REVIEWS

Physicians' Perspectives About Burnout: a Systematic Review and Metasynthesis

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BACKGROUND: Doctors' burnout is a major public health issue with important harmful effects on both the healthcare system and physicians' mental health. Qualitative studies are relevant in this context, focusing as they do on the views of the physicians of how they live and understand burnout in their own professional field.

OBJECTIVE: To explore physicians' perspectives on burnout by applying a metasynthesis approach, including a systematic literature review and analysis of the qualitative studies.

DATA SOURCES: Medline, PsycINFO, EMBASE, and SSCI from the earliest available date to June 2018

REVIEW METHODS: This metasynthesis follows thematic synthesis procedures. Four databases were systematically searched for qualitative studies reporting doctors' perspectives on burnout. Article quality was assessed with the Critical Appraisal Skills Program. Thematic analysis was used to identify key themes and synthesize them.

RESULTS: Thirty-three articles were included, covering data from more than 1589 medical doctors (68 residents and 1521 physicians). Two themes emerged from the analysis: (1) stress factors promoting burnout—ranked as organizational, then contextual and relational, and finally individual—factors and (2) protective factors, which were above all individual but also relational and organizational.

CONCLUSIONS: The individual and organizational levels are abundantly described in the literature, as risk factors and interventions. Our results show that doctors identify numerous organizational factors as originators of potential burnout, but envision protecting themselves individually. Relational factors, in a mediate position, should be addressed as an original axis of protection and intervention for battling doctors' burnout.

INTRODUCTION

Burnout is a work-related syndrome involving emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment[1]. In recent years, doctors' burnout has become a major public health issue in most Western countries. Its prevalence is quite high in many countries, in residents as well as experienced physicians and regardless of the specialty[2]. In one recent US study, 54.4% of a cohort of 6880 physicians had experienced at least one symptom of burnout[3].

Doctors' burnout has important harmful effects on the healthcare system. It appears to increase the risk of medical errors by residents[4] as well as their elders[5] and impair the professionalism of doctors[6] as well as their productivity (availability at work, sick leaves)[7]. It thus costs hospitals and communities dearly[8].

Consequences for doctors can also be serious, increasing their risk of suicide[9], even though they are at higher risk than the general population for depression and for traffic accidents[10].

The scientific literature on this subject is abundant. This quantitative literature has generated several narrative and systematic reviews as well as meta-analyses that have made it possible, in particular, to describe the correlates of doctor burnout across regions and specialties[11] and its impact on their productivity[7], to list the factors, internal and external, that can cause this burnout[12], and to assess the effectiveness of different interventions, focused on either the individual or the organisation[13]. Accordingly, young physicians, women, and those in more isolated practices appear to be at greater risk of burnout. Similarly, common personal characteristics of doctors, ones that favored their academic success, such as their perfectionism, compulsiveness, guilt, and self-denial, may predispose them to burnout, as do the current changes in healthcare environments and in hospital administration, by creating substantial external pressures[12].

To our knowledge, there is no systematic review of the qualitative literature on physician burnout. Qualitative methods are especially relevant in this context, aiming as they do to describe and understand complex phenomena in greater depth. They are a tool of choice for focusing on the views of the physicians of how they live, conceive, and understand burnout in their own professional field. Because qualitative studies are usually conducted with small samples and in specific context, there may often be concern about the generalizability of their results.

The objective of this study was to explore physicians' perspectives on burnout by applying a metasynthesis approach, including a systematic literature review and analysis of qualitative studies on the subject[14,15].

METHODS

Study Design

This metasynthesis relies on our six-stage approach[16–20] inspired by the model of meta-ethnography[21] and the procedures of the thematic synthesis[22]. It complies with the ENTREQ reporting guidelines[23].

Our approach consisted of six successive stages:

1. Defining the research question, the subjects, and the types of studies to be included
2. Identifying and selecting the studies
3. Assessing the quality of the studies selected
4. Analyzing the studies, identifying their themes, and translating these themes between the studies
5. Generating the themes of the analysis and structuring the synthesis
6. Writing the synthesis

The thematic analysis contained two phases: one descriptive, which defined and compared the themes, and the other interpretive, which developed original ideas drawn from the review.

Search Strategy and Selection Criteria

We conducted a systematic search in four databases according to a search algorithm specific to each base: Medline, PsycINFO, EMBASE, and SSCI through June 30, 2018. Preliminary research had identified several articles from which we selected key words. The research group used existing literature reviews to determine a list of key words, a mix of free-text terms and thesaurus terms, referring to burnout, physicians, and medical residents, and qualitative research, to collect studies indexed in the databases. Our search strategy is available as supplementary material (supplementary material online, Table S1).

Inclusion criteria were qualitative research regarding burnout from the physicians' perspective (medical doctors, residents, trainees), published in peer-reviewed journals, in English or French language. Exclusion criteria were quantitative or mixed studies, reviews, commentaries, editorials, theses, and non-peer-reviewed journal articles. We discussed potential articles at meetings of our research group, composed of specialists in qualitative research and physicians. We decided to include all studies related to physicians' burnout without requiring that it necessarily be the principal object of the study.

Extensive lateral searches—systematic checking of reference lists, hand searching of key journals and the PubMed sidebar of related articles—also sought to identify papers that might have eluded our algorithms. Three authors (AM, LBC, and JS) independently screened the papers retrieved, initially by title, then by abstract, and finally by full text.

After collecting the references and eliminating duplicates, two authors (JS and LBC) subsequently read the titles and abstracts to assess their relevance to our target subject and methodology. The database indexing of qualitative studies was rather poor, and most of the references collected were actually quantitative studies. They were eliminated at this step. When the abstract was not sufficient, we read the entire article. Disagreements were resolved during meetings of the research group. The potentially relevant articles were then read in full, and a second selection made to keep only the article that met our inclusion criteria.

Assessment of Article Quality

We assessed the quality of included articles using the Critical Appraisal Skills Program (CASP)[24]. It comprises 10 questions: two screening questions about the aims of the research and appropriate use of a qualitative methodology and eight questions covering research design, sampling strategy, data collection, researcher's reflexivity, ethical issues, data analysis, the findings, and the value of the research. Two authors (JS and AM) performed this assessment independently and then discussed the results within the research group until we reached agreement. Given the lack of consensus about the role and function of study quality assessment as part of systematic reviews, we did not exclude any study from the analysis based on our evaluation. However, results are as reliable as they are based on the studies with high methodological quality. We therefore performed a secondary sensitivity analysis by excluding from the synthesis studies in the lowest quartile of methodological quality[15].

Data Analysis

Our analysis began with an attentive reading and then repeated readings of the titles, abstracts, and texts of each article. One researcher (AM) extracted the formal characteristics of the studies, and three (JS, AM, and LBC) independently extracted and analyzed the first-order results (that is, the study results) and the second-order results (authors' interpretations and discussions of the results) in a form of a summary for each study selected; these independent analyses were then compared and discussed at the research meetings.

Thematic analysis followed the five-stage approach (supplementary material online, Table S2). Thematic analysis made it possible to develop themes inductively, from our study data. The work of translation involved comparing and assembling the themes obtained by the analysis of each article to retain the key themes that capture similar ideas in the different articles and then to develop overarching concepts about the research question. The high level of rigor of the results was obtained by triangulation of both the data sources and the analyses: three independent analyses and monthly research meetings to discuss the results. NVivo 11 software was used to manage data, facilitate the development of themes, and verify the researchers' contribution to the findings.

RESULTS

Presentation of Studies

Of the 2807 articles initially retrieved (after duplicates were removed), 33 articles covering data from more than 1589 medical doctors (68 residents and 1521 physicians) were included in this metasynthesis (Fig. 1).

The median sample size was 22 (range, 7 to 676). These 33 studies came from 15 countries, 22 of them from English-speaking countries. Data were collected mostly through interviews (28). Table 1 describes the characteristics of the studies we included.

The quality appraisal showed that the overall quality of the studies was high (Table 2 and supplementary material online, Table S3). The principal flaw was that several papers failed to address the role of the researchers' contribution to the findings and/or interpretations. Secondary analysis without the 8 studies with the lowest quality score on CASP (< 18/20) [25,28,33,38,40,48,51,54] did not change the results.

Description of the Themes

Two themes emerged from the analysis: (1) the stress factors promoting burnout—ranked as organizational, then contextual and relational, and finally individual—factors and (2) the protective factors, which were above all individual but also relational and organizational. Table 3 presents quotations from participants and from the authors of the primary studies for each theme. Table 4 gives a list of all the stress and protective factors found in the studies.

It is important to note that none of these studies directly explored the experience of burnout from the point of view of doctors. Several studies provided descriptive elements of doctor burnout that matched the clinical descriptions in
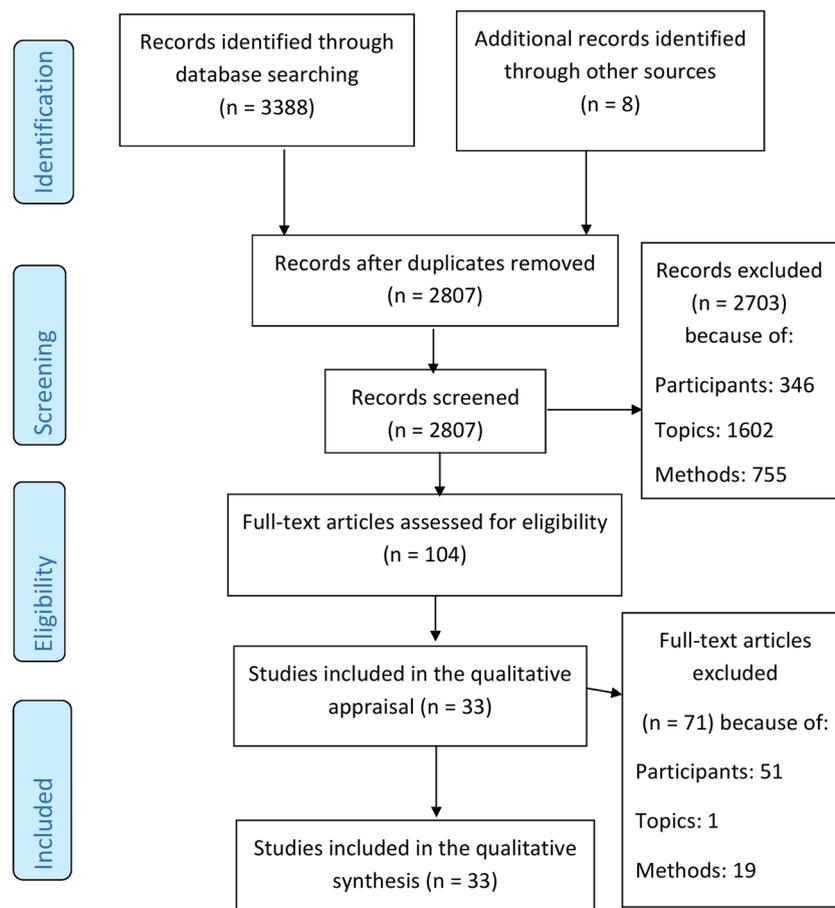

Figure 1 Flow of information through the different phases of study selection. From Moher et al.[64]

Table 1 Main Characteristics of the Studies

References	Year	Aim	Country	Setting	Participants	Data collection	Method
Franz et al.[25]	2010	To describe structural barriers to mental health specialists and consequences of these barriers on care for patients with dementia	USA	Northern California hospital	Physicians ($N = 40$)	Open-ended interviews	Thematic analysis
Petek, Gajsek, and Ster[26]	2016	To explore the options and capabilities of women general practitioner specialist trainees in coordinating their family and career	Slovenia	Women GP specialist trainee from the national training program.	Physicians ($N = 10$)	SSI and in-depth interviews	Phenomenological
Hasbrouck and Waddimba[27]	2017	To identify practitioners' subjective perceptions of predominant stressors in their work lives	USA	1 teaching hospital, 6 community hospitals, 31 outreach clinics, a long-term care facility, and 20 school-based health centers	Physicians ($N = 308$)	Written answers to open-ended questionnaire items	Thematic analysis
Beng et al.[28]	2015	To explore the subjective experiences of stress of both doctors and nurses providing palliative care	Malaysia	University Malaya Medical Centre of Kuala Lumpur	Physicians ($N = 10$)	Semi-structured interviews (SSI)	Thematic analysis
Ciceklioğlu et al.[29]	2014	To obtain a deep understanding of how family physicians experienced the process of reforms by focusing on working conditions related to organizational stress	Turkey	The participation of all categories of primary care personnel	Family physicians ($N = 51$)	36 in-depth interviews and 4 FG	Phenomenological
Flowerdew et al.[30]	2012	To identify key stressors for emergency department staff	UK	Emergency department of a London teaching hospital	Physicians ($N = 11$) Residents ($N = 5$)	SSI	Thematic analysis
Iversen, Farmer, and Hannaford[31]	2002	To examine whether there are workload pressures, as reported by healthcare professionals, which are unique to rural general practice	UK	General practice teams located in different geographical areas (urban and rural)	General practitioners (GP)($N = 16$)	SSI and an observation day in each practice Iterative approach	Phenomenological
McGowan et al.[32]	2013	To identify the individual and organizational factors impacting on quality of care and patient safety	Ireland	Irish teaching hospitals	Physicians ($N = 20$)	SSI and in-depth interviews	Thematic analysis + NVivo
Picard et al.[33]	2015	To examine how residents in general practice evaluate the link between burnout and empathy	France	Paris University	Residents ($N = 24$)	SSI	Thematic analysis
Turk et al.[34]	2013	To explore the link between organizational culture, burnout and quality of care	Turkey	University hospital	Physicians ($N = 14$)	SSI and focus groups	Thematic analysis
Post and Weddington[35]	2000	To examine the nature of work-related stress and coping experienced by African-American family physicians	USA	African-American family physicians across the state of Ohio	Physicians ($N = 10$)	SSI	Phenomenological
Spinelli et al.[36]	2016	To explore the experiences of family physicians caring for women using illicit	USA	Group of inner-city family physicians	Physicians ($N = 44$)	Focus group	Phenomenological

Table 1. (continued)

References	Year	Aim	Country	Setting	Participants	Data collection	Method
Schneider et al.[37]	2014	drugs, especially their emotional response To evaluate the perceived impact of Physician Well-being Coaching on physician stress and resiliency	USA	Physician Well-being Coaching Pilot in Duke university	Physicians ($N = 11$)	SSI	Qualitative content analysis
Agana et al.[38]	2017	To explore the factors that contribute to job satisfaction and burnout in faculty members in a family medicine department	USA	Six department clinics	Physicians ($N = 36$)	Focus groups (FG)	Thematic analysis
Kjeldmand and Holmström[39]	2008	To explore general practitioners' (GPs) experience of participating in Balint groups and its influence on their work life	Sweden	Balint groups in southern Sweden	GPs ($N = 9$)	Interviews with open-ended questions	Phenomenological
Miyasaki et al.[40]	2017	To understand the experience and identify drivers and mitigating factors of burnout and well-being among neurologists	USA	Neurologists	Physicians ($N = 676$)	Free-text comments	Inductive data analysis
Orri, Revah-Lévy, and Farges[41]	2015	To explore the emotional experiences of surgeons and their impact on their surgical practice	France	Teaching hospitals, hepato-pancreatico-biliary surgeons	Physicians ($N = 27$)	Unstructured interviews	Phenomenological
Sturman, Tan, and Turner[42]	2017	To better understand the intern transition and evaluate how effectively our medical programme is preparing students for their intern roles, by seeking the perspectives of recent graduates	Australia	Diverse hospital settings in Queensland (12) and North America (3)	Interns ($N = 15$)	SSI	Qualitative content analysis
Verdonk et al.[44]	2014	To explore how medical interns experience and cope with stress, as well as how they reflect on the gendered aspects of stress	Netherlands	Dutch medical school	Medical interns ($N = 17$)	SSI	Thematic analysis
Wainwright et al.[45]	2017	To explore junior doctors' experiences of using a Deanery Professional Support Unit	UK	Deanery Professional Support Unit	Interns ($N = 8$)	In-depth telephone interviews	Thematic analysis
Riley et al.[46]	2018	To explore the barriers and facilitators to help-seeking for mental illness and burnout among a medical population	UK	Multicenter qualitative study	Physicians ($N = 47$)	In-depth interviews	Thematic analysis
Granek et al.[47]	2015	To examine paediatric oncologists' grief reactions to patient death	Canada	Two academic centers	Physicians ($N = 21$)	SSI	Grounded theory
Menezes et al.[48]	2013	To explore whether working in the fetal medicine setting has an effect on health professionals	Australia	Practitioners in fetal medicine	Physicians ($N = 11$)	SSI	Thematic analysis
Dzeng et al.[49]	2015		USA				Phenomenological

Table 1. (continued)

References	Year	Aim	Country	Setting	Participants	Data collection	Method
		To investigate physician trainees' experiences and attitudes regarding medical practices and treatments at the end of life		Three American academic medical centers	Residents ($N = 22$)	SSI and depth qualitative interviews	
Zambrano et al.[50]	2014	To explore the experiences, coping mechanisms, and impact of death and dying on palliative medicine specialists when dealing with their patients at the end of life	Australia	Palliative medicine unit	Physicians ($N = 7$)	Open-ended, in-depth interviews	Thematic analysis
Gwala-Ngozo et al.[51]	2010	To investigate the experiences of doctors who perform elective surgical procedures in an area with a high incidence of HIV and AIDS	South Africa	General hospital	Physicians ($N = 14$)	SSI	Phenomenological
Fitzgerald et al.[52]	2017	To explore the experience of psychological distress and well-being in emergency medicine consultants	UK	Emergency medicine department	Physicians ($N = 18$)	SSI	Interpretative phenomenological analysis (IPA)
Verhoef et al.[53]	2015	To explore the impact of the disciplinary process and imposed measures on healthcare professionals	Netherlands	Disciplinary tribunal	Physicians ($N = 12$)	SSI	Inductive qualitative content analysis
Cheshire et al.[54]	2017	To explore GPs' experiences of workplace challenges and stresses, and their coping strategies, particularly focusing on understanding the impact of recent NHS workplace changes	England	Recruitment by the Royal College of General Practitioners, especially at a resilience talk in Glasgow, flyers, contacts, snowballing	Physicians ($N = 22$)	FG + one-to-one telephone interviews	Thematic analysis
Lindfors, Boman, and Alexanderson[55]	2012	To gain knowledge of stress-coping strategies used by academic physicians.	Sweden	Academic physicians employed at a university hospital	Physicians ($N = 17$)	Three-part focus group interviews	Grounded theory
Swetz et al.[56]	2009	To explore strategies for avoiding burnout and finding fulfilment in palliative medicine	USA	The American Academy of Hospice and Palliative Medicine website	Physicians ($N = 30$)	Qualitative online multiquestion/single-answer survey	Thematic analysis
Woolhouse et al.[57]	2012	To explore the experiences of a group of inner-city family physicians caring for women using illicit drugs	Canada	Family physicians working in Toronto or Ottawa	Physicians ($N = 10$)	In-depth interviews	Phenomenological
Zwack and Schweitzer[58]	2013	To identify health-promoting strategies employed by experienced physicians in order to define prototypical resilience processes and key aspects of resilience fostering preventive actions	Germany	University Hospital Heidelberg	Physicians ($N = 200$)	SSI	Content Analysis method

the literature: feelings of exhaustion, chronic fatigue, decreased motivation, mood swings, irritability, low tolerance for stress, apathy, vulnerability to psychosomatic symptoms, and sadness[25,26].

Table 2 CASP Summary

Criteria	Example	Quality assessment of studies (summary)		
		Met criterion	Partially met	Did not meet
Aims	Explicitly stated aims/objectives of research	33	0	0
Method	Appropriate use of qualitative methods	33	0	0
Research design	Justification of the specific research design	33	0	0
Sampling	Appropriate sampling strategy, description of recruitment, discussion around recruitment	32	1	0
Data collection	Appropriate description of data collection methods	33	0	0
Reflexivity	Critical examination of researchers' own role and potential bias in data collection and analysis	12	5	16
Ethical issues	Evidence of approval by an appropriate body	22	8	3
Data analysis	Adequate and in-depth description of analysis process, sufficiently rigorous data analysis	33	0	0
Findings	Clear statement of the findings, discussion of evidence, credibility, integrity	33	0	0
Value of research	Contribution to existing knowledge, transferability	33	0	0

The Stress Factors Associated with the Onset of Burnout

The doctors included in these studies reported numerous stress factors that could promote the onset of burnout.

Organizational Factors. The physicians in these studies recognized organizational difficulties as the stress factors contributing the most to burnout[27].

Nearly all the studies reported aspects of burnout associated with the organization of work. The doctors noted especially workloads that were too high[25,26,28–34] and especially the load of paperwork[29,35,36] and insufficiently diversified work[37].

The theme of time recurred repeatedly: the doctors reported workdays that were too long, the constant need to do things faster[32,38,39–41], as well as a lack of time[29,32,37], in particular to spend with patients, for continued education, and to have a social life[26,34]. Heavy workloads and lack of time were directly related to the difficulty many of these doctors had in finding a balance between their personal and working lives[21,32,40,41].

Table 3 Quotations

Themes	Quotations from participants in primary studies	Interpretations of findings offered by authors
1. Stress factors associated with the onset of burnout		
1.1 Organizational factors	"We have a legal right to 30 days annual leave. However, I cannot take even 20 days. You cannot leave without finding someone to fill your place."[29] "I've always said I would gladly see twice as many people if I could see them, treat them, and then walk out of the room and have nothing else to do."[36] "I believe that patients approach women differently. You have to prove yourself more as a woman. They do not trust you as quickly as they trust men and think that you are a nurse."[44]	Interestingly, respondents acknowledged that their working conditions might affect their work performance, on occasion. However, they did not appear to be concerned about the impact of these conditions on their own well-being[32]. These tensions were described as originating from the clinicians' experience of new requirements in the work environment, the tension between direct patient care and non-direct patient care tasks, and the "e-stress" caused by the digital presence in providers' work lives. Several authors have reported on the impact of workplace stressors on provider burnout[36].
1.2 Relational factors	"We explain that the condition is actually quite bad, and the survival is not so good. But some relatives are so much attached to patients that they do not want to accept it. They want us to do everything. There goes the conflict."[28]. "I do not want to communicate as much because I know they are stressed"; "I know they are really busy and I attempt to do things myself."[30] "You're emotionally preoccupied when you get home sometimes and you are still thinking about things and wondering whether you did the right thing. I find myself sometimes waking up in the night thinking 'did I make up that diaphragmatic hernia or was it really there?'"[48].	The conceptualisation of the Model as a continuum of problems in caring for others at one end and problems in caring for oneself at another. In this study, the difficulties of being careful are linked to organizational problems. This study supports the existence of a relation between difficulty in caring for others and the absence of self-care[28]. The two most common stressors, excessive workload and staff shortages, may be considered two sides of the same problem, that is, an imbalance between workload and resources. By definition, stress occurs when a person perceives that demand exceeds available resources. This imbalance is exacerbated by government targets, where time pressure becomes an issue in addition to clinical need[30].
1.3 Individual factors	"I do not relive being in front of the disciplinary board anymore. For about a year I would wake up every night at 3 AM and would start to explain what had happened." "It's a very negative experience and it's annoying for the family as	This study showed an association between complaint procedures and risks of depression, anxiety, and suicidal ideation. Another study revealed that anger, distress, and the feeling of being personally

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Themes	Quotations from participants in primary studies	Interpretations of findings offered by authors

Table 3. (continued)

Themes	Quotations from participants in primary studies	Interpretations of findings offered by authors
	well. It gets you down and almost makes you depressed, although you get over it as well."[53]	attacked are common responses to litigation[53].
2. The protective factors of burnout		
2.1 Individual factors	"I see that I can hang in there by having a definite goal, a set timeframe till the exam. I hope that as a resident I will know how to manage my work conditions and other things so that working in my own clinic will be different."[26] "I try to meet up with my friend who lives in the village every Thursday, we go for a coffee or a fruit cup and we have that hour to ourselves. Then I come home and dive in with full power. I always have it in the back of my head that I need to do something for myself as well, even though I need to speed things up afterwards to finish everything I had set out."[26] "Create a calendar and set aside time for exercise and yourself each week." "Faith activities including prayer for my patients, their families and myself."[56]	The crucial factor for achieving an effective balance is the empowerment of women doctors, which is enabled through a positive attitude towards self[27]. This finding suggests the need for multiple outlets for wellness and decompression. The most common approach reported is related to exercise and physical well-being, closely followed by nurturing professional relationships and taking a "*transcendental* perspective. The latter approach is consistent with previous studies which have suggested that "daily spiritual experiences" may help professionals engaged in end-of-life care to mitigate burnout[12] and speaks to strong mind–body philosophy while taking care of oneself is critical to optimally care for others[56].
2.2 Relational factors	"Being part of a team—recognising you do not need to carry the burden alone." "My success has come from the support and mentoring of colleagues in the field, and the understanding by senior hospital and health system officials of the importance of offering palliative care services."[56] "We are torturing this poor gentleman; that is really all we are doing. I do vaguely feel uncomfortable about the general gestalt of what we do in the ICU to people at the end of life. I feel morally sick to my stomach about it of course. Some of what we do is awful, but some of those things have also given me the skills to resuscitate [others]. I do not mean to justify the torture that we put our elderly critically ill and dying through, but it did provide me with many learning opportunities to help people who then could be saved."[48]	The interdisciplinary team (IDT) is a hallmark of delivering high-quality palliative care; hence, building relationships and promoting teamwork within the IDT is thought to be essential. This includes a strong sense of sharing workload and recognizing one's personal limitations, and that utilizing IDT colleagues may minimize risk of burnout[56]. Physician trainees experienced significant moral distress when they felt obligated to provide treatments at or near the end of life that they believed to be futile. Some trainees developed detached and dehumanizing attitudes towards patients as a coping mechanism, which may contribute to a loss of empathy[48].

Finally, they described problems with those above them in the hospital chain of command[27,29,36,42], lack of continuing

Themes	Quotations from participants in primary studies	Interpretations of findings offered by authors

Table 3. (continued)

Themes	Quotations from participants in primary studies	Interpretations of findings offered by authors
2.3 Organizational factors	"I think the way the team works under pressure is a factor of how the team leadership works under pressure."[30] "Palliative care is extraordinarily draining, so I find the key to a long career in this field is balance . . . research, writing and teaching . . . "[56].	Leadership and teamwork appear to be mediating factors between objective stress and the subjective experience. So, stress is not only dependent on the realities of workload, but also strongly influenced by how a team and team leader deal with it[30]. The results of our qualitative study illustrate several key findings. First, those surveyed reported using a variety of wellness strategies (median of at least four). This finding suggests the need for multiple outlets for wellness and decompression[56].

education[25,32,34], and the lack or unreplaced absence of healthcare personnel[27,30,32,43].

Doctors underlined the importance of context: both the social context and that of their medical practice. Accordingly, age, sex, and skin color could generate stressful situations. The young physicians reported stress that they considered inherent in their lack of knowledge and experience[42,44,45]; women described inequalities in terms of opportunity, recognition, and credibility[34,44] as well as sexual harassment in the workplace[34]. Finally, some authors pointed out the experiences of discrimination and racism endured by black doctors[35].

Physicians also reported some particular workplaces or situations that were especially stressful. These included all types of situations associated with isolation[29,31,46]. Similarly, three medical situations were noted: (i) directly facing death[28,47,48] or the end of life[49,50]; (ii) risk-taking, especially in surgery[51,41]; and (iii) the complexity of situations with comorbidity or entanglement with social factors[28].

Finally, participants very frequently raised the issue of poor working conditions[28,29,52], which could involve either material conditions, such as inadequate equipment[32,51] or the precarity of some doctors' status, associated with substantial concern about their future[29,32,34].

Relational Factors. Doctors reported fairly frequently that relational difficulties between professionals caused substantial stress. These could concern disagreements or differences of opinions between providers[28] or a vague definition of their respective roles[34]. The younger physicians described difficult relationships with senior doctors: they described communication problems, even misunderstanding between them[30,42].

Many doctors also described inordinate emotional investment with patients and their relatives: too much

Table 4 List of Stress and Protective Factors

Factors	Number of studies	References
Stress factor		
Organizational factors		
High workloads	9	20, 21, 23–29
Load of paperwork	3	24, 30, 31
Insufficiently diversified work	1	32
The constant need to do things faster	5	27, 33, 35–37
Lack of time	5	21, 24, 27, 29,32
The hospital chain of command	4	22, 24, 31, 38
Lack of continuing education	3	20, 27, 29
Lack of healthcare personnel	3	21, 25, 27
Lack of knowledge and experience	3	38, 39, 40
Discriminations	3	29, 39, 30
To be isolated	3	24, 26, 41
Directly facing death	5	23, 42–45
Risk-taking	2	37, 46
Poor working conditions	6	23, 24, 27, 29, 46, 47
Relational factors		
Relationship problems in the team	4	23, 25, 29, 38
Too much empathy	4	23, 28, 37, 43
Self-sacrifice	1	21
Lack of recognition from both patients and family	3	24, 28, 31
Individual Factors		
Burden of personal responsibility	3	24, 37, 46
Responsibility for complications	1	37
Disciplinary measures for medical errors	1	48
Feelings of guilt	2	37, 46
Doubts about their abilities	2	27, 30
Protective factors		
Individual factors		
Self-knowledge	10	21, 32, 35, 37, 45, 49, 50–53
Self-care	10	21, 23, 29, 30, 32, 45, 46, 50, 51, 53
Realistic vision of one's work	7	23, 25, 32, 35, 50–52
Relational factors		
Good professional relationships	6	21, 25, 35, 48, 51, 53
Emotional support between colleagues	8	21, 25, 35, 44, 45, 50–52
Teamwork to avoid isolation	1	52
Group decision-making	2	32, 46
Benefits of supervision	1	39
Appropriate distance with patients	5	23, 28, 35, 44, 53
Patients' gratitude to them	1	39
Friendships and families	5	21, 30, 46, 50, 53
Organizational factors		
Increase the number of doctors	1	25
Protocols for strategies to increase productivity	2	25, 46
Good leadership	1	25
Importance of organizing and managing (enough time to see patients, long-term permanent job)	2	35, 45, 50, 53
Diversification of activities	5	32, 37, 45, 50, 51

empathy[28,33,41,48], even self-sacrifice[26]. They also complained about the lack of recognition from both patients and family[29,33,36].

Individual Factors. The doctors participating in these studies reported very few stress factors directly related to themselves. Some authors insisted on the burden of personal responsibility[29,41,51]. Some underlined the dimensions of decision-making[48,52], others responsibility for complications[41], and still others the effects of disciplinary measures for medical errors[53]. They also reported feelings of guilt[41,51] or helplessness[28,49], as well as doubts about their abilities[32,35].

Connections Between Stress Factors. The studies reveal a ranking of and connections between the stress factors that can promote the onset of burnout. Organization was the most recurrent level mentioned in the studies, then relation, and finally individual factors. A structure of experience, within a timeline, can be drawn from this hierarchy. This suggests that a doctor experiences organization as the first level being affected, then relational aspects, and finally himself or herself (Fig. 2).

The Protective Factors

Most studies also reported protective factors that mirrored the stress factors and could help to prevent physician burnout.

Individual Factors. Regardless of the associated stress factors, most articles reported individual protective factors. We found three that were especially important: (i) self-knowledge, (ii) self-care, and (iii) a realistic vision of one's work.

To protect oneself and cope with stress, doctors underlined the importance of knowing oneself well[39,54]. This involved knowing their abilities and their needs[26,55], but especially their limitations[26,39,50,55–57]. It required increasing their reflexivity and self-consciousness[37,55,58] and recognizing and naming their emotions[39,41].

It was also very important for physicians to take care of themselves[26,35,37] and to make time for a personal life[35,50,58] especially for leisure activities[34,55,56,58]. Some studies underlined the importance of physical well-being through a healthy diet and physical activity[56,58]. For psychological well-being, physicians mentioned different avenues towards calmness or letting go[28]: religious beliefs and spiritual practices, meditation, or philosophy[26,35,51,56,58], or potential recourse to psychological help[53]. Others also underlined the benefits of humor[56].

Finally, a realistic vision and realistic expectations of their work was also protective[37,56,57]. The doctors highlighted the importance of making choices: ranking tasks, setting priorities, setting achievable objectives, and making compromises and not committing to too many activities[28,30,37,55]. This also meant willingness to refuse tasks and responsibilities[37,55]. It also involve accepting what they could not change[58] and not being able to do everything for each patient[39].

Relational Factors. Many studies considered that good professional relationships were an essential protective
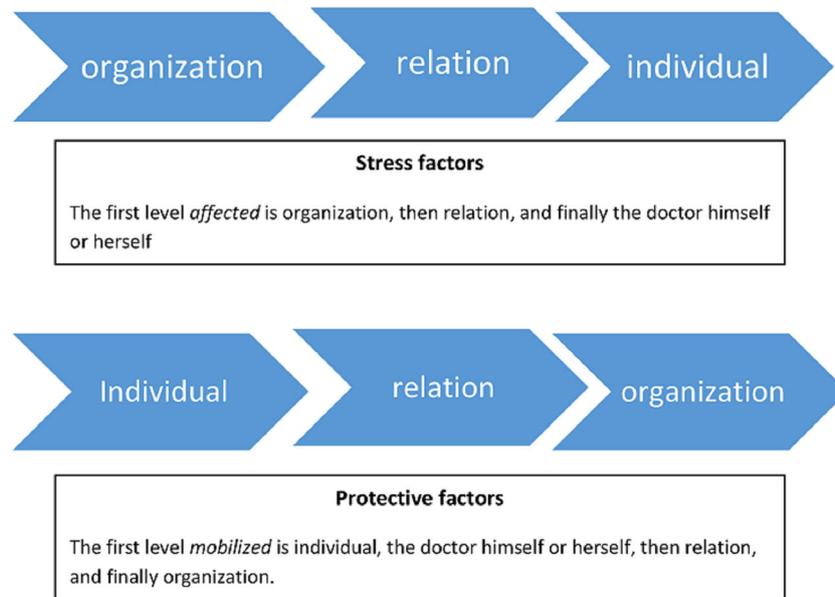
Figure 2 Connection between factors.

factor[26,30,53,56,58]. The physicians underlined especially the importance of dialogue and emotional support between colleagues[26,30,39,49,50,55–57,39]. They also prioritized teamwork to avoid isolation[57], to enable group decision-making[37,51], and especially to ensure a feeling of safety and satisfaction at work[39]. Finally, they mentioned the benefits of supervision[44,26].

Strategies to keep relationships with patients at an appropriate distance were frequently reported as a protective factor[32,58]. Some explained that they considered each patient as a whole and listened to them so that they were able to hear their story[39], see the person behind the symptoms[58], and explore their expectations and their preferences[28]. Surgeons, on the other hand, reported it was necessary to dehumanize patients—to consider only their body parts or organs—to be able to act[49].

Some physicians also mentioned protective factors associated with the physician-patient relationship: remembering patients they had cared for[56] and whose funeral they had attended[49]. Finally, they were sensitive to their patients' gratitude to them[44].

Most physicians reported that their friendships and families played a major protective role[26,55,58]. They insisted especially on the importance of spending time with them[26,55], receiving family support[26,35,51], and having an understanding life partner[26].

Organizational Factors. Finally, and to a lesser degree, the studies underlined that better organization of work protected doctors from stress. This involves increasing the number of doctors in each department[30], setting up protocols for management or strategies to increase productivity[30,51], and good leadership[30].

We also find here the question of time and the importance of organizing and managing one's time[50,55,58], especially of having enough time to see patients[58], and of a long-term permanent job[39].

Finally, several authors underlined the protective role of diversification of activities (teaching, supervision, and research)[37,41,50,55,56].

Connections Between Protective Factors. Contrary to the connections of the stress factors, here, the first, and most, recurrent level mobilized for protection was personal and individual, then the relations mentioned less often, and finally the organization. The structure of experience, as shown in Fig. 2, would be here that doctors first protected themselves individually, by their personal actions, thoughts, and personal qualities. They mobilized then relational aspects, and at last the contextual and organizational level aspects.

DISCUSSION

Our research found no qualitative study that explicitly explored physicians' experiences of burnout. When this point was considered in the studies included in this metasynthesis, it always involved descriptions or definitions of burnout but never access to experience. Future qualitative research is thus necessary to explore in depth the subjective experience of physicians who have experienced burnout.

Our research found that qualitative studies about physicians' burnout mostly explored contributing and protective factors. Some factors have been already broadly investigated while others have been mentioned in only one study (Table 4)—for instance, self-sacrifice or the impact of medical errors—further research should specifically explore the latter. Furthermore, this metasynthesis provides access to the ranking and connections between the different types of factors, but no

study directly addressed this important issue. The individual and organizational levels are abundantly described in the literature, simultaneously for risk factors[59] and interventions[13]. On this subject, a recent meta-analysis[13] found mainly interventions with an individual focus (mindfulness, stress management, small-group discussions, self-care training, and communication skills training), and few interventions focusing on organization (rotation length, various modifications to clinical work processes, and shortened resident shifts) of similar effectiveness in reducing burnout scores. The authors concluded that interventions combining these two levels are needed[13].

Our results suggest that doctors identify numerous organizational factors at the origin of potential burnout, but envision protecting themselves individually above all. This is similar to the personality features often associated with images of physicians, such as perfectionism and denial of personal vulnerability, already described as factors predisposing them to burnout[12,45] and which would also induce them to seek solely individual solutions. We also think that physicians do not know whom they should address—or how—about organizational factors. A recent study considered the loss of a feeling of control as a major contributor to doctors' burnout[60] and some authors have put forward their loss of autonomy in their practices to "unknown and invisible forces."[6] In other words, doctors may no longer control what happens for or to them at the organizational level and this factor may, besides contributing to burnout, prevent them from acting on it at that level.

The second level of response in our two themes concerns the group and interpersonal relationships, both in the workplace and in their personal lives. The literature also highlights the importance of socialization at work as a protective factor[12]. The importance of this relational and group dimension is consistent with numerous reports on the sociology of work and of social psychology, which have shown the entanglement between individual and group in institutions[61]. The group at the hospital, we think, represents an original axis of protection and intervention for battling burnout in healthcare professionals generally and doctors in particular. That is, burnout must be thought of as an individual experience that takes place within a group. A doctor's experience of burnout must not be considered in individual problem but on the contrary be integrated into the group dimension. Some authors have insisted on the distinction between depression and burnout[62,63]; considering burnout only as an individual experience is equivalent to confusing it with depression, that is, an experience of distress belonging only to the depressed individual.

Strengths and Limitations

This metasynthesis integrates the experience of 1589 doctors from 15 different countries. The method we applied is rigorous, has been tested in medical research[21], and meets the criteria of the ENTREQ guidelines[23]. We analyzed 33 articles, all published in peer-reviewed journals and mostly of good quality. Our method is well adapted to the synthesis of a large number of qualitative studies and enabled us to reach a much broader perspective than any of the initial studies.

Nonetheless, certain aspects of this metasynthesis limit the generalization of its conclusions. A qualitative metasynthesis collects only partial data from the participants and depends on the researchers' interpretations of the data. Moreover, although the review assembled articles from diverse cultural areas, English-speaking countries are overrepresented as we restricted our selection to articles in that language and ours, for practical reasons. We might have excluded studies from language other than French and English and therefore reinforced this overrepresentation. Finally, this work focused only on qualitative literature and did not integrate studies about interventions. It would be very useful to study which factors are linked with which interventions so to elicit what the contributing factors left aside are.

CONCLUSION

This metasynthesis provides access to what doctors identify as contributing factors to burnout and how they envision protecting themselves from it. Relational factors should be addressed as an original axis of protection and intervention for battling doctors' burnout.

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