

Association between workplace violence and burnout syndrome among schoolteachers: A systematic review

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Abstract

Introduction: This review aimed to examine systematically the epidemiological evidence linking occupational exposure to violence with risk of burnout syndrome (BOS) among schoolteachers.

Methods: A systematic review of literature used five primary databases: PsycINFO; Web of Science; PubMed Medline; Scopus; Cochrane; and keywords related to (a) workplace violence (WV), bullying, harassment, lateral violence, pupil misconduct, physical assault, teacher victimization; (b) schoolteachers, teachers, schools, pre-primary, kindergarten, primary, secondary; (c) burnout, emotional exhaustion, depersonalization, to identify relevant articles. Articles included featured occupational violence and burnout among schoolteachers. Results of the studies were analysed qualitatively.

Results: Of 1,472 peer-reviewed articles initially identified, 13 articles were included. All of them were published from 2005 to 2021 and had a quantitative approach. Type of violence against teachers ranged from workplace bullying or mobbing ($n = 4$), psychological violence ($n = 4$), to a combination of physical and psychological violence ($n = 5$). Most of the (verbal and physical) violence was perpetrated by students ($n = 9$). All grade and levels of schoolteachers were involved. In all cross-sectional studies ($n = 10$), WV was found to be correlated or associated with BOS ($n = 5$), the dimensions of EE and DP ($n = 4$) or the only dimension of EE ($n = 2$). Longitudinal studies showed that depersonalization was a significant predictor of workplace bullying ($n = 1$) and WV was indirectly a predictor of BOS ($n = 2$).

Discussion and Conclusions: The reviewed studies consistently indicate an association between WV and BOS in schoolteachers. Further longitudinal studies are needed to provide most evidence on this relationship. There is need of legislative interventions for implementing mandatory occupational health programs and voluntary workplace health promotion programs. These solutions may protect and promote teachers' mental well-being and give more education and emotional support to students and their families.

KEY WORDS: Burnout syndrome; harassment; psychosocial risk factors; systematic review; teachers; workplace violence.

INTRODUCTION

Teaching is a highly demanding and stressful occupation [1]. Teacher stress has been defined as a teacher's experience of unpleasant, negative emotions resulting from some aspects of their work [2]. Burnout syndrome (BOS) has been described in ICD-11 as an occupational syndrome resulting from poorly managed chronic workplace stress, which is characterized by emotional exhaustion (i.e. feelings of energy depletion), depersonalization or cynicism (i.e. increased mental distance from one's job or feelings of negativism or cynicism related to one's job), and reduced professional efficacy [3]. BOS has been described in a variety of human service professions [4-6] and is considered an occupational hazard in helping professions [7] referred to a state of emotional, attitudinal and physical exhaustion that follows from a prolonged exposure to chronic stress [8-17]. However, many questions on BOS still remain unanswered. For instance, although there is a substantial overlap between BOS and depression [18], BOS

should be better conceptualized as a breakdown in the relationship between workers and their work or clients [19]. Indeed, this syndrome is strictly related to occupational setting, and, therefore, BOS and depression should be considered two different concepts [20]. Furthermore, antecedents of work-related stress disorders and antecedents of BOS may be different [21]. Work-related stress is a risk factor that refers to aspects of the design and management of work and its social and organisational contexts that have the potential for causing psychological or physical harm [22], BOS has been described as a peculiar and distinctive psychosocial risk factor in helping professions including teachers, because it is closely associated with high emotional load and emotional demands [8, 23, 24]. According to the Job Demand Resources model [25, 26], occupational antecedents, also termed 'stressors' [25] or 'job demands' [26] of teacher burnout include job characteristics such as heavy workload, relationships with colleagues and management, poor working

TAKE-HOME MESSAGE

This systematic review showed a close association between workplace violence and burnout syndrome among schoolteachers. Further longitudinal studies are needed to explain this relationship.

Competing interests - none declared.

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Cite this article as: Chirico F, Capitanelli I, Bollo M, Ferrari G, Acquadro Maran D. Association of workplace violence and burnout syndrome among schoolteachers: A systematic review. J Health Soc Sci. 2021;6(2):187-208

Author Contributions: Conceptualization, study design, methodology, formal analysis, writing- original draft, writing- review & editing: FC. Data collection, writing- review & editing: IC and MB. Resources, supervision: GF. Supervision, formal analysis, writing- review & editing: DAM.

DOI 10.19204/2021/ssct6

Received: 20/05/2021

Accepted: 01/06/2021

Published Online: 06/06/2021

environment, pupil behaviour, long working hours, providing cover for teacher shortages and absences, pressure of school targets and inspections, coping with change and administrative duties [25–28]. On the opposite, positive relations with colleagues and the school administration as well as the feeling of doing a meaningful job are positive aspects of the job, termed as ‘job resources’, which may predict positive outcomes such as teacher motivation and well-being and prevent from the onset of teacher stress and burnout [29–32]. Workplace violence (WV) is another psycho-social risk factor, which is specifically regulated in European workplaces. WV can be physical, psychological and/or emotive, and people who are violent towards or harass an employee could be customers, clients, patients, students or pupils of this person [33]. Psychological and emotive violence can vary through an ideal continuum in terms of intensity, frequency, and severity, ranging from workplace incivility or bullying, passing through lateral violence [34]. Lateral violence is a type of psychological harassment that can be isolated or sporadic and results in hostility. Psychological harassment include sexual harassment (unwanted sexual attention), verbal abuses, threats, humiliations, intimidations, criticism, innuendo, social and professional exclusion, discouragement, disinterest, and denied access to information [35]. Workplace bullying is a type of harassment described as an enduring offensive and insulting behavior, which is worsened by an intimidating, malicious, and insulting pattern [34, 36]. In Europe, bullying is usually termed as ‘mobbing’ [37] and occurs among peers, towards superiors or subordinates (vertical or hierarchical violence) [38, 39]. Bullying is a kind of deliberate and repetitive behavior able to affect negatively the health and economic wellness of the victim. Workplace incivility differs from (physical or verbal) WV for its ambiguity in the intent to damage the victim [40]. Teachers are exposed to physical (e.g., objects thrown, physical attacks, property damages), verbal (e.g., harassment, verbal threats) and social or relational (e.g., gossiping, refusing

collaboration or sabotaging teacher’s work by using electronic devices and modern technology) violence, which is often perpetrated by students and their parents, or by colleagues as well [41, 42]. Scholars found a relationship between poor social interrelations with both pupils and colleagues or destructive friction within the professional community due to interpersonal conflicts and pupil misconduct, and an increased risk of developing BOS symptoms among schoolteachers [43–49]. A meta-analysis showed the existence of a relationship between pupils’ misconduct and teacher burnout [43]. Studies conducted in literature [50–53] showed that WV and BOS are associated in nurses and healthcare workers. Also, in teachers this relationship was found. Mościcka-Teske and colleagues [54], for example, in an investigation that involved more than 1,200 teachers, showed that those who were victims of harassment or bullying were more prone to report burnout symptoms than non-victims. Geissler [55] found a correlation between victimization, emotional exhaustion and depersonalization in this population. Similar data were found by Koga and colleagues [56] (verbal violence was associated with emotional exhaustion) and by Melanda and colleagues [57] (violence had a direct effect on emotional exhaustion and depersonalization).

Likewise, teachers who regularly witness aggression also present a higher risk of emotional exhaustion although this might be less pronounced than their victimized colleagues [58, 59]. In addition, exposure to a globally high level of several types of aggression (combining witnessing and victimization) might impact teachers more severely than exposure to any specific type of aggression [58].

Physical assaults among education workers is a relevant problem worldwide, which is defined as being ‘hit, slapped, kicked, pushed, choked, grabbed, sexually assaulted, or otherwise subjected to physical contact intended to injure or harm’ [60]. Physical violence has a significant impact on teachers’ job satisfaction and health-related quality of life [61]. But, in general, school-related violence predi-

cts physical and emotional effects, as well as teaching-related functioning [62]. Emotional labor and emotional management play an essential role in school teaching, as schoolteachers undergo complex interactions with students, colleagues, and parents [8, 63, 64], and emotional demands are the main risk factors to emotional exhaustion, which is the 'core' dimension of BOS [65]. WV can increase the degree of emotional labor among workers [65], who are exposed to verbal and physical violence in their interactions with customers. Emotional labor, indeed, is highly correlated with workplace violence experience [66]. Physical and verbal violence among teachers have consequences in terms of low emotional work ability [67], lower levels of physical, mental and emotional well-being [68, 69] and occurrence of mental disorders including BOS symptoms [70]. Moreover, WV has economic costs for individuals, working organizations and the society [71]. Teacher who experience violence develop a negative attitude towards their work, which discourage the development of their work ability [72], reducing their motivation [73] and commitment [62], with severe consequences on the quality of education provided [62, 68, 69, 73] and the well-being and performances of students [68]. Medical and psychological care, absenteeism, lost instructional time, and the replacement of teachers who leave the profession, produce direct and indirect costs for work organizations and the society in general [72, 73]. A systematic review found a significant correlation between burnout symptoms and physical violence at work among physicians and nurses [74], but this association was not systematically analyzed in teachers. Therefore, the aim of this review was to systematically review studies on the association between WV and BOS and to describe this relationship in schoolteachers.

METHODS

The review was conducted and reported according to the PRISMA 2020 guidelines [75].

Study design

Systematic review

Participants, interventions, comparators, outcome (PICO)

P: schoolteachers. I: exposure to workplace violence. C: workers not experiencing violence at work. O: burnout symptoms.

Systematic review protocol

The study protocol of this research was submitted to PROSPERO for registration, on May 16, 2021 with the following ID number: 255293.

Search strategies

During May 2021, a systematic search of the literature was carried out in the databases of Scopus, Pubmed/Medline, WOS, PsycINFO and Cochrane. A free search was carried out in Google Scholar and in portals related to occupational health and healthcare at work to identify those studies that were not published in the databases. The search strategy was based on the combination of specific search terms, properly combined by Boolean operators on Pubmed/Medline: Violence [Mesh], Workplace Violence [Mesh], School teachers [Mesh], Burnout, professional [Mesh], pupil behavior, harassment, workplace incivility, bullying, lateral violence, physical assault, emotional exhaustion. The PICO strategy was adapted to the other databases. Only original studies in English published from the inception to April 2021, were retrieved. Although review studies and commentaries were excluded from the present review, additional eligible studies were included after a hand-search of their reference lists.

Data sources, studies sections and data extraction

The principal criterion for eligibility was the presence of WV and burnout symptoms. All studies that took into consideration any type of WV associated or linked to symptoms of BOS among schoolteachers employed at pre-primary, primary, middle and secondary

schools were included, while studies on WV that failed to provide any information on BOS were excluded. Similarly, studies that reported violence, bullying or harassment perpetrated by schoolteachers *vs* students or among students (e.g., bullying at school) or in family, and WV on social workers, educators, administrative school workers, school principals, and university teachers (e.g. college instructors) were excluded. All the papers that mentioned emotional exhaustion or burnout symptoms among the observed effects of WV were included. Studies focusing only on emotional distress and other kind of emotional outcomes such as personal disengagement, which did not consider emotional exhaustion and burnout were excluded. Both quantitative and semi-quantitative studies with cross-sectional, retrospective, case-control and prospective design were screened for inclusion. Second level studies (review studies), and qualitative research were excluded, although they were examined in order to identify further research to be included in this review. After independently reviewing all titles/abstracts to identify potentially relevant articles, two authors (IC and MB) used the aforementioned inclusion/exclusion criteria to select studies on the basis of a full-text review. Disagreements were resolved by discussion with a third author (DAM), who acted as the final referee. The selected studies that met the pre-defined inclusion/exclusion criteria and were related to the topic of interest were included in our systematic review. Data concerning the country of study, school type, the type of WV, the method of measurement of WV and BOS, and, when applicable, the WV and BOS prevalence rate were extracted from each study. Data on correlation or association between WV and BOS were also extracted when available. The authors carried out the data extraction process independently. The results of the studies were analysed qualitatively. The findings obtained were discussed by all the authors. Figure 1 illustrates the paper extraction flow diagram for this systematic review.

Study quality assessment

The quality of cohort and case-control studies was assessed by the Newcastle-Ottawa Scale (NOS) that evaluates selection, comparability and exposure criteria, attributing a maximum score of 9 points [76, 77]. The quality of other studies was assessed using an adapted version of the Newcastle-Ottawa Quality Assessment Scale (NOS-A) for Case-Control/Cross-sectional studies [78] that awards a maximum score of 10 points.

RESULTS

Description of the studies included

The literature search yielded 1,452 published references. After review of the title, abstract, and full-text, a total of 13 studies met the full inclusion criteria and were included (see Figure 1).

All the included studies were published between 2005 and 2021 (May). Articles that were excluded included: two reviews, mixed cohorts studies on the relationship between WV and BOS in social workers, educators, school principals, and university teachers ($n = 29$), studies focusing on emotional distress and other types of emotional outcomes ($n = 13$), studies focusing on community violence ($n = 2$) or regarding pupils misconducts without verbal/physical/sexual violence ($n = 7$). In an analysis by country, the greatest scientific production in this field has been developed in USA ($n = 2$) and Lithuania ($n = 2$) followed by several countries with only one study, namely Italy, Germany, Turkey, Brazil, Canada, China, Malaysia, Romania, and Spain.

The methodology used in the papers analyzed provides an overview of how research and reflection on teacher burnout and workplace violence is being addressed. All the publications ($n = 13$) had a quantitative approach, as we can see in Table 1. Articles with a mixed or qualitative methodology were not included. Most of articles ($n = 10$) were cross-sectional. Only 3 articles were longitudinal, of which one study was carried out with 'ex post facto design'.

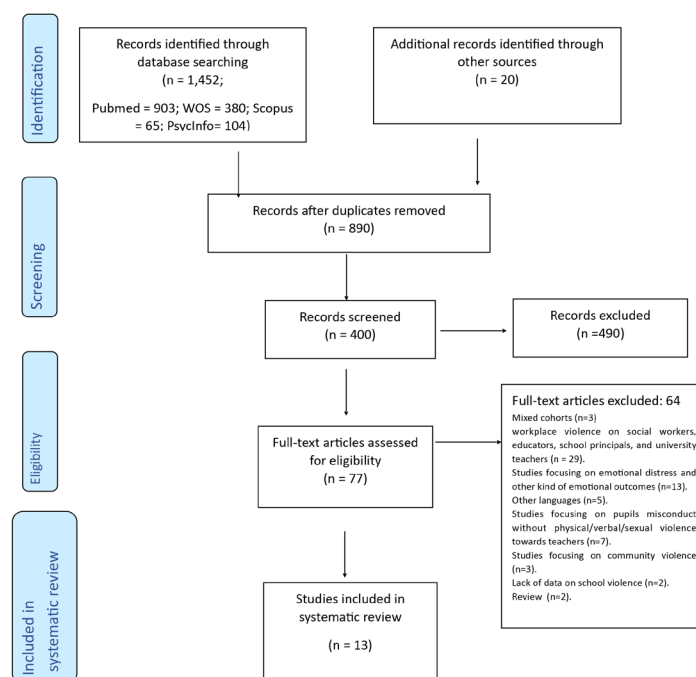


Figure 1. Flowchart for identification of studies included in the systematic review ($n = 13$).

According to our evaluation, the cross-sectional studies had a moderate to high quality score (ranging from 4 to 7 on the 9-point NOS-A scale), while the 3 cohort studies had a low quality score ranging from 3 to 4-point NOS scale.

Females were more represented than males in 12 studies (ranging from 56 to 88% of all participants). Only in one study, females represented 48% out of the total sample.

In our review, type of violence considered was workplace bullying or mobbing ($n = 4$), psychological violence ($n = 4$), and a combination of physical and psychological violence ($n = 5$).

In most studies, psychological violence was labelled as a combination of various type of psychological and verbal violence including abusive supervision, undermining, ostracism, unwanted sexual attention, workplace incivility, insults, humiliation, embarrassment, threats, teacher victimization by pupils and colleagues.

Physical violence was perpetrated by pupils ($n = 3$), pupils and colleagues ($n = 1$), and pupils, parents, colleagues, superiors and strangers ($n = 1$).

Participants of the included studies were primary ($n = 1$) or secondary ($n = 6$) schoolteachers, and mixed samples of pre-primary, primary and secondary ($n = 3$), primary and secondary ($n = 2$), and primary, middle and secondary ($n = 1$) schoolteachers. All the grade levels were represented, but most of the studies recruited secondary schoolteachers ($n = 12$), matching with the evidence that most of the violence acts were perpetrated by students ($n = 9$) in terms of verbal and/or physical violence. WV by supervisors/superiors and colleagues/coworkers was cited in five [79, 84, 86, 88, 91] and seven [58, 79, 82, 84, 86, 88, 91] studies, respectively. WV by parents was reported in two studies [80, 88] and WV by strangers in only one study [88]. Two studies [81, 83] did not indicate the identity of the perpetrators of violence towards teachers.

WV was measured with several instruments, of which an 'ad hoc' instrument was adopted in eight studies. BOS was measured with MBI ($n = 13$), OLBI ($n = 2$), CBI ($n = 1$) and CTJBQ-R ($n = 1$), showing how most of the studies were carried out with the most known and used instrument to measure BOS,

Table 1. Studies on workplace violence and burnout syndrome among schoolteachers (*n* = 13).

	Author, year	Country	Study design	N. cases	Quality	Type (gender) of ST	Type of violence	Perpetrator of violence	WV Measure	BURNOUT			Findings on the relationship between WV and BOS
										Sub-scale (EE, DP, PA)	BOS measure		
1	Fox and Stallworth 2005 [79]	USA	CS	779	6	Pre-primary, primary and secondary (F=82%)	Workplace bullying	Students, supervisors, coworkers	WB-C	EE DP AA	OLBI	BOS was statistically ($P < 0.01$) related to violent acts ($r=0.15$), pervasive bullying ($r=0.37$), bullying by principal ($r=0.28$), bullying by coworkers ($r=0.45$).	
2	Unterbrink et al., 2008 [80]	German	CS	949	6	Secondary (F=64%)	Psychological violence (verbal violence, insult)	Pupils, parents	Ad hoc	EE DP PA	MBI (Deutsche version)	Verbal insult by pupils was statistically ($P < 0.05$) associated with EE ($\beta=0.18$), reduced PA ($\beta=-0.122$), DP ($\beta=0.23$). Complaint by parents was associated with reduced PA ($\beta=-0.16$) and DP ($\beta=0.08$).	
3	Raya Trenas et al., 2009 [81]	Spain	Long (ex-facto design)	220	4	Pre-Primary, primary, and secondary (F=58%)	Workplace bullying	Not reported	LIPT	EE DP PA	MBI	GIPH was correlated with EE ($r=0.258$, $P < 0.001$) and DP ($r=0.392$, $P < 0.001$). Depersonalisation was a significant predictor of workplace bullying ($\beta=-0.023$, $P < 0.01$).	
4	Astrauskaitė et al., 2010 [82]	Lithuania	CS	351	4	Secondary (F= 88%)	Psychological violence (WH and witnessing WH)	Colleagues	WHS	EE	MBI-ES	Higher WH was related to higher EE ($P < 0.01$). EE was associated to disruption ($B=1.140$, $P = < 0.01$), humiliation ($B=0.357$, $P < 0.05$), indignity ($B=1.304$, $P < 0.01$), and alienation ($B=0.732$, $P < 0.01$). Witnessing WH was associated to higher level of EE ($P < 0.01$).	
5	Tanham and Cam 2011 [83]	Turkey	CS	451	4	Primary school teachers (F=48%)	Mobbing	Not reported	MOST	EE DP PA	MBI	MOST scores was associated with EE scores ($r=0.36$, $P < 0.01$), DP scores ($r=0.39$, $P < 0.01$) and PA scores ($r=-0.16$, $P < 0.01$) and MBI total score ($r=0.40$, $P < 0.01$).	
6	Sulea et al., 2012 [84]	Romania	CS	193	6	Secondary (F=80%)	Psychological harassment (abusive supervision, undermining, ostracism, unwanted sexual attention, workplace incivility)	Colleagues, superior	Tepper's scale, Duffy's scale, 10-item Workplace Ostracism Scale, Subscale of Sexual Experiences Questionnaire, 12-item Workplace Incivility Scale	EE DP	MBI-GS	Interpersonal mistreatment was related to BOS sub-dimensions. EE was statistically ($P < 0.05$) associated with abusive supervision ($\beta=-0.22$), ostracism ($\beta=-0.44$), undermining ($\beta=-0.21$), unwanted sexual attention ($\beta=-0.20$), incivility ($\beta=-0.22$). Cynicism was statistically ($P < 0.05$) associated with abusive supervision ($\beta=-0.32$), ostracism ($\beta=-0.45$), undermining ($\beta=-0.29$), incivility ($\beta=-0.35$).	

Table 1. continued

Author, year	Country	Study design	N. cases	Quality	Type (gender) of ST	VIOLENCE			BURNOUT		Findings on the relationship between WV and BOS
						Type of violence	Perpetrator of violence	WV Measure	Sub-scale (EE, DP, PA)	BOS measure	
7 Bass, 2016 [85]	USA	CS	679	6	Primary, middle, and secondary (F=80%)	Physical violence (physical attacks), Psychological violence (insults, threats, sexual harassment)	Pupils	Ad hoc	EE DP PA	MBI	Physical and psychological violence by students was positively related to BOS ($\beta=0.22, P < 0.001$)
8 Bernotaite et al., 2017 [86]	Lithuania	CS	517	6	Secondary (F=81%)	Workplace bullying	Colleagues, superiors, Students	NAQ	EE DP PA	MBI	WB was related to EE ($r=0.165, P < 0.01$) and DP ($r = -0.260, P < 0.01$).
9 Santos et al., 2018 [87]	Malaysia	CS	575	5	Primary and secondary (F=81.4%)	Physical violence. Psychological violence (verbal abuse, ignoring instructions/requests by teacher, spreading rumours, damaging property, ignoring homework, writing hateful messages, sexual harassment, disturbing classes	Pupils	Ad hoc	Personal student and work-related BOS	CBI	Total frequency of ETB significantly predicted increased personal burnout ($\beta = 0.139, t = 2.935; P = 0.004$); work-related burnout ($\beta = 0.351, t = 3.833; P = 0.000$); and student-related burnout ($\beta = 0.490, t = 4.995; P < 0.001$).

Table 1. continued

Author, year	Country	Study design	N. cases	Quality	Type (gender) of ST	Type of violence	Perpetrator of violence	WV Measure	BURNOUT		Findings on the relationship between WV and BOS
									Sub-scale (EE, DP, PA)	BOS measure	
10 Yang 2019 [58]	China	CS	1,711	6	Secondary (F=62%)	Physical violence (physical attacks), Psychological violence (social and cyber violence, verbal violence, sexual harassment, personal property offenses, teacher victimization)	Pupils, colleagues	MTVS	EE DP PA	CTJBQ-R	Total TV was related to BOS (r=0.19, P <0.001), EE (r=0.09, P <0.001), reduced PA (r=0.06, P <0.05), and DP (r=0.21, P <0.001). Physical TV was related to BOS (r=0.15, P <0.001), EE (r=0.17, P <0.001), and DP (r=0.9, P <0.001). Social TV was related to BOS (r=0.28, P <0.001), EE (r=0.17, P <0.001), reduced PA (r=0.07, P <0.01), and DP (r=0.27, P <0.001). Verbal TV was related to BOS (r=0.25, P <0.002), EE (r=0.14, P <0.002), reduced PA (r=0.08, P <0.002), and DP (r=0.25, P <0.001). Cyber TV was related to BOS (r=0.14, P <0.001), reduced PA (r=0.08, P <0.002), and DP (r=0.15, P <0.001). Sexual harassment was related to BOS (r=0.18, P <0.001), EE (r=0.05, P <0.05), reduced PA (r=0.06, P <0.05) and DP (r=0.27, P <0.001). Personal property offenses was related to BOS (r=0.19, P <0.002), EE (r=0.10, P <0.001), reduced PA (r=0.06, P <0.05), and DP (r=0.22, P <0.001).

Table 1. continued

Author, year	Country	Study design	N. cases	Quality	Type (gender) of ST	VIOLENCE			BURNOUT		Findings on the relationship between WV and BOS
						Type of violence	Perpetrator of violence	WV Measure	Sub-scale (EE, DP, PA)	BOS measure	
11 Acquadro Maran and Begotti 2020 [88]	Italy	CS	331	7	Pre-primary, primary, secondary (F=56%)	Physical violence (physical aggression) Psychological violence (verbal aggression, threats, stalking)	Student, parents, colleagues, superiors, strangers.	VTF	EE DP	OLBI	WV was associated with general burnout (F=5.84, P <0.05), EE (F=3.96, P <0.05) and disengagement (F=5.85, P <0.05).
12 Olivier et al., 2021 [89]	Canada	Long	2,072	3	Secondary (F=57.1%)	Physical violence (physical attacks), Psychological violence (verbal violence, student-to student aggression-WSS; student to teacher aggression- WST with insults, threats, and victimization by students (VS))	Pupils	Ad hoc	EE	MBI-ES	Exposure to aggression was associated with high EE via the effects of aggression on decreased levels of belongingness (indirect effect=0.152, 95% CI = 0.116 to 0.188) and perceived school safety (indirect effect = 0.174; 95% CI = 0.137 to 0.212).
13 Melanda et al., 2021 [91]	Brazil	Long	430	4	Primary, secondary (F 65.8%)	Psychological violence (verbal violence, embarrassmentthreats)	Pupils, colleagues and superiors	Ad hoc	EE DP	MBI (Brazilian version)	PV at T0 was related to EE at T0 (r=0.26) and T1 (r=0.24), DP at T0 (r=0.23) and T1 (r=0.21) PV at T1 was related to EE at T1 (r=0.24) and DP at T1 (r=0.32) (P <0.001), PV at T0 predicted EE at T0 (β = 0.435, P <0.001) and DP at T0 (β = 0.332, P <0.01). PV at T1 predicted EE at T1 (β = 0.334, P <0.01). Longitudinally PV at T0 did not have a sign direct effect on EE (-0.114) and DP 8-0.075) at T1 (pNS), however indirect effect of PV on EE (β = 0.459) and DP (β = 0.428) at T1 was observed.

Notes: CS, Cross-sectional; Long, Longitudinal; ST, Schoolteachers; BO, burn-out; CBI, Copenhagen Burnout Inventory; CTJBO-R, Chinese Teachers' Job Burnout Questionnaire-Revised; DR, Depersonalization or Cynicism; EE, Emotional Exhaustion; ETB, Educator Targeted Bullying; GIPH, Global Index of Psychological Harassment; I, Involvement; MBI-D German version MBI, MBI-ES, Emotional Exhaustion Scale of Maslach Burnout Inventory; MIQ-T, Moral Injury Questionnaire – Teacher Version; MOST, mobbing scale for teachers, NIQ, Negative Acts Questionnaire; OLBI, Oldenburg Burnout Inventory; PD, Professional Disengagement; PE, Personal Efficacy; PI, Personal Involvement; PBR, Pupil Behaviour Patterns scale; PV, psychological violence; SMBM, Shirom-Melamed Burnout Measure; SECIY, Survey of Exposure to Community Violence; TV, Teacher Victimization; VIF, Violent Incident Form; WB-C, Workplace Bullying Checklist; WHS, Work Harassment Scale; WIS, Workplace Incivility Scale

(*): Newcastle-Ottawa Quality Assessment Form for Cohort studies score (maximum score=9) and Newcastle-Ottawa Quality Assessment Scale for Case-Control/Cross-sectional studies score (maximum score=10)

namely the Maslach Burnout Inventory in its various versions [57, 80–88, 89].

Prevalence of workplace violence and teacher burnout

In the study by Fox and Stallworth [79], 94.7% of school teachers reported being subjected to bullying; particularly 65% reported being victims of pervasive bullying as the violence occurs 'quite often' or 'extremely often'. This study showed no data about BOS prevalence. Similarly, Raya Trenas et al. [81] reported that two thirds of 220 school teachers had been target of bullying at work.

In the study of Astrauskaiė et al [82], 161 (46%) out of the schoolteachers experienced high emotional exhaustion levels, while 51% of them showed low emotional exhaustion after they had been subjected to work harassment. 179 (51%) schoolteachers in the sample have witnessed work harassment.

In the study of Tanham and Cam [83], more than half of the schoolteachers (54.8%) suffered from moderately mobbing acts, while lower percentage (30.6% and 14.6%) of them suffered from little and intensive mobbing at work, respectively. As a consequence, 27.1%, 48.6% and 24.4 % out of the participants complained low, moderate and high level of EE, while 51%, 28.6% and 20.4% out of the sample experienced low, moderate and high level of DP, and 10.9%, 31.0% and 58.1% reported low, moderate and high level of PA, respectively.

Bernotaite et al [86] showed that prevalence of WH was occasional (8.3%) and severe (2.9%) and was witnessed by 3.3% of teachers; 32% out of the schoolteachers reported low, 33% moderate and 35% high levels of EE.

In the study by Santos et al [87], a total of 65.2% ($n = 373$) of schoolteachers reported that at some time in their career they had suffered or witnessed educator-targeted (ETB) bullying. Prevalence rates for different types of ETB varied considerably; with 49.8% ($n = 285$) of respondents reporting verbal abuse; and 44.4% ($n = 254$) of them reporting constant ignoring of instructions/requests by the educator as the most prevalent forms of ETB.

13.8% ($n = 79$) of them reported having been physically abused; 18.2% ($n = 104$) reported students spreading rumors about them; and 14.0% ($n = 80$) reported having property damaged by students. 8.2% ($n = 47$) indicated that they had experienced some other form of ETB such as ignoring homework; writing hateful messages in weekly journals; sexual harassment and purposefully disturbing classes. As concerning burnout experience in relation to teaching experience, Malaysian educators exhibit above average levels of personal burnout (mean score 49.16, with < 1 year of experience, and 51.24 with 11-15 years of experience) and work-related burnout with increased teaching experience (mean score 43.75 with <1 year of experience, and 47.26 with 11-15 years of experience). For student-related burnout, instead, Malaysian educators exhibited higher than average levels of student-related burnout until 16 years (mean score 41.62, <16 years of experience); after which student-related burnout levels dip below average (mean score 34.92, >16 years of experience).

In the study by Acquadro Maran and Begotti [88], 58% of schoolteachers (192/331) experienced WV. 19% ($n = 62$) of them reported that they had been subjected to physical aggression at work or on the way to or from their workplace. 31% ($n = 103$) stated that they had been victims of threats and 67% ($n = 224$) of verbal aggression, 5.7% ($n = 19$) of stalking. Teachers victims of violence at school exhibited above average levels of BOS (mean score 35.21, range 16-64), EE (mean score 18.78, range 8-32), and disengagement (mean score 16.41, range 8-32). In the study by Olivier et al [89], prevalence of teachers victimization by students was 40.6% and among those, 6.8% reported that victimization episodes occurred frequently. Witnessing student to teacher aggression (WST) was not a frequent phenomenon as 73.3% out of school teachers have witnessed WST once or more (17.8%), while witnessing student to student aggression (WSS) was more common in school context (once 30.3%, twice 50.8%, or more 17.8%).

In the longitudinal study by Melanda et al, at time zero 55.1% teachers were insulted by students, 19.5% received threats and 16.7% had been humiliated or embarrassed by colleagues or superiors. After 6 months (time 1), 50% teachers were insulted by students, 21.8% received threats and 9.2% had been humiliated or embarrassed by colleagues or superiors. In this study, schoolteachers complained high median levels of EE (25-26 points) and DP (10 points).

Finally, in our review no study compared WV and BOS prevalence by gender.

The relationship between workplace violence and teacher burnout

The selected studies explored the negative effects of the WV on teachers' BOS levels. All the cross-sectional studies ($n=10$) highlighted a statistically significant association or correlation between WV and the three sub-dimensions of BOS [79, 80, 83, 85, 88], or with high EE and DP [57, 81, 84, 88] or with the only dimension of EE [82, 89]. In the longitudinal study by RayaTrenas et al [81], depersonalization was a significant predictor of workplace bullying ($\beta = -0.023$, $P < 0.01$). In the prospective study by Melanda et al [57], psychological violence including verbal violence, embarrassment and threats was correlated to high EE and DP at time 0 and at time 1 (after 24 months). In this study, there was an indirect effect of psychological violence at T0 on BOS levels observed at T1, including via psychological violence at T1, which suggests that exposure to psychological violence over time has a cumulative effect on dimensions of burnout. In the prospective study by Olivier et al [90], for example, exposure to both physical and verbal aggression by pupils was associated with high EE via the effects of aggression on decreased levels of belongingness (indirect effect²=0.15; 95% CI 0.11 to 0.18) and perceived school safety (indirect effect = 0.17; 95% CI 0.13 to 0.21).

The relationship between physical violence and teacher burnout

In the studies examining the relationship be-

tween physical violence and BOS, the perpetrators were always students from primary, middle and secondary students. This form of violence, furthermore, was associated in most of the studies with verbal violence and teacher victimization. Only in the study by Acquadro Maran and Begotti [88], physical violence was perpetrated not only by student (57%), but also by parents (20%), colleagues (14%), superiors (2%), and strangers (4%). Physical attacks by primary, middle and secondary students were positively related to BOS ($\beta = 0.22$, $P < 0.001$) [85]. Acquadro Maran and Begotti [88] showed that WV experienced by pre-primary, primary and secondary teachers, was associated with general burnout ($F = 5.84$, $P < 0.05$), EE ($F = 3.96$, $P < 0.05$) and disengagement ($F = 5.85$, $P < 0.05$).

In China, Yang and colleagues [58] reported teacher victimization (TV) in secondary teachers. In this study, physical TV was related to BOS ($r = 0.15$, $P < 0.001$), EE ($r = 0.17$, $P < 0.001$), and DP ($r = 0.9$, $P < 0.001$).

Olivier and colleagues [89] described victimization of secondary schoolteachers experienced in terms of verbal and physical aggression. Exposure to WV was associated with high EE via the effects of aggression on decreased levels of belongingness (indirect effect² = 0.152; 95% CI 0.116 to 0.188) and perceived school safety (indirect effect = 0.174; 95% CI 0.137 to 0.212).

Psychological violence and teacher burnout

In the study by Fox and Stallworth [79], BOS was statistically ($P < 0.01$) related to violent acts ($r = 0.15$), pervasive bullying ($r = 0.37$), bullying by principal ($r = 0.28$), bullying by coworkers ($r = 0.45$). In the study by Astrauskaiè and colleagues [82], higher levels of WH by colleagues were related to higher EE ($P < 0.01$) in secondary teachers. EE was associated to disruption ($B = 1.140$, $P < 0.01$), humiliation ($B = 0.357$, $P < 0.05$), indignity ($B = 1.304$, $P < 0.01$), and alienation ($B = 0.732$, $P < 0.01$). Witnessing WH was associated to higher level of EE ($P < 0.01$).

In the study by Santos and colleagues [87], carried out in a sample of Malaysian primary

and secondary teachers, 65.2% ($n = 373$) of schoolteachers reported that at some time in their career they had suffered or witnessed ETB. Total frequency of ETB significantly predicted increased personal burnout ($\beta = 0.139$, $t = 2.935$; $P = 0.004$); work-related burnout ($\beta = 0.351$, $t = 3.833$; $P = 0.000$); and student-related burnout ($\beta = 0.490$, $t = 4.995$; $P < 0.001$). Teachers reported being victims of the following types of psychological violence: verbal abuse; ignoring instructions/requests by teacher; spreading rumours; damaging property; ignoring homework; writing hateful messages; sexual harassment; and disturbing classes.

In Sulea et al [84], interpersonal mistreatment was related to BOS sub-dimensions in secondary teachers. EE was statistically ($P < 0.05$) associated with abusive supervision ($\beta = -0.22$), ostracism ($\beta = -0.44$), undermining ($\beta = -0.21$), unwanted sexual attention ($\beta = -0.20$), incivility ($\beta = -0.22$). Cynicism was statistically ($P < 0.05$) associated with abusive supervision ($\beta = -0.32$), ostracism ($\beta = -0.45$), undermining ($\beta = -0.29$), incivility ($\beta = -0.35$). In the study by Bernotaite et al [86] on secondary teachers, WH was related to EE ($r = 0.165$, $P < 0.01$) and DP ($r = -0.260$, $P < 0.01$). In the study by Yang et al [58], social TV was related to BOS ($r = 0.28$, $P < 0.001$), EE ($r = 0.17$, $P < 0.001$), reduced PA ($r = 0.07$, $P < 0.01$), and DP ($r = 0.27$, $P < 0.001$). Verbal TV was related to BOS ($r = 0.25$, $P < 0.002$), EE ($r = 0.14$, $P < 0.002$), reduced PA ($r = 0.08$, $P < 0.002$), and DP ($r = 0.25$, $P < 0.001$). Cyber TV was related to BOS ($r = 0.14$, $P < 0.001$), reduced PA ($r = 0.08$, $P < 0.002$), and DP ($r = 0.15$, $P < 0.001$). Sexual harassment was related to BOS ($r = 0.18$, $P < 0.001$), EE ($r = 0.05$, $P < 0.05$), reduced PA ($r = 0.06$, $P < 0.05$) and DP ($r = 0.27$, $P < 0.001$). Personal property offenses were related to BOS ($r = 0.19$, $P < 0.002$), EE ($r = 0.10$, $P < 0.001$), reduced PA ($r = 0.06$, $P < 0.05$), and DP ($r = 0.22$, $P < 0.001$).

DISCUSSION

The purpose of this work was to conduct a systematic review of the studies concerning any

type of workplace violence on schoolteachers resulting or associated with burnout syndrome. Our findings showed that most part of investigation were cross-sectional and samples were constituted by teachers of all levels and grades of school. Moreover, most part ($n = 9$) of the studies considered the violence acted by students, five studies considered the violence acted by both students and colleagues (comprising superiors), and only one study considered merely the violence perpetrated by colleagues or all types of occupational perpetrators (students, parents, co-workers, superiors, strangers). This is important because as underlined by Melanda [57], the violent behavior could be acted not only by students, but also by parents, colleagues, superiors and other members of the school. However, also when all the sources of violence against teachers were considered [88], the main source of WV remained the students. Since teachers deal with their pupils every day, this finding means that violence experienced by victims may be constant and repeated, resulting in negative feelings such as humiliation, indignity and alienation [82]. When studies have considered BOS in relation to violence, both the victim and the witnesses were found to be more prone than non-victims and non-witnesses to experience exhaustion and depersonalization [88, 91]. These findings are in agreement with previous research in which the source of violence was among peers (student-to-student), confirming that being witness of violence is *per se* a form of violence [92], and may negatively impact the safety perception in teachers [89].

All the cross-sectional studies included in our review, showed a significant association or correlation between WV and BOS. In longitudinal studies, psychological violence was a significant predictor directly or indirectly of EE and DP [57, 89]. In the longitudinal study by Olivier et al [89], exposure to aggression was associated with high levels of EE via the effects of aggression on decreased levels of belongingness and perceived school safety. In the longitudinal study with a 'prospective ex post fact' approach carried out by Raya Trenas

et al [81], a sub-dimension of BOS, namely depersonalization, was a significant predictor of workplace bullying. Although most studies of our review showed an association between WV and BOS, and many of them considered WV as the independent variable of this relationship, their cross-sectional nature prevents us from infer on the directionality of the observed associations, which could also express reverse causality. This main finding of this review, however, confirms previous research on the close relationship between verbal and physical violence, which represent common mental health traumas at workplace, and an increased risk of anxiety, depression and other mental health outcomes [93–96].

In our review, six studies showed high prevalence of WV and BOS among schoolteachers, two studies showed only high prevalence of WV, five studies showed no prevalence data on WV and BOS. With regard to differences in the prevalence of exposure to WV and occurrence of BOS between male and female teachers, our review found no studies comparing schoolteachers by gender.

In the literature [97], there are differences in the form of victimization experienced by males and females, where males are more likely than female to experience verbal and psychological violence, whereas females tend to experience more than male multiple types of concurrent victimizations. Moreover, as suggested by Berg and Cornell [98], Martinez and colleagues [99] and McMahan [69], male teachers are more likely to experience threats, physical violence and multiple forms of aggression from students, whereas female teachers are more likely to experience verbal and nonphysical forms of violence, such as property damage [100, 101].

Findings by Buonomo and colleagues [102] showed that prevalence of WV is higher among females than males. However, other investigations reported opposite findings. Probably, males are less prone that females to recognize themselves as victims of any forms of violence [103, 104], and – as a consequence – are unwilling to ask help [105]. Another explanation is inherent in the rela-

tionship between victim-perpetrator and the social norms on gender relations, that imply ‘role models’ and ‘stereotypical masculine attributes in violence prevention’ [106]. Further research should investigate the gender of all actors involved in the phenomenon (perpetrator, victim, bystander), as a possible variable in the explanation of victimization in teachers and the propensity to intervene to defend the victim. For example, Ermer and colleagues [107] found that when the perpetrator is male, his behavior is perceived more seriously than the misconduct performed by a female. Furthermore, the role of the bystanders is fundamental to deal with the workplace violence: their prosocial behavior, in combination with more school programs against violence, could help the victims of violence to find a solution [108, 109].

With regard to teacher burnout and grade level, our systematic review confirms that secondary schoolteachers tend to experience higher levels of depersonalization and reduced level of personal accomplishment than primary schoolteachers [110–113]. With regard to the instruments used by scholars, most researchers used original or modified versions of the Maslach Burnout Inventory (MBI) to measure how emotionally exhausted, depersonalized, and/or unaccomplished teachers feel, whereas the measurement of WV was carried out with heterogeneous instruments, namely ‘ad hoc’ questionnaires. This is a critical issue in the research on psychosocial risk factors that prevent us to obtain better evidence from meta-analytic analyses [114]. Generally, in the literature the most used questionnaires are either the MBI-HSS or the MBI-ES, as these inventories were developed specifically for the human service professions, whereas the MBI-GS was created to address all other occupations. According to inventory guidelines, the only difference between the MBI-HSS and the MBI-ES in terms of items is that the MBI-HSS uses the term ‘recipient’ to refer to the clients that human service professionals work with, while the MBI-ES uses the term ‘students’. However, both of these burnout inventories in their

most recent editions focus on the frequency of emotional exhaustion, depersonalization, and lack of personal accomplishment. Teachers with a greater degree of burnout have higher scores on the dimensions of emotional exhaustion and depersonalization, and lower scores on the personal accomplishment dimension [43, 90].

Our systematic review has some implications for policymakers, because prevention programs at school, which could be carried out by employers with the cooperation of occupational physicians and school psychologists within the framework of health surveillance and workplace health promotion programmes, may be decisive to tackle WV and BOS, which are relevant psychosocial risk factors in the teaching job. Given the relationship of WV with BOS, it is important to deal with the circularity of this relationship that the violence may trigger. According to Salimi and colleagues [115], it is fundamental to provide information on the phenomenon (what type of misconduct is considered a form of violence, e.g., reflecting on the consequences) starting from a detailed analysis of the school organization and its characteristics. This is important to plan a tailor-made intervention, which reflects the needs of that particular context as well as its unique cultural and organizational values [91].

The WV against teachers determines a sense of distrust in the workplace, that involves not only the victim but also the witnesses and the students that attend the misconduct [89]. Moreover, the absence of intervention permits the escalation of the violent behavior, thus spreading within the organization a culture in which the violence is – implicitly - accepted. Furthermore, depersonalization and emotional disorders may promote a culture of WV. Prevention and intervention programs, therefore, can effectively reduce the risk of individual and organizational poor outcomes of WV and BOS, and give information on the best strategies that could be adopted to deal with this phenomenon. Espelage and colleagues [116] suggested to implement socio-behavioral programs that allow to stu-

dents, teacher, superiors and other stakeholders to recognize some emotional state such as anger, and to express it in a functional way, avoiding violence. The goal of these programs is to provide teachers with effective strategies to cope with the stressful event, defusing the possible escalation of violence that his/her behavior could increase [117]. At the organizational level, the goal is to intervene to reduce the work-related stress, by promoting a strong sense of trust within organizations, to give specific norms and adopting a ‘zero tolerance’ politic against violent behavior.

Above all, as suggested by McKenzie [118] and by Choong et al [119], it is important to create a climate that permits the support by colleagues, the promotion of the organizational citizenship, that allows to adopt behavior oriented to respect and civility. For those teachers victims of violence and that suffer of BOS, the school should offer a specific therapy to reduce the consequence of the victimization (e.g., anxiety and depressive symptoms, distress, rumination, fatigue, exhaustion and depersonalization). This support should be aimed at re-establishing the confidence in own ability to deal with stressful events, such as the management of interpersonal conflict in classroom.

Strengths and limitations of the review

A first limitation of this review is that we have not included pupil misbehaviour, which is a well-recognized source of teacher burnout in literature. Pupils’ misconduct is better conceptualized as ‘job demand’ and has been defined as those behaviors that disrupt the teaching learning process or interfere with the orderly operation of the classroom. Pupil misbehavior, however, could include verbal violence and disrespect towards teachers as well [43]. A second limitation concerns the criteria of inclusion of the studies analysed: our choice, in fact, was to only include quantitative studies. Moreover, studies with different samples of school workers (e.g. educators, support teachers) and teachers (e.g. university teachers) were excluded. Further systematic reviews could focus on pu-

pils' misbehavior, including also qualitative studies and different sample of teachers. In the future, systematic reviews could compare results from qualitative and quantitative investigations and findings from different sample of workers and perpetrators. Finally, most of the studies included in our review were cross-sectional, which does not allow to verify the direction of the observed associations between WV and BOS. Our review, however, is likely the first to shed light on the relationship between WV and BOS in a category of workers who are at high risk of WV and BOS. Subsequent longitudinal studies could help understand the mechanisms linking WV and mental health. Further research should also deepen the prevalence of the phenomenon, the type of behavior acted, the differences by gender in the victims, and the relationship between perpetrator and victim.

CONCLUSIONS

This systematic review highlights the existence of an association between psychological and physical violence against schoolteachers and teacher burnout, and in some cases WV has been found as a predictor of BOS. Our review highlights some important factors that affect teachers who are victims of WV in relation with BOS. First at all, although pupils are the most represented actors of violence, violent behaviours may involve all the actors who are part of this phenomenon at school (students, colleagues, superiors and so on). All grade and levels of schoolteachers may be involved. In conclusion, there is need of legislative interventions for implementing mandatory occupational health programs and voluntary workplace health promotion programs. These solutions may be useful to protect and promote teachers' mental well-being and give education and emotional support to students and their families.

References

1. Kyriacou C. Teacher stress: Directions for future research. *Educ Rev.* 2001;53:27–35. doi:10.1080/00131910120033628.
2. Kyriacou C. Teacher stress: from prevalence to resilience. In: Langan-Fox J, Cooper CL editor(s). *Handbook of Stress in the Occupations*. Cheltenham: Edward Elgar; 2011. pp 161–173.
3. WHO. Burn-out an “occupational phenomenon”: International Classification of Diseases”. 28 May 2019. Last update: 2020. Available from: https://www.who.int/mental_health/evidence/burn-out/en/.
4. Cocker F, Joss N. Compassion Fatigue among Healthcare, Emergency and Community Service Workers: A Systematic Review. *Int J Environ Res Public Health.* 2016 Jun 22;13(6):618. doi: 10.3390/ijerph13060618..
5. Chirico F, Crescenzo P, Sacco A, Riccò M, Ripa S, Nucera G, et al. Prevalence of burnout syndrome among Italian volunteers of the Red Cross: a cross-sectional study. *Ind Health.* 2021;59(2):117–127. doi: 10.2486/indhealth.2020-0246.
6. Magnavita N, Chirico F, Garbarino S, Bragazzi NL, Santacroce E, Zaffina S. SARS/MERS/SARS-CoV-2 Outbreaks and Burnout Syndrome among Healthcare Workers. An umbrella Systematic Review. *Int J Environ Res Public Health.* 2021;18(8):4361. doi: 10.3390/ijerph18084361.
7. Chirico F. The assessment of psychosocial risk: only “work-related stress” or something else? *Med Lav.* 2015 Jan 9;106(1):65–66.
8. Chirico F, Taino G, Magnavita N, Giorgi I, Ferrari G, Mongiovì MC, et al. Proposal of a method for assessing the risk of burnout in teachers: the VA.RI.B.O strategy. *G Ital Med Lav Erg.* 2019;41(3):221–235.
9. Chirico F. Is burnout a syndrome or an occupational disease? Instructions for occupational physicians. *Epidemiol Prev.* 2017 Sep;41(5-6):294–298. doi: 10.19191/EP17.5-6.P294.089.
10. Chirico F. Is it time to consider Burnout Syndrome an occupational disease? *Br J Psych.* 2017 Jul

- 17;190(1):e-letter. Available from: <http://bjp.rcpsych.org/content/190/1/81.2.e-letters#is-it-time-to-consider-burnout-syndrome-an-occupational-disease>.
11. Lastovkova A, Carder M, Rasmussen HM, Sjoberg L, Groene GJ, Sauni R, et al. Burnout syndrome as an occupational disease in the European Union: an exploratory study. *Ind Health*. 2018 Apr 7;56(2):160–165. doi: 10.2486/indhealth.2017-0132. Epub 2017 Nov 3.
 12. Vandenberghe R, Huberman AM. *Understanding and Preventing Teacher Burnout: a Sourcebook of International Research and Practice*. Cambridge: Cambridge University Press; 1999.
 13. Tsouloupas CN, Carson RL, Matthews R, Grawitch MJ, Barber LK. Exploring the association between teachers' perceived student misbehaviour and emotional exhaustion: the importance of teacher efficacy beliefs and emotion regulation. *Educ Psychol*. 2010;30:173–189. doi: 10.1080/01443410903494460.
 14. Dicke T, Parker PD, Holzberger D, Kunter M, Leutner D. Beginning teachers' efficacy and emotional exhaustion: latent changes, reciprocity, and the influence of professional knowledge. *Contemp Educ Psychol*. 2015;41:62–72. doi: 10.1016/j.cedpsych.2014.11.003.
 15. Pyhältö K, Pietarinen J, Haverinen K, Tikkanen L, Soini T. Teacher burnout profiles and proactive strategies. *Eur J Psychol Educ*. 2021;36:219–242. doi: <https://doi.org/10.1007/s10212-020-00465-6>.
 16. Aydogan I, Dogan AA, Bayram N. Burnout among Turkish high school teachers working in Turkey and abroad: a comparative study. *Electron J Res Educ Psychol*. 2017;7:1249–1268.
 17. Foley C, Murphy M. Burnout in Irish teachers: investigating the role of individual differences, work environment and coping factors. *Teach Teach Educ*. 2015;50:46–55.
 18. Bianchi R, Schonfeld IS, Laurent E. Burnout-depression overlap: a review. *Clin Psychol Rev*. 2015 Mar;36:28–41. doi: 10.1016/j.cpr.2015.01.004. Epub 2015 Jan 17.
 19. Epstein RM, Privitera MR. Physician burnout is better conceptualised as depression - Authors' reply. *Lancet*. 2017 Apr 8;389(10077):1398. doi: 10.1016/S0140-6736(17)30898-X.
 20. Chirico F. Burnout and depression are not the same thing. *Br J Psych*. 2017 Oct;2;190(1):e-letter. Available from: <http://bjp.rcpsych.org/content/190/1/81.2.e-letters#burnout-syndrome-and-depression-are-not-the-same-thing>.
 21. Chirico F. The forgotten realm of the new and emerging psychosocial risk factors. *J Occup Health*. 2017;59(5):433–435. doi: 10.1539/joh.17-0111-OP.
 22. Cox T, Griffiths A, Rial-Gonzalez E. *Work-Related Stress*. Luxembourg: Office for Official Publications of the European Communities; 2000.
 23. Chirico F, Heponiemi T, Pavlova M, Zaffina S, Magnavita N. Psychosocial Risk Prevention in a Global Occupational Health Perspective. A Descriptive Analysis. *Int J Environ Res Public Health*. 2019;16(14):2470. Published 2019 Jul 11. doi:10.3390/ijerph16142470.
 24. Chirico F. Job stress models for predicting burnout syndrome: a review. *Ann Ist Super Sanita*. 2016 Jul-Sep;52(3):443–456. doi: 10.4415/ANN_16_03_17.
 25. Betoret FD. Stressors, self-efficacy, coping resources, and burnout among secondary school teachers in Spain. *Educ Psychol*. 2006;26:519–539.
 26. Demerouti E, Bakker AB, Nachreiner F, Schaufeli WB. The job demands–resources model of burnout. *J Appl Psychol*. 2001;86:499–512.
 27. Van Droogenbroeck F, Spruyt B, Vanroelen C. Burnout among senior teachers: investigating the role of workload and interpersonal relationships at work. *Teach Teach Educ*. 2014;43:99–109.
 28. Brewer EW, Shapard L. Employee burnout: a meta-analysis of the relationship between age or years of experience. *Hum Resour Dev Rev*. 2004;3(2):102–123.
 29. Collie RJ, Martin AJ. Teachers' sense of adaptability: Examining links with perceived autonomy support, teachers' psychological functioning, and students' numeracy achievement. *Teach Teach Educ*. 2017;55:29–39. doi: <https://doi.org/10.1016/j.lindif.2017.03003>.
 30. Hakonen JJ, Bakker AB, Schaufeli WB. Burnout and work engagement among teachers. *J School Psychol*. 2006;3:495–513. doi: <https://doi.org/10.1016/j.jsp.2005.11.001>.

31. Skaalvik EM, Skaalvik S. Job satisfaction, stress and coping strategies in the teaching profession—What do teachers say? *Int Educ Stud.* 2015;8(3):181–192. doi: <https://doi.org/10.5539/ies.v8n3p181>.
32. Skaalvik EM, Skaalvik S. Job demands and job resources as predictors of teacher motivation and well-being. *Soc Psychol Educ.* 2018;21:1251–1275. doi: <https://doi.org/10.1007/s11218-018-9464-8>.
33. Eurofound. *Violence and harassment in European workplaces: Causes, impacts and policies*, Dublin: European Foundation for the Improvement of Living and Working Conditions; 2015.
34. Bambi S, Foà C, De Felippis C, Lucchini A, Guazzini A, Rasero L. Workplace incivility, lateral violence and bullying among nurses. A review about their prevalence and related factors. *Acta Biomed.* 2018 Jul 18;89(6-S):51–79. doi: 10.23750/abm.v89i6-S.7461.
35. McKenna BG, Smith NA, Poole SJ, Coverdale JH. Horizontal violence: experiences of Registered Nurses in their first year of practice. *J Adv Nurs.* 2003 Apr; 42(1):90–96.
36. Ishmael A, Alemoru B. *Harassment, bullying and violence at work: a practical guide to combating employee abuse (employment matters)* London: Spiro; 2002.
37. Hutchinson M, Wilkes L, Jackson D, Vickers MH. Integrating individual, work group and organizational factors: testing a multidimensional model of bullying in the nursing workplace. *J Nurs Manag.* 2010 Mar;18(2):173–181.
38. Cleary M, Hunt GE, Walter G, Robertson M. Dealing with bullying in the workplace: toward zero tolerance. *J Psychosoc Nurs Ment Health Serv.* 2009;47(12):34–41.
39. Bambi S, Guazzini A, De Felippis C, Lucchini A, Rasero L. Preventing workplace incivility, lateral violence and bullying between nurses A narrative literature review. *Acta Biomed.* 2017 Nov 30;88(5S):39–47. doi: 10.23750/abm.v88i5-S.6838.
40. Hutton SA. Workplace incivility: State of the science. *J Nurs Adm.* 2006;36:22–27.
41. Lokmic M, Opic S, Bilic V. Violence against teachers- Rule or exception? *Int J Cogn Res Sci Eng Educ.* 2013;1(2):6–15.
42. Dzuka J, Dalbert C. Student violence against teachers: teachers' well-being and the belief in a just world. *Eur Psychol.* 2007;12:253–260.
43. Aloe AM, Shisler SM, Norris BD, Nickerson AB, Rinker TW. A multivariate meta-analysis of student misbehavior and teacher burnout. *Educ Res Rev.* 2014;12:30–44.
44. Cano-Garcia FJ, Padilla-Munoz EM, Carrasco-Ortiz MA. Personality and contextual variables in teacher burnout. *Pers Individ Differ.* 2005;38(4):929–940.
45. Dorman JP. Relationship between school and classroom environment and teacher burnout: a LISREL analysis. *Soc Psychol Educ.* 2003;6(2):107–127.
46. Gavish B, Friedman IA. Novice teachers' experience of teaching: a dynamic aspect of burnout. *Soc Psychol Educ.* 2010;13(2):141–167.
47. Leung DYP, Lee WWS. Predicting intention to quit among Chinese teachers: differential predictability of the component of burnout. *Anxiety Stress Coping.* 2006;19(2):129–141.
48. Pyhältö K, Pietarinen J, Salmela-Aro K. Teacher–working–environment fit as a framework for burnout experienced by Finnish teachers. *Teach Teach Educ.* 2011;27(7):1101–1110.
49. Pietarinen J, Pyhältö K, Soini T, Salmela-Aro K. Validity and reliability of the socio-contextual teacher burnout inventory (STBI). *Psychol.* 2013;4(1):73–82.
50. Allen BC, Holland P, Reynolds R. The effect of bullying on burnout in nurses: the moderating role of psychological detachment *J Adv Nurs.* 2015 Feb;71(2):381–390. doi: 10.1111/jan.12489. Epub 2014 Aug 1.
51. Giorgi G, Mancuso S, Fiz Perez F, Castiello D'Antonio A, Mucci N, Cupelli V, et al. Bullying among nurses and its relationship with burnout and organizational climate. *Int J Nurs Pract.* 2016;22(2):160–168. doi: 10.1111/ijn.12376. Epub 2015 Mar 30.

52. Karsavuran S, Kaya S. The relationship between burnout and mobbing among hospital managers. *Nurs Ethics*. 2017;24:337–348. doi: <https://doi.org/10.1177/0969733015602054>.
53. Livne Y, Goussinsky R. Workplace bullying and burnout among healthcare employees: The moderating effect of control-related resources. *Nurs Health Sci*. 2018;20:89–98. doi:<https://doi.org/10.1111/nhs.12392>.
54. Mościcka-Teske A, Drabek M, Pyżalski J. Experienced bullying and hostile behavior in the workplace and symptoms of burnout in teachers. *Med Pr*. 2014;65(4):535–542. doi: 10.13075/mp.5893.00017.
55. Geissler KL. The relationship between teacher training, perceptions of school violence, and burnout. *CUNY Academic Works*. 2015. doi: https://academicworks.cuny.edu/gc_etds/560.
56. Koga GKC, Melanda FN, Santos H, Sant’Anna FL, González AD, Mesas AE, et al. Factors associated with worse levels in the Burnout scale in basic education teachers. *Cad Saude Colet*. 2015;23:268–275. doi: <https://doi.org/10.1590/1414-462X201500030121>.
57. Melanda FN, Salvagioni DAJ, Mesas AE, González AD, Cerqueira PHR, Alencar GP, et al. Cross-sectional and longitudinal relationships between psychological violence and teacher burnout. *Int Arch Occup Environ Health*. 2021 Apr 15. doi: 10.1007/s00420-020-01633-3.
58. Yang C, Frederick SS, Nickerson AB, Jenkins LN, Xie J-S. Initial Development and Validation of the Multidimensional Teacher Victimization Scale. *Sch Psychol*. 2019; 34(2):244–252.
59. Galand B, Lecocq C, Philippot P. School violence and teacher professional disengagement. *Br J Educ Psychol*. 2007;77:465–477. doi: <http://dx.doi.org/10.1348/000709906X114571>.
60. Gerberich SG, Nachreiner NN, Ryan AD, Church T, McGovern P, Geisser M, et al. Violence against educators: a population-based study. *J Occup Environ Med*. 2011;53:294–302.
61. Tiesnam HM, Hendricks S, Konda S, Hartley D. Physical assaults among education workers. *J Occup Environ Med*. 2014;56(6):621–627.
62. Wilson CM, Douglas KS, Lyon DR. Violence against teachers: prevalence and consequences. *J Interpers Violence*. 2010;26(12):2353–2371.
63. Zheng X, Shi X, Liu Y. Leading Teachers’ Emotions Like Parents: Relationships Between Paternalistic Leadership, Emotional Labor and Teacher Commitment in China. *Front Psychol*. 2020 Apr 3;11:519. doi: 10.3389/fpsyg.2020.00519.
64. Lee YH, Chelladurai P, Kang C. Emotional Labor in the Dual Role of Teaching and Coaching. *Psychol Rep*. 2018 Oct;121(5):952–973. doi: 10.1177/0033294117741656. Epub 2017 Nov 24.
65. Vammen MA, Mikkelsen S, Forman JL, Hansen ÅM, Bonde JP, Grynderup MB, et al. Emotional demands and exhaustion: cross-sectional and longitudinal associations in a cohort of Danish public sector employees. *Int Arch Occup Environ Health*. 2019 Jul;92(5):639–650. doi: 10.1007/s00420-018-01398-w. Epub 2019 Mar 13.
66. Chang SJ. A study on the validation of Korean emotional labor scale (K-ELS) and Korean workplace violence scale(K-WVS). Korean occupational safety & health agency; 2014.
67. de Ceballos AGC, Carvalho FM. Violence Against Teachers and Work Ability: A Cross-Sectional Study in Northeast Brazil. *J Interpers Violence*. 2019 Oct 14;886260519881002. doi: 10.1177/0886260519881002.
68. Chen JK, Astor RA. Students’ reports of violence against teachers in Taiwanese schools. *J Sch Violence*. 2008;8:2–17.
69. McMahon SD, Reaves S, McConnell EA, Peist E, Ruiz L. APA Task Force on Classroom Violence Directed Against Teachers, Reynolds CR. The ecology of teachers’ experience with violence and lack of administrative support. *Am J Community Psychol*. 2017;60:502–515.
70. Rudkjoebing LA, Bungum AB, Flachs EM, Eller NH, Borritz M, Aust B, et al. Work-related exposure to violence or threats and risk of mental disorders and symptoms: a systematic review and meta-analysis. *Scand J Work Environ Health*. 2020 Jul 1;46(4):339–349. doi: 10.5271/sjweh.3877. Epub 2020 Jan 7.
71. Høgh A, Clausen T, Bickmann L, Hansen ÅM, Conway PM, Baernholdt M. Consequences of

Workplace Bullying for Individuals, Organizations and Society. In: D'Cruz P. et al. (eds) Pathways of Job-related Negative Behaviour. Handbooks of Workplace Bullying, Emotional Abuse and Harassment, vol 2. Singapore; Springer; 2021. https://doi.org/10.1007/978-981-13-0935-9_8.

72. Berlanda S, Fraizzoli M, de Cordova F, Pedrazza M. Psychosocial risks and violence against teachers. Is it possible to promote well-being at work? *Int J Environ Res Public Health*. 2019;16:4439. doi:10.3390/ijerph16224439.
73. Sungu H. Teacher victimization in Turkey: A review of the news on violence against teachers. *Anthropologist*. 2015;20:694–706.
74. Giménez Lozano JM, Martínez Ramón JP, Morales Rodríguez FM. Doctors and Nurses: A Systematic Review of the Risk and Protective Factors in Workplace Violence and Burnout. *Int J Environ Res Public Health*. 2021 Mar 22;18(6):3280. doi: 10.3390/ijerph18063280.
75. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*. 2021 Mar 29;372:n71. doi: 10.1136/bmj.n71.
76. Deeks JJ, Dinnes J, D'Amico R, Sowden AJ, Sakarovitch C, Song F, et al. International Stroke Trial Collaborative Group; European Carotid Surgery Trial Collaborative Group. *Health Technol Assess*. 2003;7:1–173. doi:10.3310/hta7270.
77. Wells GA, Shea B, O'Connell D, Peterson J, Welch V, Losos M, et al. The Newcastle–Ottawa Scale (NOS) for assessing the quality of nonrandomised studies in meta-analyses. 2012 [cited 2021 May 02]. Available from: http://www.ohri.ca/programs/clinical_epidemiology/oxford.asp.
78. Modesti PA, Reboldi G, Cappuccio FP, Agyemang C, Remuzzi G, Rapi S, et al. ESH Working Group on CV Risk in Low Resource Settings. Panethnic Differences in Blood Pressure in Europe: A Systematic Review and Meta-Analysis. *PLoS One*. 2016;11:e0147601. doi: 10.1371/journal.pone.0147601 eCollection 2016.
79. Fox S, Stallworth LE. The battered apple: An application of stressor–emotion–control/support theory to teachers' experience of violence and bullying. *Hum Relat*. 2010;63:927–954.
80. Unterbrink T, Zimmerman L, Pfeifer R, Wirsching M, Brahler E, Bauer J. Parameters influencing health variables in a sample of 949 German teachers, *Int Arch Occup Env Health*. 2008;82:117–123.
81. Raya Trenas A, Herruzo J, Pino M. Predictors for bullying at work in the field of education. *Innovar*. 2009;19:65–71.
82. Astrauskaite M, Perminas A, Kern R. Sickness, colleagues' harassment in teachers' work and emotional exhaustion. *Medicina (Kaunas)*. 2010;46(9):628–634.
83. Tanhan F, Çam Z. The relation between mobbing behaviors teachers in elementary schools are exposed to and their burnout levels. *Procedia Soc Behav Sci*. 2011;15:2704–2709.
84. Sulea C, Filipescu R, Horga A, Orțan C, Fischmann G. Interpersonal mistreatment at work and burnout among teachers. *Cogn Brain Behav*. 2012;26:553–570. doi:10.1037/0021-9010.90.3.483.
85. Bass BI, Cigularov KP, Chen PY, Henry KL, Tomazic RG, Li Y. The effects of student violence against school employees on employee burnout and work engagement: The roles of perceived school unsafety and transformational leadership. *Int J Stress Manag*. 2016;23(3):318–336. <https://doi.org/10.1037/str0000011>.
86. Bernotaite L, Malinauskiene V. Workplace bullying and mental health among teachers in relation to psychosocial job characteristics and burnout. *Int J Occup Med Env Health*. 2017;30(4):629–640. <https://doi.org/10.13075/ijom.1896.0094M>.
87. Santos A, Tin JJ. The nature, extent and impact of educator-targeted bullying on school teachers in West Malaysia. *Br J Guid Counc*. 2018;46(5):543–556. doi: <https://doi.org/10.1080/03069885.2016.1245410>.
88. Acquadro Maran D, Begotti T. A Circle of Violence: Are Burnout, Disengagement and Self-Efficacy in Non-University Teacher Victims of Workplace Violence New and Emergent Risks? *Appl Sci*. 2020 Jan;10(13):4595.
89. Olivier E, Janosz M, Morin AJS, Archambault I, Geoffrion S, Pascal S, et al. Chronic and Temporary

- Exposure to Student Violence Predicts Emotional Exhaustion in High School Teachers. *J Sch Violence*. 2021;50(2):195–211.
90. Maslach C, Jackson SE, Schwab RL. Maslach Burnout Inventory- Educators Survey (MBI-ES). In C. Maslach, S. E. Jackson, & M. P. Leiter (Eds.), *MBI Manual* (3rd eds.). Palo Alto, CA: Consulting Psychologists; 1996.
 91. Kanno H, Giddings MM. Hidden trauma victims: Understanding and preventing traumatic stress in mental health professionals. *Soc Work Ment Health*. 2017 May 4;15(3):331–353.
 92. Ingram KM, Espelage DL, Davis JP, Merrin GJ. Family violence, sibling, and peer aggression during adolescence: associations with behavioral health outcomes. *Front Psychiatry*. 2020 Feb 11;11:26.
 93. Magnavita N, Heponiemi T, Chirico F. Workplace Violence Is Associated With Impaired Work Functioning in Nurses: An Italian Cross-Sectional Study. *J Nurs Scholarsh*. 2020;52(3):281–291. doi:10.1111/jnu.12549.
 94. Magnavita N, Di Stasio E, Capitanelli I, Lops EA, Chirico F, Garbarino S. Sleep Problems and Workplace Violence: A Systematic Review and Meta-Analysis. *Front Neurosci*. 2019;13:997. Published 2019 Oct 1. doi:10.3389/fnins.2019.00997.
 95. Magnavita N, Capitanelli I, Arnesano G, Iuliano A, Mauro I, Suraci F, et al. Common occupational trauma: is there a relationship with workers' mental health? *Traumatas*. 2021;1.
 96. Magnavita, N. Workplace violence and occupational stress in health care workers: a chicken and egg situation - Results of a 6-year follow-up study. *J Nurs Scholarsh*. 2014;46: 366–376.
 97. Cho H, Seon J, Han JB, Shamrova D, Kwon I. Gender differences in the relationship between the nature of intimate partner violence and the survivor's help-seeking. *Violence Against Women*. 2020 May;26(6-7):712–729.
 98. Berg JK, Cornell D. Authoritative school climate, aggression toward teachers, and teacher distress in middle school. *Sch Psychol Q*. 2016;31:122–139. doi: <http://dx.doi.org/10.1037/spq0000132>.
 99. Martinez A, McMahan SD, Espelage D, Anderman EM, Reddy LA, Sanchez B. Teachers' experiences with multiple victimization: Identifying demographic, cognitive, and contextual correlates. *J Sch Violence*. 2016;15:387–405. doi:<http://dx.doi.org/101080/15388220.2015.1056879>.
 100. Moon B, Morash M, Jang JO, Jeong S. Violence against teachers in South Korea: Negative consequences and factors leading to emotional distress. *Violence Vict*. 2015;30: 279–292. doi:<http://dx.doi.org/10.1891/0886-6708.VV-D-13-00184>.
 101. Wei C, Gerberich SG, Alexander BH, Ryan AD, Nachreiner NM, Mongin SJ. Work-related violence against educators in Minnesota: Rates and risks based on hours exposed. *J Saf Res*. 2013;44:73–85. doi: <http://dx.doi.org/10.1016/j.jsr.2012.12.005>.
 102. Buonomo I, Fiorilli C, Romano L, Benevene P. The Roles of Work-Life Conflict and Gender in the Relationship between Workplace Bullying and Personal Burnout. A Study on Italian School Principals. *Int J Environ Res Public Health*. 2020 Nov 25;17(23):8745. doi: 10.3390/ijerph17238745.
 103. Donne MD, DeLuca J, Pleskach P, Bromson C, Mosley MP, Perez ET, et al. Barriers to and facilitators of help-seeking behavior among men who experience sexual violence. *Am J Mens Health*. 2018 Mar;12(2):189–201.
 104. Laskey P, Bates EA, Taylor JC. A systematic literature review of intimate partner violence victimisation: An inclusive review across gender and sexuality. *Aggress Violent Behav*. 2019 Jul 1;47:1–1.
 105. Von Hohendorff J, Habigzang LF, Koller SH. “A boy, being a victim, nobody really buys that, you know?”: Dynamics of sexual violence against boys. *Child Abuse Negl*. 2017 Aug 1;70:53–64.
 106. Jewkes R, Flood M, Lang J. From work with men and boys to changes of social norms and reduction of inequities in gender relations: a conceptual shift in prevention of violence against women and girls. *Lancet*. 2015; 385(9977):1580–1589.
 107. Ermer AE, Roach AL, Coleman M, Ganong L. Deconstructing attitudes about intimate partner violence and bystander intervention: The roles of perpetrator gender and severity of aggression. *J Interpers Violen-*

ce. 2021 Jan;36(1-2):NP896–919.

108. Dovidio JF, Piliavin JA, Schroeder DA, Penner LA. The social psychology of prosocial behavior. Psychology Press; 2017 Sep 25.
109. Jaureguizar J, Ibabe I, Straus MA. Violent and prosocial behavior by adolescents toward parents and teachers in a community sample. *Psychol Sch.* 2013 May;50(5):451–470.
110. Kauppi T, Pörhölä M. School teachers bullied by their students: Teachers' attributions and how they share their experiences. *Teach Teach Educ.* 2012;28:1059–1068. doi:<http://dx.doi.org/10.1016/j.tate.2012.05.009>.
111. Lyon DR, Douglas KS, Simon Fraser University & British Columbia Teachers Federation. *Violence against British Columbia teachers: Report of the Simon Fraser University/British Columbia Teachers' Federation violence against teachers survey*. Burnaby, British Columbia: Mental Health, Law & Policy Institute, Simon Fraser University; 1999.
112. Anderson MB, Iwanicki EF. Teacher motivation and its relationship to burnout. *Educ Adm Q.* 1984;20:94–132. doi:10.1177/0013161X84020002007.
113. Avtgis TA, Rancer AS. The Relationship between Trait Verbal Aggressiveness and Teacher Burnout Syndrome in K-12 Teachers. *Commun Res Rep.* 2008;25:86–89. doi: <https://doi.org/10.1080/08824090701831875>.
114. Chirico F, Magnavita N. Burnout Syndrome and Meta-Analyses: Need for Evidence-Based Research in Occupational Health. Comments on Prevalence of Burnout in Medical and Surgical Residents: A Meta-Analysis. *Int J Environ Res Public Health.* 2019;16. doi:10.3390/ijerph16091479. *Int J Environ Res Public Health.* 2020;17(3):741. Published 2020 Jan 23. doi:10.3390/ijerph17030741.
115. Salimi N, Karimi-Shahanjarin A, Rezapur-Shahkolai F, Hamzeh B, Roshanaei G, Babamiri M. Use of a Mixed-Methods Approach to Evaluate the Implementation of Violence and Bullying Prevention Programs in Schools. *Educ Urban Soc.* 2020. doi:10.1177/0013124520972090.
116. Espelage D, Anderman EM, Brown VE, Jones A, Lane KL, McMahon SD, et al. Understanding and preventing violence directed against teachers: Recommendations for a national research, practice, and policy agenda. *Am Psychol.* 2013;68(2):75–87.
117. Callahan CJ. Crisis intervention model for teachers. *J Instr Psychol.* 1998 Dec 1;25(4):226.
118. McKenzie SG. Trust and organizational citizenship: A study of the relationship of the three referents of trust and the organizational citizenship of elementary school teachers. Sna Antonio: The University of Texas at San Antonio; 2011.
119. Choong YO, Ng LP, Na SA, Tan CE. The role of teachers' self-efficacy between trust and organisational citizenship behaviour among secondary school teachers. *Pers Rev.* 2019 Nov 8.