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Antecedents and consequences of work-related and personal bullying: A cross-sectional study in an Italian healthcare facility

Davide MINNITI[1], Michele PRESUTTI[2], Marta ALESINA[3], Adelina BRIZIO[4], Paola GATTI[5], Daniela ACQUADRO MARAN[6*]

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[1]*General Direction, AOU S. Luigi Ginzaga, Orbassano (TO), Italy. E-mail: direzione.generale@sanluigi.piemonte.it*

[2]*Local Health Unit Torino 3, Collegno (TO), Italy. E-mail: michele.presutti@aslto3.piemonte.it*

[3]*Local Health Unit Torino 3, Collegno (TO), Italy. E-mail: marta.alesina@aslto3.piemonte.it*

[4]*Department of Psychology, University of Torino, Torino, Italy. E-mail: adelina.brizio@unito.it ORCID: 0000-0001-7838-5869*

[5]*Department of Psychology, University of Milano-Bicocca, Milano, Italy. E-mail: paola.gatti@unimib.it ORCID: 0000-0002-6174-5052*

[6]*Department of Psychology, University of Torino, Torino, Italy. E-mail: daniela.acquadro@unito.it ORCID: 0000-0002-9924-4093*

Correspondence

Abstract

Introduction: Workplace bullying (WB), encompassing work-related bullying (WRB) and personal bullying (PB), significantly impacts workers and organizational culture. This study explores the broader implications of WB, focusing on its perception when associated with job functions versus when targeted at individuals.

Methods: This cross-sectional study was carried out in a healthcare facility in northwestern Italy, involving 311 workers who responded to a questionnaire designed to assess the nature of bullying experienced. The survey explored various dimensions of WB, including psychosocial climate, leadership behavior, job satisfaction, and mental health outcomes.

Results: Our findings indicated that WRB had a more detrimental impact than PB. Employees exposed to WRB reported lower job satisfaction ($F(2, 295) = 59.048$, $p < .001$), higher stress levels, and increased burnout (Emotional Exhaustion $F(2, 294) = 40.346$, $p < .001$). WRB was associated with negative perceptions of organizational fairness ($F(2, 295) = 38.637$, $p < .001$) and dynamism. PB also showed significant effects, particularly on team dynamics (MDOQ_team $F(2, 294) = 52.514$, $p < .001$) and communication (MDOQ_communic $F(2, 294) = 15.038$, $p < .001$).

Discussion and Conclusions: WB profoundly deteriorates inter- and intra-group processes and undermines organizational culture, potentially affecting its legitimacy and reputation. The study underscores the need for organizational strategies that mitigate WB by promoting positive workplace environments and enhancing managerial practices to prevent bullying.

Take-home message: This study underscores the severe impact of workplace bullying, particularly work-related bullying, on both individual well-being and organizational culture. It reveals that employees exposed to work-related bullying experience significantly lower job satisfaction and higher levels of stress and burnout, which in turn deteriorate inter and intra-group relations and undermine organizational legitimacy and reputation. These findings highlight the urgent need for effective management strategies to prevent bullying and promote a healthier, more supportive work environment.

Keywords: healthcare workers; healthcare facility; personal bullying; workplace bullying; workplace violence

INTRODUCTION

Workplace bullying (herein after WB) is often understood as a gradually escalating process [1-3] in which an initially unresolved conflict or frustration between colleagues or between workers and supervisors over a work-related or personal problem eventually leads to negative and aggressive behavior that progressively places the target in an inferior position [4-7]. It is important to emphasize that one or more negative actions do not constitute WB. Only when the negative actions are systematically and frequently directed against a specific person over a long period can they be classified as WB [2,8]. To define the phenomenon, it is essential to note that two equally powerful individuals or parties may be stuck in a long-term conflict over a personal or work-related issue, but it is not considered WB until one of the individuals involved is unable to avoid and defend against the negative interpersonal attacks [9,10]. This paper focuses on two main categories of WB: work-related bullying (WRB) and person-related bullying (PB). The former includes behaviors such as setting unreasonable deadlines, assigning tasks below a person's level of competence, or withholding information that affects performance. It is a persecution particularly prevalent in healthcare settings [11]. As described by Erwandi et al. [12], WRB behaviors occur when an individual withholds information that could affect performance. PB may consist of behaviors such as being ignored or excluded, becoming a victim of gossip and rumors, or receiving cues and signals from others to quit one's job [13]. As Erwandi et al. [12] noted, examples of PB also include actions related to persistent criticism of mistakes or errors and sarcasm. Victims of both types of WB report severe psychological stress symptoms and physiological health consequences after being exposed to persistent victimization and stigmatization [1,4,14,15]. Victims typically report high levels of anxiety, depression, and increased somatic and psychological symptoms, while they experience high levels of negative affectivity [16,17].

Because WB is distinctly different from other victimization-based constructs [18,19], it is important to understand its background and potential implications. As with other violent behaviors (e.g., sexual harassment in the workplace, [20]), workers in workplaces in which WB occurs report more negative perceptions of the work environment, more role conflict, and poorer leadership behaviors than those who have not experienced WB [21,22]. Therefore, it is essential to emphasize that WB does not occur in an empty context but is often triggered by various psychosocial factors in the workplace.

Antecedents of WB

Research has found that organizational antecedents of WB include poor communication flow, an adverse psychosocial climate, role conflict and inadequate job description, unfair reward systems, and weak leadership style [23-25]. In particular, an organizational climate characterized by WB highly reflects an uncontrollable and unpredictable work environment in which none of the employees can be sure to refrain from negative behaviors. Therefore, the presence of anticipatory stress related to future potential events, regardless of whether they actually occur, can elicit negative health responses as if they were real and would occur [26,27]. This is supported by research showing that in a workplace characterized by WB, workers tend to report their fear of being the next target of bullying. This fear may manifest itself in a cognitive state of constant

worry, which is responsible for prolonging the heightened stress response. In addition, there is empirical evidence that WB occurs most frequently in organizations characterized by structural deficiencies in terms of poor organization and clarity of work tasks and responsibilities: as a result, WB has been shown not only to cause financial and legal problems for organizations [28] but also to be strongly associated with a decline in job satisfaction and an increase in feelings of exhaustion and depersonalization among all employees in the work unit [29]. Thus, the phenomenon has been conceptualized as a social stressor because it affects interpersonal interaction among all employees within the workplace [30-33]. According to Samnani and Singh [19], three levels of antecedents should be considered: individual-level antecedents, group-level antecedents, and organizational-level antecedents when studying WB. Our study does not focus on the individual level as it is usually understood (e.g., target or perpetrator). Still, we propose to examine an intermediate level, namely, the interface between the individual and his or her relationship with work. At this level, variables such as autonomy, sense of belonging, and clear roles can be crucial and have been recognized as important factors (for a review, see [34]). Despite the general conceptualization of WB as a group process [35,36], group-level factors have not received much attention in the literature on this phenomenon [37-40].

Consequences of WB

WB has been associated with increased levels of worry, increased need for rest, decreased sleep quality, and symptoms of burnout. Much of the research has examined complaints that are more psychological in nature. Empirical studies consistently show that bullying is related to anxiety and depression. There is also widespread agreement that victims of WB present with psychiatric symptoms, even when the WB exposure does not meet the official criteria for post-traumatic stress disorder (PTSD). It should be noted that victims are confronted with their trauma daily in the workplace. In addition, WB imposes costs on the organization [41]. First, victims who suffer the emotional and physiological consequences are more likely to be absent due to illness [42]. In addition, victims who continue to work show lower task performance, lower creativity, poorer organizational behavior, and higher counterproductive work behavior [6]. There are also indirect costs to organizations, as meta-analytic results suggest that individuals who experience WB have lower job satisfaction, life satisfaction, organizational commitment, and higher intent to quit [43]. These negative work attitudes are also related to performance outcomes [44].

To summarize the analysis of the literature on the antecedents and consequences of WB, we present a summary in Methods.

The current study

As described above, research on the phenomenon has shown that workers whose organizational context is characterized by WB risk experiencing a deterioration in their psychological and physical well-being [28,45]. The purpose of this work was to analyze a broad nomological network for bullying and to extend previous findings suggesting that WB affects more workers when the phenomenon is experienced as work-related bullying than when it is experienced as personal bullying. At the same time, work-related bullying may elicit unpleasant feelings and psychosomatic reactions [46-49], as is the case with all violent behavior in this population [50-52]. Specifically, the hypothesis is that workers who experienced work-related bullying had higher levels of stress, burnout, negative affect, somatic stress symptoms, and cognitive stress symptoms and reported lower scores on measures of general health than workers who experienced working in an environment characterized by personal bullying. The workplace chosen for this study was a healthcare facility in northwestern Italy. The results of the Fifth European Working Conditions Survey [53] show that the prevalence rate of WB among healthcare workers is 11.3%. These results were also confirmed in Italy: the prevalence of the phenomenon in health care was 12%, while the percentage in other sectors, such as commerce, was 9% [54,55]. The importance of studying the prevalence of personal and work-related bullying in the healthcare sector is that this phenomenon affects not only the well-being of employees but also patient care [56,57].

METHODS

This cross-sectional study is part of a larger research project on the training needs of workers in a health facility in northwestern Italy. The health facility involved is "ASL TO3". This health facility has 4019 employees, including health, administrative, and support staff. 3040 are female (75,64% of the total number of employees). This health facility is the reference point for the health care of 581,281 people. For the specific purpose of this study, a meeting was held to explain the survey process. A formal communication was then sent to all employees, which included a description of the project and the link to the questionnaire. The link was active from December 2021 to May 2022. Italy faced the fourth wave of the COVID-19 pandemic during these months and the accompanying vaccination campaign. The heavy workload of health workers slowed data collection and necessitated a reduction in the sample size. The study was conducted using the snowball system: each worker involved in the project was asked to involve five other workers in completing the questionnaire.

The inclusion criteria were that they were employees of the organization. The exclusion criteria were that they were not employees of the organization. For example, workers in cooperatives and subcontracting firms were excluded from participation in the study. When the link was closed, 311 people had completed the questionnaire. 23 people were excluded because they had not completed the entire questionnaire scale. Thus, the final sample includes 298 participants. Before conducting the survey, we calculated the sample size. Based on the consideration that the total number of female employees in the health facility was 4019 and that we did not know a priori the percentage of individuals who had experience with WB, we assumed a prevalence of 12%, in agreement with Italian data from Colombo [54] and the Italian National Institute for Occupational Safety and Prevention (I.S.P.E.S.L.) [55]. The minimum number of observations required to achieve a 95% confidence level and a 5% margin of error was 157, and the 298 responses we collected allowed a sufficient margin (margin of error: ± 3.55%). Calculations were performed using Calculator.net (https://www.calculator.net/sample-size-calculator.html?type=1&cl=95&ci=5&pp=12&ps=4019&x=55&y=16).

Study measures

The first part of the questionnaire contains a description of the purpose and instructions for filling it out (including the contact details of the authors of this paper for any doubts or problems), as well as the consent form and the declaration of anonymity and privacy. This introductory part is followed by a series of items to record socio-demographic aspects (gender, marital status, presence of children, work experience, professional group, and type of contract). The second part of the questionnaire includes the following scales:

- *Negative Acts Questionnaire Revised* (NAQ-R) [13] Italian version [57,58]. It was used to assess the nature of the WB experienced by the participants. The items followed an operational approach in which participants were asked to indicate how often they experienced various potential bullying behaviors or negative actions in the workplace. WB referred to personal bullying (PB), i.e., hostile actions toward an individual (e.g., "spreading gossip and rumors about you"), and work-related bullying (WRB), i.e., behaviors related to the work of the person who is the target of the bullying (e.g., "someone withholds information that affects your performance"). It should be noted that the items never use terms directly related to concepts such as harassment or bullying. All items were scored on a 6-point Likert scale (1 = strongly disagree, 6 = strongly agree). This study used PB Cronbach's alpha = 0.94 and WRB Cronbach's alpha = 0.81.
- The *Majer-D'Amato Organizational Questionnaire* (M-DOQ, [59]) was used to assess organizational climate. This instrument views organizational climate as a multidimensional construct. The instrument consists of 70 items proposed as statements to which the subject responds by expressing their level of agreement using a 5-point Likert scale (1 completely false, 5 completely true). The statements allow you to detect the experiences of workers in relation to 10 factors (steps), the 10 factors are: Communication, that maps the availability and clarity of information dissemination (12 Items, α=0.92, e.g., "In my organization everybody is adequately informed about the objective and outcome"); Team, which analyzes the cohesion

of the group (11 Items, α=0.93, e.g., "In my team people usually agree with each other"); Leadership, which analyzes the relationships and communications with superiors (8 Items, α=0.86, e.g., "My superior is sensitive to my training needs"); Job involvement, which analyzes involvement in work and organization (5 items, α=. 0.76, e.g., "My job is thrilling and exciting"); Autonomy and responsibility for the organization of work (6 items, α=0.85, e.g., "In my job I have a certain amount of autonomy"); Consistency between strategic orientations and their operational application, (8 Items, α= 0.82, e.g., " My organization makes an effort to adapt to social and political changes"); Dynamism, vitality organizational and propensity for development (5 items, α= 0.78, e.g., "In my organization the decision that are taken are implemented quickly"); Job description, that is clarity of roles and tasks (5 items α= .0.78 e.g., "The task that are part of my role are clearly defined"); Reward, equity, social sensitivity and feeling of impartiality (5 items , α= 0.81, e.g., "Financial incentives are adequate when rewarding commitment and skills"); Innovativeness and propensity to it (5 Items, α=0.8, e.g., " In my organization people are encouraged to find new ways around old problems").

- The *Copenhagen Psychosocial Questionnaire* (COPSOQ II) has been used to examine work satisfaction [60]. The scale consists of 6 items. An example item is "How much are you satisfied with your job as a whole, everything is taken into consideration?". All items were scored on a 5-point Likert scale (1 = completely dissatisfied, 5 = very satisfied). Cronbach's alpha = 0.86.
- The *ANAC Questionnaire* [61,62] was used to assess the organizational well-being and is composed of different areas of investigation: (A) Health and safety at work and work-related stress, (B) discrimination, (C) fairness in my administration, (D) career and professional development, (E) my work, (F) my colleagues/the person in charge of my business, (G) the context of my work, (H) the sense of belonging, (I) the image of my administration, (L) my organization (evaluation system), (M) my performance (evaluation system), (N) system operation (evaluation system), (O) my boss and my growth (direct supervisor), and (P) my boss and equity (direct supervisor). In this study, we considered E, F, G, H, and I areas; all items were scored on a 6-point Likert scale (1 = strongly disagree, 6 = strongly agree). (E) My work (5 items, α= 0.82, e.g., "I have an adequate level of autonomy in carrying out my work"); (F) My colleagues/the person in charge of my business (5 items, α= 0.85, e.g., "I feel part of a team"), (G) the context of my work (5 items, α= 0.90, e.g., "My organization invests in people, including through adequate training"), (H) the sense of belonging (5 Items, α=0.83, e.g., "I am proud to work in this organization"), (I) the image of my organization (3 Items, α=0.94, e.g., "People, in general, think that this organization in which I work is an important body for the community").
- The *Maslach Burnout Inventory* (MBI; [63]) was used to assess the following symptoms of burnout: Depersonalization (DP)_(5 items; α= 0.73, e.g., "I feel I treat some recipients as if they were impersonal objects "), Emotional Exhaustion (EE)_ (9 items, α=0.90, e.g., "I feel emotionally drained from my work"), and Personal Accomplishment (PA)_(8 items, α=0.77, e.g., "I can easily understand how my recipients feel about things"). The 7-point Likert scale ranging from 0 (never) to 6 (every day) expresses how frequently a person experiences the given dimensions of burnout.

As previously mentioned, to summarize the literature analysis on the antecedents and consequences of WB, we present a summary using the scales used (Table 1). It should be noted that the variables listed below have already been described in the previous sections.

Table 1. Summary of antecedents and consequences.

Individual-work relation antecedents	**Group level antecedents**	**Organizational level antecedents**	**Consequences**
ANAC_job	ANAC_colleagues	ANAC_work context	COPSOQ_job satisfaction

ANAC_sense of belonging	MDOQ_team	ANAC_organizational image	MBI_personal accomplishment
MDOQ_role clarity		MDOQ_rewards	General well-being
MDOQ_job autonomy		MDOQ_leaders	MBI_emotional exhaustion
		MDOQ_innovation	MBI_depersonalization
		MDOQ_dynamism	
		MDOQ_coherence and fairness	
		MDOQ_communication	

Note: ANAC = ANAC questionnaire; MDOQ = Majer-D'Amato Organizational Questionnaire; COPSOQ = Copenhagen Psychosocial Questionnaire; MBI = Maslach Burnout Inventory.

Ethical aspects

This study complied with the 1995 Declaration of Helsinki provisions, revised at the Edinburgh meeting 2000 [64]. All relevant ethical guidelines were followed, including compliance with Italian legislation regarding the privacy statement. The research project was approved by the Ethics Committee of the University of Turin before the start of the study (n. 0654311 – 7th December 2021). Participation was voluntary, and no one received compensation for their participation.

Statistical analyses

Data analyses were performed using IBM SPSS Statistics. Descriptives (mean values and standard deviations) and intercorrelations among the variables in the study are shown in Table 1. Cronbach's alpha was calculated for each scale to measure internal consistency among the items [65]. Lastly, univariate ANOVAs were performed to compare three groups of respondents (i.e., high, medium, and low on each bullying subscale) on some potential antecedents and consequences. This study used the ANOVA for descriptive rather than explanatory purposes [66]. In other words, our research design does not enable us to state that being high, medium, or low on bullying is the cause of the differences we found. However, we can say that in many cases, we found statistically significant differences linked to different perceptions of bullying on the job. When Levene's test for the homogeneity of variance was significant, we chose not to comment on the ANOVA. In comparing our groups, we used Bonferroni as a post-hoc test.

To identify the groups of respondents in our sample, we first calculated the average value on the subscale of work-related bullying (WRB) and on the subscale of personal bullying (PB) in the entire sample. Afterward, we proceeded to identify the groups using both a semantic criterion (to take the meaning of the anchors of our Likert response scale into consideration) and a statistical criterion (to take the dispersion of our scores around the mean into consideration – see for example, [67]). The choice for the PB scale was particularly difficult because of the high distortion of data, where the high positive asymmetry and kurtosis show a distribution where answers are highly concentrated on the low values of the Likert scale. Table 2 shows how we divided the groups and their composition.

Table 2. The composition of the respondents' sub-groups on WRB and PB.

	WRB		**PB**	
Group	**N**	%	N	%
Low - Up to 2.00	203	68.1	257	86.2
Medium - 2.01-3.50	73	24.5	33	11.1
High - 3.51-5.00	22	7.4	7	2.3
Total	298	100.0	297	99.7

Note: NAQ_PB = Negative Act Questionnaire Personal Bullying; NAQ_WRB = Negative Act Questionnaire Work Related Bullying.

Lastly, we chose several variables regarding the antecedents and consequences of bullying. The antecedents can be divided into three categories, two of which are mentioned for instance, by Samnani and Singh [19] the antecedents at the organizational level (i.e., ANAC_work context, ANAC_organizational image, MDOQ_rewards, MDOQ_leaders, MDOQ_innovation, MDOQ_dynamism, MDOQ_coherence and fair-ness, MDOQ_communication) and the antecedents at the group level (i.e., ANAC_colleagues, MDOQ_team). We then identified a third category: the variables that investigate the relationship between the individual and his/her job, such as ANAC_job, ANAC_sense of belonging, MDOQ_role clarity, and MDOQ_job autonomy. As for bullying consequences, we used seven variables at the individual level (see 46. Matthiesen & Einarsen, 2010), three that investigate positive outcomes (i.e., COPSOQ_job satisfaction, MBI_personal accomplishment, General well-being) and two adverse outcomes (i.e., MBI_emotional exhaustion, MBI_depersonalization).

RESULTS

Overall, 78.8% of the sample were women. 62.9% of the total sample were married, 20.7% were single, 13.9% were separated/divorced, and 2.4% were widowed. 65.6% of them have at least one child. The average age is 48.04 years (range 23-65 years, *SD* =10.76). Their work experience in the organization ranges from a few months to 40 years (M = 17.31, *SD* = 12.47). 89.05% have a permanent contract, and 64.5% are medical staff.

Before discussing our findings on the ANOVAs, it should be specified that whenever ANOVA results for more than one construct are commented on below (for instance, because the patterns of results for these constructs are identical in the posthoc tests), the variables will be listed in decreasing order of F value.

The ANOVA showed several statistically significant differences, starting with bullying antecedents (Table 3) and considering the sub-dimension of work-related bullying (WRB). However, the results for ANAC_job, ANAC_organizational image, MDOQ_role clarity, and MDOQ_autonomy were not reported due to a significant Levene test. Considering organizational antecedents, ANAC_work context [F (2, 295) = 34.474, p <.001], MDOQ_leaders [F (2, 295) = 30.448, p <.001], and MDOQ_innovation [F (2, 295) = 16.754, p <.001] showed the same pattern of results: respondents low on WRB perceived their work context and their leaders as significantly better, and described the organization as higher on innovation than those who are medium and high on WRB; those who were medium on WRB had significantly higher perceptions on these variables than those who were high. Similarly, those who were low on WRB described their organization as fairer and thus had higher scores on MDOQ_coherence and fairness [F (2, 295) = 38.637, p <.001] than those who scored medium and high. Among the antecedents that tap positive constructs operationalized as negative variables, the results of the ANOVA again showed the same pattern in two cases: those who were high or medium on WRB perceived more negative communication and less dynamism in the organization than those who were low on WRB. The ANOVAs for these variables showed very high F values ([F (2, 295) = 44.366, p <.001] for MDOQ_communication and [F (2, 295) = 38.840, p <.001] for MDOQ_dynamism, respectively). A third negatively operationalized antecedent was MDOQ_rewards [F (2, 295) = 28.819, p <.001].

Table 3. Summary of ANOVA results for WB antecedents.

	NAQ_WRB	**NAQ_PB**
ANAC_Job_5items_mean	*	*
ANAC_Colleagues_5items	[F (2, 295) = 15.662, p <.001] L > M, H** M > H	[F (2, 294) = 33.638, p <.001] L > M, H
ANAC_Work setting_5items	[F (2, 295) = 34.474, p <.001] L > M, H M > H	*
ANAC_SenseOfBelonging_5items	[F (2, 295) = 20.388, p <.001] L > M, H M > H	[F (2, 294) = 6.933, p <.001] L > H
ANAC_OrganizationalImage_3items	*	[F (2, 292) = 5.192, p <.01] L > M, H
MDOQ_Reward (neg)	[F (2, 295) = 28.819, p <.001] H > M, L M > L	[F (2, 294) = 4.396, p <.05] H > L
MDOQ_Leaders	[F (2, 295) = 30.448, p <.001] L > M, H M > H	[F (2, 294) = 12.637, p <.001] L > M, H M > H
MDOQ_Innovation	[F (2, 295) = 16.754, p <.001] L > M, H M > H	[F (2, 294) = 9.609, p <.001] L > M, H
MDOQ_Dynamism (neg)	[F (2, 295) = 34.840, p <.001] H, M > L	[F (2, 294) = 4.541, p <.05] M > L
MDOQ_Coherence/Fairness_8item	[F (2, 295) = 38.637, p <.001] L > M, H	[F (2, 294) = 6.747, p <.001] L > M, H
MDOQ_JobDescription_5item	*	[F (2, 294) = 12.342, p <.001] L > M, H M > H
MDOQ_Autonomy_6item	*	*
MDOQ_Team_11item	[F (2, 295) = 27.045, p <.001] L > M, H M > H	[F (2, 294) = 52.514, p <.001] L > M, H M > H
MDOQ_Communic (neg)_12item	[F (2, 295) = 44.366, p <.001] H, M > L	[F (2, 294) = 15.038, p <.001] H > M, L M > L

Note: NAQ_PB = Negative Act Questionnaire Personal Bullying; NAQ_WRB = Negative Act Questionnaire Work-Related Bullying; ANAC =ANAC questionnaire, MDOQ= Majer-D'Amato Organizational Questionnaire.

Table 4. Summary of ANOVA results for WB consequences.

	NAQ_WRB	**NAQ_PB**
COPSOQ_JS_6items	[F (2, 295) = 59.048, p <.001] L > M, H** M > H	[F (2, 294) = 22.889, p <.001] L > M, H M > H
MBI_EE_9items	[F (2, 294) = 40.346, p <.001] H > M, L M > L	[F (2, 293) = 11.327, p <.001] M > L
MBI_PA_8items	[F (2, 294) = 6.350, p <.005] L > H	[F (2, 293) = 8.129, p <.001] L > M, H
MBI_DP_5items	*	[F (2, 293) = 8.651, p <.001] M > L
GWB_6items	*	[F (2, 294) = 21.670, p <.001] L > M, H

Note: NAQ_PB = Negative Act Questionnaire Personal Bullying; NAQ_WRB = Negative Act Questionnaire Work Related Bullying; COPSOQ= Copenhagen Psychosocial Questionnaire; MBI= Maslach Burnout Inventory, GWB= General Well-being questionnaire.

In this case, respondents high on WRB perceived the reward system in the organization as significantly worse than respondents who were medium and low, and those who were medium on WRB perceived the reward system as worse than those who were low. Considering group antecedents, both MDOQ_team [F (2, 295) = 27.045, p <.001] and ANAC_colleagues [F (2, 295) = 15.662, p <.001] showed that respondents low on WRB perceived the relationship with their colleagues and their team as significantly better than those who were medium and high.

Those who were medium on WRB had significantly better perceptions than those who were high. As regards the antecedents we labeled as individual-job relationship dimensions, the ANOVA was significant for ANAC_sense of belonging [F (2, 295) = 20.388, p <.001]: respondents low on WRB had higher scores on the sense of belonging than those who were medium and low, while respondent's medium on WRB had higher scores than those high.

As for the antecedents and personal bullying (PB), ANAC_job and MDOQ_autonomy did not respect the criterion of the homogeneity of variance as in the case of WRB and had a significant Levene test. In addition, in this case, the ANAC_work context also showed significant results on Levene; thus, the ANOVA was not commented on.

As far as organizational antecedents are concerned, important differences between groups of respondents with an almost identical pattern are shown for MDOQ_leaders [F (2, 294) = 12.637, p <.001], MDOQ_innovation [F (2, 294) = 9.609, p <.001], MDOQ_coherence and fairness [F (2, 294) = 6.747, p <.001], and ANAC_organizational image [F (2, 292) = 5.192, p <.01]. In all these cases, respondents who were low on PB showed higher scores on these variables than those who were medium and high. In addition, for MDOQ_leaders, respondents medium on PB perceive their leaders as better than respondents who scored high. Among the negatively operationalized antecedents, there were significant differences in MDOQ_communication [F (2, 294) = 15.038, p <.001], MDOQ_dynamism [F (2, 294) = 4.541, p <.05], and MDOQ_reward [F (2, 294) = 4.396, p <.05].

Each variable showed different results in the post-hoc test. Respondents high on PB perceived the communication as more negative than those who were medium and low, and those who scored medium on PB perceived the communication as significantly worse than those who were low; respondents medium on PB perceived the organization as less dynamic than those who were low, and lastly, respondents high on PB perceived the reward system as worse than those who were low. Considering group antecedents, both MDOQ_team [F (2, 294) = 52.514, p <.001] and ANAC_colleagues [F (2, 294) = 33.638, p <.001] showed that respondents low on PB perceived the relationship with their colleagues and their team as

significantly better than those who were medium and high. In addition, those who are medium on PB had substantially higher scores on MDOQ_team than those who were high. As regards the individual-job relationship antecedents, significant differences were found for MDOQ_role clarity [F (2, 2954) = 12.342, p <.001] and ANAC_sense of belonging [F (2, 294) = 6.933, p <.001].

Respondents low on PB had higher scores on role clarity than those who were medium and low, while respondents medium on PB had higher scores than those high. Again, those who were low on PB had higher scores on sense of belonging than those who were high.

Regarding the consequences of WB (Table 4), three variables had a significant Levene test when considering WRB; thus, the ANOVAs were not presented. These variables were MBI_depersonalization and general well-being. As for positive individual consequences, COPSOQ_job satisfaction [F (2, 295) = 59.048, p <.001] had a very high F value: respondents low on WRB were significantly more satisfied than respondents who were medium and high, and respondents who were medium on WRB were more satisfied than those who were high. MBI_personal accomplishment [F (2, 294) = 6.350, p <.005] shows that those low on WRB feel more personal accomplishment than those high on WRB.

Considering PB, all consequences had significant ANOVAs with non-significant Levene's tests. The three positive individual consequences, i.e., COPSOQ_job satisfaction [F (2, 294) = 22.889, p <.001], general well-being [F (2, 294) = 21.670, p <.001], and MBI_personal accomplishment [F (2, 293) = 8.129, p <.001], had in part the same pattern: respondents who were low on PB perceive more satisfaction, well-being and accomplishment than those who were medium or low. In addition, those who are medium on PB showed higher job satisfaction than those who were high.

DISCUSSION

Overall, the results of this study showed that participants reported WRB and PB as having almost the same organizational, group, and individual workplace antecedents. Thus, the results did not support our hypothesis: for both WRB and PB, workers with higher scores reported more negative antecedents and consequences than workers who indicated lower scores. Specifically, analysis of the variables used in this study showed that workers with higher and medium WRB scores were likelier than participants with low WRB scores to report WB antecedents such as less favorable work context, poorer leadership style, less inclination to innovate, and less fairness. In addition, those with the highest WRB scores reported higher organizational antecedents such as negative communication, less dynamic, and a reward system perceived as unfair. Regarding negative group-related antecedents, respondents with higher WRB scores indicated more than those with low and medium scores regarding team and peer relationships.

Regarding antecedents of individual work relationships, workers with higher WRB scores indicated a lower sense of belonging than workers with low and medium scores. As a result, workers with higher and medium WRB scores reported lower satisfaction, well-being, and accomplishment than workers with low WRB scores. In addition, these workers reported lower job satisfaction and greater emotional exhaustion.

Results showed that some antecedents were more pronounced for workers with higher PB scores than for workers who indicated lower or medium PB scores. These antecedents were related to leadership style, innovation, coherence and fairness, and organizational image. As in the case of the highest WRB scores, some negative organizational and group antecedents were reported more strongly by PB workers with higher scores than by workers with low and medium scores: negative communication, dynamics, reward system, team, and colleagues (the last two refer to group-related antecedents). Concerning individual antecedents of the working relationship, high-scoring workers were less likely to report role clarity and a sense of belonging than low and medium-scoring workers. The consequences for high-scoring workers on the PB showed that they were less inclined than low- and medium-scoring workers to feel satisfaction, well-being, and accomplishment. Medium- and higher-scoring workers were more inclined than low-scoring workers to feel emotional exhaustion and depersonalization.

At the same time, the results confirmed that workers were negatively affected by WB in both WRB and PB. These findings are consistent with stress models that link sources of occupational stress to decreased psychological well-being and aversive emotional responses (e.g., [68-70]). Thus, the elevated levels of negative affect and stress may reflect a transient state of fear and anxiety about becoming the offender's next target, which is consistent with findings from previous investigations (see [70-73]). The finding that workers with higher WRB and PB scores exhibit more burnout and poorer overall health is not surprising, as impaired psychosomatic health and high levels of burnout are considered normal responses to interpersonal, psychological, and emotional stressors at work (e.g., [22,74]).

However, some differences emerged in antecedents and consequences related to WRB and PB. Workers who reported higher WRB scores perceived the work context as less innovative and unfair than those who reported low or medium scores. This is a very interesting finding. Work context determines the social, psychological, and physical conditions under which work is performed. Through physical, social, organizational, and psychosocial mechanisms, it could be both an accelerator and a preventer of chronic diseases and a key factor in individual health behaviors. The basis of social relations in the work context is identifying the worker with the institution [75]. This process depends on organizations being "relational communities" in which individuals develop supportive social relationships [76,77]. In addition, identification could affect members' sense of belonging, their sense of importance to others and the group, and their shared trust that their needs will be met through the commitment to be together. Offering a perceived safe work context where WB behavior is not tolerated enables people to ask for and receive social support from peers and supervisors: as del Carmen et al. [78] noted, social support is a measure of effective coping with WB, as it allows them to soothe their emotions. According to Jill et al. [79] (see also [80]), experiences of an unfair workplace are related to reciprocity, which leads to organizationally desirable behaviors such as work engagement and loyalty among employees. Therefore, an organizational culture that emphasizes justice and equity will elicit positive responses from employees, promote a friendly environment, and reduce WB [81].

Consequently, workers who indicated higher WRB scores showed higher levels of job satisfaction. As noted earlier, low levels of job satisfaction reduce work eagerness and increase intent to quit. These data should be read simultaneously with the specific historical period and in the context of health care facilities: intention to leave work and reductions in enthusiasm may be signals that, along with burnout symptoms, can affect affection for work [82]. More than in other organizational contexts, the loss of workers here means the loss of skills and knowledge that are difficult to replace [83].

Among workers who reported higher PB scores, there was a tendency to report on organizational image. Durniat [84] states that WB could hurt organizational image and reputation. This has to do with the organization's external image and, more importantly, its internal image. The organization's internal image refers to its values, fundamental elements associated with perceived trust, and the psychological contract that binds employees to the organization. It is no coincidence that the actual sense of belonging is impaired in individuals with higher scores on both the PB and WRB. In healthcare, this needs to be monitored as it can damage the internal image, which could affect the perception of the quality of care by patients and their caregivers [85]. The risk is that trust in the organization is undermined, especially in an organization where the value of care should be directed not only outward but primarily inward. As a result, workers who reported a high score for PB also reported a high value for depersonalization. Depersonalization is a disturbed and distorted perception of self, others, and the environment and is manifested by an affective-symptomatic lack of empathy. Workers with high PB scores may feel disconnected from others, demotivated, and isolated. These negative feelings may cause the workers to withdraw from work and put less energy into the work. This feeling may lead to a withdrawal from work that is not associated with quitting but rather with a slowing down of behavior [6] by postponing tasks perceived as particularly stressful from an emotional perspective.

Study limitations

This investigation has several limitations. First, the cross-sectional study design does not allow for finding causality between the variables, only for the argument of an association between them. We know that we distinguish between antecedents and out-comes of WB based only on the literature, while our analyses cannot bear out our choices. This is an essential limitation of our study: the analyses are merely descriptive (as stated in the analyses section) and helpful in showing several differences between groups of respondents. The value of these differences is that they make the description of the bullying nomological network, as identified through the literature, more detailed and fine-grained. The self-assessment of WB and other self-assessment variables should be associated with some objective ones.

Further investigation could analyze these subjective (such as anxiety) and objective (such as absenteeism and tardiness; see [86]) variables. Moreover, this study with a small sample can only be considered preliminary work, and further research would be needed in this area. Also, it should be noted that the study was conducted during the pandemic: this period brought additional stressors, increased morbidity, and difficult working conditions that increased the likelihood of burnout [87]. A longitudinal study might be useful to better understand the impact of the pandemic on perceptions of WB - both WRB and PB - and the role fatigue played in perceptions of the phenomenon and its consequences. In addition, it may be helpful to conduct a qualitative or mixed-methods study to better understand how WRB and PB affect workers and to identify those work contexts that may be particularly affected by the phenomenon. This could allow action to be taken on the specific cause of WB: the violent behaviors could be seen as a symptom of an organizational context in which the adverse action is tolerated. In addition, we did not investigate whether participants were perpetrators or victims of other violent phenomena in their lives (e.g., domestic violence among children, bullying at school): questionnaire responses could be biased by other experiences with the phenomenon of violence. Another limitation is that we did not examine the prevalence of WB by comparing workers in different organizations, for example. This would allow us to compare the phenomenon's prevalence within the same professional group and with other professional groups such as teachers, employees in the private sector, etc.

Further research in healthcare organizations could help to better define whether there is a higher prevalence related to the professional context. For example, it might be useful to conduct a qualitative study and field observations to better understand how the dynamics of WB play out and what variables (e.g., incivility) can lead to this phenomenon. This would also allow us to understand what strategies might be useful to intervene and prevent the phenomenon. Finally, participation in the survey could be affected by bias due to social desirability (the tendency of participants to give answers that they believe convey a positive image of themselves). This bias could've affected the study results by overestimating some variables and underestimating others [88].

Implications for policymakers

Despite this limitation, the results of this study could provide some clues to prevent the WB. For example, some strategies, such as improving work schedules, promoting self-management, and providing opportunities to strengthen personal resilience, such as stress reduction techniques and mental health awareness resources, could be encouraged by management to help all employees reduce workload and stress. As Hershcovis et al. [41] and Salin et al. [89] suggested, prevention at WB typically focuses on three types of interventions: primary, secondary, and tertiary. Primary interventions focus on preventing the occurrence of WB. Hoel et al. [90] examined the effectiveness of communication, stress management training, and negative behavior awareness training compared with a control group. However, no clear improvements were found over 6 months.

In contrast, research on Civility, Respect, and Engagement in the Workforce program (CREW) has yielded more promising results. The CREW program was launched in 2005 at the U.S. Department of Veterans Affairs and includes a series of

participatory exercises (e.g., discussions, role-playing) designed to raise awareness of one's interpersonal impact in the workplace. As described by Hershcovis et al. [41], studies using a robust randomized control trial design reported significant improvements in workplace civility behaviors sustained over a 12-month period [91], as well as additional gains in job satisfaction, organizational commitment, trust in management, and job burnout [92]. As mentioned earlier, factors such as role ambiguity, high demands, poor leadership, and perceived unfairness influence the likelihood of WB. Therefore, it is important to create systems that provide role clarity and appropriate workloads, provide leadership training that promotes supportive leadership styles, and develop policies that ensure fair and equitable treatment, decisions, and outcomes to reduce the incidence of workplace aggression and bullying.

Secondary interventions are about giving employees the resources they need to deal with WB when it does occur. For example, the work of Zapf and Gross [3] suggests that coping strategies are essential for dealing with conflict. Specifically, potential targets who have not been victimized can better recognize and avoid escalating negative behavior. In addition, Niven et al.'s [93] study showed that regulating emotions in response to aggression appears to be an important factor influencing the severity of consequences on employee health and well-being [93,94]. Finally, tertiary interventions refer to the organizations' ability to respond appropriately once WB has been reported. A third party (e.g., an outside consultant or a staff member from HR) could intervene to facilitate discussion and focus on the relationships and communication difficulties between the victim, offender, and witness. The study conducted by Hamre et al. [95] found that mediation can be useful in preventing escalation, especially if it is an initial conflict. Organizations may also consider a "zero tolerance" policy that provides sanctions if the behavior WB has been documented. If consistent with company policy, sanctions can be useful in remembering which behaviors are acceptable and which will not be tolerated. In this way, it is also possible to consolidate the adopted rules and spread an organizational culture focused on employee safety. A complementary approach is counseling for victims, perpetrators, and witnesses: these services allow people to reflect on what has happened.

CONCLUSIONS

The main strength of the study is the multiple assessment of some relevant variables to investigate workers' mental status. In this study, WB was discussed in terms of its impact beyond the workplace on workers, who feel the reverberations of negative behavior through the deterioration of inter- and intra-group relations processes.

This research highlights that WB is seen and felt at multiple levels of an organization. At the organizational level, practitioners and HR managers must consider that WB negatively impacts organizational culture and, ultimately, the organization's legitimacy and reputation in the community and society [38,96]. Preventive measures are, therefore, essential.

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