



## What we know, what we do not know, and what we should and could have known about workplace bullying: An overview of the literature and agenda for future research



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### ABSTRACT

Over the last three decades, the scientific and social interest in workplace bullying has accelerated and our understanding of this pervasive and detrimental social problem has advanced considerably in a relatively short amount of time. Workplace bullying is now a phenomenon of global interest, new topics are steadily emerging within the field, and the methodological quality of the studies has become more sophisticated. Building on findings from the ever increasing number of systematic reviews and meta-analyses in this field, the aim of this literature overview was two-folded. In the first part, the aim was to provide a basic overview of what we already know with regard to the nature and content of the bullying phenomenon, its risk-factors and causes, its consequences, and its potential measures and interventions. In the second part, the aim was to address what we do not know and to put forward an agenda for future research within the field. Here, six major knowledge challenges are discussed: a) construct clarification, b) the need for theoretical models, c) causality, d) bullying as a process, e) mediators and moderators, and f) intervention and rehabilitation of victims, perpetrators, and work environments.

In the course of only a few decades, workplace bullying has moved from a being a taboo subject in organizational life and a non-existent topic in the scientific literature to becoming a well-established and highly recognized social stressor in both research and in legislation (Samnani & Singh, 2012). While the bullying phenomenon was described as early as the mid-1970s in Carroll M. Brodsky's (1976) seminal book "The harassed worker", the first peer reviewed scientific paper that explicitly referred to the concept of workplace bullying was an article in Norwegian language appearing as late as 1989 (Matthiesen, Raknes, & Røkkum, 1989). The first English language article in an international peer reviewed journal was published in 1990 (Leymann, 1990b). Thereafter, only a handful of articles were published up until the mid-1990s. From the late-1990s there has been a tremendous increase in research on workplace bullying with the number of studies particularly accelerating after 2005. A meta-analysis of the prevalence rates of workplace bullying which incorporated 91 studies published up until 2009, revealed that 81.3% of the included studies were published in the period 2000–2008 (Nielsen, Matthiesen, & Einarsen, 2010). Similarly, in a meta-analysis from 2012 which comprised 54 studies on the individual level outcomes of workplace bullying, 13% of the

included studies were published before the year 2000, whereas 87% were published in the period 2000–2011 (Nielsen & Einarsen, 2012).

Following the increased interest in the phenomenon, the methodological quality of studies has improved and research designs have steadily become more sophisticated through the increased use of prospective research designs, multilevel studies, and meta-analyses. In addition, studies on workplace bullying now emerge from countries all over the world. Being remarkably consistent with regard to findings, studies show that bullying takes place on a global basis with similar features and outcomes (Escartin, Zapf, Arrieta, & Rodriguez-Carballeira, 2011; Power et al., 2013; Van de Vliert, Einarsen, & Nielsen, 2013).

As a consequence, our knowledge about workplace bullying has advanced considerably over a relatively short time-span. Building mainly on findings from existing meta-analyses and systematic reviews (see Table 1 for an overview), we will, in this "overview of reviews", provide a basic summary of existing research on workplace bullying. In doing so we will discuss the nature and concept of workplace bullying, and then turn to the main topics investigated so far. As displayed in Table 1, the majority of existing reviews has focused on the outcomes of

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**Table 1**  
An overview of meta-analyses and systematic reviews on workplace bullying.

| Authors and year   | Title   | Journal   | Design                              | Topic                            |
|--|---|---|-------------------------------------|----------------------------------|
| Rai and Agarwal (2018)   | A review of literature on mediators and moderators of workplace bullying: Agenda for future research  | Management Research Review                            | Systematic review                   | Mediators and moderators         |
| Escartin (2016)  | Insights into workplace bullying: psychosocial drivers and effective interventions  | Psychology Research and Behavior Management           | Systematic review                   | Interventions                    |
| Gillen, Sinclair, Kernohan, Begley, and Luyben (2017)                | Interventions for prevention of bullying in the workplace   | Cochrane Database of Systematic Reviews               | Systematic review                   | Interventions                    |
| Hershcovis (2011)  | “Incivility, social undermining, bullying ... oh my!”: A call to reconcile constructs within workplace aggression research  | Journal of Organizational Behavior                    | Meta-analysis                       | Conceptualizations and outcomes  |
| Hodgins, MacCurtain, and Mannix-McNamara (2014)                      | Workplace bullying and the association with suicidal ideation/thoughts and behaviour: a systematic review   | International Journal of Workplace Health Management  | Systematic review                   | Interventions                    |
| Leach, Poyser, and Butterworth (2017)                                | Workplace bullying: A systematic review of risk factors and outcomes  | Occupational and Environmental Medicine               | Systematic review                   | Outcomes                         |
| Moayed, Daraiseh, Shell, and Salem (2006)                            | Workplace bullying: A methodological review of research on the antecedents and consequences of workplace harassment   | Theoretical Issues in Ergonomics Science              | Systematic review                   | Antecedents and outcomes         |
| Neall and Tuckey (2014)  | Outcomes of workplace bullying: A meta-analytic review  | Journal of Occupational and Organizational Psychology | Systematic review                   | Research methods                 |
| Nielsen and Einarsen (2012)  | Exposure to workplace harassment and the Five Factor Model of personality: A meta-analysis  | Work & Stress   | Meta-analysis                       | Outcomes                         |
| Nielsen, Glasø, and Einarsen (2017)                                  | Workplace bullying and sickness absence – A systematic review and meta-analysis of the research literature  | Personality and Individual Differences                | Meta-analysis                       | Antecedents                      |
| Nielsen, Indregard, and Øverland (2016)                              | Workplace bullying and subsequent health problems   | Scandinavian Journal of Work Environment & Health     | Systematic review and meta-analysis | Outcomes                         |
| Nielsen, Magerøy, Gjerstad, and Einarsen (2014)                      | The impact of methodological moderators on prevalence rates of workplace bullying.  | The Journal for the Norwegian Medical Association     | Meta-analysis                       | Outcomes                         |
| Nielsen et al. (2010)  | A meta-analysis   | Journal of Occupational and Organizational Psychology | Meta-analysis                       | Prevalence and research methods  |
| Nielsen, Tangen, Idsoe, Marthiesen, and Magerøy (2015)               | Post-traumatic stress disorder as a consequence of bullying at work and at school. A literature review and meta-analysis  | Aggression and Violent Behavior                       | Review and meta-analysis            | Outcomes                         |
| Theorell et al. (2015)   | A systematic review including meta-analysis of work environment and depressive symptoms   | BMC Public Health                                     | Review and meta-analysis            | Outcomes                         |
| Van den Brande, Baillien, De Witte, Vander Elst, and Godderis (2016) | The role of work stressors, coping strategies and coping resources in the process of workplace bullying: A systematic review and development of a comprehensive model | Aggression and Violent Behavior                       | Systematic review                   | Antecedents and coping resources |
| Verkuil, Atasayi, and Molendijk (2015)                               | Workplace Bullying and Mental Health: A Meta-Analysis on Cross-Sectional and Longitudinal Data  | Plos One  | Meta-analysis                       | Outcomes                         |
| Xu et al. (2018)   | Workplace bullying and violence as risk factors for type 2 diabetes: a multicohort study and meta-analysis  | Diabetologia  | Meta-analysis                       | Outcomes                         |

bullying. However, there are also some studies reviewing antecedents and predictors of bullying, methodological aspects, and the effectiveness of interventions. Hence, in this overview, we will first and foremost focus on antecedents, risk factors, outcomes, and interventions. Further, we will describe the methods used, and the limitations, shortages, and knowledge gaps of existing research. We will thereafter propose six key knowledge challenges within the field that may serve as an agenda for future research on workplace bullying. This is a narrative review where the aim is to highlight the main findings on workplace bullying rather than providing a systematic critical assessment of the research field. Hence, this paper provides a state-of-the-art overview of the current knowledge base and draws together the key threads from this body of research to highlight important gaps and set directions for the future.

## 1. What we know about workplace bullying

### 1.1. Conceptualization – and confusion

In the scientific literature, exposure to psychological aggression at the workplace has been conceptualized with a variety of labels such as abusive supervision (Tepper, 2007), incivility (Cortina, Magley, Williams, & Langhout, 2001), bullying/mobbing (Einarsen, Hoel, Zapf, & Cooper, 2011), harassment (Nielsen, Glasø, & Einarsen, 2017), victimization (Aquino & Thau, 2009), interpersonal deviance (Berry, Ones, & Sackett, 2007), emotional abuse (Keashly, 1998), ostracism (Williams, 2007), and social undermining (Duffy, Ganster, & Pagon, 2002). As all these phenomena can be considered as sub-facets of psychological aggression it has been questioned whether this proliferation of constructs is adding appreciably to our knowledge, or whether it is constraining the questions we ask (Hershcovis, 2011). Whereas some argue that the plethora of constructs has led to a confusing state of affairs in which many scholars are studying virtually identical forms of mistreatment of subordinates and fellow workers, but with different terminology (Hershcovis, 2011; Raver & Barling, 2007; Spector & Fox, 2005), others argue that most of the construct labels capture important meaningful theoretical differences (Tepper & Henle, 2011).

In line with the latter perspective, the definitional characteristics of workplace bullying clearly highlights bullying as a unique, and especially detrimental, form of aggression at the workplace. Some forms of workplace aggression, such as incivility and social undermining, is defined as deviant, but low in intensity and happening infrequently and occasionally, typically involving behavior with ambiguous intent to harm the target. Workplace bullying, however, is defined as situations where an employee repeatedly and over a prolonged time period is exposed to harassing behavior from one or more colleagues (including subordinates and leaders) and where the targeted person is unable to defend him-/herself against this systematic mistreatment (Einarsen, 2005; Einarsen et al., 2011). Consequently, workplace bullying is not about single episodes of conflict or harassment at the workplace, but rather a form of persistent abuse where the exposed employee is submissive to the perpetrator (Einarsen, 1999, 2000). From a legal and applied perspective, one must also exclude interactions and interpersonal conflicts that inevitably and predictably occur at workplaces, and that are within the framework of the work contract or a legal and regulated framework of health and dignity at work.

From a scientific perspective, this definition suggests that there are three main characteristics of workplace bullying. First, an employee becomes the target of systematic negative and unwanted social behaviors in the workplace. Secondly, the exposure occurs over a long time-period. Thirdly, the target experiences that he or she cannot easily escape the situation, nor stop the unwanted treatment (Olweus, 1991, 1993). Conceptually, it is the persistency, the systematic nature, and the feeling of being trapped and victimized by the harassment, which distinguishes bullying from other forms of aggression and mistreatment in the workplace. Intentionality on behalf of the perpetrator is however

not considered as a definitional aspect of workplace bullying, neither from a legal nor from a psychological perspective. Nielsen, Hoel, Zapf, and Einarsen (2016, pp. 206–207) present three arguments for why intent should not be considered in research on bullying. First, it is difficult to prove intent, and in some cases it may be that the target attributes intent to the perpetrator which may not correspond with the alleged perpetrator's perception of the situation. Second, unskilled social behavior might harm somebody even if there was no intent to harm. Finally, intent is difficult to measure and often obscure to the actor at the time of the said action. Illustrating this latter point, most studies on aggression and related concepts utilize measures presenting the respondents with a lists of experienced or enacted negative behaviors and assess the frequency of the behaviors (e.g., Einarsen, Hoel, & Notelaers, 2009; Escartin, Monzani, Leong, & Rodriguez-Carballeira, 2017; Ferris, Brown, Berry, & Lian, 2008). Explicit reference to intention usually does not take place.

### 1.2. Assessing workplace bullying - research methods and designs

While the qualitative interview approach has been employed in research on workplace bullying since the early 1990s (e.g., Baillien, Neyens, De Witte, & De Cuyper, 2009; Groeblichhoff & Becker, 1996; Strandmark & Hallberg, 2007), the vast majority of studies has relied on quantitative methods and especially cross-sectional self-report questionnaire survey designs in non-probability (i.e., convenience) samples (Neill & Tuckey, 2014; Nielsen et al., 2010; Nielsen & Einarsen, 2012). With a few notable exceptions, most studies have investigated bullying from the perspective of targeted employees rather than from the perspectives of the perpetrators (Baillien, Rodriguez-Munoz, Van den Broeck, & De Witte, 2011; Balducci, Cecchin, & Fraccaroli, 2012; Glasø, Nielsen, & Einarsen, 2009; Hauge, Skogstad, & Einarsen, 2009) or observers (Emdad, Alipour, Hagberg, & Jensen, 2012; Nielsen & Einarsen, 2013; Persson et al., 2009). A more objective method in line with judicial principles, called Investigation, has also been developed (Hoel & Einarsen, 2011). Using this method, evidence is collected from both target and alleged perpetrator, as well as from witnesses. While this approach may have high face validity, the method has so far mainly been used in applied settings and has therefore not been subject to scientific evaluation.

In most scientific studies that have examined targets or victims, exposure to bullying have been assessed with (a) the respondents' overall feeling of being victimized by bullying (the self-labeling method), (b) the respondents' perception of being exposed to a range of specific bullying behavior (the behavioral experience method), (c) or a combination of the two methods (Nielsen, Notelaers, & Einarsen, 2011). When utilizing the self-labeling approach, participants are asked a single-item question about whether or not they have been bullied. In some studies, respondents are presented with a theoretical definition of bullying prior of being asked whether or not they, using the definition as a basis, would characterize their experiences in the workplace over a given period of time as exposure to bullying. In other studies, the question on exposure to bullying has been asked without a preceding definition. In contrast to the self-labeling methods, the "behavioral experience method" measures exposure to specific bullying behaviors by presenting respondents with an inventory that includes various types of behavior that may be named bullying if they occur repeatedly. The respondents are then asked to report how frequently they have experienced the different behaviors within a given time period. While a range of different behavioral experience inventories exist, such as the Leymann Inventory of Psychological Terror (LIPT; Leymann, 1990a) and the Workplace Aggression Research Questionnaire (Harvey & Keashly, 2003), the Negative Acts Questionnaire (NAQ; Einarsen et al., 2009; Notelaers, Van der Heijden, Hoel, & Einarsen, 2018) has been utilized in more than 50% of all published studies and is by far the most frequently used measurement inventory in research on workplace bullying (Nielsen et al., 2010; Nielsen & Einarsen, 2012).

### 1.3. Workplace bullying by numbers – prevalence rates

Based on meta-analysis of prevalence rates, it has been estimated that about 15% of employees on a global basis are exposed to some level of workplace bullying (Nielsen et al., 2010). However, rates vary extensively depending on methodological factors and geographical origin of the studies. In their meta-analysis, Nielsen et al. (2010) found a difference in prevalence rates of 8.7 percentage points between studies employing probability as opposed to non-probability samples. In addition, type of measurement method was found to be especially important. While behavioral experience studies provided an average rate of 14.8%, studies investigating self-labeled victimization from bullying based on a given definition of the concept had an average rate of 11.3%. A rate of 18.1% was found for self-labeling studies without a given definition. An explanation for the divergence in estimate between the two self-labeling methods is that laypersons perceive bullying differently from the scientific understanding of the workplace bullying construct. A study comprising 1095 Australian adults found that there was limited overlap between lay definitions and scientific definitions of bullying as laypersons definitions included characteristics that were not a part of the scientific definitions, and vice versa (Saunders, Huynh, & Goodman-Delahunty, 2007).

Geographical origin of the studies also influence prevalence rate as Scandinavian countries seems to have significantly lower rates compared to other European countries and the US (Nielsen et al., 2010). While these differences may be explained by cross-cultural characteristics (Jacobson, Hood, & Van Buren III, 2014; Varhama & Björkqvist, 2004), Van de Vliert et al. (2013) showed in a study comprising survey data from 44,836 employees in 44 countries that climate-economic conditions also influence prevalence rates. Specifically, it was established that workforces reported more bullying in poorer countries with more demanding climates characterized by colder-than-temperate winters, hotter-than-temperate summers, or both. Finally, it was found that the impact of climate-economic hardships on bullying suppressed the impact of cultural in-group orientation on bullying.

Prevalence rates of bullying are also dependent upon demographical factors such as gender (Eriksen & Einarsen, 2004; Salin, 2003; Vartia & Hyyti, 2002) and occupation (Niedhammer, David, Degioanni, & 143 Occupational Physicians, 2007). In a study of nearly 8000 Norwegian employees, Einarsen and Skogstad (1996) found that organizations with many employees, male-dominated organizations, and industrial organizations had the highest prevalence of bullying. In a representative study of Danish employees, it was established that unskilled workers reported the highest prevalence of bullying, while managers/supervisors had the lowest prevalence (Ortega, Høgh, Pejtersen, Feveile, & Olsen, 2009). People working with objects (male-dominated occupations) and people working with clients/patients (female-dominated occupations) reported higher prevalence of bullying compared to other occupational groups, which also may indicate that a gender-balance in the work environments is a potential protective factor for bullying. Although the above studies on demographic risk factors are based on large and representative samples, they represent single contributions to the literature and need to be replicated in other populations before firm conclusions about risk groups can be made. Hence, to this date our knowledge about risk groups and risk setting are relatively limited and there is a need for more systematic studies.

### 1.4. Antecedents and predictors of bullying

In the literature, the two dominant explanations for the occurrence of bullying are (1) the work environment hypothesis and (2) the individual-dispositions hypothesis (Zapf & Einarsen, 2011). Building on the work of Leymann (1992, 1996), the work environment hypothesis claims that bullying is a consequence of the prevailing job design and social environment within organizations. As a contrast, the individual-disposition hypothesis highlights individual characteristics such as

personality traits as potential precursors of bullying and claims that specific characteristics scores, or combinations of characteristics, increase the risk of being exposed to bullying or for exposing others to bullying (Zapf & Einarsen, 2011).

In support of the work environment hypothesis, a systematic review of work stressors showed that role conflict, workload, role ambiguity, job insecurity and cognitive demands were the most significant predictors of being a target of workplace bullying (Van den Brande et al., 2016). An association between work stressors and bullying was also substantiated by longitudinal evidence as four out five prospective studies have found that exposure to work stressors such as work load, job insecurity, and role conflict increase the subsequent risk of workplace bullying (Van den Brande et al., 2016). Interestingly, in two prospective studies that failed to identify any significant relationships between role stressors and subsequent exposure to workplace bullying it was found that prior exposure to workplace bullying accounted for subsequent variation in role ambiguity, role conflict, and role overload, thus questioning conclusions regarding causality made in other studies (Hauge, Skogstad, & Einarsen, 2010; Nielsen & Knardahl, 2015). On the other hand, a study with a true prospective design based on a heterogeneous sample of 2800 Norwegian workers, showed that role stressors at baseline predicted new cases of workplace bullying two years on (Reknes, Einarsen, Knardahl & Lau, 2014). Hence, the available evidence for the work environment hypothesis is still inconclusive and further studies are needed in order to understand how bullying is associated with the overall work environment.

Most studies on the individual dispositions hypothesis have examined personality traits as risk factors for workplace bullying in cross-sectional data. In a meta-analysis of the Five Factor Model of personality and general workplace harassment, which also provided separate analyses for bullying, extraversion ( $r = -0.16, p < .05$ ) and neuroticism ( $r = 0.31; p < .001$ ) emerged as the only significant correlates of bullying (Nielsen, Glasø, & Einarsen, 2017). Yet, as the causal associations between individual characteristics and bullying can be multi-fold, longitudinal evidence is needed in order to establish whether specific dispositions are risk factors for bullying or whether bullying leads to changes in dispositions among those exposed. To this date, only two studies have examined the causal relationships between individual dispositions and bullying using time-lagged data. In a prospective study which examined associations between the traits in the Five Factor Model and bullying in a sample comprising 3066 Norwegian employees with a two year time-lag, neuroticism and conscientiousness emerged as significant predictors of subsequent bullying (Nielsen & Knardahl, 2015). Interestingly, conscientiousness emerged as the only significant predictor of later victimization from bullying, after adjusting for role conflict and role ambiguity, thus indicating the importance of work factors in predicting bullying. In tests of reverse associations, victimization from bullying at baseline was significantly related to being less agreeable, less conscientious, and less open to new experiences at follow-up. Workplace bullying as a predictor of changes in personality was also established in a study of 190 Polish workers with a six month time-lag (Podsiadly & Gamian-Wilk, 2016). Specifically, the findings showed that exposure to bullying in the first wave led to a decrease in agreeableness in the second wave. Personality did not predict later exposure to bullying.

It is important to note that the work environment hypothesis and the individual dispositions hypothesis are not mutually exclusive, findings in support of one explanation do not go against the other. Rather, it may actually be that workplace bullying results from an interaction between situational and individual factors (Reknes, Einarsen, Gjerstad, & Nielsen, 2018). This suggests that work factors and dispositional factors should be examined in conjunction rather than separately. With regard to the existing evidence, the findings from studies on the potential antecedents of workplace bullying provide support for both the work-environment and the individual disposition hypotheses, in that both work factors and dispositions are associated with increased

risk of bullying. However, some findings point to bullying as both a predictor and an outcome with regard to personality and work environment factors. The starting point of the association is therefore still unknown and needs further investigation. Consequently, given the paucity of longitudinal research, it is immature to draw firm conclusions about both the validity of the work environment- and the individual dispositions hypotheses.

### 1.5. The consequences of workplace bullying

An extensive body of research has been devoted to the outcomes of workplace bullying, something which is clearly reflected by the many meta-analyses in this area of the research field. Summarizing cross-sectional relationships between bullying and different outcomes by means of a meta-analysis which comprised 66 independent samples and 77,721 respondents, Nielsen and Einarsen (2012) established average weighted correlations in the range of 0.23 to 0.37 between exposure to bullying and different psychological and somatic health outcomes. The findings showed that bullying was most strongly associated with psychological health in the form of post-traumatic stress symptoms, depression, and anxiety. Exposure to bullying was also associated with work-related and behavioral outcomes such as intent to leave, lack of commitment, job dissatisfaction, and absenteeism, while no relationships were found with regard to sleep problems, core-self evaluations, and productivity. Yet, fewer studies exist in these latter areas.

In a meta-analysis of the cross sectional relationships between bullying and mental health (65 effect sizes,  $N = 115,783$ ), Verkuil et al. (2015) showed positive associations between workplace bullying and symptoms of depression ( $r = 0.28$ , 95% CI = 0.23–0.34), anxiety ( $r = 0.34$ , 95% CI = 0.29–0.40) and stress-related psychological complaints ( $r = 0.37$ , 95% CI = 0.30–0.44). In another meta-analysis, it was found a mean correlation of 0.44 (95% CI = 0.36–0.48) between workplace bullying and an overall score on symptoms of posttraumatic stress (Nielsen, Tangen, et al., 2015). Correlations between bullying and specific PTS-symptoms were in the same range.

While cross-sectional evidence provides important information about associations between bullying and potential correlates, it does not allow for conclusions about causality between variables. However, in recent years, bullying as a precursor to health and well-being has been substantiated by an increasing number of longitudinal findings, and especially by findings on the time-lagged associations between workplace bullying and health problems. Taken together, the studies have established that exposure to workplace bullying has a long-term negative impact on mental health (e.g., Finne, Knardahl, & Lau, 2011; Kivimäki et al., 2003; Rugulies et al., 2012), suicidal ideation (Nielsen, Einarsen, Notelaers, & Nielsen, 2016; Nielsen, Nielsen, Notelaers, & Einarsen, 2015), headache (Tynes, Johannessen, & Sterud, 2013), chronic neck pain (Kääriä, Laaksonen, Rahkonen, Lahelma, & Leino-Arjaas, 2012), fibromyalgia (Kivimäki et al., 2004), sleep difficulties (Hansen, Høgh, Garde, & Persson, 2014), work related strain (Hoobler, Rospenda, Lemmon, & Rosa, 2010), basic psychological needs and functioning (Trépanier, Fernet, & Austin, 2016), job insecurity and intent to leave (Glambek, Matthiesen, Hetland, & Einarsen, 2014), turnover (Høgh, Hoel, & Carneiro, 2011), registered sickness absence (Ortega, Christensen, Høgh, Rugulies, & Borg, 2011; Suadicani, Olesen, Bonde, & Gyntelberg, 2014), and the risk of becoming a recipient of a disability pension (Berthelsen, Skogstad, Lau, & Einarsen, 2011). The association between bullying and subsequent mental health problems seems especially robust as it has been replicated in both general and occupation specific samples, as well as in different countries and cultures. Furthermore, the different time-lags between baseline and follow-up measurements used in the existing studies show that bullying is significantly related to subsequent health problems over relatively short (e.g., 6 months; Nielsen, Tvedt, & Matthiesen, 2012) as well as over long time periods (e.g., 5–7 years; Einarsen & Nielsen, 2015; Lahelma, Lallukka, Laaksonen, Saastamoinen, & Rahkonen, 2012).

A reoccurring finding in many longitudinal studies on the cause-effect associations between workplace bullying and mental health problems is that existing mental health problems also predict of later exposure to bullying, at least when time lags are between one and two years. According to Nielsen and Einarsen (2012), there are two different theoretical explanations for how health and well-being can influence subsequent risk of bullying. The first explanation is based on the “gloomy perception” mechanism (de Lange, Taris, Kompier, Houtman, & Bongers, 2005), and suggests that employees with already reduced well-being and health have lower tolerance for exposure to aggression and, consequently, also have a lower threshold for interpreting certain behavior as bullying. The second explanation is in line with a social interactionist perspective on aggression and suggests that employees with impaired health and/or low well-being can violate expectations, annoy others, and even violate social norms of polite and friendly interaction and thus trigger aggressive behavior in others (Einarsen, 2000). This mechanism is further elaborated in the so-called victim precipitation theory (Aquino & Bradfield, 2000; Elias, 1986).

The longitudinal associations between bullying and outcomes have been summarized in several meta-analyses. Based on prospective associations from 13 samples ( $N = 62,916$ ), Nielsen and Einarsen (2012) found that workplace bullying influenced mental health problems over time, while baseline mental health problems also were associated with an equally strong increased risk of subsequent reports of exposure to bullying. In an updated meta-analysis, Nielsen et al. (2014) found that workplace bullying predicted subsequent mental health problems with an average Odds Ratio of 1.68 (95% C.I. = 1.35–2.09) whereas existing mental health problems also were significantly related to later exposure to bullying (Odds Ratio = 1.74; 95% C.I. = 1.44–2.12;  $K = 7$ ). Similar findings on bullying and mental health were reported in meta-analyses by Verkuil et al. (2015) and Theorell et al. (2015). Interestingly, the reverse impact of health problems on later exposure to workplace bullying has not been found in studies using time-lags of more than two years. A representative study employing a five year time lag found that bullying predicted mental health problems, whereas health problems had no impact on subsequent risk of being bullied (Einarsen & Nielsen, 2015). However, as few studies have examined associations between workplace bullying and health over longer periods than two years, there is a need for further research in order to establish the development of the association between the variables over time.

With regard to other long-term outcomes of bullying, a systematic review and meta-analysis on the relationships between bullying and later sickness absence which included 17 primary studies, found that exposure to workplace bullying was unambiguously associated with increased risk of sickness absence (Nielsen, Indregard, & Øverland, 2016). A rating of the studies indicated high methodological quality and the meta-analytic part of the study showed that exposure to bullying increased the risk of later sickness absence (odds ratio 1.58, 95% CI 1.39–1.79). While there is strong evidence for bullying as an antecedent to sickness absence, fewer studies have examined bullying as a precursor to disability retirement. To this date, the empirical evidence is scarce and findings are somewhat mixed with some studies supporting bullying as a risk factor for disability retirement (Berthelsen et al., 2011; Dellve, Lagerstrom, & Hagberg, 2003; Glambek, Skogstad, & Einarsen, 2015; Leinonen et al., 2011), whereas others provide ambiguous findings (Sterud, 2013). Yet, in a recent prospective study of 14,501 Norwegian employees which used official registry data on all-cause disability retirement over a 10 year follow-up period it was found that bullying significantly predicted risk of disability retirement with a Hazard Ratio of 1.55 (Nielsen, Emberland, & Knardahl, 2017). This relationship remained statistically significant after adjusting for job demands and lack of job control. Although women had the highest overall risk of disability, both bullied men and women had a higher risk of disability compared to non-bullied employees of the same gender.

Bullying has also been linked to diabetes, suicide and posttraumatic stress. In a multi-cohort study and meta-analysis comprising 45,906

respondents from Sweden, Denmark, and Finland, Xu et al. (2018) found that bullied participants had a 1.46 (95% CI 1.23–1.74) times higher risk of developing type 2 diabetes compared with non-bullied participants. The results were similar for men and women, and were consistent across cohorts. While this finding shows that bullying may have detrimental physical outcomes, the mechanisms that can explain the association still remains unknown and should therefore be examined in upcoming research. With regard to suicide, a systematic review concluded that there is an absence of high-quality epidemiological studies, but that the available evidence suggests that there is a positive association between workplace bullying and suicidal ideation (Leach et al., 2017). However, there is a need for further longitudinal, population-based research, adjusting for potential covariates (both within and outside the workplace), to determine the level of risk that workplace bullying independently contributes to suicidal ideation and behavior (see Nielsen, Nielsen, et al., 2015 for an example). While bullying correlates more strongly with symptoms of post-traumatic stress disorder than with other outcomes (Nielsen & Einarsen, 2012), a lack of longitudinal research and structural clinical interview studies means that existing literature provides no absolute evidence for or against bullying as a causal precursor of this specific outcome (Nielsen, Tangen, et al., 2015).

### 1.6. Measures and interventions against workplace bullying

Given that bullying is a form of workplace aggression that likely leads to negative consequences for targets, organizations and for society, a key question is how to address these problems (Hodgins et al., 2014; Salin, 2008a, 2009). Interventions is an important topic for investigation as research has revealed that few if any of the general interpersonal conflict management strategies available to those bullied seem to be effective in preventing and stopping a bullying situation (Zapf & Gross, 2001). Hence, organizational and management interventions are sorely needed (Salin, 2008b). However, although interventions against workplace bullying represent a key area within the practice field, research has lagged behind on this important topic (Escartin, 2016; Saam, 2009). In the studies that exist, the general focus has been on approaches to classifying intervention strategies, the appropriateness of mediation as an intervention strategy and studies of how different organizations respond to workplace bullying (Saam, 2009). Consequently, with exceptions of some correlation studies which have examined facets of organizational climate as indicators of workplace bullying (Bond, Tuckey, & Dollard, 2010; Einarsen, Skogstad, Rørvik, Lande, & Nielsen, 2016; Law, Dollard, Tuckey, & Dormann, 2011), most studies have focused on secondary and tertiary interventions rather than effective primary intervention strategies.

In a systematic review of interventions against incivility and bullying which comprised 12 studies, only two interventions were classified as effective in that the intervention had a positive effect on incivility (Hodgins et al., 2014). None of the investigated interventions had any effect on bullying. As for methodological quality, nine studies were rated as “weak”, and three studies were rated as “moderate” with regard to methodological quality. Another systematic review identified one randomized control study and seven quasi-experimental longitudinal studies (Escartin, 2016). According to the author, the majority of reviewed outcomes evidenced some level of change, mostly positive, suggesting that workplace bullying interventions are more likely to affect knowledge about the phenomenon, attitudes, and self-perceptions. When looking at changes in actual bullying behaviors the findings showed much more mixed results. In general, growing effectiveness was stated as the level of intervention increased from primary to tertiary prevention. Hence, we seem to be better at alleviating the detrimental outcomes of bullying than we are at preventing bullying from happening in the first place.

However, methodological limitations relating to the evaluation designs in included studies hinder direct attribution of these findings to

the applied interventions. In the summary of his review, Escartin (2016) concludes that there is a need for further developing and evaluating potential anti-bullying interventions. To develop effective interventions, practitioners and academics should cooperate to design, implement, and evaluate interventions that are based on solid theoretical and methodological approaches, as has been the case in the field of bullying in schools (Olweus, 1993, 2003; Olweus, 2005). Similarly, in a Cochrane review of interventions against workplace bullying the authors concluded that there is very low quality evidence that organizational and individual interventions may prevent bullying behaviors in the workplace and that one needs large well-designed controlled trials of bullying prevention interventions operating on the levels of society/policy, organization/employer, job/task and individual/job interface (Gillen et al., 2017).

## 2. What we do not know about workplace bullying

### 2.1. The key knowledge challenges in the field

While existing research has provided solid and extensive evidence for the prevalence, outcomes, and predictors of bullying, there are still crucial knowledge gaps and some key challenges within the field that need to be solved in order to develop effective organizational interventions and clinical treatment procedures or even creating a solid knowledge base for our understanding of this pertinent problem. In the following, we will present what we consider as the six most important knowledge challenges within the field that needs to be addressed in upcoming research:

#### 2.1.1. Construct clarification

Research on workplace bullying has blossomed over the last decades and particularly so after the turn of the millennium, as has research on concepts such as incivility, abusive supervision and social undermining to mentioned but a few. A chief challenge both from a theoretical, methodological and applied perspective is to further discern to what degree these concepts are distinct or overlapping. As noted in the introduction to this article, it has been questioned whether a proliferation of constructs is adding appreciably to our knowledge, or whether it is constraining the questions we ask (Hershcovis, 2011). Although several scholars have provided strong theoretical arguments for why workplace bullying is a unique form of workplace aggression that is distinct from related constructs such as incivility, abusive supervision, social undermining, and interpersonal conflicts, there are relatively few studies which have established these differences empirically. In her meta-analysis which compared different forms of aggression, Hershcovis (2011) found that there were few differences with regard to how incivility, interpersonal conflict, abusive supervision, and workplace bullying correlated with outcome variables something which led the author to argue that the examined constructs are highly similar. However, while the study by Hershcovis provided important findings about the overlap in outcomes between forms of aggression, the study did not inform about whether there are actual differences in how different types of aggression are conducted and experienced by those involved. Even if outcomes are similar, antecedents and the nature of the phenomena may still be different. Information on such issues is therefore vital with regard to the development of measures and interventions towards workplace aggression. For instance, high intensity forms of aggression, such as workplace bullying, may require other interventions than aggression of lower intensity such as incivility (Hodgins et al., 2014). To better understand the differences and similarities between bullying and other forms of aggression there is a need for robust single sample empirical studies that are able to assess and compare multiple forms of aggression simultaneously (see Reknes et al., 2016). In a recent study, Baillien, Escartin, Gross, and Zapf (2017) showed empirically that workplace bullying was related to, yet conceptually and empirically different from interpersonal conflicts in the work environment.

### 2.1.2. Theoretical frameworks

A theory is a set of analytical principles or statements designed to structure our observations, understanding and explanations of the world. Theories are therefore an important basis and guide in research as they provide suggestions for reasonable questions and explanations for how and why specific relationships may lead to specific events. However, because the scientific study of workplace bullying seems to have arisen from a need to address an important social problem rather than as the result of purely academic and theoretical interest, theories guiding workplace bullying research are therefore relatively few and far between (Høgh, Mikkelsen, & Hansen, 2011; Zapf & Einarsen, 2005). A consequence of this lack of theory is that research findings on workplace bullying is difficult to translate into practice and there is a shortage of explanations for how and when bullying is related to other variables. In order to move the field forward it is necessary to further integrate established theories for adjacent research fields and to develop and establish new theoretical models that specifically integrate the unique characteristics of the phenomena of workplace bullying.

One way of providing a theoretical basis for research on workplace bullying would be to build on well-established theoretical models in social psychology. For instance, as workplace bullying by definition deals with social interactions in work groups, drawing on intragroup theories such as social rules theory (SRT) (Argyle, Henderson, & Furnham, 1985; Ramsay, Troth, & Branch, 2011), social identity theory (Tajfel & Turner, 1986), and conflict research models (Jehn, Bezrukova, & Thatcher, 2008; Joshi & Jackson, 2003; Tjosvold, 1991) may be helpful. An alternative to using existing theoretical models will be to develop new theoretical models that are founded in our existing knowledge about workplace bullying and thereby incorporate the specific characteristics of the bullying phenomenon. Integrating established and new-founded theories is a third option.

According to social rules theory, social rules are expectations about behavior that should or should not be performed in a particular social situation, and shared by members of a group (Argyle, Furnham, & Graham, 1981). In this sense, rules are normative forces and are often easily recognized when they are broken. Workplace bullying are essentially of a rule-breaking nature as it involve negative acts against others with less power to defend (Ramsay et al., 2011), and a social rule perspective could therefore be beneficial with regard to understanding how bullying arise, develops, and are handled in organizations. Social identity is the portion of an individual's self-concept derived from perceived membership in a relevant social group (Tajfel, 1974). Hence, in light of social identity theory, workplace bullying may be understood as a relational process where the marginalization experienced by the target is caused by an experience of being hidden or devalued by the preferred in-group. "We understand ourselves and our lives in relation to others and this understanding is assessed and evaluated against notions of sameness and difference" (Ward, 2009, p. 243).

In terms of conflict theory, bullying involves two conflict parties who are involved in a prolonged conflict process (Van de Vliert, 2011). This suggests that bullying can be considered as an unsolved social conflict having reached a high level of escalation and involving an imbalance of power between the parties (Zapf & Gross, 2001). A conflict perspective on bullying could therefore be highly beneficial due to the insights on conflicts development, escalation, and conflict resolution that has described in the conflict literature (Baillien et al., 2009; Hoel, Rayner, & Cooper, 1999; Keashly & Nowell, 2003). Hence, by examining conflict dynamics and conflict management both within smaller groups and in organizations it may be possible to gain a better understanding of variables that affect the causes, dynamics, and outcomes of bullying. One promising concept here is that of conflict management climate in organizations, and how such a climate may act to prevent both bullying and its outcomes (Einarsen et al., 2016). It should be noted that although there are conceptual similarities between conflict and bullying, making the assumption that bullying is just another conflict would be a mistake (Van de Vliert, 2011). In a study

which investigates the defining features that distinguish workplace bullying from interpersonal conflict it was concluded that bullying could be regarded as part of the wide definition of interpersonal conflicts because victims of bullying are confronted with interpersonal conflict incidents, but that due to its nature, workplace bullying as a particular concept should be distinguished from a prototypical interpersonal conflict (Baillien et al., 2017).

### 2.1.3. Causality

Bullying is a complex social phenomenon that can stem from a wide range of antecedents and develop through multiple pathways. Knowledge about how bullying is causally related to other variables is therefore highly important with regard to both the development of theoretical models and for creating effective interventions. For instance, an understanding of whether it is specific factors in the work environment that causes bullying, whether it is the occurrence of bullying that leads to changes in the work environment, or whether the association between work environment is reciprocal and dynamic, can be used to shape prevention strategies and interventions. However, to this date, there has been an overuse of cross-sectional designs in research on workplace bullying, as clearly documented in a review of methods and design in bullying studies (Neill & Tuckey, 2014). This reliance on one-time point studies seems to have created confusion about whether key correlates of bullying are predictors, consequences, or both (see also Hershcovis & Reich, 2013). Although studies with prospective designs show that bullying is related to subsequent health problems, a reoccurring finding in many studies is that existing health problems also predict later exposure to bullying (Nielsen et al., 2014; Nielsen & Einarsen, 2012; Verkuil et al., 2015). Similarly, in research on predictors of bullying, psychosocial factors at work and personality dispositions have been established as both antecedents and outcomes of bullying in time-lagged studies (Hauge et al., 2010; Nielsen & Knardahl, 2015). One the one hand, this suggest that the associations between bullying and correlates are likely to be characterized by reciprocal relationships, a finding which is in line with bullying as a dynamic social phenomenon. One the other hand, we still do not know when bullying is a cause or a consequence of related variables. Consequently, to understand the causal nature of workplace bullying and its correlates there is a need for more advanced study designs where one also is able to identify contributing factors that governs the development of the bullying process.

Researchers should therefore aim at using methods and refined research designs with high internal and external validity and where it is possible to determine directionality between variables (Nielsen, Hoel, et al., 2016). Experimental research designs or survey studies following the same individuals over several time points (e.g., diary studies or longitudinal studies with multiple measurement points) are needed in order to provide better indications of causality. While there are clear ethical boundaries which limit the manipulated levels of exposure in experiments on bullying, it has been shown that "milder" forms of bullying behaviors can be induced without risking long-term harm to the subjects (Eisenberger, Lieberman, & Williams, 2003; Williams, 2007). The use of experimental designs will also allow for eliminating extraneous variables that may otherwise confound the investigated relationships. Another avenue is the use of hypothetical scenarios (Kakarika, González-Gómez, & Dimitriades, 2017; Pallesen, Nielsen, Mageroy, Andreassen, & Einarsen, 2017). It should be noted that issues of causality are closely related to the above discussion about theoretical frameworks. Without an underpinning theory, additional studies using designs that are more advanced will most likely continue the tendency towards a-theoretical empirical studies where post-hoc explanations will be favored at the expense of a priori theory.

### 2.1.4. Processes

Following from the above discussion of theoretical frameworks and causality, there are several reasons to consider bullying as a process.

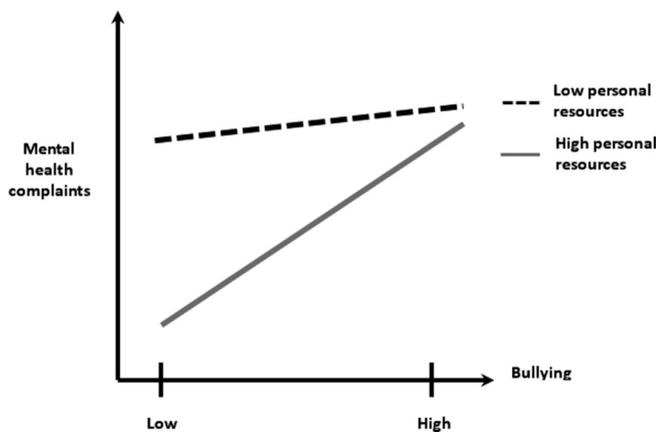


Fig. 1. Reverse buffering effect of personality dispositions on the association between exposure to bullying and mental health complaints.

For instance, building on Glas's (1982) contingency model of conflict escalation, a general assumption within the research field has been that bullying usually is a process which develops and escalates over time (Einarsen, 2000; Einarsen et al., 2011). During the early phases, it has been claimed that victims are typically subjected to aggressive behavior that is difficult to pinpoint due to their indirect and discrete nature. If the bullying is allowed to continue, more direct aggressive acts are assumed to appear (Björkqvist, 1992). The victims are then clearly isolated and avoided or humiliated in public. In the end, both overt physical and psychological aggression may be used (Einarsen et al., 2011). Hence, bullying is not seen as a static phenomenon, but as a dynamic social interaction. It is therefore important to examine and understand the conditions that may tend to intensify or moderate the bullying process (Matthiesen, Aasen, Holst, Wie, & Einarsen, 2003), both from the perspective of the target and the perpetrator.

However, due to the overuse of cross-sectional research design as well as qualitative analysis of target reports in hindsight, most existing studies have provided nothing more than a series of "snapshots" of the bullying phenomenon and little is known about how bullying actually develops and escalates or de-escalates over time. In addition, as most research has focused on the targets of bullying, there is a lack of knowledge about perpetrators as well as the role of bystanders and colleagues in the bullying process, including how and when managers may intervene or contribute to further problems. While there are some studies that have examined antecedents and outcomes over time, most of these have been limited to two-wave surveys with time lags up to 24 months. As a consequence there is a lack of knowledge about the evolution of bullying in longer time-frames. To fully address bullying as a process there is a need for studies testing a priori process models with multiple assessment points that can capture the dynamics both over short and long periods. Detailed analyses of cases might be one way of illuminating the process. Such an approach may be especially useful with regard to informing process models (see Matthiesen et al., 2003 for an example). The use of quantitative diary studies could be another beneficial approach (Escartin et al., 2017; Totterdell, Hershcovis, Niven, Reich, & Stride, 2012; Zhou, Yan, Che, & Meier, 2015).

#### 2.1.5. Mediators and moderators

Despite the considerable attention that has been devoted to the predictors and health outcomes of workplace bullying, most studies have focused on direct relationships between variables (Nielsen, Hoel, et al., 2016). As a consequence, there is a shortage of studies with strong theoretical foundation which add to the understanding of the conditions and underlying mechanisms which can explain: 1) how and when bullying occurs and develops, 2) how and when exposure to bullying influence the health and well-being of the targets, and 3) for whom bullying have the most profound negative effects. Such efforts

are meager in antecedents–bullying relationships (Rai & Agarwal, 2018). In order to understand how bullying relates to other variables, researchers need to examine *mediation models* that identify and explain the mechanism or process that underlies an observed relationship between an independent and dependent variable via the inclusion of a third intervening variable (Frone, 1999). In order to understand when bullying is associated with other variables, researchers have to examine *moderation models* that explicitly include variables that moderate the relationship between a predictor and an outcome. The basic premise for these models is that the strength of the relation between variables differs as a function of moderator variables (Frone, 1999). To gain an even better understanding of the association between bullying and other variables, a moderated mediation model includes both intervening and conditional factors. For instance, with regard to health and well-being, a moderated mediation model founded in theory will examine and explain both how and when workplace bullying is related to outcomes (Hayes, 2013). Hence, moderated mediation models suggest that exposure to bullying has an indirect effect on health and well-being through specific intervening factors, and that the strength of the indirect effect is conditioned by characteristics of one or more moderating variables, be it individual, organizational or contextual factors.

To this date, only a few studies, mainly based on cross-sectional self-report data from small and specialized samples (e.g., members of support associations for victims of bullying), have examined mediating and moderating variables (Nielsen, Matthiesen, & Einarsen, 2008; Plopa, Plopa, & Skuzińska, 2016; Reknes et al., 2016). Yet, some emerging findings suggest that the individual dispositions of targets may be especially important conditional factors with regard to the health outcomes of bullying, albeit not in the expected manner. Theoretically, it is likely that the effects of bullying are dependent upon a range of personal, situational and organizational characteristics such as individual dispositions and resilience, coping behaviors, social support, and leadership practices (Zapf & Einarsen, 2005). Based on well-established theories on stress such as the Transactional model of stress and coping (Lazarus & Folkman, 1984) one would therefore expect that specific personal resources such as high hardiness or positive affect, should be protective factors with regard to the effects of bullying. However, illustrating a reverse buffering effect (see Fig. 1), findings from both cross-sectional and longitudinal studies on the moderating effects of factors such as sense of coherence (Nielsen et al., 2008), self-labeling as a victim of bullying (Hewett, Liefoghe, Visockaite, Roongrerngsuke, & Hewett, 2016; Vie, Glasø, & Einarsen, 2011), ability to defend (Nielsen, Gjerstad, Jacobsen, & Einarsen, 2017), agreeableness (Ilies, Johnson, Judge, Keeney, & Johnson, 2011), coping style (Reknes et al., 2016), and optimism (Britton, Sliter, & Jex, 2012) have shown that these personal resources only have a protective effect against mental distress in cases of no or only low exposure to aggression and bullying at the workplace. In cases of high exposure, targets reports equally high levels of mental distress irrespectively of their individual predispositions, something that may indicate that high intensity bullying is detrimental for all.

Yet, substantially more research are indeed needed to verify and not the least explain these very surprising findings. A possible explanation is that targets high in personal resources experience a situational incongruence, and thereby cognitive dissonance, since bullying represents an incident that does not corresponds with how these targets perceive themselves and the world. Building on a person-environment fit perspective, the situational-congruence model proposes that a person will experience more positive and less negative affect when there is congruence between a given situation and personality (Pervin, 1993). In contrast, individuals will experience heightened negative affect in situations that are incompatible with their personality characteristics (Diener, Larsen, & Emmons, 1984; Ilies et al., 2011). It should be noted that there may be other explanations for these observed associations between bullying, personality resources, and outcomes. Longitudinal findings show that bullying is related to reduce individual resources

(Nielsen & Knardahl, 2015; Podsiadly & Gamian-Wilk, 2016). Following the conservation of resources theory (Hobfoll, 1989) this could indicate a mediation model where bullying leads to resource depletion among those who actually have resources and where this depletion subsequently reduce health and well-being in this group.

While there are relatively few studies to this date (Rai & Agarwal, 2018), the importance of organizational moderators of bullying is an emerging topic with research on workplace bullying. For instance, studies on psychosocial safety climate, that is shared perceptions of organizational policies, practices, and procedures for the protection of worker psychological health and safety (Dollard & Bakker, 2010), has shown that a positive perception of psychosocial safety climate reduces both the occurrence of bullying and the health consequences following bullying (Bond et al., 2010; Dollard, Dormann, Tuckey, & Escartin, 2017; Law et al., 2011). Similar findings have been made for other aspects of organizational climate (Einarsen et al., 2016), thus indicating that an organizations interests in the employees' health and well-being may be beneficial with regard to reducing both bullying and its impact.

While the above findings show the importance of including mediators and moderators with regard to bullying, further research is also needed on the antecedents, mechanisms and conditions of bullying. In order to achieve more reliable knowledge about these issues, upcoming research should use prospective designs, preferably with more objective data, employing randomized samples and also look at both multilevel designs, shortitudinal designs (diary studies) and quasi-experimental designs. Registry data (Eriksen, Høgh, & Hansen, 2016; Nielsen, Indregard, & Øverland, 2016), bio-physiological markers (Hansen et al., 2006; Hansen, Høgh, & Persson, 2011), and even genetic dispositions may useful objective measurements in future studies on outcomes of bullying (Jacobsen, Nielsen, Einarsen, & Gjerstad, 2018). While questionnaire surveys on individual dispositions such as personality is likely to be influenced by reporting bias, measures of genetic dispositions, for instance through saliva sampling, will add to our knowledge about individual characteristics and bullying by being objective and more or less bias free indicators.

### 2.1.6. Interventions and rehabilitation of victims, perpetrators, and the given work environments

A consequence of the lack of knowledge about causality, processes, and mediators/moderators is that our knowledge base for developing and evaluating interventions against bullying has been insufficient. As highlighted by the systematic reviews by Hodgins et al. (2014) and Escartin (2016), there is a lack of robust studies on interventions against workplace bullying. Because of this, we know very little about how to handle and prevent workplace bullying or how to rehabilitate victims of bullying, perpetrators, and work environments. In light of the documented devastating outcomes of bullying it is pertinent that our research contributes to the development of solid primary intervention strategies as well as of applied tools to handle and treat cases of bullying when they arise. Hence, researchers should examine which types of interventions organizations tend to use and how effective these are in terms of reducing the occurrence of workplace bullying. In doing so, interventions should be tested and studied at primary (prevention), secondary (handling of cases), and tertiary (rehabilitation) levels.

Primary interventions aim to prevent workplace bullying before it ever occurs. This can be done by preventing factors that cause bullying, altering the organizational climate or culture, by ending behaviors that can be experienced as bullying in an early phase, and by improving resources that increase the resistance to bullying if it actually do occur. Examples of primary interventions are to give employees and organizations lectures on bullying and courses in conflict prevention and management (Mikkelsen, Høgh, & Puggaard, 2011). To be able to develop effective primary interventions we need to identify and understand the risk groups and causes of bullying, as well as the role of attitudes and processes. As highlighted previously in the current overview, these are under-explored issues in research on workplace

bullying. Secondary interventions aim to reduce the impact of bullying when it has already occurred. This is done by detecting the bullying as soon as possible to halt or slow its progress, by encouraging strategies to prevent recurrence, by helping those targeted to retain regular health and functioning, and by addressing and readjusting the behaviors of the bullies. To develop effective secondary interventions we therefore need knowledge about bullying as a process, coping resources, and outcomes of bullying. As shown previously, we know that bullying has long-term effects such as posttraumatic stress, suicidal ideation, and increased risk for disability retirement. Tertiary interventions aim to reduce the impact of the lasting effects of bullying. This is done by helping people manage the long-term, often-complex health problems and injuries and to improve their ability to function, their quality of life and their life expectancy. Effective tertiary interventions will be dependent upon valid knowledge about health outcomes of bullying and the mechanisms that can explain the detrimental effects of bullying. For instance, findings indicate that bullying can change the targets' basic assumptions about themselves and the world as worthy and meaningful (Adoric & Kvartuc, 2007; Mikkelsen & Einarsen, 2002; Rodriguez-Munoz, Moreno-Jimenez, Vergel, & Garrosa, 2010). Hence, a potential tertiary intervention may be to readjust and reverse these assumptions.

In order to acquire valid knowledge about the effectiveness of interventions, researchers should follow well-established principles for intervention research that make it possible to evaluate both the process and the effects (Cox, Karanika, Griffiths, & Houdmont, 2007; Nielsen & Abildgaard, 2013; Nielsen & Randall, 2013). This includes the use of both intervention and control groups in studies. Further, the intervention studies need to be designed to examine directly how and why the interventions bring about change and why they sometimes fail, as well as a (Nielsen & Randall, 2013) a process evaluation that includes a close examination of the psychological and organizational mechanisms that hinder and facilitate desired intervention outcomes (Nielsen & Randall, 2013). Research on interventions could also benefit from knowledge from studies on interventions against bullying in schools where interventions have been thoroughly investigated (Olweus, 1994; Vreeman & Carroll, 2007). Studies should also look at the effectiveness of preventive systems and intervention strategies already in use (Einarsen, Mykletun, Einarsen, Skogstad, & Salin, 2017).

### 3. Conclusions

Research on workplace bullying has grown, matured, and developed extensively in a relatively short amount of time and bullying is now considered as a one of the most detrimental stressors in contemporary working life (Niedhammer, Chastang, Sultan-Taieb, Vermeylen, & Parent-Thirion, 2013). Nonetheless, as highlighted in this review, there is still a lot we do not know about the phenomena of workplace bullying. The general theoretical model depicted in Fig. 2 provides a summary of the topics discussed in this review. Illustrating a conditional process (moderated mediation) perspective on workplace bullying, the figure shows that bullying, including its causes and consequences, may only be fully understood when mediating and moderating factors are examined within in a time perspective. In order to develop robust and effective interventions there is consequently a need for further research on the nature, risk groups antecedents, and consequences of bullying through the use of advanced and sound methodological designs and a well-developed theoretical framework. We have provided suggestions for six different, but interwoven, knowledge gaps that need to be addressed in upcoming research. By filling these gaps our understanding of workplace bullying will advance even further and we will be important steps closer to preventing and healing its occurrence and detrimental consequences.

The above constraints in what we know about workplace bullying can in part be explained by inherent methodological limitations in existing studies. As already noted, cross-sectional designs have been the dominant approach in bullying studies. In their methodological review

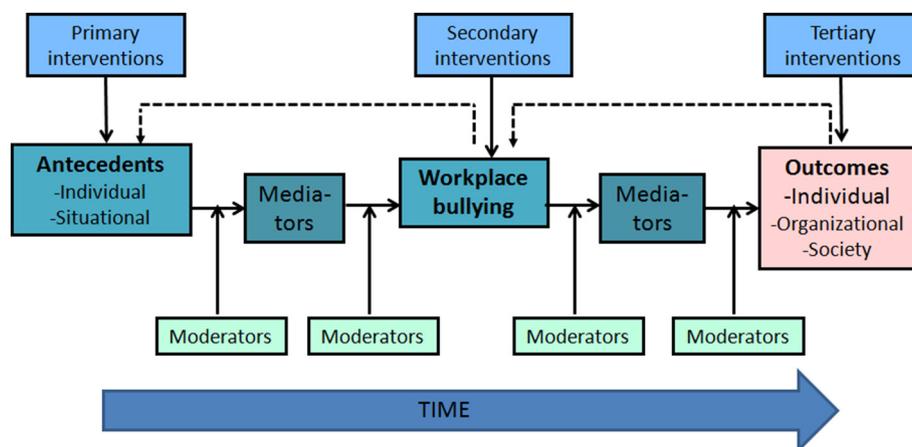


Fig. 2. Theoretical model for the development and outcomes of workplace bullying.

of the literature on workplace bullying Neall and Tuckey (2014) concluded that the research within the field is also hampered by: 1) an overuse of self-report surveys, 2) a reliance on single-source data, 3) analyses at the individual level rather than at a group or organizational level, 4) a one-sided focus on the antecedents and outcomes of bullying rather than on mechanisms and conditions, 5) an overuse of field/survey studies, 6) a lack of information about perpetrators, and 7) the use of non-representative sampling procedures. To advance our knowledge about workplace bullying the methodological variety and quality of research must therefore be improved and expanded. This include adopting longitudinal and experimental designs, utilizing within-person approaches, employing animal models, incorporating the perspectives of witnesses and perpetrators of harassment, developing combined group/organizational and individual levels of analysis, and focusing on the dynamic processes of workplace bullying (Neall & Tuckey, 2014; Nielsen & Einarsen, 2012). Providing information on when and why certain interventions procedures may work is another pertinent need.

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