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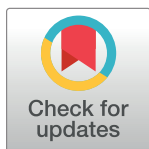
RESEARCH ARTICLE

# Association between burnout and stigma in physicians

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## Abstract

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## Background

Physicians suffering from burnout are more likely to develop depression, substance dependence, and cardiovascular diseases, which can affect their practices. Stigmatization is a barrier to seeking treatment. This study aimed to understand the complex links between burnout among medical doctors and the perceived stigma.

## Methods and findings

Online questionnaires were sent to medical doctors working in five different departments of the Geneva University Hospital. The Maslach Burnout Inventory (MBI) was used to assess burnout. The Stigma of Occupational Stress Scale in Doctors (SOSS-D) was used to measure the three stigma dimensions. Three hundred and eight physicians participated in the survey (response rate: 34%). Physicians with burnout (47%) were more likely to hold stigmatized views. Emotional exhaustion was moderately correlated with perceived structural stigma ( $r = 0.37$ ,  $P < .001$ ) and weakly correlated with perceived stigma ( $r = 0.25$ ,  $P = 0.011$ ). Depersonalization was weakly correlated with personal stigma ( $r = 0.23$ ,  $P = 0.04$ ) and perceived other stigma ( $r = 0.25$ ,  $P = 0.018$ ).

## Conclusion

These results suggest the need to adjust for existing burnout and stigma management. Further research needs to be conducted on how high burnout and stigmatization impact collective burnout, stigmatization, and treatment delay.

## 1. Introduction

Physician burnout is widely defined as emotional exhaustion, a decreased sense of meaning at work, feelings of ineffectiveness, and the dehumanization of others [1,2]. Burnout is an important issue among medical doctors, with a prevalence of 25–65% [3–5]. The Physicians Foundation (USA) (2020 survey) reported that 58% of physicians often have feelings of burnout, compared to 40% in 2018. Burnout among physicians may lead to decreased empathy and attention toward patients [6,7], the decline in mental health among doctors, depression, substance abuse, suicide [8,9], and a higher risk of cardiovascular disease [10]. “The burned-out physician” is described as “angry, irritable, impatient” and “having increased absenteeism, decreased productivity, and providing decreased quality of care” [11]. Burnout can impact quality of care by poor medical knowledge [12], less thorough therapeutic discussions, less adequate or even erroneous prescriptions, particularly among internal medicine residents [13–15]. Burnout in medical doctors can represent a high cost, as it is also related to early departures [4,12] and an increased desire to change professions [16]. Medical turnover about job dissatisfaction increases the costs of recruiting and retaining doctors [12,17] and decreases cohesion in the institution [18].

Burnout is associated with environmental factors, such as a high prevalence of occupational stress among physicians [19–21]. Heavy schedules, working time, stress, and regular on-call duties are different factors that can promote burnout [22,23]. On a more general level, the healthcare system is often experienced as inequitable, focused on financial profitability, and dehumanized [24]. Pressure to lower costs and increase productivity can induce burnout among medical doctors, who are caught between profitability requirements and their contact with people suffering [25]. Publication pressure for doctors engaged in academic careers or poorly supervised technical acts have also been mentioned as risk factors [26]. On the personal level, the imbalance between work and private life can produce potential conflicts between professional and personal choices, usually solved in favor of professional life [27]. These difficulties can occur in fragile social realities, such as marital or financial difficulties, or in the isolation of doctors from abroad [10].

Stigma refers to negative social attitudes that are attached to a disapproved mark in an individual.

Link & Phelan [28] conceptualized the mechanisms of stigmatization. The first mechanism (“direct discrimination”) involved attitudes and beliefs producing direct discriminatory behaviors. The second mechanism (“structural discrimination”) involved structural inequalities producing covert discrimination. The third mechanism (“social psychological processes”) involved self-stigmatization producing self-devalued behaviors. These interrelated mechanisms can reciprocally increase, leading to detrimental consequences for the stigmatized individuals

Stigma is a barrier to help-seeking, and many physicians experiencing burnout will not be treated or experience delay in treatment [29–31]. In medical culture, burnout is highly stigmatized because physicians tend to consider their state of health, especially mental health, as an indicator of their medical competence. A doctor suffering from burnout may be perceived by their peers and by their selves as weak and incompetent [10,32]. Stigma has been defined as including different components: personal, perceived other, and perceived structural stigma [33]. Personal stigma refers to personal stigmatizing attitudes held toward other people experiencing occupational stress and burnout, perceived other stigma is defined as a person’s beliefs about the stigmatizing attitudes held by other people. Perceived structural stigma represents policies and practices that restrict the opportunities or well-being of the stigmatized person [33].

Nearchou et al. [34] reported the importance of separately investigating the different types of stigmas when predicting help-seeking interventions. They showed that public stigma was a stronger predictor of help-seeking intentions for depression in adolescents than personal stigma. Bracke et al. [35] also stressed the need to distinguish between the different types of stigmas. They reported that dominant beliefs about stigma within a culture decreased the likelihood of seeking help from mental health professionals compared to individuals' personal beliefs regarding stigma. To improve help-seeking among physicians, the effects and interrelationships between these types of stigmas and burnout must be investigated. More profound knowledge of stigmatizing thoughts and erroneous beliefs is essential to reduce the barriers to treatment, improve the prevention and management of burnout in medical doctors, as well as increasing the quality of care. Addressing and challenging stigma may result in better outcomes for physicians and patients alike [36]. However, very little data are available concerning the stigma of burnout among medical doctors.

This study aimed to investigate the potential relationship between stigma and burnout symptomatology among medical doctors working in a university hospital and, more specifically, between the dimensions of stigma and burnout. We hypothesized that: 1) personal stigma could be associated with emotional exhaustion as a defense or denial of one's own emotional difficulties; 2) perceived other stigma could be related to depersonalization and development of negative interpersonal attitudes toward patients and/or colleagues, as beliefs about others' stigmatizing attitudes and negative attitudes toward others can enhance each other in a loop; and 3) perceived structural stigma could be correlated with personal accomplishment, as perceived restriction and loss of confidence can interact in a vicious circle.

These hypotheses are issued from Link & Phelans' discrimination model integrated with the Maslach model of burnout.

## 2. Methods

### 2.1 Participants and setting

This study was conducted in five academic departments at Geneva University Hospital (HUG). Psychiatry, internal medicine, family medicine, pediatrics, obstetrics, and gynecology. Nine hundred and sixty-one residents, fellows, and attending physicians were invited to complete an electronic survey via email. They received two reminders over three months. Participation in the study was voluntary and there was no compensation for completing the questionnaire. The study protocol was approved by the Research Ethics Committee of Geneva University Hospital. Written informed consent for the study was obtained from all participants. All survey responses were anonymous. After completion of the survey, mental health resources were provided to the participants if needed.

### 2.2 Measurement of burnout and stigma

Burnout was assessed using the *Maslach Burnout Inventory* (MBI) [37]. The French version of this 22-item self-report scale is answered on a 6-point Likert scale (from "never" to "every day") [38]. The scale measures three dimensions: emotional exhaustion (feeling of emotional annihilation of resources and loss of motivation), depersonalization (development of negative interpersonal attitudes toward patients and/or colleagues with loss of empathy, irritability, and cynicism), and personal accomplishment (loss of confidence in one's competence with the idea of being unable to achieve one's work successfully. Higher scores on emotional exhaustion ( $\geq 27$ ) and depersonalization ( $\geq 1$ ) and low scores on personal accomplishment ( $\leq 33$ ) are indicative of greater burnout [39].

Stigma was assessed using the *Stigma of Occupational Stress Scale for Doctors* (SOSS-D) [33]. It is an 11-item self-report scale that measures three dimensions of stigmatization: perceived structural stigma (addresses stigma of stress and burnout within the context of structural influences operating in the workplace, policies, and practices that restrict the opportunities or well-being of the stigmatized physician), personal stigma (personal stigmatizing attitudes held toward other people experiencing occupational stress and burnout), and perceived other stigma (addresses a physician's beliefs about the stigmatizing attitudes held by other physicians). The scale was developed based on stigma-related barriers to help-seeking in the medical profession. It was meant to improve the understanding of stigma in this population and assist in designing strategies to enhance help-seeking among physicians. Responses are recorded on a 7-point Likert scale ranging from "strongly disagree" to "strongly agree." In the French version of the scale, five items compose the "perceived structural stigma subscale" (3\*, 5, 6, 8, 9\*), and two of them (\*) are intended to be reverse-scored. Three items compose the "personal stigma" subscale (1, 7, and 11), and three the "perceived other stigma" subscale (2, 4, and 10). The SOSS-D was translated into French (and back-translated) and piloted with 12 physicians. After the initial adjustments to the translation, the scale was administered to 323 physicians. The internal consistency coefficient for the French SOSS-D was 0.72 and ranged from 0.55 to 0.75 for the three subscales. Confirmatory factor analysis indicated an acceptable but imperfect fit of the hypothesized measurement model (root mean square error of approximation 0.89, comparative fit index 0.867). The results provide evidence of the validity and reliability of the French version of the SOSS-D.

### 2.3 Statistical analysis

Descriptive statistics were used to show the respective means of the different burnout and stigma subscales. The stigma scale was stratified by burnout status and mean comparison of both groups. Associations between the subscales were made using univariate associations that included all three MBI subscales as interdependent covariates, with all variables standardized to mean 0 and variance 1. Adjusted associations were obtained from multiple linear regression models that included all three MBI subscales as covariates, with all variables normalized to mean 0 and variance 1 (equivalent to partial correlation coefficients). Attenuation correction was performed by dividing each partial correlation coefficient by the square root of the product of the internal consistency coefficients of the corresponding scales. All analyses were conducted using Stata SE 16 for Macintosh [40].

## 3. Results

### 3.1 Participants

Three hundred and eight physicians participated in the survey (response rate: 34%). Sixty-two percent (62%) of the 308 physicians who completed the demographic portion of the survey were women. Most participants (77%) were in a personal relationship. The mean age was 38.6 years (SD = 9.2). Forty percent of the participants were residents, 36.8% were fellows, and 23% were attending physicians. They had practiced for an average of 12.5 (SD = 9.4) years. Internal medicine physicians represented 29% of the participants, followed by psychiatrists (23%), pediatricians (22%), family medicine physicians (21%), and obstetricians & gynecologists (5%).

### 3.2 Prevalence of burnout and stigma

The descriptive statistics are presented in [Table 1](#).

Table 1. Descriptive Scale Statistics Maslach's Burnout Inventory and SOSS-D.

	Mean (SD)	Interquartile Range	Cronbach's alpha	Percentage meeting criteria for burnout low	Percentage meeting criteria for burnout moderate	Percentage meeting criteria for burnout high
<b>Maslach's Burnout Inventory (N = 308)</b>						
<b>Emotional Exhaustion</b>	20.26 (11.46)	11;28	0.92	44.8%	35.5%	19.7%
<b>Depersonalization</b>	7.88 (6.32)	3;12	0.78	44.8%	28.7%	26.5%
<b>Personal Accomplishment</b>	39.33 (6.10)	36;44	0.75	54.8%	31.6%	13.6%
<b>SOSS-D (N = 308)</b>						
<b>Perceived Structural Stigma</b>	3.85 (.68)	3.5;4.25	0.65			
<b>Personal Stigma</b>	2.58 (1.18)	1.67;3.33	0.55			
<b>Perceived Other Stigma</b>	4.12 (.89)	3.5;4.75	0.66			

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### 3.3 Perceived stigma in physicians stratified by the presence of burnout

Of the 308 physicians who participated in the study, 163 (53%) did not meet the criteria for burnout. Participants were considered burnt out if both their emotional exhaustion and depersonalization scores were high, while their personal accomplishment scores were low. A comparison of the mean scores of burnout by stigma is presented in Fig 1.

Physicians with burnout were more likely to hold stigmatized views than those without burnout syndrome. Physicians without burnout were more likely to score high on item 9. There was no statistically significant difference in item 3 between the groups. Items 3 and 9 are part of the perceived structural stigma subscale and are both intended to be reverse-scored.

## 4. Association between burnout and stigma in physicians

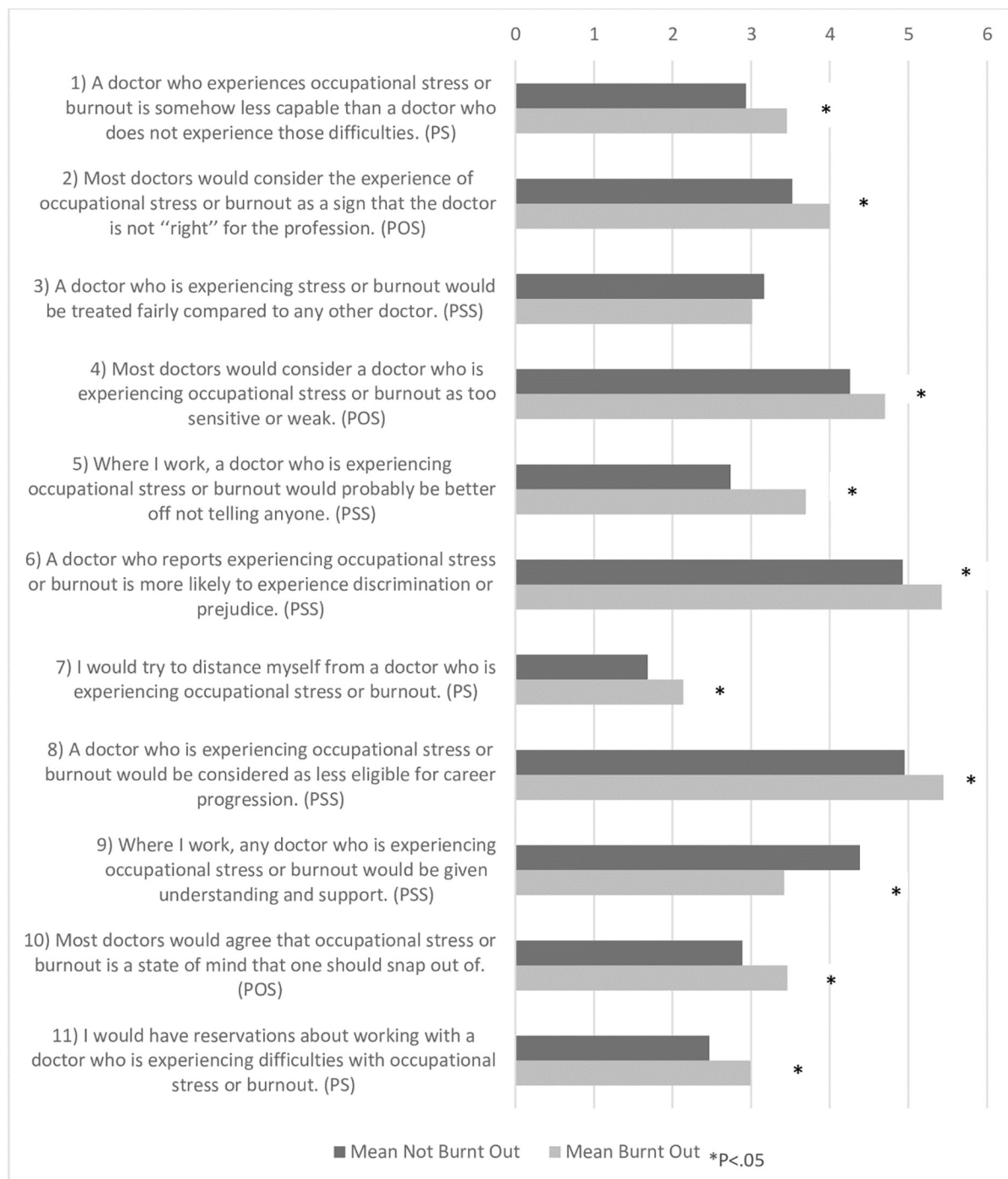
Table 2 shows Pearson's correlation between each of the stigma dimensions and burnout dimensions. Emotional exhaustion was moderately correlated with perceived structural stigma and weakly associated with perceived other stigma. Depersonalization was weakly related to personal stigma and perceived other stigma. Personal accomplishment was not correlated with any dimension of stigma.

Thus, perceived other stigma and depersonalization were associated as hypothesized. However, the results do not confirm our other hypotheses. Personal stigma was not associated with emotional exhaustion, but with depersonalization. Perceived structural stigma was not associated with personal accomplishment, but with emotional exhaustion.

## 5. Discussion

This study aimed to investigate the potential relationship between burnout dimensions and stigma among physicians working in a university hospital. To the best of our knowledge, this is the first study to address these issues in this context. Overall, our results show a link between stigma and burnout among burnt out physicians. Still, our results do not confirm our assumptions of dimension-by-dimension association: emotional exhaustion was moderately correlated with perceived structural stigma and weakly correlated with perceived other stigma but not with personal stigma. Depersonalization was associated with personal and other perceived stigmas. Personal accomplishment was not associated with any stigma dimensions.





**Fig 1. Comparison of stigma by burnout.** PS: Personal stigma, POS: Perceived other stigma, and PSS: Perceived structural stigma.

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In their review describing the prevalence of burnout among physicians, Rotenstein et al. [2] showed that studies variably reported prevalence estimates of overall burnout or burnout sub-components: 67.0% for general burnout, 72.0% for emotional exhaustion, 68.1% for depersonalization, and 63.2% for low personal accomplishment. A recent review described the

Table 2. Associations between subscales of the MBI and subscales of the SOSS-D, presented as Pearson correlation coefficients.

SOSS-D (dependent variable) →	Perceived structural stigma		Personal stigma		Perceived other stigma	
	Univariate associations					
MBI ↓	Correlation	p	Correlation	p	Correlation	p
Emotional exhaustion	0.33	< .001	0.22	< .001	0.25	< .001
Depersonalization	0.22	< .001	0.22	< .001	0.24	< .001
Personal accomplishment	-0.13	0.02	-0.07	0.23	-0.01	0.83
	Adjusted associations					
MBI ↓	Correlation	p	Correlation	p	Correlation	p
Emotional exhaustion	0.31	<0.001	0.14	0.053	0.18	0.011
Depersonalization	0.02	0.71	0.15	0.040	0.17	0.018
Personal accomplishment	-0.03	0.65	0.02	0.68	0.10	0.086
	Adjusted associations, corrected for attenuation					
MBI ↓	Correlation	p	Correlation	p	Correlation	p
Emotional exhaustion	0.37	<0.001	0.20	0.053	0.25	0.011
Depersonalization	0.03	0.71	0.23	0.040	0.25	0.018
Personal accomplishment	-0.04	0.65	0.03	0.68	0.15	0.086

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prevalence of burnout among general practitioners [41] and noticed that in that population, mean burnout estimates were: 16.43 for emotional exhaustion, which represents a low degree of emotional exhaustion, 6.74 for depersonalization, which represents a moderate degree of this dimension, and a low degree of personal accomplishment (29.28). This heterogeneity in prevalence highlights the importance of considering the work context when considering burnout.

In this study, mean sub-scores for stigma were higher for perceived structural stigma, like in other studies [33], and personal stigma was rated the lowest. These findings show that the perception of the stigma of stress and burnout is mainly situated within the context of the structural influences operating in the workplace. These concerns about the policies and practices that restrict the opportunities of stigmatized persons may prevent physicians from disclosing psychological distress and seeking help.

There was a significant difference in how physicians with burnout syndrome experienced stigma compared with physicians without burnout syndrome. Most items on the stigma scale were higher in those with burnout. Physicians with burnout were likelier to hold stigmatized views as most items had a statistical difference. These results go in the same direction. Namely, high burnout correlates with high stigma and low burnout with lower perceived stigma. Dyrbye et al. [32] assessed the perceptions of stigma among medical students with burnout. They used the MBI to measure burnout and selected items from existing literature on stigma in the field of mental illness. Students with burnout had significantly higher perceived stigma scores and greater fear of discrimination and confidentiality breaches than those without burnout. Similarly, Weiss et al. [42] examined the relationship between burnout and fellows' perceptions of stigma surrounding help-seeking for mental illness. They concluded that fellows with burnout were more likely than their peers to perceive significant stigma around help-seeking for psychological distress.

Our results show a more complex pattern than the one-to-one association between the different dimensions of burnout and stigma we hypothesized. The primary association was between perceived structural stigma and emotional exhaustion. At the same time, we hypothesized that personal stigma would be associated with emotional exhaustion and that perceived structural stigma would be related to (lack of) personal accomplishment. This dimension of



burnout was not associated with any stigma. Our results show that physicians who perceive discrimination and fear of their career and may choose not to disclose their distress (perceived structural stigma) are also more likely to feel tired and unable to face the demands of their job or engage with people (emotional exhaustion). Emotional exhaustion is a core dimension of burnout [32]. In our results, emotional exhaustion was also associated with perceived other stigma and was weakly associated with personal stigma. Perceived other stigma and personal stigma were also associated with another dimension of burnout (depersonalization). We hypothesized that perceived other stigma would only be correlated with depersonalization because of a negative loop. In addition, in the results, the perceived stigma of being less capable and bringing disrepute to the profession (personal stigma) was also linked with a feeling of incapacity to face job demands (emotional exhaustion) and disengagement (depersonalization).

In a recent study [43], nonprofessional occupational mental health staff's perceived mental illness-related stigma was assessed using Link's Devaluation-Discrimination Scale [44], and burnout was evaluated using the MBI. These results suggest that higher perceived mental illness-related stigma is associated with more severe burnout. Mental-illness-related stigma significantly affected the MBI depersonalization subscale score, but not other burnout dimensions. Our study showed that emotional exhaustion is associated with the three factors of perceived stigma and that depersonalization is associated with the SOSS-D subscales related to interpersonal attitudes (personal stigma and perceived other stigma). Perceived stigma at work may also have progressive dimensions. Stigma is a complex and multidimensional phenomenon, and various measures exist. Perceived burnout stigma can also be assessed as a unidimensional construct [45]; they developed an eight-item instrument (BSI-8) that predicts burnout and other mental health indicators, such as depression, anxiety, and stress in adults. They conceptualized burnout stigma as the perceived stigma of individuals experiencing burnout. The differences between the scales measuring stigma might have led to different results. Nevertheless, the results of different studies have shown the same trend. In the future, various approaches, such as qualitative research, could enhance comprehensive results related to the phenomenological experiences of burnout and stigmatization of individuals and their relationship with help-seeking.

The psychological mechanisms underlying the association between stigma and burnout remain unclear. Different models have been previously described. The first model considers stigmatizing attitudes as related to adverse outcomes, which emphasizes the role of the stigmatizer's psychological distress in the cyclical process of stigma [46]. Burnout stigmatization can also be understood through the lens of social-cognitive stigma theory: people approve of the stereotype that individuals who are burnt out are somehow at fault for their condition and should work harder to meet societal demands [45]. The psychological flexibility model has also been applied to stigma-related problems. Among people suffering from depression, the combination of the increased potential for aversive experiences, a tendency for experiential avoidance, and rigid patterns of behavior under the control of cognitions that are insensitive to the current context are grouped under the term "psychological inflexibility" processes [47]. Burnout has been shown to overlap with depression in terms of etiology, symptoms, course, and cognitive bias [48,49]. Psychological flexibility is negatively correlated with stigma [46] and has a critical indirect role in stigma via emotional exhaustion [50]. Our results fit this flexibility model, as the emotional exhaustion subscale was associated with three factors of perceived stigma. Moreover, in our study, physicians suffering from burnout also had a higher perceived stigma. These characteristics will, in turn, render them unable to empathize with other medical doctors presenting with burnout symptoms. This process can contribute to burnout contagion, given that personal burnout may increase collective burnout, both directly and indirectly [45].

Emotional contagion has been defined as a tendency to converge emotionally by automatically synchronizing facial expressions and postures with those of another person [51]. Several studies have demonstrated that the experience of burnout is contagious and can be transferred directly from one employee to another [52,53] and that the contagion of emotion instigates incivility in the workplace, which in turn is related to two dimensions of burnout (emotional exhaustion and cynicism) [54]. Victims and perpetrators of incivility both suffer from heightened burnout. Indirect burnout can be transferred through the influence of burned-out individuals on the working conditions of others. For example, burnt-out individuals, who have been found to make more mistakes, misuse work breaks, and be more absent from work, can make their co-workers' jobs more difficult and increase their workload [45]. Our results introduce a new explanation for burnout contagion, as they theoretically show that high burnout and high perceived stigma work together in interpersonal relationships. Physicians with high perceived stigma would not only stigmatize their peers but would also be less empathic, supportive, and understanding. Burnout and stigma increased among colleagues. Burnout and stigma can produce a lack of conversations about burnout, encouragement of support groups, increased vigilance for signs of burnout, and action for suffering colleagues, especially in hierarchical relationships. Further research is required to confirm these results.

The results suggest the need for anti-stigma or anti-burnout interventions for physicians working in hospitals. The reported barriers to treatment and active help-seeking include lack of time, cost, concerns regarding confidentiality, potential career implications, exposure to unwanted interventions, and stigmatization [55–58]. Dyrbye et al. [32] highlighted that perceived stigma could contribute to not seeking help, together with negative personal experiences and the hidden curriculum. Shah et al. [59] advocated for politically significant steps to minimize COVID-19-specific contributing factors for burnout. In Mexico, a program was launched to prevent burnout among physicians and health care professionals. The author explained the lack of attendance in the programs to the “normalization of stress and/or stigma among healthcare professionals” [60]. Bianchi et al. [48] explored senior doctors' views on mental illness within the medical profession through semi-structured interviews. These findings suggest that more significant efforts are needed to destigmatize mental illness in work and improve support for doctors. Similarly, Martin et al. [61] showed that medical students could benefit from exposure to physicians with self-disclosed histories of coming mental illnesses. Winstanley (2018) [62] developed a web-based intervention to support doctors and medical students in their decision to disclose their mental illness. Walsh et al. [63] explored interventions for the prevention and reduction of work stress and burnout in hospital doctors using a qualitative design. They concluded that the culture of medicine needs to change from stigmatization and competitiveness to compassion and collaboration. Additionally, promoting psychological flexibility could be a powerful tool for reducing stigmatizing attitudes and burnout [50]. Several interventions have been evaluated for managing physician burnout. Clough et al. [64] conducted a systematic review of psychosocial interventions targeting occupational stress and burnout among doctors. Cognitive behavioral interventions demonstrated the most substantial evidence, particularly for reducing stress. Patel et al. [9] reviewed strategies to manage physician burnout. These include professional coaching and stress reduction programs, team-building activities, paid leave, and time off. Walsh et al. [63] qualitatively explored interventions for the prevention and reduction of work stress and burnout in hospital doctors. They concluded that the culture of medicine needs to change from stigmatization and competitiveness to compassion and collaboration.

This study has several limitations. First, the cross-sectional design of this study allows for the interpretation of correlations rather than causality. Burnout and perceived stigma are interrelated in physicians, and it remains unclear whether burnout generates perceived stigma

or conversely. Second, nonresponse bias must be considered, as non-responders may be more exposed to burnout and perceived stigma. Or, on the contrary, it is possible that those more affected by burnout have been more interested in participating. Third, social desirability bias was not controlled. Participants may have answered these sensitive questions with socially desirable rather than truthful responses. Intensive care unit physicians and surgeons were not assessed. Surgical residents have high overall burnout scores [65], and Fu et al. [66] commented on the efforts needed to dismantle the institutionalized stigmatization of mental illness about suicide among surgical trainees. Fourth, the alpha of the three factors of the stigma scale was low. While the sample size was large enough to conduct the analyses, future studies with larger sample sizes should be conducted to provide stronger evidence.». Finally, these results were representative of a single institution. These factors limit the generalizability of the results because there are undoubtedly specialty-related cultures that influenced our results. Future studies should include a more extensive range of specialties to confirm our findings.

To conclude, the results of this study provide a broader understanding of the experience of burnout among medical doctors, which suggests the need for adjustment of existing burnout management at the institutional level. Further research is needed to explore how increased burnout and stigmatization impact collective burnout and stigmatization, as well as treatment delay.

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## Author Contributions

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**Writing – original draft:** S. Favre.

**Writing – review & editing:** H. Richard-Lepouriel.

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