The making and breaking of workplace bullying perpetration: A systematic review on the antecedents, moderators, mediators, outcomes of perpetration and suggestions for organizations

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A B S T R A C T

Research examining workplace bullying (WB) perpetration from the perspective of perpetrators has remained limited compared to the literature on targets and victims. Until now, no systematic review of the studies from the perpetrators' viewpoints has been published. The present review aimed to synthesize the empirical studies that examine antecedents, mediators, moderators, and outcomes of WB perpetration. It also analyzed the practical suggestions given to curb perpetration and the research methods used. A literature search in Scopus, ProQuest, Science Direct, PubMed, and Web of Science databases for empirical studies published between 2003 and 2023 in peer-reviewed journals in English resulted in 50 full-text articles. Antecedent–perpetration relationships were primarily examined based on social and aggression theories. These relationships were analyzed in the silos of work environment or individual factors without diverse moderators and mediators. Research on WB perpetrators largely lacked causality analysis. Perpetration was associated with task-focused, conflict-prone, poorly organized, and stressful work environments. WB perpetrators had undesirable personality characteristics, and they were also being bullied. The outcomes of their behavior were rarely studied. The suggestions the researchers gave to curb WB perpetration seemed unlikely to be implemented by the same management team that created the toxic environment in the first place. Research on WB perpetrators, which is still in its infancy stage, lacks variety in terms of topics studied, the combination of work environment and individual factors, causality analysis and evidence-based interventions.

1. Introduction

Innumerable constructs explain the negative workplace behaviors that harm employees and organizations. These interpersonal mistreatments, physical and psychological, range from simple incivility to all-out physical violence. Negative acts that comprise workplace aggression include sexual harassment, counterproductive work behavior, abusive supervision, bullying, deviance, lateral violence (Magnavita et al., 2020) and violence (Manier et al., 2017; Priesemuth et al., 2017). Bullying is a common workplace phenomenon, defined as a severe and damaging interpersonal behavior (Akanksha et al., 2021), occurring regularly and repeatedly over a period of time, with the interaction of personal and work-related factors (Rai & Agarwal, 2018). The phenomenon results in adverse outcomes for all parties involved.

For targets and victims, adverse outcomes may be negative well-being (Zapf et al., 2020), sleep problems (Magnavita et al., 2019; Nielsen et al., 2020), mental disturbances (Verkuil et al., 2015), frequent job changes, or unemployment (Einarsen et al., 2020), and/or suicidal thoughts (Gunn & Goldstein, 2020). For spouses, adverse outcomes may be partner social undermining and conflicts (Rodríguez-Muñoz et al., 2020). For witnesses, possible negative consequences may be increases in turnover intentions and reductions in organizational commitment (Salin & Notelaers, 2018). For departments or work units, higher employee burnout (Escartín, Dollard, et al., 2021) and finally, for organizations and society, funds wasted (Cullinan et al., 2020; Kline & Lewis, 2019) may be possible adverse outcomes of workplace bullying (WB).

1.1. Research on bullying from perpetrators' viewpoint

The direct causes (antecedents) and outcomes of WB, the factors which indirectly play a part in these relationships (mediators), and the factors that strengthen, diminish or alter these relationships (moderators) have typically been studied from the perspective of the WB victims. Research on WB started through the lens of targets and victims in the 1990s, and the study of moderators and mediators started after 2001 (Rai & Agarwal, 2018). As in-depth research from the perspective of perpetrators lagged behind, a detailed understanding of the underlying and intervening mechanisms involved in WB perpetration was not thoroughly achieved. To fill this gap, studies analyzing the bullying phenomenon from the lens of other actors of the phenomenon started. Research on perpetrators or bullies started in 2003 (Coyne et al., 2003). Since then, research on WB perpetrators has been growing. Among the 50 articles covered in the present systematic review, 46 studies focused on antecedents, 17 tested mediators and moderators in the relationship between antecedents and WB perpetration, and four focused on the WB perpetration outcomes (Fig. 1).

One of the reasons for the lack of effective interventions is, perhaps, our limited understanding of the perpetrators. Although perpetrators were studied along with other actors for some time, the emergence of studies only focusing on them is a positive advancement in understanding their perspective in-depth. Along with the utilization of complex research methods and robust software development, the cross-sectional method gave way to longitudinal research on perpetrators. Longitudinal research and testing of mediators and moderators have replaced earlier simpler cross-sectional studies, allowing for more detailed analysis over time. These advancements bring us closer to fully understanding the complexities of WB and may lead to more effective interventions and further policy changes to prevent it.

1.2. Perpetration prevalence

Despite the efforts to reduce WB in the last 30 years, the prevalence rate of victimization is around 15 % globally (Nielsen & Einarsen, 2018). Bullying prevalence is often measured, but different methods used to calculate prevalence result in a wide range of figures. If analyzed by intensity, 3 % of employees experience severe and 10 % occasional bullying, while 10–20 % experience negative social behaviors (Zapf et al., 2020). According to a recent world-wide review (León-Pérez et al., 2021), bullying prevalence fluctuates between 0.6 %- 13 % in Scandinavian countries, between 2.5 %–27.9 % in Mediterranean countries, between 2.4 %–51 % in American countries, and between 0.3 %–18.5 % in Asia-Pacific countries, suggesting that the organizational context and specific characteristics of the sample, rather than the national culture, may explain differences in the prevalence of bullying. As the research on WB started with analyzing victims and targets, the phenomenon was defined and measured from the victims' points of view. Hence, the literature on WB perpetration has been comparatively limited. Only a few studies measure WB perpetration from the perpetrator's perspective. Few scales assess WB from the perpetrators' perspective (Escartín, Vranjes, et al., 2021), and few studies show a range of prevalence of self-reported bullies and perpetrators, e.g., 9.5 % in workplaces (León-Pérez et al., 2021).

The prevalence rate of perpetration was reported by 17 of the 50 studies in our review. Nine studies measured bullies by the self-labeling method, where the average rate of bully prevalence was 4 %. The other eight studies measured perpetration by the behavioral approach and found an average prevalence of 8 % (please refer to Table 1).

1.3. Need for the review

Although the organizational psychology field has supplied organizations with valuable insights into the phenomenon, the high level of sustained prevalence and possible management indifference indicates
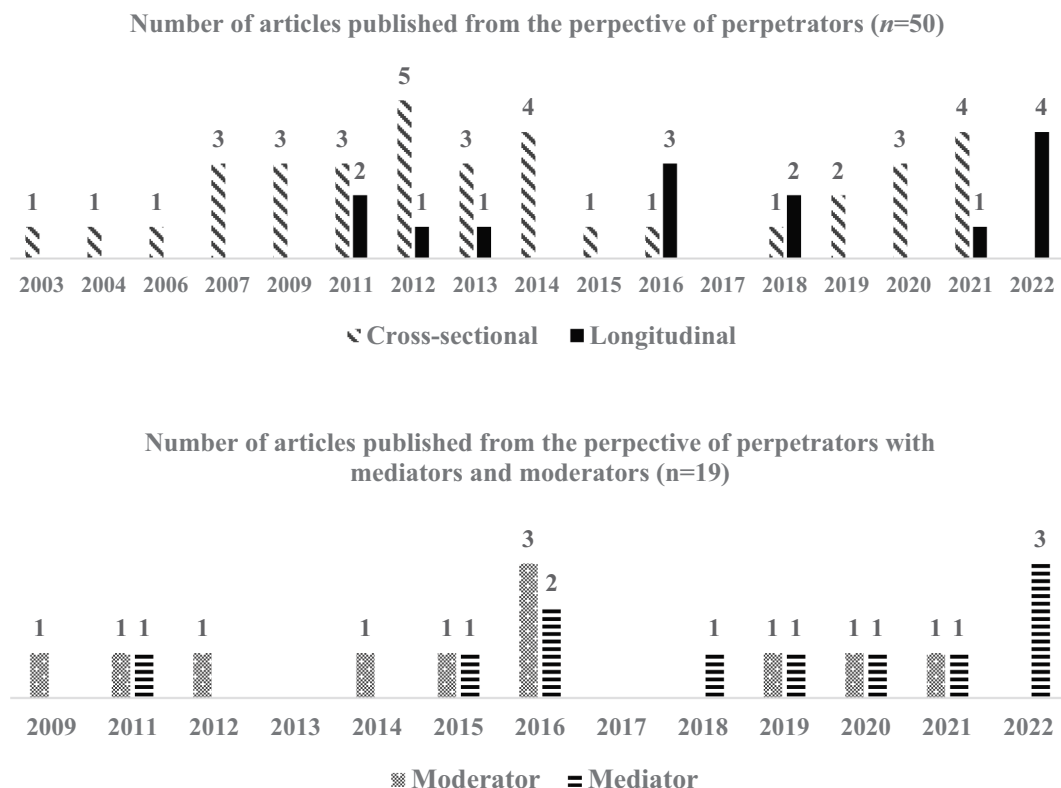

Fig. 1. Articles included in the systematic review.

Table 1
Prevalence of perpetration measured by self-reports and behavioral method.

Authors/publication year	Measures	Participants	Bullies	%
Coyne et al. (2003)	Single item with definition "Workplace bullying is 'persistent, offensive, abusive, intimidating, malicious or insulting behavior, abuse of power or unfair penal sanctions, making the recipient feel upset, threatened, humiliated or vulnerable, undermining self-confidence, causing stress"	288	56	19 %
Matthiesen and Einarsen (2007)	Single item with definition "To label something as bullying it has to occur repeatedly over a period of time, and the person confronted has to have difficulties defending themselves. It is not bullying if two parties of approximately equal 'strength' are in conflict or the incident is an isolated event."	4742	237	5 %
Seigne et al. (2007)	Single item with definition "When a person is bullied in the workplace, he/she is repeatedly exposed to aggressive acts, which can either be physical, psychological and/or verbal. Cruelty, viciousness, the need to humiliate and the need to make somebody feel small dominates a working relationship".	34	10	29 %
Hauge et al. (2009)	Single item with definition "Bullying takes place when one or more persons systematically and over time feel that they have been subjected to negative treatment on the part of one or more persons, where the person(s) exposed to the treatment have difficulty in defending themselves. It is not bullying when two equally strong opponents are in conflict with each other".	2359	68	3 %
Liu (2012)	Respondents were asked if they displayed bullying behaviors towards others	114	8	7 %
Nielsen (2013)	Single item with definition "Bullying takes place when one or more persons systematically and over time feel that they have been subjected to negative treatment from the part of one or more persons, where the person(s) exposed to the treatment have difficulty in defending themselves against them".	594	21	4 %
De Wet and Jacobs (2014)	Single item self-constructed questionnaire "If you have ever bullied one or more of your colleagues, please feel free to share your experiences with us"	999	32	3 %
Glambek et al. (2016)	Single item with definition "Bullying (for example harassment, torment, freezeout or hurtful teasing) is a problem in some workplaces and for some employees. To be able to call something bullying, it has to occur repeatedly over a certain period of time, and the bullied person has difficulty in defending him- or herself. It is not bullying when two persons of approximately equal "strength" are in conflict, or if it is a single situation.	1613	45	3 %
Özer et al. (2022)	Single item with definition "Bullying means that a person repeatedly is exposed to unpleasant or degrading treatment, and that the person finds it difficult to defend himself or herself against it".	2508	50	2 %
Sub total		13,251	527	4 %

Authors/publication year	Measures	Participants	Perpetrators	%
Lee and Brotheridge (2006)	43 items from existing scales (Cortina et al., 2001; Keashly et al., 1994; Quine, 1999; Rayner, 1997).	180	44	24 %
Escartín et al. (2012)	Adapted NAQ-RE & NAQ-P	521	52	10 %
Brotheridge et al. (2012)	43 items from existing scales (Cortina et al., 2001; Keashly et al., 1994; Quine, 1999; Rayner, 1997).	180	3	2 %
Escartín et al. (2013)	14 item Adapted Spanish NAQ-RE (Moreno-Jiménez et al., 2007)	4848	194	4 %
Linton and Power (2013)	Modified NAQ-R	224	39	17 %
Pilch and Turska (2014)	Adapted version of UBQ	117	28	24 %
Mazzone et al. (2021)	Three items adjusted from the SNAQ (Notelaers et al., 2019)	630	17	3 %
Özer et al. (2023)	Modified EAPA-T-R (Escartín et al., 2017)	2508	369	15 %
Sub total		9208	746	8 %

Notes: NAQ-RE: Negative Acts Questionnaire-Revised Spanish, NAQ-P: Negative Acts Questionnaire-Perpetrators, NAQ-R: Negative Acts Questionnaire-Revised, UBQ: Unethical Behavior Questionnaire; SNAQ: Short Negative Acts Questionnaire, EAPA-T-R: Reduced form of Psychological Abuse Scale Applied in the Workplace.

that the field still has a long way to go in the research to eliminate these illegal and unethical workplace acts. While many comprehensive reviews were published on WB (Nielsen & Einarsen, 2018; Rai & Agarwal, 2018; Samnani & Singh, 2014), they approached bullying from the victims' and targets' perspectives. There is no compiled knowledge on antecedents, mediators, moderators and outcomes of WB from the perpetrators´ perspective. Therefore, the present review aims to identify the factors causing individuals to become perpetrators and how they are affected and synthesize suggestions for practitioners to stop this phenomenon. This aim seems relevant, as we have limited knowledge of how work conditions trigger perpetrators and which dispositions affect their behavior. The ultimate goal is to provide clarity for future research to develop effective interventions in organizations focusing on potential or active perpetrators to reduce bullying.

2. Methodology

In this review, we included primary empirical studies on antecedents, moderators, mediators and outcomes of WB from the perspective of perpetrators. We used the following keywords (or a combination of keywords) in the search (Appendix A) from 2003 to 2023: WB, perpetrator, perpetration, bully, and bullies. We searched Scopus, ProQuest, Science Direct, PubMed, and Web of Science databases in January 2023. Our eligibility criteria for inclusion were; a) primary empirical studies published in peer-reviewed journals in English with full texts available and doctorate theses; b) publication period between 2003 and 2023; c) focused on antecedents, moderators, mediators and outcomes of WB

from the perspective of perpetrators. Therefore, the following records were excluded from our review a) conference abstracts, book chapters, commentaries, editorials, academic letters, systematic reviews, meta-analyses, literature reviews, and all other types of non-empirical studies; b) studies from the perspectives of others, such as victims, targets, managers, bystanders, human resources practitioners, occupational health physicians; c) other negative behaviors like school bullying, workplace violence, cyberbullying, sexual harassment, abusive supervision, counterproductive work behaviors, and incivility. Search results for 3507 records were uploaded to Rayyan software (Rayyan Systems Inc. Cambridge, MA, USA). With the help of the software, we deleted duplicates (1159), non-English abstracts and main text languages (10) and publications other than empirical studies such as systematic reviews, meta-analyses, book chapters, magazines, books, news (260), resulting in eligible records (2078) for abstract reviews. The abstracts of the remaining records were screened for eligibility by the first author. After the deletion of articles with other constructs such as mistreatment, incivility, cyberbullying, violence (610), and studies that were not from the perspectives of perpetrators (1423), our research yielded 45 articles. These studies were downloaded as full-text articles and reviewed based on strict inclusion criteria. Study quality was ensured by checking that all articles were published in peer-reviewed articles, including authors' details, aims pursued, details on methods and measures used, study participants' details, and all the related contexts reflecting perpetrators' perspectives. Two articles were excluded due to i) missing information on the scales used to measure perpetration (Hidzir et al., 2017) ii) lack of recordings of the interviews (4: Misra &

Sharma, 2022). Seven articles (referenced by other articles) were added to the review based on their adherence to inclusion criteria, leading to the final group of 50 selected articles. Fig. 2 includes the PRISMA flowchart representing the step-by-step exclusion. We acknowledge that our search may not be exhaustive and recognize the opportunity for a more comprehensive systematic review.

3. Results

Scholars have long analyzed bullying victims and targets, concluding that two main theories could explain bullying behavior from victims' perspectives. The "Work Environment Hypothesis" (Leymann, 1996) suggests that work conditions such as role conflicts, work overload, and job ambiguity created by poor job design and an unfavorable social environment foster bullying. On the other hand, the "individual dispositions" hypothesis indicates that the victim or perpetrator's characteristics trigger bullying behavior (Einarsen et al., 2020). Empirical data on bullying studies indicated many possible causes related to the organization, the department or unit, the perpetrator or bully, and the target or victim. Out of the 50 empirical studies analyzing WB from perpetrators' views, 15 focused exclusively on the antecedents of the work environment, 14 on individual differences, and 21 incorporated both factors in their studies (see Table 2). We also analyzed researchers' suggestions to organizations on preventing WB based on the results of their studies.

3.1. Antecedents of perpetration

3.1.1. Work environment factors as antecedents of bullying perpetration

3.1.1.1. Job demands & job resources.
Employee well-being was defined as a function of job demands and the decision authority the employee has to meet these demands (Job Demand-Control; Karasek, 1979) and the effort put in meeting the job demands and the rewards obtained in return (Siegrist, 1996). By adding job resources to the function, the Job Demands-Resources Model (Bakker & Demerouti, 2007) emphasized job resources (e.g., social support, performance feedback, and autonomy), triggering motivation to meet the demands resulting in lower strain and thus better well-being. The organizational inefficiencies arising from the imbalance of job demands and resources were frequently considered as antecedents in WB research. Cross-sectional studies showed that accused

perpetrators complained about staff shortages (Jenkins, Zapf, et al., 2011), being overworked (Liu, 2012), perceived less laissez-faire supervisory leadership, less job insecurity, and significantly more job satisfaction and control over decisions (Hauge et al., 2007). If perpetrators perceived to have high resources, such as being highly employable (De Cuyper et al., 2009), or if they had task autonomy under high job demands, they still bullied others (Van den Broeck et al., 2011), when analyzed cross-sectionally.

In longitudinal studies, perpetrators seemed neither triggered by the changes in job demands (workload, role conflicts, job insecurity) nor by job resources (skills, autonomy, social support) over 12 months (Baillien, Rodríguez-Muñoz, et al., 2011). However, research also showed that having an imbalance of demands and resources, such as high workloads with low autonomy, reported higher perpetration after 12 months (Baillien, De Cuyper, et al., 2011).

The Work Environment Hypothesis, the Job Demands and Resources model, the Stressor Emotion framework of Counterproductive Work Behaviors (Spector & Fox, 2005), and General Strain (Hinduja, 2007) theories have assisted in explaining the results that poorly organized work environments with imbalanced demands and resources, create stressful work conditions, triggering emotional responses to strain, and acts of perpetration. However, one result that these models could not explain was that high resources such as high employability and job autonomy seemed to go beyond helping relieve stress for some individuals and encouraged perpetration. Perhaps conflicting results suggested that other forces related to the organization or related to the individual might be at play.

3.1.1.2. Conflicts & role ambiguity.
Conflicts are an inevitable part of work-life that arise from the clash of principles, interests, or opinions; they can be work-related or interpersonal, and when unsolved, they may lead to WB (Baillien et al., 2009; Baillien et al., 2017). Task (Baillien et al., 2015) and role conflicts (Hauge et al., 2009; Jenkins, Zapf, et al., 2011; Matthiesen & Einarsen, 2007) were related to perpetration cross-sectionally. Moreover, role conflicts predicted it after 12 months (Balducci et al., 2012); forcing conflict management style increased reports of perpetration after six months while the problem-solving style reduced it (Baillien et al., 2013).

Role ambiguity refers to a lack of clear understanding of what actions must be taken to achieve one's individual goals (Kahn et al., 1964).
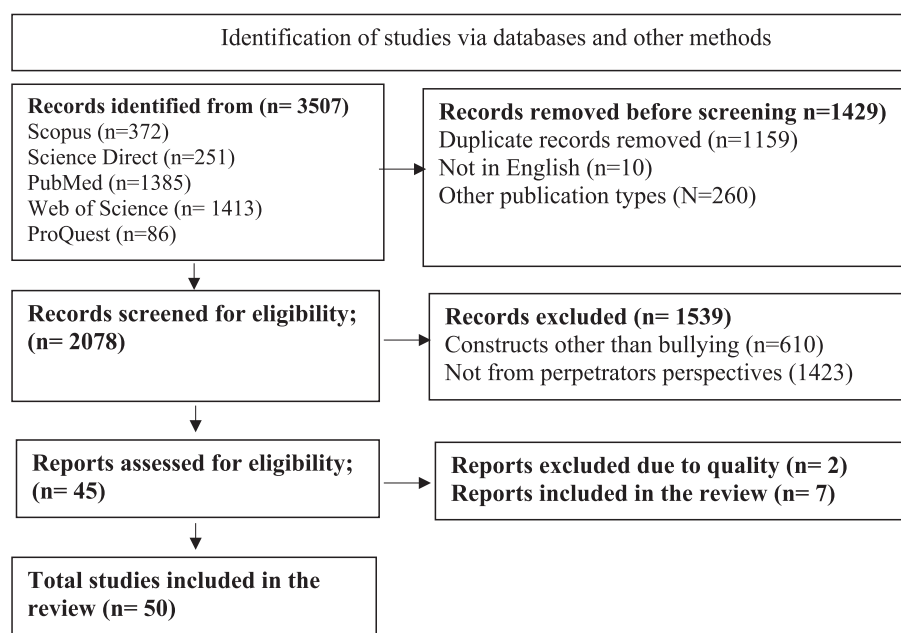

Identification of studies via databases and other methods

Records identified from (n= 3507)	→	**Records removed before screening n=1429)**
Scopus (n=372)		Duplicate records removed (n=1159)
Science Direct (n=251)		Not in English (n=10)
PubMed (n=1385)		Other publication types (N=260)
Web of Science (n= 1413)		
ProQuest (n=86)		

Records screened for eligibility; (n= 2078)	→	**Records excluded (n= 1539)**
		Constructs other than bullying (n=610)
		Not from perpetrators perspectives (1423)

| **Reports assessed for eligibility; (n= 45)** | → | **Reports excluded due to quality (n= 2)** |
| | | **Reports included in the review (n= 7)** |

| **Total studies included in the review (n= 50)** |

Fig. 2. PRISMA 2020 flow diagram for systematic reviews.

Table 2
Critical findings of the 50 analyzed studies in chronological order.

Authors & publication year	Study design, participants, country, subjects	Domain of research & variables	Summary of results
Coyne et al. (2003)	*CS & *QN; Fire service, UK (n = 288); Victims & Bullies	*ID. *Ant: Personality, perceptions of the work environment.	Independence, extroversion, and conscientiousness were not related to perpetration. Self & peer-reported bullies tended to have difficulty coping with personal criticism.
Coyne et al. (2004)	CS & QN; Fire service, UK (n = 288); Victims & Bullies	*WE. Ant: Team member preference and effectiveness.	Self- and peer-reported bullies tended to be the least preferred people to work with.
Lee and Brotheridge (2006)	CS & QN; Diverse industries, Canada (n = 180); Targets & Perpetrators	WE. Ant: Being Bullied.	Receiving undermining and verbal abuse predicted scapegoating and undermining others.
Hauge et al. (2007)	CS & QN; Representative sample, Norway (n = 2539); Targets & Bullies	WE. Ant: Job (satisfaction, demands, insecurity), decision authority, leadership behavior.	Bullies reported less laissez-faire leadership, job stressors, job insecurity; and more job satisfaction, control over decisions than targets and target/bullies.
Seigne et al. (2007)	CS & QN; Random employees, Ireland (n = 34); Bullies	ID. Ant: Personality.	Bullies tended to be significantly more independent, competitive, assertive, single-minded, and forthright than non-bullies.
Matthiesen and Einarsen (2007)	CS & QN; Heterogenous employee sample, Norway (n = 4742); Targets, Victims, Bullies	WE & ID. Ant: Aggression, role conflict, role ambiguity.	Most bullies were males, tended to show unstable self-esteem, score higher aggressiveness, role conflict and role ambiguity.
De Cuyper et al. (2009)	CS & QN; Two organizations, Belgium (n = 693); Targets & Perpetrators	WE & ID. Ant: Job insecurity; *Mod: Perceived employability.	Individuals who perceived themselves as highly employable, despite feeling insecure about their jobs, reported perpetration.
Glasø et al. (2009)	CS & QN; Random employee sample, Norway (n = 2539); Targets & Bullies	ID. Ant: Interpersonal problems.	Bullies tended to be more domineering, vindictive, cold, socially avoidant, intrusive, distrustful than non-victims, and had high interpersonal problems.
Hauge et al. (2009)	CS & QN; Representative sample, Norway (n = 2359; Bullies	WE & ID. Ant: Being bullied, role conflict, interpersonal conflicts, gender.	Being bullied, being male, role and interpersonal conflicts significantly predicted being a bully. Age and organizational position was not related to it.
Baillien, Rodríguez-Muñoz, et al. (2011)	L (2 waves 12 months lag) & QN; A financial organization, Belgium (n = 177); Targets & Perpetrators	WE Ant: JD and JR (not supported).	JD was positively, and JR was negatively correlated with perpetration but no significant cross-lagged effect was found after 12 months.
Van den Broeck et al. (2011)	CS & QN; 17 organizations, Belgium (n = 749); Targets & Perpetrators	WE. Ant: Job Demands (JD), Job resources (JR); *Med: Emotional exhaustion (not supported).	The combination of high JD and high JR was indicative of perpetration. Emotional exhaustion related positively to perpetration but was not a mediator
Baillien, De Cuyper, and De Witte (2011)	*L (2 waves 12 months lag) & QN; Two organizations, Belgium (n = 320); Targets & Perpetrators	WE Ant: Workload Mod: Job Autonomy.	Workload was associated with perpetration with 12 months lag for those who scored low on job authority.
Jenkins, Zapf, et al. (2011)	CS & QL; Heterogenous employee sample, Australia (n = 24); Accused bullies	WE. Ant: Stressful work environment, being bullied.	Alleged bullies have highly stressful work environments, ambiguous roles, staff shortages, high levels of conflict and some are being bullied. They showed inappropriate behavior (joking), and rationalized their behavior as legitimate performance management.
Jenkins, Winefield, and Sarris (2011)	CS & QL; Heterogenous employee sample, Australia (n = 24); Accused bullies	WE & ID. Out: Personal and professional experiences	Accused bullies experienced depression, anxiety, post-traumatic stress, suicide ideation and felt injustice. They were dismissed or resigned, and lost confidence in their managerial abilities
Ceja et al. (2012)	CS & Mixed Method; 10 organizations, Spain (n = 287); Perpetrators	WE Ant: Task-oriented focus, too little hierarchy, negative work atmosphere.	Family firms tended to be associated with balanced people-task orientation, a positive work environment, and low mobbing levels.
Balducci et al. (2012)	L (2 waves 12 months lag) & QN; Healthcare agency, Italy (n = 234); Targets & Perpetrators	WE & ID. Ant: Role conflict, role ambiguity (not supported); Mod: Personal vulnerability (e.g. depressive & anxiety disorder) (not supported).	Role conflict positively affected perpetration after 12 months, and perpetration did not predict role conflict.
Bloch (2012)	CS & QL; A heterogeneous bully group, Denmark (n = 15); Bullies	ID Ant: Bullies' experiences with victims.	Bullies classified the victims as violators of basic norms of the work community, triggering contempt, anger, vengeance, and negative actions, to consolidate power. Defended themselves as victim did not object.
Brotheridge et al. (2012)	CS & Mixed Method; 4 organizations, Canada (n = 180); Targets & Perpetrators	WE & ID. Ant: Anger, Machiavellianism, self-esteem, self-monitoring, social support, job autonomy & control, physical health outcomes.	Perpetrator-targets are in vicious cycle of bullying, reported higher levels of self-doubt, anger, bullying and perpetration. They had lower work autonomy/control and co-worker support. Self-esteem was not related to perpetration.
Escartín et al. (2012)	CS & QN; Heterogenous employee sample, Spain (n = 521); Targets & Perpetrators	WE & ID. Ant: Gender, occupational status and supervisor transformational leadership style	Transformational leadership was negatively related to the personal bullying of others. Men and supervisors tended to engage in perpetration.
Liu (2012)	CS & Mixed Method; Pharma/Biotech/Medical Device Industry, USA (n = 114); Targets, Victims, Bullies, Witnesses	WE & ID. Ant: Work environment, emotions.	Perpetrators admitted that they were poor leaders and overworked. Relatively younger ones rationalized their behavior stating that others are trying to bring them down due to jealousy.
Baillien et al. (2013)	L (2 waves 6 months lag) & QN; Two organizations, Belgium (n = 277); Targets & Perpetrators	WE & ID. Ant: Task conflict, Conflict management styles.	The forcing style of conflict management was positively, and the problem-solving style was negatively related to becoming a perpetrator after 6 months.
Linton and Power (2013)	CS & QN; Working university students, Canada (n = 224); Targets & Perpetrators	ID Ant: Personality characteristics of the Dark Triad, aggression, sensation seeking.	Perpetration was positively related to Machiavellianism, narcissism, psychoticism, aggression, and disinhibition.

Table 2 (*continued*)

Authors & publication year	Study design, participants, country, subjects	Domain of research & variables	Summary of results
Escartín et al. (2013)	CS & QN; Heterogenous employee sample, Spain ($n = 4848$); Targets & Perpetrators	WE Ant: Being bullied, Psychosocial Safety Climate (PSC).	There is a positive relationship between victimization & perpetration; a negative one between PSC and perpetration.
Nielsen (2013)	CS & QN; Two shipping companies, Norway ($n = 594$); Targets, Victims, Bullies, Witnesses	WE Ant: Leadership style of the perpetrator.	Laissez-faire leadership is positively related to perpetration, whereas both transformational leadership styles and authentic leadership styles were not.
García-Ayala et al. (2014)	CS & QN; Security sector, Spain ($n = 392$); Targets & Perpetrators	WE & ID. Ant: Being bullied; Mod: Psychological detachment, empathy.	Being a target of bullying behaviors predicted becoming a perpetrator, psychological detachment and empathic concern attenuated this relationship.
De Wet and Jacobs (2014)	CS & Mixed Method; A sample of teachers, South Africa ($n = 999$, 32 bullies); Bullies	ID. Ant: Bullies' experiences with victims.	Bullies abused others due to jealousy, retaliation, stress, personal and health problems, and they rationalized their behavior.
Pilch and Turska (2014)	CS & QN; Random employee sample, Poland ($n = 117$); Targets & Perpetrators	WE & ID. Ant: Machiavellianism, Perceptions of organizational culture (clan, adhocracy, market & hierarchy).	Perceptions of organizational culture were not significantly correlated to perpetration, while Machiavellianism predicted perpetration.
Zabrodska et al. (2014)	CS & QL; Researchers in academia, Austrialia, Czech Republic, Iran ($n = 7$); Targets, perpetrators	ID. Ant: Moral condemnation, failure to recognize the harm done, precarious emotions	Perpetrators believed targets violated shared social norms and values, they rationalized their acts as necessary to sustain moral order. They had difficulty recognizing the harm they inflict and had oscillating emotions (self-righteous, doubtful, remorseful).
Baillien et al. (2015)	CS & QN; Representative sample, Belgium ($n = 2029$); Targets & Perpetrators	WE & ID. Ant: Task conflict. Mod: Forcing style of conflict management. Med: Relationship conflict.	There was a positive relationship between task conflicts and perpetration mediated by relationship conflicts and moderated by forcing conflict management style for perpetrators.
Mackey et al. (2016)	S1: CS & QN ($n = 396$); S2: L & QN (2 waves, 3 weeks lag) ($n = 123$); Random employees, USA; Perpetrators	ID. Ant: Entitlement. Mod: Felt accountability. Med: Perceptions of abusive supervision.	There was an indirect relationship between entitlement and perpetration through perceptions of abusive supervision that was stronger for employees who report lower levels of felt accountability.
Holten et al. (2016)	L (2 waves 2 years lag) & QN; Heterogeneous employees, Denmark ($n = 1650$); Targets & Perpetrators	WE & ID. Ant: Task and relational organizational change. Mod: Leadership quality, positive/negative affectivity.	Organizational change, specifically relations-related change, predicts perpetration. The more employees perceived low leadership quality and the more they feel distressed, nervous, upset (high negativity), perpetration intensified.
Glambek et al. (2016)	L (3 waves, 5 years) & QN; Representative sample, Norway ($n = 1650$); Perpetrators	WE. Out: Occupational status	Perpetrators' occupational status is largely unchanged, and remains so over time
Jacobson et al. (2016)	CS & QN; Working university students, USA ($n = 128$); Perpetrators	ID. Ant: Moral emotional traits and perspective-taking. Mod: Self-esteem. Med: Reparative action.	Moral emotional traits, self-esteem, conscientiousness were negatively, and being male was positively related to perpetration. Reparative action mediated the relationship between guilt proneness and perpetration, which was moderated by self-esteem.
Baillien et al. (2018)	L (3 waves 6 months lag) & QN; Heterogeneous employees, Belgium ($n = 1994$); Perpetrators	WE & ID. Ant: Organizational change. Med: Psychological contract breach.	Exposure to organizational change was positively related to being a perpetrator (after 12 months) through perceptions of psychological contract breach.
Mortensen and Baarts (2018)	CS & QL; Hospital employees, Denmark; Targets & Perpetrators	WE. Ant: Distinctive joking practice.	Joking practices caused perpetration to emerge. Employees felt forced to participate due to social exclusion fear.
Abbink and Doğan (2018)	L (2 waves) & QN; Random employees, Netherlands & Germany ($n = 860$); Targets & Perpetrators	WE Ant: Group dynamics.	Mob formation as a game was easy and more frequent if the individual gains from it were higher. Envy increased but pity did not decrease mobbing.
Dåderman and Ragnestål-Impola (2019)	CS & QN; Five organizations, Sweden ($n = 172$); Targets & Perpetrators	ID Ant: Personality traits. Mod: Honesty and Humility.	Perpetrators are callous, manipulative, extrovert, disagreeable, and dishonest. The relationship between perpetration and Machiavellianism was stronger when Honesty-Humility was low.
Kizuki et al. (2019)	CS & QN; Heterogeneous employees, Japan ($n = 927$); Perpetrators	WE & ID. Ant: Adverse childhood home experiences and school bullying (ACESB) Med: Being bullied	Employees who had ACESB were at increased risk later in life of enacting bullying behaviors at work. Being bullied did not mediate this relationship
Vandevelde et al. (2020)	CS & QN; 26 organizations, Belgium ($n = 1077$); Targets & Perpetrators	WE & ID. Ant: Person-job fit, Person-group fit, Person-organization fit. Med: Strain and conflict.	Employees Job fit, Group fit and Organization fit were associated with perpetration, explained by strain. Conflict explained the relationship between Group Fit and perpetration.
Lacy (2020)	CS & QN; Employees in a university, USA ($n = 63$); Accused bullies	ID Ant: Dark Triad personality traits, cultural values	Psychopathy, narcissism and Machiavellianism predicted engagement in WB, while cultural values did not.
Sischka et al. (2020)	CS & QN; Random individuals in the world ($n = 1260$); Targets, Victims, Perpetrators, Bullies	WE. Ant: Coworker competition. Mod: Passive avoidant leadership style.	Coworker competition predicted perpetration, passive avoidant leadership moderated the relationship between competition and perpetration.
Escartín, Dollard, et al. (2021).	CS & QN; Random employees, Spain ($n = 3778$); Targets & Perpetrators	WE & ID. Ant: Psychosocial Safety Climate (PSC). Med: Emotional Exhaustion.	Work-unit perpetration explained the negative relationship between perceptions of PSC and employees' emotional exhaustion. In their reverse effects, PSC was significantly linked to WB for targets and perpetrators via emotional exhaustion.
Vranjes et al. (2021)	L (2 waves 6 months lag) & QN; ten organizations, Belgium (S1 $n = 1226$; S2 $n = 1205$); Targets & Perpetrators	WE & ID. Ant: Being bullied. Mod: Coping strategy.	Employees who tend to cope actively with bullying have a higher likelihood of becoming perpetrators, whereas those who tend to disengage from it are less likely to become perpetrators.

Table 2 (*continued*)

Authors & publication year	Study design, participants, country, subjects	Domain of research & variables	Summary of results
Fernández-del-Río et al. (2021)	CS & QN; Heterogeneous employees, Spain (*n* = 613); Targets & Perpetrators	ID. Ant: Personality traits.	Narcissism and sadism were positively, and agreeableness was negatively related to workplace perpetration behaviors. Perpetrators tended to be males.
Wicks et al. (2021)	CS & QL; Medical doctors, New Zealand (*n* = 24); Targets & Accused Bullies	WE. Out: Physical and psychological outcomes	Accused bullies felt ignored and bullied, perceived injustice and unpleasant work environment. They isolated themselves, felt stressed, anxious, depressed and physically sick.
Mazzone et al. (2021)	CS & QN; School teachers, Ireland (*n* = 630); Targets, bullies, bystanders	ID. Ant: empathic concern and perspective-taking.	Employees who were bullied frequently, witnessed and bullied others frequently. Respondents with higher perspective-taking, empathic concern, and personal distress were less likely to be involved in bullying perpetration
Özer et al., 2022	L (3 waves 6 months lag) & QN; Heterogeneous employees, Spain and Turkey (*n* = 2447); Perpetrators	WE & ID. Ant: Organizational trust (OT) and justice (OJ). Med: Psychological distress and physical symptoms.	OJ negatively predicted psychological and physical health deterioration, while unexpectedly, OT positively predicted the same. Health conditions did not predict perpetration after 3 months.
Balducci et al. (2022)	L (2 waves 12 months lag) & QN; Healthcare organization, Italy (*n* = 235); Perpetrators	ID. Ant: Workaholism Med: Job-related negative affect (anger, disgust, pessimism, discouragement).	Workaholism was a significant predictor of WB perpetration after 12 months; reverse causation was not supported. Job related negative affect did not mediate this relationship.
Vranjes et al. (2022)	L (4 waves 6 months lag) & QN; Heterogeneous employees, Belgium (*n* = 1420); Targets & Perpetrators	WE & ID. Out: WB. Med: Relationship conflict with colleagues & Perceived control.	WB perpetration led to more exposure to bullying 18 months later. Relationship conflicts and perceived control partially mediated this effect.
Özer et al., 2023	L (24 waves 1 week lag) & QN; Heterogeneous employees, Spain and Turkey (*n* = 31); Perpetrators	WE & ID. Ant: Being bullied, sleep duration and quality, physical exercise.	Physical activity during the work week and being bullied positively predicted perpetration the same week, while sleep quality did not. Perpetrators tend to score high on psychological distress, tend to be supervisors and tend not to have mental illnesses

Note: CS: Cross-sectional; QN: Quantitative; OL: Qualitative; L: Longitudinal; WE: Work Environment; ID: Individual Dispositions; Ant: Antecedent; Mod: Moderator; Med: Mediator, Out: Outcome.

Qualitative studies found that when interviewed, accused bullies complained about role ambiguity (Jenkins, Zapf, et al., 2011), and when studied quantitatively, perpetrators reported elevated levels of it (Matthiesen & Einarsen, 2007). Although one quantitative study found that role ambiguity did not increase the probability of perpetration (Hauge et al., 2009), results on role ambiguity were all cross-sectional and did not unravel causality.

In general, study results agreed that if work roles were confusing, went against each other, especially when task conflicts were reduced to relationship conflicts and intensified by a forcing style of conflict management on the perpetrator's part, conflicts lead to perpetration. Results were also backed by theories as follows: mediocre work environments trigger conflicts (Work Environment Hypothesis), leading to loss of resources (Conservation of Resources; Hobfoll, 2001), draining individuals, causing negative emotions (Stressor Emotion Framework) such as frustration and aggression (Frustration-Aggression; Berkowitz, 1989). If individuals were bullied, they were stressed and bullied others. Some individuals had a deep concern for themselves but not for others (Dual Concern; De Dreu et al., 2000). They engaged in bullying to save face or regain power and thus felt nourished with new resources (Social Interaction Theories; Tedeschi & Felson, 1994).

3.1.1.3. Organizational culture and climate. The established rules, beliefs, assumptions, and values make up the organizational environment and play a role in WB. However, the research on the organizational environment as an antecedent to perpetration is fragmented. The most studied construct is the psychosocial health and safety climate, which focuses on employee psychological health and safety, defining what is expected of employees and what behaviors should be avoided in workplaces. Three studies examined the relationship between organizational context and acts of perpetration cross-sectionally. Low perceptions of psychosocial health and safety climate on an individual level (Escartín et al., 2013) and on the work unit level (Escartín, Dollard, et al., 2021) were related to higher levels of perpetration. Study results showed that bullying is also a group-level construct affecting the health of all related parties and triggered by the organizational psychosocial health and safety climate. Social Learning Theory (Bandura, 1973)

supported this finding, as social behavior can be acquired by observing and imitating others.

Two studies examined organizational change as an antecedent to perpetration. Organizational change predicted perpetration after 12 months if employees felt betrayed and frustrated, believing that the organization did not fulfill its commitments to them while they did (Baillien et al., 2018). Relational changes in organizations are social changes where the quality and number of interactions with others are modified. Such workplace developments predicted perpetration events after two years (Holten et al., 2016). Results were backed by various theories stating that change may be stressful and frustrating (Frustration-Aggression theory) for the employees, increasing employee expectations for the organization to meet (Social Exchange; Blau, 1964). However, if employee efforts are not matched, individuals may see this as a violation of social exchange and direct their stress and frustration onto others to gain power (Proxy Blaming; Zemba et al., 2006; Social Interactionist Theory; Goffman, 1967). The research found that "non-family-owned" companies focused more on tasks, neglecting the well-being of employees, recorded higher perpetration than "family-owned" companies with balanced "task-people focus" (Ceja et al., 2012). These results were supported by theories stating that an unfavorable work environment and short-term focus on employees (Stakeholder models; Zellweger & Nason, 2008) created stress and emotional responses (Stressor Emotion Framework and Three-Way; Baillien et al., 2009).

Pilch and Turska (2014) studied how perceptions of organizational culture (hierarchy, market, clan, and adhocracy) lead to perpetration, but they found no impact cross-sectionally. Özer et al. (2022) studied the impact of organizational trust and justice on perpetration with three waves of data collection. Despite the cross-sectional relations, no significant direct or indirect paths were found after six months.

3.1.1.4. Teams and groups. The grouping of individuals to achieve organizational tasks and goals may also be the germinating grounds for perpetration. Cross-sectional studies showed that bullies had low co-worker support (Brotheridge et al., 2012), and they were the least preferred ones in teams despite their help in achieving team goals

(Coyne et al., 2004). Accused bullies showed inappropriate social behaviors (e.g., joking) in groups (Jenkins, Zapf, et al., 2011).

Cross-sectional studies showed that perpetrators were triggered if they perceived a low fit with their job, group, and organization. The underlying reasons were stress and conflicts experienced in the low-fit environment (Vandevelde et al., 2020). Perpetrators bullied others in competitive work environments, especially when they were under the management of passive-avoidant supervisors (Sischka et al., 2020). Longitudinal studies showed that bullies selected victims easily, showed no pity, adapted to group dynamics that promoted unethical behavior even for small gains (Abbink & Doğan, 2018), and embraced social games like joking to defend themselves, avoiding social exclusion (Mortensen & Baarts, 2018).

Various theories backed results on perpetrator behaviors, stating that in stressful work environments, individuals may deplete their resources (Conservation of Resources Theory), get frustrated (Frustration-Aggression), and act negatively even for small gains (Social Preferences; Fehr & Schmidt, 1999). Witnesses repeat these negative behaviors (Social Learning; Victim Precipitation Theory by Aquino et al., 2004), especially when they perceive many are doing it (Group Dynamics theory; Forsyth, 2009) and when they believe that this behavior will go unpunished by the absent leader (Social Identity; Tajfel, 1974). In summary, all of the above studies on various constructs of teamwork found that team level of interaction was strongly related to perpetration.

3.1.1.5. Leadership. Studies showed that the individual in charge of leading the group or the organization has a significant impact on perpetration phenomena. An inactive and ineffective laissez-faire leadership style was associated with an increased risk of perpetration where the perpetrators possibly perceived that the leaders did not care about work problems or were not concerned about the well-being of subordinates. Perpetrators perceived that there would not be any repercussions for their negative acts (Nielsen, 2013). Cross-sectional research on transformational leadership style had contradictory results where one study found no relationship between transformational leadership and perpetration (Nielsen, 2013), another one found that perpetrators reported less perpetration under transformational leaders, possibly because their opinions were valued, increasing their resources and lowering their stress (Escartín et al., 2012). Perceptions of good leadership quality lowered perpetration after two years (Holten et al., 2016).

3.1.1.6. Being bullied. When employees are abused, they feel stressed and drained, showing aggression to others to cope with bullying and recuperate the energy lost, as supported by the Conservation of Resources and Frustration – Aggression Theories. Being bullied predicted bullying others (Escartín et al., 2013; García-Ayala et al., 2014; Hauge et al., 2009; Jenkins, Zapf, et al., 2011), but the relationship attenuated after 12 months (Baillien, Rodríguez-Muñoz, et al., 2011). Although previously bullying others did not predict being bullied cross-sectionally (Lee & Brotheridge, 2006), the effect from exposure to enactment and enactment to exposure of bullying was of equal strength after six months (Vranjes et al., 2021). Target-perpetrators engaged in active coping (trying to stop the bully) when confronted with bullying and tended to have high levels of physical symptoms (Brotheridge et al., 2012), possibly due to the stress caused by the vicious cycle of bullying. Actively trying to stop the bullying and seeking support on how to solve the problem increased the perpetration events after being bullied, whereas coping with bullying by expressing emotions, seeking emotional support, and withdrawing behaviorally or mentally from the bullying situation reduced perpetration (Vranjes et al., 2021). First of its kind in bullying literature, researchers studied perpetrator behavior over a 24-week daily and weekly diary study. They found that employees who reported being bullied during the work week did not show enactment of bullying the next week, but being bullied predicted

perpetration the same week (Özer et al., 2023).

Results were explained by various theories stating that individuals dealing with a stressful work environment may deplete their resources (Conservation of Resources Theory) and sometimes lash out towards innocent third parties (Displaced Aggression Theory; Dollard et al., 1939) due to frustration (Frustration-Aggression Theory). Others model this behavior (Social Learning Theory) as people's immediate environment influences their attitudes and behaviors (Social Information Processing Theory; Salancik & Pfeffer, 1978). None of the studies revealed if the original perpetrators were targeted in revenge or if bullying was a learned act targeting others in the organization.

3.1.1.7. Summary of work environment factors as antecedents. To summarize, studies on the work environment showed that absent managers who did not intervene in conflicts and organizations with poor work designs focusing only on tasks and neglecting employee well-being created conflict-prone environments. Such environments incited stress, exhaustion, insecurity, and frustration, triggering some individuals to bully others. Once ignored, allowed or not condemned, such behaviors became learned behavior for many. These behaviors multiplied, creating many targets and perpetrators in the vicious circle of perpetration. However, some individuals did not perceive the work environment as stressful, but they still engaged in perpetration. The possible reasons for their behavior will be examined under individual characteristics as antecedents below. It is worth noting that most of the research on antecedents (46 articles) was conducted with a cross-sectional study design (34: 74 %) where cause-and-effect relationships were not established.

3.1.2. Individual differences as antecedents of bullying perpetration

3.1.2.1. Character traits. Behaviors that describe individuals are personality traits, and some traits were found to be related to perpetration. Bullies were found to be high on self-doubt and low on self-monitoring (Brotheridge et al., 2012); low on emotional stability, tended to have difficulty coping with personal criticism, be easily upset, and view the world as threatening (Coyne et al., 2003); assertive, aggressive (Matthiesen & Einarsen, 2007); impulsive, selfish, not empathetic (Seigne et al., 2007); domineering, vindictive, socially avoidant, intrusive with a high level of interpersonal problems (Glasø et al., 2009).

Perpetrators who were analyzed based on Dark Triad scales (Paulhus & Williams, 2002) tended to score high on sadism (Fernández-del-Río et al., 2021), high on Machiavellianism (Brotheridge et al., 2012; Pilch & Turska, 2014) and high in Machiavellianism, narcissism, and psychopathy traits (Dåderman & Ragnestål-Impola, 2019; Fernández-del-Río et al., 2021; Lacy, 2020; Linton & Power, 2013). Perpetrators tended to be manipulative, lacked empathy, scored high in extroversion, and dishonesty (HEXACO; Lee & Ashton, 2004), scored low in agreeableness, fairness, and sincerity (Dåderman & Ragnestål-Impola, 2019), and high in aggression, sensation seeking (Linton & Power, 2013).

Study results were contradictory regarding perpetrators' self-esteem. Studies found that perpetrators tended to have highly unstable (Matthiesen & Einarsen, 2007) and low self-esteem (Brotheridge et al., 2012). Backed by the Sociometer Theory of Self-esteem (Leary, 2004), one study showed that high self-esteem inhibited individuals from engaging in perpetration (Jacobson et al., 2016). If individuals were equipped with guilt, shame proneness, reparative action tendencies, empathy, and conscientiousness (Jacobson et al., 2016) or had high levels of perspective-taking and empathic concern (Mazzone et al., 2021), reports of perpetration dropped.

An earlier study found no relationships between perpetration and openness to experience, conscientiousness, extroversion, and neuroticism traits (Coyne et al., 2003). However, later studies using the Five-Factor scale (McCrae & Costa, 2013) found that perpetrators tended to be less agreeable (Dåderman & Ragnestål-Impola, 2019; Fernández-del-Río et al., 2021), and score low in conscientiousness (Jacobson et al.,

2016).

Perpetrators were found to be low on conscientiousness in a study (Jacobson et al., 2016), suggesting that perpetrators are not quite dutiful and responsible. They thus may tend to fail to fulfill their obligations. In another longitudinal study, workaholic individuals reported WB perpetration after 12 months (Balducci et al., 2022), which might suggest that perpetrators may be focusing only on work, neglecting other areas and lacking a holistic approach to life.

3.1.2.2. Emotions. Individuals show emotions if an event is of personal significance to them. Bullies scored high on anger (Brotheridge et al., 2012); felt revenge and contempt towards victims (Bloch, 2012); and showed swaying emotions such as self-righteousness, doubtfulness, and remorsefulness (Zabrodska et al., 2014). Bullies regarded victims as violators of rules of working life (De Wet & Jacobs, 2014) or violators of shared social norms and values (Zabrodska et al., 2014). They reacted to preserve their positions in work-life, justifying perpetration as the victims were jealous of them (Liu, 2012), believed that the victim was deserving of it (Bloch, 2012) and had trouble recognizing the harm they inflicted (Zabrodska et al., 2014).

Various theories supported these findings stating that individuals regularly assess and classify each other (Social Interactionist Theory) and construct group-based hierarchical systems based on ethnicity, class, and religion (Social Dominance; Pratto & Stewart, 2012). Some individuals look for cooperation and reciprocity in society. When cooperation is contested, they react. Some are motivated to acquire higher status and legitimize dominance over perceived inferior groups (Moral Codes and Emotions Theories, Barbalet, 1998; Pelzer, 2005).

3.1.2.3. Perceptions. Individuals' understanding and awareness of the work environment may be instrumental in triggering perpetration. Employees who believed they deserved better treatment at work perceived their supervisors as abusive and tended to bully others (Mackey et al., 2016). Theories supported by these results state that behavior is a social exchange where negative behavior is reciprocated with a negative one (Social Exchange Theory) and may be displaced onto others (Displaced Aggression Theory; Frustration-Aggression Theory).

3.1.2.4. Age. Upon examining the descriptive statistics tables, it is observed that some studies found that perpetrators are younger employees rather than older (Baillien et al., 2013; Baillien et al., 2015; Baillien et al., 2018; De Cuyper et al., 2009; Kizuki et al., 2019; Özer et al., 2022; Sischka et al., 2020; Vandevelde et al., 2020), while others did not find statistically significant correlations between age and perpetration (Brotheridge et al., 2012; Hauge et al., 2009; Mazzone et al., 2021).

3.1.2.5. Gender. Studies that published the correlation between gender and reports of perpetration mostly noted that male participants were more likely than females to engage in perpetration (Baillien et al., 2013; Brotheridge et al., 2012; De Cuyper et al., 2009; Escartín et al., 2012; Fernández-del-Río et al., 2021; Hauge et al., 2009; Jacobson et al., 2016; Kizuki et al., 2019; Vandevelde et al., 2020). However, others did not find any correlation between gender and perpetration behavior (Baillien et al., 2018; Balducci et al., 2012; Mazzone et al., 2021; Özer et al., 2022; Sischka et al., 2020). A recent review interpreted such results showing that perpetrators tend to be males as follows; based on victims' reports most perpetrators are supervisors, and males are overrepresented, in supervisory positions, resulting in perpetration being associated with males (Zapf & Einarsen, 2020).

3.1.2.6. Supervisory position. Another frequently investigated factor of perpetration behavior was the supervisory roles of the study participants. The hierarchical position of the perpetrators showed conflicting results where some studies found no relationship between supervisory position and perpetration (De Cuyper et al., 2009; Hauge et al., 2009; Sischka et al., 2020), while other studies found that perpetrators tend to be supervisors (Baillien et al., 2015; Escartín et al., 2012; Özer et al., 2022; Özer et al., 2023). Studies also mentioned that perpetrator supervisors could also be a target of bullying (Özer et al., 2023; Vranjes et al., 2022).

3.1.2.7. Physical and psychological health. Linton and Power (2013) indicated that female body weight was significantly and positively correlated with perpetration, suggesting that obese females tended to bully others more than non-obese ones. Another cross-sectional study studied perpetration behavior based on Social Learning Theory. They found that employees with adverse childhood experiences, such as being slapped, punched, shouted at, ignored and who experienced school bullying were at higher risk of becoming WB perpetrators (Kizuki et al., 2019). A diary study based on the Conservation of Resources Theory, showed that perpetrators' excess physical activity during the work week positively predicted perpetration the same week. Researchers also tested if sleep quality predicted WB perpetration. They found that changes in sleep quality did not predict reports of perpetration (Özer et al., 2023). Results of a three-wave longitudinal study showed that perpetrators tended to score high on psychological distress and physical symptoms at each data collection (Özer et al., 2022).

3.1.2.8. Summary of individual dispositions as antecedents. In summary, studies on individual dispositions' perspective showed that perpetrators and bullies seemed to be mistreated during childhood; they tended to be males and have undesirable personality characteristics such as being narcissistic, selfish, manipulative, uncompassionate, and disagreeable with low moral emotions. They expected to be better treated in work life, were activated under absent managers, and where engaged in excessive physical activity during the work week. They felt anger towards victims and rationalized their behaviors. Contrasting to their generally believed powerful image, some studies showed that perpetrators felt remorse after their behaviors, doubted themselves, had low self-esteem, and they were experiencing bullying even if they were managers. Studies on traits showed that perpetrators tend to be low in conscientiousness but can also be workaholics.

3.2. Moderators of perpetration

Of the 50 studies in our review, 11 articles tested moderators to explain WB perpetration (Table 2).

Some traits related to reports of perpetration were used as moderators in antecedent–perpetration relationships. Empathy (being bullied–perpetration relationship, García-Ayala et al., 2014); positive/negative affectivity (organizational change – perpetration relationship, Holten et al., 2016); honesty and humility (personality-perpetration relationship, Dåderman & Ragnestål-Impola, 2019) have been found to act as moderators that weaken the antecedents–bullying relationships. Higher levels of self-esteem were instrumental in inhibiting bullying through the need to maintain social relationships (Jacobson et al., 2016). To better understand how self-esteem contributes to perpetration, longitudinal studies should be conducted to capture stability and level of self-esteem. One study found that the perpetrator's forcing conflict management style boosted perpetration (task conflicts-perpetration, Baillien et al., 2015). Another study analyzed psychological health as a moderator and found that the baseline personal vulnerabilities such as depressive and anxiety disorder of the perpetrator (Role conflict-perpetration relationship, Balducci et al., 2012) marginally influenced the level of perpetration under role conflicts. Having high employability perceptions (job insecurity-perpetration relationship, De Cuyper et al., 2009) and not feeling the need to explain their behavior to their supervisors (entitlement- perpetration relationship,

Mackey et al., 2016) were the two moderators intensifying reports of perpetration. Additionally, psychological detachment (being bullied–perpetration relationship, García-Ayala et al., 2014) and passive coping strategies towards bullying (being bullied-perpetration relationship, Vranjes et al., 2021) reduced the strength of the perpetration phenomenon. The theory of emotional regulation strategies (Parkinson & Totterdell, 1999) supported these results, where individuals who could psychologically detach from work reduced their stress and reduced the likelihood of becoming a perpetrator. In contrast to recovery exercises, low job autonomy (workload-perpetration relationship, Baillien, De Cuyper, et al., 2011); poor leadership quality (organizational change – perpetration relationship, Holten et al., 2016), and passive avoidant supervisors (co-worker competition-perpetration relationship, Sischka et al., 2020) increased strength of the antecedent-perpetration relationship.

In summary, working under managers with passive avoidant styles and poor leadership quality, using forcing style of conflict management, having perceptions of high employability, low accountability, and low job autonomy increased WB perpetration incidences. Contrastingly, having empathy, positive affectivity, honesty, humility, high self-esteem, psychological detachment, recovery exercises, and passive coping strategies against WB attenuated perpetration behavior.

3.3. Mediators of perpetration

Out of the 50 studies in our review that analyze perpetration, 11 articles tested mediators to explain WB perpetration. Please refer to Table 2 for details on mediators and note the longitudinal designs as they would be more reliable for mediation analysis.

Relationship conflicts (task conflicts-perpetration relationship, Baillien et al., 2015) and conflicts, in general, were the underlying reasons for perpetration (Group-fit - perpetration relationship, Vandevelde et al., 2020). Emotional exhaustion (psychosocial safety climate- perpetration relationship, Escartín, Dollard, et al., 2021), strain (Person-job fit, group-fit, organization fit– perpetration relationship, Vandevelde et al., 2020) and reparative action (Guilt proneness -perpetration relationship, Jacobson et al., 2016) were mediators in the antecedent-perpetration relationships. Another cross-sectional study examined the relationship between adverse childhood experiences and workplace perpetration and found that WB did not mediate this relationship (Kizuki et al., 2019). However, as the mediation effects in these studies were measured cross-sectionally, cause-and-effect relationships were not established.

A longitudinal study examined psychological distress and physical symptoms as mediators (organizational trust and justice - perpetration relationship, Özer et al., 2022) and found that poor organizational environment seemed to cause psychological stress and poor health conditions after three months. However, eroding health conditions did not result in perpetration after three months. Despite cross-sectional associations between poor health and perpetration, individuals may have adapted to the stressful environments and thus did not show aggressive negative behavior in the long term (Conservation of Resources Theory). Perceptions of abusive supervision (entitlement-perpetration relationship, Mackey et al., 2016), and psychological contract breach (organizational change-perpetration relationship, Baillien et al., 2018) explained the perpetration when the underlying forces were studied longitudinally. Another longitudinal study established a significant relationship between workaholism and WB perpetration after 12 months. Researchers tested if job-related negative affect, such as anger, was a mediator but did not find it significant in this relationship (Balducci et al., 2022). A longitudinal study examined being bullied as an outcome of WB perpetration after 18 months and found that relationship conflicts increased employees' vulnerability to bullying exposure (Vranjes et al., 2022).

3.4. Outcomes of perpetration

When accused of bullying, individuals experienced depression, anxiety, post-traumatic stress, suicide ideation and felt injustice. They were dismissed or resigned from their jobs, and they lost confidence in their managerial abilities (Jenkins, Winefield, & Sarris, 2011). Similarly, another cross-sectional study found that employees accused of bullying felt that the accusation of bullying was a form of bullying, as they were not allowed to defend themselves. They perceived injustice and reported an unpleasant work environment. After the accusations, they isolated themselves from others, engaged in self-reflection, felt stressed, anxious, depressed and physically sick (Wicks et al., 2021).

Over five years, a longitudinal study found that being a perpetrator did not significantly increase the probability of reporting sick leave of >24 days, receiving disability benefits, change of employer, or probability of being unemployed. Results suggested that perpetrators of WB have uninterrupted work lives and do not experience unemployment or job changes (Glambek et al., 2016). However, another longitudinal study results (Vranjes et al., 2022) showed that perpetrators experience WB 18 months later, where relationship conflicts increase over time, draining one's resources (Conservation of Resources Theory) and resulting in experiencing bullying.

3.5. Practical suggestions for organizations, practitioners and policymakers

Of the 50 studies in our review, 39 articles suggested steps to restrain perpetration. These suggestions were compiled in Table 3 to guide top management, human resource practitioners, professionals and government bodies to shed light on actionable steps and further studies to stop WB.

Researchers suggested conducting character trait assessments to

Table 3
Practice, policy implications.

Assessments: Conduct personality trait assessments; test the potential hires for fit to the job, the group, and the organization; assess the psychological wellbeing of all employees; detect vulnerable, overworked, stressed departments, teams, and individuals; assess organizational trust and justice environment, informal networks within teams to reveal isolated individuals to integrate them.

Training: Organize conflict handling, cognitive behavior, and empathic skills training to de-escalate problems; problem-solving style of conflict management and an ethical, perspective-taking leadership style training for supervisors and organization-wide training for recognizing, dealing with, and preventing bullying.

Job Designs and Organizational Change: Assess work designs, and personalize them to reduce high-strain jobs with imbalanced job demands and resources. Establish open communication and employee participation in organizational changes to avoid self-protecting behaviors.

Managing potential and active perpetrators: Manage frustrations, and conflicts by encouraging problem-solving behavior, intervene to resolve the conflicts, be attentive to physically and psychologically exhausted, frustrated employees, give them feedback, promote work recovery experiences, listen to bullies, note that they may also be bullied, trace back to the origin of their behavior, mentor and advise perpetrators that their behaviors are unacceptable.

Leadership: Place special effort in leadership training by promoting constructive forms of leadership (transformational, authentic, ethical), reducing supervisor job stress, and ensuring there are no absent managers (passive avoidant leadership).

Organizational policies and practices: Develop effective policies to discourage dysfunctional, conflict-escalating behaviors, establish explicit accountability mechanisms against bullying, ensure clear communication, establish human resource hotlines to report mistreatment, enhance the psychological climate by introducing employee health and safety rules, advocate a change in harmful social practices, do not reinforce workaholic tendencies, to stop individuals that take matters in their hands to achieve justice.

Governments: The European framework agreement on harassment and violence at work explicitly states that being a perpetrator of bullying should result in "disciplinary actions." Such laws should be passed globally, and organizations should be made accountable for WB; government entities should charge penalties if organizations do not have clear policies, practices that inhibit WB and a clear description of potential sanctions. Governments should fight bullying early on in families and schools through awareness and prevention programs.

detect potential and active perpetrators (Dåderman & Ragnestål-Impola, 2019). However, human resources should be mindful of perpetrators' dark traits where potential hires may not answer the questions truthfully to conceal themselves. Therefore, if individuals with undesirable characteristics enter the organizations, management is advised to monitor them to avoid outbreaks of bullying (Fernández-del-Río et al., 2021) and only promote individuals with strong moral character (Jacobson et al., 2016). Once in the organization, potential and active perpetrators may undergo corporate training on various topics, such as how to handle conflicts constructively (Baillien et al., 2015), how to build empathy (García-Ayala et al., 2014; Mazzone et al., 2021) and how to engage in ethical and rational leadership practices (Sischka et al., 2020; Vandevelde et al., 2020).

To detect a potential outbreak of perpetration events, researchers advised conducting ongoing assessments on the psychological well-being of all employees and on informal networks within teams to reveal isolated and stressed individuals (Coyne et al., 2004; Mackey et al., 2016). Organization-wide training for conflict handling (Baillien et al., 2013; Escartín et al., 2013; Lee & Brotheridge, 2006; Vandevelde et al., 2020; Vranjes et al., 2022) and for recognizing, dealing with, and preventing bullying (De Wet & Jacobs, 2014) were also suggested to set the boundaries on employee behavior and obstruct vigilante justice (Brotheridge et al., 2012).

The lion's share of the intervention over perpetrators lies with the managers. Research showed that WB is a long-standing power struggle arising from unsolved conflicts turning into systematic and persistent bullying (Strandmark & Hallberg, 2007). Therefore, researchers suggested that supervisors should actively focus on employees with undesirable characteristics (Pilch & Turska, 2014), manage their stress, physical and psychological exhaustion (Özer et al., 2023; Van den Broeck et al., 2011), frustrations (Hauge et al., 2007) and promote work recovery experiences to ensure psychological detachment from work and relief from stress (García-Ayala et al., 2014). Since conflicts at work are unavoidable, managers should also attend to conflicts immediately (Escartín et al., 2013), encourage problem-solving behavior (Baillien et al., 2013), use the sense-making approach to encourage self-reflecting (Zabrodska et al., 2014) and prevent individuals from bullying others (Hauge et al., 2009). Despite all the aforementioned precautionary steps, if a bullying incident is reported, managers are advised to listen to bullies (Bloch, 2012; Jenkins, Winefield, & Sarris, 2011; Linton & Power, 2013; Wicks et al., 2021); carefully trace back to the originating event (Vranjes et al., 2021); watch out if they have high job resources in hand that might be used to abuse others (Van den Broeck et al., 2011); give them feedback and help (Baillien et al., 2018) so that perpetrators could make amends to their behavior; and refrain from encouraging workaholism (Balducci et al., 2022).

Despite high expectations from managers to curb bullying, victim reports suggest that bullies are supervisors more than subordinates (Zapf et al., 2020). Studies showed that managers may misbehave under organizational performance pressures (Blackwood & Jenkins, 2018) and use tactical bullying to eliminate low-performing employees or strengthen their positions (Jenkins, Zapf, et al., 2011). Therefore, researchers indicated that special effort has to be placed on leadership training by promoting constructive forms of leadership, reducing job stress (Hauge et al., 2009), and ensuring there are no absent managers (passive avoidant leadership), especially in competitive work environments (Sischka et al., 2020).

When a bullying incident is exposed, top management and human resource practitioners (Salin et al., 2020) are advised to reflect on organizational malpractices that led to the incident. It is paramount that organizations recognize their wrongdoings in creating perpetrators at work. As perpetration seems to stem from stressful, poorly organized workplaces, researchers advised organizations to assess work designs, personalizing them for employees (Vandevelde et al., 2020) so that high strain jobs with imbalanced job demands and resources are reduced (Baillien, De Cuyper, et al., 2011; Van den Broeck et al., 2011), and

supportive cultures are established (Ceja et al., 2012). During organizational changes, organizations are urged to establish open communication and encourage employee participation to avoid perceptions of injustice, causing self-protecting behaviors (Baillien et al., 2018; Holten et al., 2016). Studies found that perpetrators were rarely punished (Salin et al., 2019) and researchers urged organizations to develop effective policies to discourage dysfunctional, conflict-escalating behaviors (Lee & Brotheridge, 2006); establish explicit accountability mechanisms against bullying; ensure clear communication with employees, and establish human resource hotlines to report mistreatment (Mackey et al., 2016). To maintain a positive working environment free of perpetration, researchers suggested enhancing the psychological climate by introducing employee health and safety rules (Escartín, Dollard, et al., 2021; Nielsen, 2013), advocating a change in harmful social practices (Mortensen & Baarts, 2018); allowing employee participation in organizational processes and developing their competences (Baillien et al., 2018); and ensuring a good balance between task and employee focus (Ceja et al., 2012) under a balanced hierarchical structure (Pilch & Turska, 2014).

Lastly, government bodies are urged to make organizations accountable for WB, charging penalties for the lack of clear policies and practices (Lacy, 2020) and enforcing clear descriptions of potential sanctions to bullying-related parties to inhibit workplace bullying (Glambek et al., 2016). Governments are also advised to fight bullying early on in families and schools by launching awareness and prevention programs for the public (Kizuki et al., 2019).

3.6. Research methods

3.6.1. Category and time dimension of the data

Different research methods are used to empirically study social behavior, test hypotheses and theories, and look for relationships between different variables (please see Table 2 for the research methods used). Out of the 50 studies in the review, 14 had a longitudinal survey design, and 36 had a cross-sectional design. Six studies had a qualitative approach with observations, collective biographies, focus groups, and interviews, enabling a deeper understanding of the bullies' experiences, environment, and inner world; 40 articles had quantitative study designs; four had mixed methods enriching quantitative findings with qualitative data. Out of the 14 longitudinal articles, three studies had three waves (Baillien et al., 2018; Glambek et al., 2016; Özer et al., 2022), one four waves (Vranjes et al., 2022), suggesting a proper examination of causality and mediation. Remarkably, only one diary study was conducted with perpetrators measuring variables daily and weekly, measuring within-level changes (Özer et al., 2023). We conclude that perpetration studies largely lack causality analysis based on the lack of studies over two waves.

3.6.2. Study variables

As perpetration is a complex and multilayered phenomenon, it needs to be studied simultaneously with work and individual factors. Out of the 50 articles in the review, 14 studies examined perpetration based on individual differences, 15 on the work environment, and 21 on both factors. Out of the 50, the number of articles testing moderators and mediators was 19; 11 moderators and 11 mediators were tested.

In our review, sixteen articles focused only on the enactment of bullying; thirty articles focused on exposure and enactment of bullying; and four articles reported results on witnesses, exposure, and enactment of bullying. The fragmented nature of information on perpetration may be due to research conducted on targets, witnesses, and perpetrators simultaneously losing focus on perpetrators. This lack of focus or inclination to report on targets, victims, or witnesses together with perpetrators reduced the detailed analysis and presentation of perpetrators' data in some studies (Holten et al., 2016; Lee & Brotheridge, 2006; Liu, 2012; Mazzone et al., 2021; Nielsen, 2013). More research focusing only on perpetrators, and on dyads (perpetrator-target and bully-victim) may

ameliorate bullying perpetration literature, demonstrating a clearer picture of the phenomenon from the perpetrators' viewpoint.

3.6.3. Study measures

From 2003 onwards, the scales used to measure perpetration started with single-item questions giving bullying definitions and asking individuals if they acted out bullying. However, measuring perpetration is a delicate task where the wording of the questions should not reveal the purpose of the task at hand, as the participants may be discouraged from reporting that they bullied others or may not be aware of their actions. Therefore, the self-labeling method of detecting bullies with a definition was eventually replaced with the behavioral method of detecting perpetration. The transformation of the scales used was visible in our review, where after the 2009's, the target scales developed with behavioral methods were adapted to active form capturing reports of perpetration.[1]

Perpetration was also measured by behavioral questions with a self-labeling definition of bullying resulting in questionable results as to what was being measured (Mazzone et al., 2021) or by using an ad-hoc self-constructed scale from a combination of previous scales (De Wet & Jacobs, 2014) resulting in debatable scale usage. Meanwhile, studies with accused bullies used admittance of being accused of bullying (Jenkins, Winefield, & Sarris, 2011; Jenkins, Zapf, et al., 2011; Lacy, 2020; Wicks et al., 2021). In the future, multiple-item behavioral questionnaires reflecting different bully behaviors and using newly developed perpetrator scales would be a better fit for studying perpetration.

3.6.4. Study samples

Bullying was predominantly studied in Europe, with 36 articles out of 50. Four studies had representative samples of Belgium and Norway (Baillien et al., 2015; Glambek et al., 2016; Hauge et al., 2007; Hauge et al., 2009). Four studies reported ethnicity (Jacobson et al., 2016; Linton & Power, 2013; Sischka et al., 2020). Incorporating cultural identities in perpetration research may help understand unique issues and provide better solutions to this phenomenon. Out of the 50 articles in the review, 15 focused only on specific sectors (e.g., academia, textiles, finance, healthcare, fire services, security, education, shipping), 2 used working students, and one quantitative study had 34 participants reducing the generalizability of the results. In conclusion, the study participants in articles in this review were skewed towards the experiences of European employees (90 % of the sample base) from a heterogeneous sample of employees from different sectors (79 %) where participants were primarily women (54 %).

4. Discussion

This study aimed to review the antecedents, moderators, mediators and outcomes related to workplace perpetration to unravel why some individuals become perpetrators and how they are affected by their actions. Recommendations for management, organizations and policymakers were also compiled to inhibit perpetration. Variables used in the studies were reviewed from the work environment and individual differences factors. Theories used in explaining the results and study method details were also analyzed.

Results showed that stressful work conditions with poor work

designs left employees in the crossfire of demands with inadequate resources, resulting in task and relationship conflicts in disharmonious teams. The process wore out employees and deranged their health conditions, leaving them frustrated and ready to unleash their anger on others. If the organization did not have policies against WB, if management was perceived as absent and uncaring about employee well-being, or if there were toxic teams inciting perpetration, then negative acts emerged. If perpetration was ignored, allowed, or not condemned by the management, such behaviors became learned behavior for many and were replicated when individuals took matters into their hands. Therefore, many sufferers became actors of negative behaviors. Individuals that reported perpetration were not well physically or psychologically, and over time, they experienced the same treatment they had inflicted on others, suggesting a vicious cycle of bullying.

The perpetrators' excess physical activity and psychological distress predicted perpetration, while strain and emotional exhaustion seemed to explain antecedent-perpetration relationships, and recovery exercises seemed to attenuate perpetration. There was little effort to examine if perpetration caused reverse changes in the work environment in the articles in this review. The finding that stressful work environments caused strain, and lowered employees' resources, resulting in aggression across the organization, was explained by many theories, such as Conservation of Resources, Frustration-Aggression, Counterproductive Work Behaviors, Social learning, Strain, and Interaction Theories.

Studies also showed that perpetrators acted out while working under absent supervisors even though they had high job resources. This behavior seemed to be different from acting out due to stress and was explained by theories such as Social Interaction, Moral Codes, Emotions, or Social Dominance, suggesting individuals are motivated by power and seek dominance over others. Some study results showed that perpetrators tended to be narcissistic, sadistic, selfish, manipulative, uncompassionate, and disagreeable, with inappropriate social behaviors and low moral emotions, while others showed that perpetrators have swaying emotions. Forcing others to accept their terms and turning the work disagreements into personal struggles and workaholism intensified perpetration, while detachment from work significantly lowered perpetration. Some perpetrators believed their behavior was legitimate managerial behavior, and some indicated that targets deserved bullying and were even responsible for it.

High job resources did not stop some individuals from acting out. The role of self-esteem and job ambiguity in triggering and the role of transformational leadership in lowering perpetration remained inconclusive. Moderators and mediators may guide us to understand the relationships when there are conflicting study results. However, a limited range of moderators and mediators were used to analyze the phenomenon. Therefore, the unsubstantiated results were left for future researchers to address.

4.1. Implications for organizations

The studies in the review offered a wide variety of suggestions to prevent bullying in the workplace (please refer to Table 3 for details). Research showed that management maintained high-performance bullies (Walsh et al., 2019) and protected the organization if gains were more from poor response to bullying (Hodgins et al., 2020). Human Resource practitioners sometimes regarded bullying as an interpersonal conflict, tended to take sides with the accused managers (Harrington et al., 2012), felt less urged to act, and requested hard evidence to intervene against bullying (Salin et al., 2020). They ignored organizational shortcomings, did not confront abusive individuals (Martin & Klein, 2013), and did not launch large-scale initiatives to improve work conditions (Karanika-Murray et al., 2016). As organizational changes are challenging, perhaps the organizational psychology field should work on developing creative and subtle interventions for concerned managers and human resource practitioners who aspire to set up bullying-free environments. These interventions may be conducted as

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[1] Out of the 40 quantitative articles, self-labeling as a bully was used in 11 articles (28 %), while measuring perpetration with behavioral methods was used in 26 articles (65 %) by using a modified version of the target scales (NAQ: Einarsen et al., 2009; NAQ-RE: Moreno-Jiménez et al., 2007; S-NAQ: Notelaers & Einarsen, 2008; NAQ-R: Einarsen et al., 2009; SNAQ-R: Notelaers et al., 2019; EAPA-T-R: Escartín et al., 2017). In recent years, the usage of newly developed perpetrator scales also started picking up (8 %; 3; Baillien et al., 2018; Dåderman & Ragnestål-Impola, 2019; Fernández-del-Río et al., 2021).

self-assessments and self-interventions and implicitly lower WB.

4.2. Implications for policymakers

Workplace health and safety is a constantly changing field, with new risk factors being identified and recognized. According to the European Agency for Safety and Health at Work (www.osha.europa.eu/en), it is important to address psychosocial risks to protect workers' health and well-being. These workplace risks can negatively impact an employee's psychological, social, or physical health. They may arise from the design, organization, and direction of work and the social environment in which it is performed. In the past, occupational health professionals primarily focused on the physical hazards present in the workplace, including chemical, physical, and biological factors impacting worker health. However, in recent years, the role of psychological factors, such as WB, covered under workplace violence has become increasingly important (Magnavita & Chirico, 2020). Especially during the COVID-19 pandemic, the prevalence of violence towards healthcare workers was measured to be between 18.5 and 84.5 % (Chirico et al., 2022). Based on the unprecedented COVID-19 pandemic and especially impacting the healthcare sector adversely, scholars urged policymakers to launch special laws to tackle stress, burnout, suicide and turnover intentions of healthcare workers (Chirico & Leiter, 2022); redefine and eliminate inconsistencies between government bodies in handling work-related mental disorders such as post-traumatic stress disorder, chronic adjustment disorder, caused by psychosocial risks such as bullying (Chirico, 2016) and to identify new interdisciplinary approaches and cooperation strategies between occupational health practitioners and public health stakeholders (Chirico et al., 2021b).

Due to management's apparent indifference to WB perpetration, scholars called policymakers to step in for interventions through legislative interventions for implementing mandatory occupational health programs (Chirico et al., 2021a); charging penalties for the lack of clear policies, practices (Lacy, 2020) and requirement of clear description of potential sanctions of related parties (Glambek et al., 2016) to inhibit WB.

4.3. Limitations

There are several limitations to the validity of this systematic review. The search for studies was limited to published literature in English. It did not include materials and research produced by organizations outside the traditional commercial or academic publishing and distribution channels, such as reports, working papers, government documents, white papers and evaluations. This restriction may have resulted in publication bias, as studies with negative results may not have been published or published in other languages. Additionally, the review used narrative synthesis rather than statistical pooling, which limits the strength of the conclusions that can be drawn. Finally, as perpetrators are often studied alongside targets, witnesses or bystanders, finding studies focused on perpetrators has been arduous. Thus, it is possible that some articles went undetected.

4.4. Future research on perpetrators

Our review illustrates several avenues for future research on WB perpetration. To name a few, it is worth noting that bullying literature still lacks comprehensive first-hand knowledge of perpetrators' physical and mental health before, during, or after the bullying process. Perpetrators' physical or psychological health (e.g., female health markers, sexual health) may be a future research area to understand why and how bullying perpetration happens. The use of wearable technologies (Özer et al., 2023) may be broadened to include wellness apps, smartwatches,

and other wearable technologies enabling objective data collection. Another variable that could be incorporated into perpetration studies could be self-control. Theories suggested that the reason and outcome of many negative behaviors (bullying, abusive supervision, incivility) were mainly based on resource losses, leading to self-control dysfunctions. A model derived from the resource theory is the Ego Depletion Model (Baumeister et al., 1998), stating that self-control efforts can exhaust individuals psychologically and lead to regulatory failures. Research showed that individuals who scored high on self-control had higher self-esteem, less bad health habits (binge eating and alcohol abuse), and better interpersonal relationships (Tangney et al., 2004); were less likely to engage in unhealthy and harmful behaviors (Forestier et al., 2018); more likely to perceive life as meaningful with structure and order (Stavrova et al., 2018) and less affected by stress (Yam et al., 2016). Based on the vast number of empirical studies on self-control pointing towards better work and private life, strengthening employees' self-control through various exercises and motivating them with rewards may be explored as inhibiting factors for bullying perpetration. Finally, as perpetrators are not a homogenous group, perhaps some of the inconclusive results of perpetrator studies are due to distinctive sub-groups within perpetrators. As many studies point towards a vicious cycle of bullying and perpetration, future studies should distinguish between perpetrators and target-perpetrator groups and analyze each group separately to reach the end goal of designing effective interventions for both groups.

5. Conclusion

Based on the above, we can conclude that perpetration literature is fragmented, with many relationships not studied and some inconclusive. Research examining the temporal precedence of events is rare; causality between many variables is still unknown. Longitudinal studies, ideally with a minimum of three waves (Cole & Maxwell, 2003), including diary studies (Navarro et al., 2015) and qualitative studies providing in-depth understanding, may resolve this complex human behavior. We propose that health conditions and self-control be tested as antecedents, mediators, and moderators and that different typologies of perpetrators be analyzed in future research. More high-quality research is needed to examine the possible causal relationships, in addition to research focusing on reversed and reciprocal relations.

CRediT authorship contribution statemens

Conceptualization, G.Ö. and J.E.; methodology, G.Ö.; software, G.Ö.; formal analysis, G.Ö.; investigation, G.Ö.; writing - original draft preparation, G.Ö.; writing - review and editing, J.E.; supervision, J.E.; All authors have read and agreed to the published version of the manuscript.

Declaration of competing interest

The authors declare no conflict of interest.

Data availability

Data will be made available on request.

Appendix A

Table 1
Electronic database search, hits and search formulation as of Jan 8, 2023.

Electronic library	Hits	Search formulation
Scopus	372	(TITLE-ABS-KEY (workplace AND bullying) AND TITLE-ABS-KEY (perpetrator) OR TITLE-ABS-KEY (perpetration) OR TITLE-ABS-KEY (bully) OR TITLE-ABS-KEY (bullies) OR TITLE-ABS-KEY (perpetrators)) AND PUBYEAR >2002 AND PUBYEAR <2024 AND (LIMIT-TO (LANGUAGE, "English"))
Science Direct	251	Title, abstract or author-specified keywords (workplace bullying) AND ((perpetrator) OR (perpetrators) OR (perpetration) OR (bully) OR (bullies)) 2003–2023
PubMed	1385	((workplace bullying) AND (perpetrators OR perpetrator OR perpetration OR bully OR bullies)[Title/Abstract]) Year: 2003–2023, full text, English
Web of Science	1413	(AB = (workplace bullying) AND AB = ((perpetrators) OR (perpetrator) OR (bullies) OR (bully))) Year: 2003–2023, articles
Proquest	86	abstract((workplace bullying) AND (perpetrators OR perpetrator OR perpetration OR bully OR bullies)) full text, Year; 2003–2023, English
Total	3507	

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