses: Health outcomes and individual coping
	Chimhutu, Victor	Results-Based Financing (RBF) in the health sector of a low-income country. From agenda setting to implementation: The case of Tanzania
	Ness, Ingunn Johanne	The Room of Opportunity. Understanding how knowledge and ideas are constructed in multidisciplinary groups working with developing innovative ideas.
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	Berthelsen, Mona	Effects of shift work and psychological and social work factors on mental distress. Studies of onshore/offshore workers and nurses in Norway.
	Krane, Vibeke	Lærer-elev-relasjoner, elevers psykiske helse og frafall i videregående skole – en eksplorerende studie om samarbeid og den store betydningen av de små ting
	Søvik, Margaret Ljosnes	Evaluating the implementation of the Empowering Coaching™ program in Norway
	Tonheim, Milfrid	A troublesome transition: Social reintegration of girl soldiers returning 'home'
	Senneseth, Mette	Improving social network support for partners facing spousal cancer while caring for minors. A randomized controlled trial.
	Urke, Helga Bjørnøy	Child health and child care of very young children in Bolivia, Colombia and Peru.
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	Blågestad, Tone Fidje	Less pain – better sleep and mood? Interrelatedness of pain, sleep and mood in total hip arthroplasty patients
	Kronstad, Morten	Frå skulebenk til deadlines. Korleis nettjournalistar og journaliststudentar lærer, og korleis dei utviklar journalistfagleg kunnskap
	Vedaa, Øystein	Shift work: The importance of sufficient time for rest between shifts.
	Steine, Iris Mulders	Predictors of symptoms outcomes among adult survivors of sexual abuse: The role of abuse characteristics, cumulative childhood maltreatment, genetic variants, and perceived social support.
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	Egelandsdal, Kjetil	Clickers and Formative Feedback at University Lectures. Exploring students and teachers' reception and use of feedback from clicker interventions.
	Torjussen, Lars Petter Storm	Foreningen av visdom og veltalenhet – utkast til en universitetsdidaktikk gjennom en kritikk og videreføring av Skjervheims pedagogiske filosofi på bakgrunn av Arendt og Foucault. *Eller hvorfor menneskelivet er mer som å spille fløyte enn å bygge et hus.*
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	Barua, Padmaja	Unequal Interdependencies: Exploring Power and Agency in Domestic Work Relations in Contemporary India
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	Vik, Alexandra	Imaging the Aging Brain: From Morphometry to Functional Connectivity
	Krossbakken, Elfrid	Personal and Contextual Factors Influencing Gaming Behaviour. Risk Factors and Prevention of Video Game Addiction.
	Solholm, Roar	Foreldrenes status og rolle i familie- og nærmiljøbaserte intervensjoner for barn med atferdsvansker
	Baldomir, Andrea Margarita	Children at Risk and Mothering Networks in Buenos Aires, Argentina: Analyses of Socialization and Law-Abiding Practices in Public Early Childhood Intervention.
	Samuelsson, Martin Per	Education for Deliberative Democracy. Theoretical assumptions and classroom practices.
	Visted, Endre	Emotion regulation difficulties. The role in onset, maintenance and recurrence of major depressive disorder.
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	Sveinsdottir, Vigdis	Supported Employment and preventing Early Disability (SEED)
	Dwyer, Gerard Eric	New approaches to the use of magnetic resonance spectroscopy for investigating the pathophysiology of auditory-verbal hallucinations
	Synnevåg, Ellen Strøm	Planning for Public Health. Balancing top-down and bottom-up approaches in Norwegian municipalities.
	Kvinge, Øystein Røsseland	Presentation in teacher education. A study of student teachers' transformation and representation of subject content using semiotic technology.
	Thorsen, Anders Lillevik	The emotional brain in obsessive-compulsive disorder
	Eldal, Kari	Sikkerheitsnettet som tek imot om eg fell – men som også kan fange meg. Korleis erfarer menneske med psykiske lidingar ei innlegging i psykisk helsevern? Eit samarbeidsbasert forskingsprosjekt mellom forskarar og brukarar.

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	Sæverot, Ane Malene	Bilde og pedagogikk. En empirisk undersøkelse av ungdoms fortellinger om bilder.
	Carlsen, Siv-Elin Leirvåg	Opioid maintenance treatment and social aspects of quality of life for first-time enrolled patients. A quantitative study.
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	Anda-Ågotnes, Liss Gøril	Cognitive change in psychosis
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	Hagen, Susanne	«Helse i alt kommunen gjør? ...» - *en undersøkelse av samvariasjoner mellom kommunale faktorer og norske kommuners bruk av folkehelsekoordinator, fokus på levekår og prioritering av fordelingshensyn blant sosioøkonomiske grupper.*
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	Potrebny, Thomas	Temporal trends in psychological distress and healthcare utilization among young people
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	Marquardt, Lynn Anne	tDCS as treatment in neuro-psychiatric disorders. The underlying neuronal mechanisms of tDCS treatment of auditory verbal hallucinations.

	Sunde, Erlend	Effects of light interventions for adaptation to night work: Simulated night work experiments
	Kusztrits, Isabella	About psychotic-like experiences and auditory verbal hallucinations. Transdiagnostic investigations of neurobiological, cognitive, and emotional aspects of a continuous phenomenon.
	Halvorsen, Øyvind Wiik	Aktørskap hjå norsklærarar i vidaregåande skule – Ein sosiokulturell intervjustudie
	Fyhn, Tonje	Barriers and facilitators to increasing work participation among people with moderate to severe mental illness
	Marti, Andrea Rørvik	Shift work, circadian rhythms, and the brain. Identifying biological mechanisms underlying the metabolic and cognitive consequences of work timing, using a rat model.
	Thomassen, Ådne Gabriel	Hardiness and mental health in military organizations. Exploring mechanism and boundary conditions.
	Husabø, Elisabeth Bakke	Implementation of indicated anxiety prevention in schools
	Hagatun, Kari	The Educational Situation for Roma Pupils in Norway. Silenced Narratives on Schooling and Future.
	Herrero-Arias, Raquel	Negotiating parenting culture, identity, and belonging. The experiences of Southern European parents raising their children in Norway.
	Moltudal, Synnøve	Purposeful Actions in Leadership of Learning Processes: A Mixed Methods Study of Classroom Management in Digital Learning Environments
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	Eilertsen, Silje Elisabeth Hasmo	Who profits from concentrated exposure treatment for obsessive-compulsive disorder (OCD)? A quality assurance project from the OCD-team in Bergen.
	Chegeni, Razieh	Anabolic-Androgenic Steroids and Aggression in Humans: Experimental Studies, Subgroups, and Longitudinal Risk
	Solstad, Stig Magne	Patients' experiences with routine outcome monitoring and clinical feedback systems in psychotherapy
	Oldeide, Olin Blaalid	Local drug prevention - From policy to practice: A qualitative case study of policy makers, outreach social workers and at-risk youths
	Steinkopf, Per Heine	«Being the Instrument of Change» Staff Experiences in Developing Trauma-informed Practice in a Norwegian Child Welfare Residential Care Unit.
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	Fekete, Orsolya Réka	Clubhouse Members' Experiences of Being in Recovery in Light of Salutogenesis
	Madsø, Kristine Gustavsen	Momentary well-being in dementia: Observational assessment of psychosocial interventions and music therapy
	Olaniyan, Oyeniyi Samuel	Embracing both sides of the same coin. Work-related psychosocial risks and resources among child welfare workers.
	Harris, Samantha Marie	Mental health encounters between general practitioners and individuals with a refugee background - Help seeking and provision in the resettlement context
	Larsen, Marit Hjellset	Service support and quality of life for youth in foster care
	Vik, Berit Marie Dykesteen dr.philos.	Effects of Music Training on Cortical Plasticity: Cognitive Rehabilitation of Patients with Traumatic Brain Injury
	Abamosa, Juhar Yasin	Pathways to Social Inclusion: The Role of Institutions in the Social Inclusion of Refugees into Higher Education in Norway. Policies and practices in focus.
	Raudeberg, Rune	Improving the Methodology for Assessing Cognitive Impairment in People with Schizophrenia Spectrum Disorders
	Ågotnes, Kari Wik	Work-related risk factors for workplace bullying. The moderating effect of laissez-faire leadership.
	Stokkebekk, Jan Kristian	Navigating Prolonged Conflict: Subject positions and meaning constructions in postdivorce families
	Valle, Roald	Skoleledelse og utdanningspolitikk. Hvordan beskrives skoleledelse etter 1990?
	Woodfin, Vivian Irena	Self-Compassion and Perfectionism
	Aarestad, Sarah Helene	Treating the aftermath of exposure to workplace bullying and preventing exclusion from working life. The effect of individual resilience, return to work self-efficacy and work-focused metacognitive and cognitive treatment.
	Ampim, Gloria Abena	Transforming gender relations? Men's involvement in care for their partners and households at the time of pregnancy in rural and urban Ghana – A qualitative study
2022 H	Liset, Randi	Light exposure and stress in pregnancy: Effects of blue-blocking glasses on sleep, mood and melatonin
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	Kahlon, Smiti	Virtual Reality Exposure Therapy for Adolescents with Public Speaking Anxiety
	Gregersen, Thea Johansen	Climate change perceptions across Europe. From climate change beliefs to climate change mitigation behaviors.

	Lenvik, Astrid Knutsdatter	Gifted Education in Norway. A mixed-methods study with teachers and students in Norwegian comprehensive school.
	Hoprekstad, Øystein Løvik	Exposure and reactions to workplace bullying: The role of prior victimization from bullying
	Hyllengren, Ulf Peder	Operational leadership. Relationship with swift trust, moral stress, and adaptability.
	Kolberg, Eirin	The effect of bright light on rest-activity rhythms and behavioural and psychological symptoms of dementia
	Døli, Hedda Ruth	Aphasia after stroke, from admission to one-year post-stroke. Lesion location, lesion size, and self-reported symptoms of anxiety and depression.
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	Bertelsen, Thomas Bjerregaard	Multifamily Group Cognitive Behavioral Therapy for Child and Adolescent Anxiety Disorders. An investigation into the effectiveness and role of family accommodation and parental early life maltreatment.
	Beresniewicz, Justyna	Structural and functional large-scale brain network dynamics: Examples from mental disorders
	Tahir, Hajra	We Want it That Way: The Acculturation of Muslims in Multicultural and Pluralistic Societies from Minority and Majority Group Perspectives
	Klykken, Fride Haram	The teaching apparatus. Understanding the material entanglement of practices in the upper secondary classroom.
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	Jensen, Monica	Problematisk og skadelig seksuell atferd blant barn. Begreper, karakteristika og vurdering i norsk kontekst.
	Brea Larios, Dixie Janice	Coping strategies for mental health problems among refugee groups in Norway
	Engebø, Jonny	Harm reducing and preventative regulation. Implemented by authorities or gamblers.
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Childhood maltreatment, sleep, and mental health in children and adolescents

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