

Are Teachers More Affected by Burnout than Physicians, Nurses and other Professionals? A Systematic Review of the Literature

Myriam Squillaci Lanners

University of Fribourg, 1700 Fribourg, Switzerland

Abstract. This article answers a main research question: Are teachers more affected by burnout than physicians, nurses and other various professionals? In order to answer this research question, a systematic literature review was conducted. All the articles included in the analysis used the Maslach Burnout Inventory (94 studies, 121 samples). Results show that occupations are impacted differently by burnout in the three sub-dimensions (emotional exhaustion, depersonalization and lack of accomplishment).

Keywords: Burnout · Maslach Burnout Inventory · Teachers · Nurses · Physicians · Working Conditions

Introduction

Numerous scientific studies have shown the extent of burnout at work in different professions. In 2012, Maslach, Leiter and Jackson estimated burnout costs at US 300 billion. In Switzerland, according to data from the Federal Statistical Office (2018), more than a third of Swiss people feel stress at work, 18% feel emotionally exhausted. People who are overworked at work are five to six times more likely to suffer from depression than people who report job satisfaction. These data mean that about one in five active people has symptoms of depression that contribute to the explosion of medical consultations for psychological reasons [1]. This problem is so urgent that it is considered a priority of the Swiss long-term strategy [2].

The assertion that teachers face higher risks of burnout than other professions is a widely recognized idea in the common sense but ultimately poorly documented in research results [3]. Nevertheless, it must be acknowledged that burnout seems to reach more specifically occupations with high levels of social interactions, such as education and health [4]. In these fields of activity, the phenomenon is seen as a real epidemic.

Definition

The most common definition of burnout is the one issued by Maslach, Jackson, Leiter, & Schaufeli (1996, p. 192): "Burnout is a psychological syndrome of emotional exhaustion, depersonalization, and lack of accomplishment that can occur among individuals who work with other people in some capacity" [5]. It is an emotional state that causes a loss of beliefs, positive feelings, optimism, respect and empathy for those around the person concerned. Psychic exhaustion is linked to physical fatigue and psychosomatic disorders. The scientific literature agrees that burnout is a disruption of the body due to a high and lasting level of stress correlated with external demands greater than the available resources. The symptoms reflect a psychic discomfort (mental or emotional exhaustion) that manifests itself in various ways [6]: mental and behavioral symptoms predominate over physical ones; the syndrome originates in professional environment; the symptoms are observed in individuals without a particular psychopathological background; decreased efficiency and lower performance are the result of negative attitudes at work; repercussions affect the person's physical and psychological functioning. The symptomatology of burnout is multiple, impacting people in their daily work and family.

The most widely used tool to measure burnout is the Maslach Burnout Inventory (MBI). This instrument (22 items) investigate three sub-dimensions to prevent burnout and improve working conditions: emotional exhaustion (EE), depersonalization (D) and personal accomplishment (PA) [6]. Emotional exhaustion is assessed through 9 items, depersonalization through 5 items and personal achievement through 8 items. Scores are considered in the danger zone if they are in the upper third of the normal distribution, in the risk zone, if they are in the second third and in the correct zone, if they are in the lower third. A low level of burnout is manifested by a low score in the EE and D dimensions, and a high score in the PA dimension [5]. The researchers note that if the EE and D scores are in the dangerous zone, the risk of being burnout is real, especially if the PA score is low.

Literature search: Methodology

In order to answer the main question of the study, an electronic search was conducted in various databases: Medline, Pubmed, Sciencedirect, Springer, Eric, Scopus. The selected searches were based on several inclusion criteria: 1. Be based on the Maslach model; 2. Use the MBI as a questionnaire to assess burnout; 3. Present scores and standard deviations in the three sub-dimensions (EE; D; PA). 4; Present the sample clearly (teachers, specialized teachers, doctors, nurses, etc.); 5. Have been published in scientific journals between 1996 and 2016; 6. Understand a sample of at least 45 participants. This literature review is part of a larger project on burnout that will be the subject of a meta-analysis [7].

As a result of this selection process, 94 studies were selected for specific data analysis: 37 studies (teachers), 28 studies (nurses), 15 studies (doctors), 14 studies (various professionals). As the same study sometimes contained several sub-samples, this

review allowed to code the scores of 121 samples in the three sub-dimensions of burnout. For each sample, 7 categories were selected: N, EE mean and EE standard deviation, D mean and D standard deviation, PA mean and PA standard deviation.

Table 1. Example of coding

Studies	EE			D		PA	
	N	M	SD	M	SD	M	SD
Al-Bawaliz, 2015	200	18.13	10.66	2.63	4.21	5.29	5.82

Results

The following table shows the distribution of average burnout scores of 45 samples of teachers in the three sub-dimensions.

Table 2. Teachers and burnout

45 Samples N = 20'999	Correct zone	Risk zone	Danger zone
EE	16 samples n = 3'856 18.36%	25 samples n = 16'048 76.42%	4 samples n = 1'095 5.21%
D	24 samples n = 7'988 38.04%	19 samples n = 12'773 60.83%	2 samples n = 238 1.13%
PA	1 sample n = 78 0.37%	11 samples n = 2'674 12.73%	33 samples n = 18'247 86.89%

This table provides a comparison of the average scores obtained by teachers in the three dimensions of burnout. With regard to emotional exhaustion, among the 45 samples (N = 20'999; 100%), 16 samples (n = 3'856) reported a correct level (18.36%), 25 samples (n = 16'048) are in the risk zone (76.42%) and 4 samples (n = 1095) are in the danger zone (5.21%). With regard to depersonalization, average ranges vary between M = 2.63 to M = 18.00. Among the 45 samples (N = 20'999), 24 samples (n = 7988) indicate a correct level (38.04%), 19 samples (n = 12773) are in the risk zone (60.83%) and 2 samples (n = 238) are in the danger zone (1.13%). With regard to personal achievement, only one study (n = 78) reports a correct level (0.37%), 11 samples (n = 2'674) are in the risk zone (12.73%) and 33 samples (n = 18247) are in the dangerous zone (86.89%). These data suggest that the demands of the teaching profession necessitate important resources in terms of emotional adaptation. The impact of emotional exhaustion in teaching is worrying with only 18% of teachers in the correct zone, because this profession requires emotional management articulated to the needs of pupils. The depersonalization seems less affected than ex-

haustion with 38% in the correct area. Regarding personal achievement, only 0.37% of teachers report a correct level. The differences between dimensions in terms of dangerousness is unexpected. Considering all the studies (N=46), only two studies report a level of burnout estimated to be dangerous in all the three dimensions [9], [10]. No study has found a satisfactory level of burnout in the three dimensions.

This first review of the literature on teachers indicates contrasting scores in all three dimensions. Is there a similar situation for nurses? The following table shows the distribution of average burnout scores of 34 samples of nurses in the three sub-dimensions.

Table 3. Nurses and burnout

34 Samples N = 14'685	Correct zone	Risk zone	Danger zone
EE	13 samples n = 6'322 43.05%	21 samples n = 8'363 56.95%	0 sample
D	15 samples n = 4'090 27.85%	18 samples n = 10'421 70.96%	1 sample n = 174 1.18%
PA	2 samples n = 252 1.72%	15 samples n = 3'972 27.05%	17 samples n = 10'461 71.74%

With regard to emotional exhaustion, among the 34 samples (N = 14'685; 100%), 13 samples (n = 6'322) reported a correct level of exhaustion (43.05%), 21 samples (n = 8'363) are in the risk zone (56.95%) and 0 sample is in the dangerous zone. With regard to depersonalization, 15 studies (n = 4'090) indicate a correct level (27.85%), 18 samples (n = 10'421) are in the risk zone (70.96%) and 1 sample (n = 174) is in the danger zone (1.18%). With regard to personal achievement, averages range from M = 41.0 to M = 11.24. Only 2 studies (n = 252) report a correct level (1.72%), 15 samples (n = 3'972) are in the risk zone (27.05%) and 17 samples (n = 10'461) are in the dangerous zone (71.74%).

These data suggest that the demands of the nursing profession require emotional resources, but less than those of the teaching profession. Regarding depersonalization, 15 studies report a correct level, 18 samples are in the risk zone and only 1 study reports a dangerous level. Nurses seem more affected by depersonalization (27.85% in the "correct" zone) than by exhaustion (43.05% in the correct zone). The following table shows the distribution of average burnout scores of 20 samples of physicians in the three dimensions.

Table 4. Physicians and burnout

20 Samples N = 7'033	Correct zone	Risk zone	Danger zone
EE	7 samples n = 2'701 38.40%	11 samples n = 4'132 58.75%	2 samples n = 200 2.84%
D	9 samples n = 2'031 28.88%	8 samples n = 4'491 63.86%	3 samples n = 511 7.27%
PA	5 samples n = 914 13.0%	7 samples n = 3'571 50.77%	8 samples n = 2'548 36.23%

With regard to emotional exhaustion, among the 20 samples (N = 7'033; 100%), 7 samples (n = 2'701) report a correct level (38.40%), 11 samples (n = 4'132) a level in the risk zone (58.75%) and 2 samples (n = 200) are in the dangerous zone (2.84%). With regard to depersonalization, 9 samples (n = 2'031) indicate a correct level (28.88%), 8 (n = 4'491) a level at risk (63.86%) and 3 (n = 511) a danger level (7.27%). Regarding personal achievement, only 5 samples (n = 914) report a correct level (13.0%), 7 samples (n = 3'571) a level at risk (50.77%) and 8 (n = 2'548) a danger level (36.23%).

These data suggest that the profession of physician requires a high number of resources in terms of emotional adjustment, as the scores are close to those obtained by teachers. Emotional exhaustion appears to be more prevalent among physicians than among nurses. Depersonalization seems to affect more doctors than nurses or teachers. The fact that only 13% of doctors feel personally accomplished at work is notable. Lack of achievement affects doctors, nurses and teachers alike.

Table 5. Other professions and burnout

22 Samples N=12'140	Correct zone	Risk zone	Danger zone
EE	11 samples n = 7'654 63.05%	11 samples n = 4'486 36.95%	0 sample
D	6 samples n = 1'046 8.55%	15 samples n = 10'820 89.93%	1 sample n = 178 1.52%
PA	1 sample n = 206 1.7%	7 samples n = 1'097 9.04%	14 samples n = 10'837 89.27%

This table shows the distribution of samples according to the severity of the average scores obtained by various professionals (booksellers, psychologists, priests, jour-

nalists, police officers, call center employees, etc.). With regard to emotional exhaustion, among the 22 samples ($N = 12'140$; 100%), 11 samples ($n = 7'654$) reported a correct level (63.05%), 11 samples ($n = 4'486$) a level at risk (36.95%) and 0 sample a level considered as dangerous. With regard to depersonalization, 6 studies ($n = 1'046$) indicate a correct level (8.55%), 15 studies ($n = 10'820$) a level at risk (89.93%) and one study ($n = 178$) a danger level (1.52%). With regard to personal achievement, only one study ($n = 206$) reported a correct level (1.7%), 7 studies ($n = 1'097$) a level at risk (9.04%) and 14 ($n = 10'837$) a dangerous level (89.27%). These data suggest that “various professionals” are less exhausted than nurses, teachers and doctors. Depersonalization seems to affect these professionals with only 8.55% in the correct zone.

Discussion

The adoption of a recognized theoretical model has facilitated the systematic review of the literature. The results of the review revealed some interesting differences. With regard to exhaustion, the averages from all-professionals [11]–[13] are lower than the other samples. According to these data, the average exhaustion score from physicians is higher than that from teachers ($M = 20.60$) and nurses ($M = 19.0$) [14]–[16]. Only the various professionals show an average exhaustion score in the correct area ($M = 17.69$). Physicians ($M = 8.01$) have higher depersonalization averages than various professionals ($M = 7.34$), nurses ($M = 6.62$) or teachers ($M = 6.55$), who obtain the highest average [9], [10]. It should be noted that the averages of all the samples are in the zone at risk for depersonalization. However, teachers, like nurses, are close to the correct area [17], [18]. At the level of personal achievement, scores are low, in the dangerous or at-risk area, indicating a lack of achievement at work [8], [10]. Teachers ($M = 28.73$) get the lowest score and are, like nurses ($M = 30.49$), in the danger zone [16], [19], [20]. Physicians ($M = 35.54$) have the highest personal achievement score, but their average score is in the zone at risk [21]–[23].

Teachers do not have the highest exhaustion averages, but the proportion of teachers in the correct area is the lowest among all the professional categories studied [24]–[26]. Teachers are less depersonalized than other professionals. However, teachers achieve the lowest personal achievement score among the professional categories considered. This descriptive and dimensional restitution showed that out of 46 studies involving a sample of 20,999 participants, only one study ($N = 78$) showed correct achievement [27]. The fact that there is such a low percentage of people accomplished on the job (regardless of the sample selected) shows the importance of considering this subscale with great caution. People who are less psychologically involved with their clients, such as call center employees, booksellers, police officers, seem more protected than other professionals [28]–[31]. The heterogeneity of the results is startling. This situation can be explained through overestimation of small studies, biases related to cultural and geographical contexts, and even biases related to the timing of the questionnaire (busy calendar). This review of the literature documented the presence of burnout in all professions, as well as teachers, doctors and nurses.

The marked differences between the three dimensions in terms of dangerousness are unexpected. This study highlighted that personal achievement evolves in a different way and seems to be independent of the other two dimensions. These results suggest that personal achievement is the most independent dimension of the MBI three-dimensional model, as confirmed by other studies [6], [32], [33]. It is difficult to comment the consistency of these scores. Are all professionals missing so much achievement at work? How is it possible that the same person is neither depersonalized nor exhausted but lacks personal accomplishment to the point of being in the danger zone? On this topic, the same heterogeneity emerges regardless of the sample size or location of the study (USA, Netherlands, Turkey, China, Italy, Switzerland). Cultural belonging therefore does not seem to offer an explanation for the differences observed. Sample sizes could also explain these differences, but the same heterogeneity is evident regardless of sample size. These items certainly raise questions and deserve specific attention. Are the items covering this dimension well formulated? In other words, do these items measure what they are supposed to measure? Are the thresholds properly established? These results suggest that it is necessary to question the gradation of the MBI scale.

Conclusion

This theoretical review, based on 94 studies and 121 samples, established that the presence of burnout is documented in all occupations, especially among teachers, doctors, and nurses. Having considered the results of a single tool is an advantage in comparing averages, but the limitations of this approach should be noted. The use of the Maslach Burnout Inventory [5] conceptualizes burnout in a three-dimensional way. Therefore, possible manifestations not included in the test are in fact excluded [34], [35]. Its frequent use in research cannot overshadow disagreements about the relationships between its three dimensions. As it stands, this tool deserves further investigation, particularly regarding personal achievement. The heterogeneity of these results indicates the need for further analysis, though the results should be considered with caution. The heterogeneity of these results testifies to the need to deepen their analysis. Confirmatory factorial analyses should examine the structure of this instrument to verify its consistency. A meta-analysis - in progress - will provide additional information for this study.

Given the consequences of burnout, research in the field must continue to reduce the devastating impact of this syndrome. Preventing burnout requires concerted action at all levels of the system. The role of the political authorities is to keep preserving the health of their employees by providing them adequate working conditions.

References

- [1] OFS, "14_Santé. Statistiques de poche 2017," Neuchâtel, 2018.
- [2] A. Balthasar and S. Studer, "Evaluation de la stratégie à long terme 2007-2018," Promotion Santé Suisse, Lucerne, 2017.

- [3] G. Jaoul and V. Kovess, "Le burnout dans la profession enseignante," *Ann. Médico-psychologiques, Rev. Psychiatr.*, vol. 162, no. 1, pp. 26–35, Feb. 2004.
- [4] D. Laugaa, N. Rascle, and M. Bruchon-Schweitzer, "Stress and burnout among French elementary school teachers: A transactional approach," *Rev. Eur. Psychol. Appl.*, vol. 58, no. 4, pp. 241–251, 2008.
- [5] C. Maslach, S. E. Jackson, and M. Leiter, "The Maslach Burnout Inventory: Manual," in *Maslach Burnout Inventory*, CA: Consul., Palo Alto, 1996, pp. 191–218.
- [6] W. B. Schaufeli and B. P. Buunk, "Burnout: An Overview of 25 Years of Research and Theorizing," in *The Handbook of Work and Health Psychology*, Chichester, UK: John Wiley & Sons, Ltd, 2004, pp. 383–425.
- [7] M. Squillaci Lanners, "Le burnout des enseignants spécialisés au regard du Maslach Burnout Inventory," Fribourg, 2018.
- [8] M. A. Al-Bawaliz, "Emotional Intelligence and its Relationship with Burnout among Special Education Teachers in Jordan: An Analytical Descriptive Study on the Southern Territory," *J. Educ. Pract.*, vol. 6, no. 34, pp. 88–95, 2015.
- [9] H. Saricam and H. Sakiz, "Burnout and teacher self-efficacy among teachers working in special education institutions in Turkey," *Educ. Stud.*, vol. 40, no. 4, pp. 423–437, Aug. 2014.
- [10] J. Mukundan and K. Khandehroo, "Burnout Among English Language Teachers in Malaysia," *Contemp. Issues Educ. Res.*, vol. 3, no. 1, pp. 71–76, 2010.
- [11] M. C. Angermeyer, N. Bull, S. Bernert, S. Dietrich, and A. Kopf, "Burnout of caregivers: a comparison between partners of psychiatric patients and nurses," *Arch. Psychiatr. Nurs.*, vol. 20, no. 4, pp. 158–65, Aug. 2006.
- [12] N. Kop, M. Euwema, and W. Schaufeli, "Burnout, job stress and violent behaviour among Dutch police officers," *Work Stress*, vol. 13, no. 4, pp. 326–340, Oct. 1999.
- [13] A. Koustelios, "Burnout Among Greek Sport Centre Employees," *Sport Manag. Rev.*, vol. 4, no. 2, pp. 151–163, Nov. 2001.
- [14] Y. A. Abdulghafour, A. M. Bo-hamra, M. S. Al-Randi, M. I. Kamel, and M. K. El-Shazly, "Burnout syndrome among physicians working in primary health care centers in Kuwait," *Alexandria J. Med.*, vol. 47, no. 4, pp. 351–357, Dec. 2011.
- [15] D. Akroyd, A. Caison, and R. D. Adams, "Burnout in radiation therapists: the predictive value of selected stressors," *Int. J. Radiat. Oncol.*, vol. 52, no. 3, pp. 816–821, Mar. 2002.
- [16] W. Schaufeli, "Burnout," in *Stress in health professionals*, John Wiley., Jenny Firth-Cozens and Roy, Ed. John Wiley and Sons, 1999, pp. 17–32.
- [17] A. Shukla and T. Trivedi, "Burnout in Indian teachers," *Asia Pacific Educ. Rev.*, vol. 9, no. 3, pp. 320–334, 2008.
- [18] S. Wang, Y. Liu, and L. Wang, "Nurse burnout: Personal and environmental factors as predictors," *Int. J. Nurs. Pract.*, vol. 21, no. 1, pp. 78–86, Feb. 2015.
- [19] M. K. Alimoglu and L. Donmez, "Daylight exposure and the other predictors of burnout among nurses in a University Hospital," *Int. J. Nurs. Stud.*, vol. 42, no. 5, pp. 549–55, Jul. 2005.
- [20] J. Ogresta, S. Rusac, and L. Zorec, "Relation between burnout syndrome and job satisfaction among mental health workers," *Croat. Med. J.*, vol. 49, no. 3, pp. 364–374, 2008.
- [21] C. Goehring, M. B. Gallacchi, B. Künzi, and P. Bovier, "Psychosocial and professional characteristics of burnout in Swiss primary care practitioners: A cross-sectional survey," *Swiss Medical Weekly*, vol. 135, no. 7–8, pp. 101–108, 2005.
- [22] A. Laurent and K. Chahraoui, "L'impact du stress professionnel sur les intervenants SMUR," *Prat. Psychol.*, vol. 18, no. 4, pp. 413–428, Dec. 2012.
- [23] J. Leung, P. Riosco, and P. Munro, "Stress, satisfaction and burnout amongst Australian and New Zealand radiation oncologists," *J. Med. Imaging Radiat. Oncol.*,

- vol. 59, no. 1, pp. 115–124, Feb. 2015.
- [24] G. Baran, M. Y. Bıçakçı, F. İnci, M. Öngör, A. Ceran, and G. Atar, “Analysis of burnout levels of teacher,” *Procedia - Soc. Behav. Sci.*, vol. 9, pp. 975–980, 2010.
 - [25] A. Brouwers, W. J. G. Evers, and W. Tomic, “Self-Efficacy in Eliciting Social Support and Burnout Among Secondary-School Teachers,” *J. Appl. Soc. Psychol.*, vol. 31, no. 7, pp. 1474–1491, Jul. 2001.
 - [26] C. Fiorilli, P. Gabola, A. Pepe, N. Meylan, D. Curchod-Ruedi, O. Albanese, and P. A. Doudin, “The effect of teachers’ emotional intensity and social support on burnout syndrome. A comparison between Italy and Switzerland,” *Rev. Eur. Psychol. Appl.*, vol. 65, no. 6, pp. 275–283, 2015.
 - [27] K. Wilkerson and J. Bellini, “Intrapersonal and organizational factors associated with burnout among school counselors,” *J. Couns. Dev.*, 2006.
 - [28] A. Togia, “Measurement of burnout and the influence of background characteristics in Greek academic librarians,” *Libr. Manag.*, vol. 26, no. 3, pp. 130–138, Apr. 2005.
 - [29] R. A. Shelby, R. M. Stoddart, and K. L. Taylor, “Factors Contributing to Levels of Burnout Among Se,” *J. Interpers. Violence*, vol. 16, no. 11, pp. 1205–1217, 2001.
 - [30] N. Kop, M. Euwema, and W. Schaufeli, “Burnout, job stress and violent behaviour among Dutch police officers,” *Work Stress*, vol. 13, no. 4, pp. 326–340, 1999.
 - [31] M. L. Kania, B. B. Meyer, and K. T. Ebersole, “Personal and environmental characteristics predicting burnout among certified athletic trainers at national collegiate athletic association institutions,” *J. Athl. Train.*, vol. 44, no. 1, pp. 58–66, 2009.
 - [32] C. Maslach, W. B. Schaufeli, and M. P. Leiter, “Job burnout,” *Annu. Rev. Psychol.*, vol. 52, pp. 397–422, 2001.
 - [33] D. Truchot and X. Borteyrou, “Le burnout chez les infirmières en cancérologie. Une approche contextuelle du modèle exigences- contrôle-soutien. Burnout among oncology nurses: a context specificity approach of the Job Demand Control Support Model,” Besançon, 2004.
 - [34] N. Schutte, S. Toppinen, R. Kalimo, and W. Schaufeli, “The factorial validity of the Maslach Burnout Inventory-General Survey (MBI-GS) across occupational groups and nations,” *J. Occup. Organ. Psychol.*, vol. 73, no. 1, pp. 53–66, Mar. 2000.
 - [35] P. Zawieja and F. (dir. . Guarnieri, *Épuisement Professionnel : Approches Innovantes Et Pluridisciplinaires*. 2013.

* Bibliography used for the systematic review is available on request