

## The role of therapy in reducing the risk of job burnout – a systematic review of literature

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### Summary

There is a growing number of publications examining the influence of different forms of therapy on reducing the risk of job burnout affecting various social groups and there is a need to assess and systematise available knowledge. Three electronic databases were searched for the purpose of this review over the 2000–2015 search period. The inclusion criterion was the influence of the selected form of therapy on reducing the risk of job burnout. Of the 235 selected articles, 22 met the inclusion criterion. In 77.3% of publications job burnout syndrome was assessed using the Maslach Burnout Inventory (MBI). Researchers also used the De Utrechtse Burnout Schaal (UBOS) questionnaire, the Maslach Burnout Inventory – Dutch Version (MBI-NL), and their own questionnaires. The most commonly applied therapies were mindfulness and cognitive-behavioral therapy (CBT). Owing to significant differences in methodology between studies, it is difficult to attempt an objective comparison. In most studies (64.64%) authors managed to achieve the intended reduction of burnout. It is necessary that studies of burnout include research projects treating the study group in a multidimensional, biopsychosocial manner, taking into account biological and psychological factors with an accompanying social reflection.

**therapies for burnout, Maslach Burnout Inventory, occupational diseases, psychological stress**

The burnout syndrome is a mental health disorder (the qualifications of ICD-10, Z73.0) which comprises three dimensions: emotional exhaustion, depersonalization and a reduced sense of personal accomplishment. The first, emotional exhaustion, is a state of depletion of an individual's emotional resources, the second denotes a negative, cynical and dehumanized attitude towards people who are the recipients of the individual's services, and the third refers to a reduced sense of personal achievement and effectiveness as well as lower self-esteem [1]. With

the ever-accelerating pace of life and ever-higher stress levels the prevention of job burnout is an important public health issue. It might have a beneficial effect on work absence caused by sick leave, which in turn translates into an important economic dimension [2]. The spread of this phenomenon cannot be clearly defined. The problem is its qualitative nature and the absence of clear differentiating criteria that would facilitate its diagnosis. It is highly probable, however, that the problem concerns the majority of contemporary society [3]. It seems that the knowledge regarding job burnout and the methods of its reduction is still unsystematized and insufficient. A growing number of authors are trying to achieve a better understanding of the problem, hoping that this will help in developing more efficient programs aimed at preventing

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burnout. At the same time there is no publication that would systematize the present knowledge of techniques that help reduce the level of job burnout. The aim of this study was a critical analysis of available literature.

## METHOD

### Search strategy

The search strategy was developed by identifying certain potentially significant expressions and combining them into phrases. Subse-

quently, a review of literature was carried out in three stages. At the beginning, potentially valuable articles were identified based on title analysis. Then, their abstracts were analyzed. Having narrowed down the number of articles to the most valuable ones, we obtained access to their full versions, finally qualifying the articles for a review (Figure 1). Using key words or phrases, we searched three electronic databases: PubMed, Embase and EBSCOhost. In addition, in order to supplement the electronic search, a manual analysis was performed on the cited literature contained in all the approved articles.

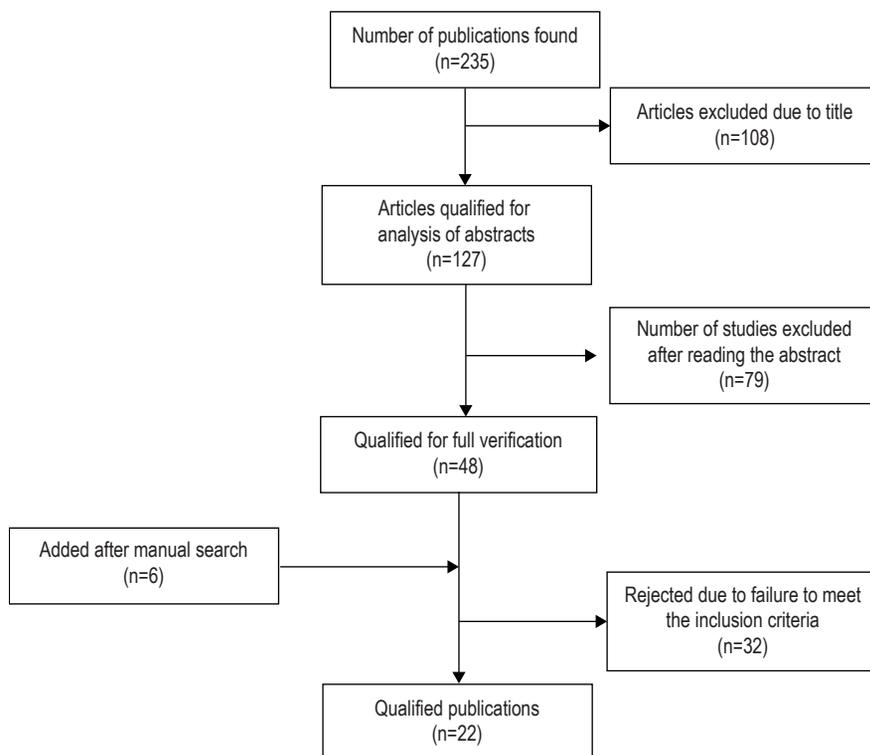


Figure 1. Diagram of the process of qualifying studies for review.

### Inclusion criteria

Articles selected for the literature review met the following inclusion criteria: they were published in English, subject to peer review, and concerned the influence of alternative and complementary therapies on the reduction of job burnout syndrome. The search excluded studies in the form of letters, preliminary findings, literature reviews and case studies. The search

period was from 1 January 2000 to 1 November 2015. Data were gathered by one researcher and checked by another. The following information was extracted from each article: year of publication, study group characteristics, therapies used, duration of intervention, questionnaire used to measure job burnout, and results indicating the degree of burnout before and after therapy.

## RESULTS

### Literature search

Initially, the electronic search produced 235 potentially relevant articles. As their titles were not consistent with the subject being analyzed, 108 studies were rejected. On the basis of the available abstracts 79 further publications were rejected and 48 were accepted for full-text analysis. At this point an additional, manual search was conducted to analyze the literature contained in the selected articles. Finally, having taken into account the eligibility criteria, 22 articles were accepted for a review.

### Participants and study characteristics

Due to a lack of methodological uniformity of the cited studies it is difficult to unequivocally determine detailed characteristics of the study groups (i.e. gender, average age or initial levels of burnout). In future studies it would be worthwhile to provide more detailed descriptions of study groups. Most publications concerned mainly healthcare workers and such studies cover also the largest study groups. The total number of persons covered by the studies in this review was 2144. The remaining distribution of the studied groups is presented in Table 1.

**Table 1.** Distribution of study groups in the literature review

Participants	Percentage of studied groups in available publications	Number of persons examined
Healthcare workers	40.9%	1114
Office workers	27.3%	474
Students	18.2%	419
Teachers	9.1%	99
Manual workers	4.5%	38
Sum total	100%	2144

In 17 of the analyzed publications (77.3% of the total) job burnout syndrome was assessed using the Maslach Burnout Inventory (MBI). In addition, authors also used the Maslach Burnout Inventory – Dutch Version (MBI-NL) (3 studies), the De Utrechtse Burnout Schaal (UBOS) (1 study) and a bespoke study ques-

tionnaire (1 study). The most commonly used forms of therapy were mindfulness and cognitive-behavioral therapy (CBT). The most common duration of an intervention was 8 weeks (31.8% of studies), but interventions lasting 3 or 6 months were also relatively frequent (Table 2).

**Table 2.** Characteristics of studies included in the review (N=22)

Author (year)	Participants	Number	Therapy	Duration of intervention	Questionnaire	Main results	Conclusions
Charles (2014) [4]	Teachers and auxiliary personnel in f a therapeutic school for children with behavioral problems	40	Transcendental meditation	4 months; twice a day for 20 minutes at home	MBI	Significant improvement on all main parameters in comparison with the control group (p=0.019). Reduction of stress (p<0.001), depression (p=0.013) and burnout (p=0.018).	A transcendental meditation program had a significant influence on the employees' work efficiency and their mental and physical health

De Vibe et al. (2013) [5]	Female students of medicine and psychology	288	Mindfulness (MBSR)	7 weeks; 1.5-hour session once a week, 6-hour session in the 6 <sup>th</sup> week, 30 minutes daily at home	MBI	Statistically significant influence of therapy on the level of mental stress ( $p=0.02$ ). The reduction of job burnout was significant ( $p=0.056$ ).	A significant improvement of mental state parameters was observed, including the level of experienced stress, subjective wellbeing and mindfulness.
Barbosa et al. (2013) [6]	Students	13	Mindfulness (MBSR)	8 weeks; 2.5 hours of exercises once a week, in the 6 <sup>th</sup> week 8 hours of silence; additionally, 35 minutes of work at home daily	MBI	A significant decrease of anxiety was observed in weeks 8 and 11 compared with the initial values ( $p<0.001$ and $p<0.01$ ), together with an increase of empathy in week 8 ( $p<0.0096$ ). Week 11 showed a decrease of empathy (statistically insignificant). No statistically significant differences in job burnout detected.	The results support the evidence asserting the effectiveness of MBSR as a behavioral intervention which decreases anxiety and increases empathy in students
Montero-Marín et al. (2013) [7]	Office workers	67	Stretching exercises	3 months; 10 minutes every day	MBI	The program of stretching exercises had a significant influence on the level of anxiety ( $p=0.004$ ) and burnout ( $p=0.025$ ). Other results concerned increased flexibility ( $p<0.001$ ); feeling less physical pain ( $p=0.001$ ); and enhanced vitality ( $p=0.016$ ).	A short program of stretching exercises at the workplace proved effective in reducing anxiety, pain and burnout. This kind of intervention may be perceived as a cost-effective strategy, serving to improve the well-being of employees.
Tsai et al. (2013) [8]	Banking and insurance workers	29	Exercises	12 weeks; twice a week; one group trained for 30 minutes and the other for 1 hour	MBI	After the intervention indicators of burnout and components of the metabolic syndrome were significantly improved in both groups (with higher and lower training intensity). The improvement was expressed by a reduction of waist circumference, systolic blood pressure, personal burnout and job-related burnout. There is a correlation between the burnout index and metabolic syndrome components and the intensity of training ( $p<0.05$ ). After accounting for potential confounding factors, it was found that the difference in waist circumference and systolic blood pressure was correlated with training intensity ( $p<0.05$ ).	This study demonstrated the influence of different intensity training on reduction of job burnout and metabolic syndrome components.

Varney & Buckle (2013) [9]	Workers	14	Aromatherapy	3 weeks	Developed by study authors: 0 – no burnout, 10 – high burnout	Although in both groups a reduction of the sense of job burnout was observed, it was significantly greater in the group receiving aromatherapy.	The results suggest that inhalation of essential oils may decrease the level of mental exhaustion/burnout experienced. Further research is needed.
Dias et al. (2012) [10]	Medical students	25	Electro-acupuncture	8 weeks	MBI	A significant decrease was observed (compared with controls) in the results of questionnaires assessing sleep: MSQ (Mini Sleep Questionnaire) ( $p=0.04$ ) and PSQI (Pittsburgh Sleep Quality Index) ( $p=0.006$ ). No significant influence on sleepiness during the day was detected. The study group showed a significant improvement of well-being and mood (Beck's scale), emotional exhaustion and cynicism.	Electro-acupuncture contributed to a significant decrease of stress-related symptoms, but as it involves inserting needles it is not possible to say what its actual influence was.
Martins et al. (2011) [11]	Employees of a pediatric hospital	74	Workshops organized by mental health specialists	2 workshops, 2.5 h each	MBI	No considerable differences detected on the frequency of burnout either in the experimental group ( $p=0.8$ ) or in both groups after the intervention ( $p=0.8$ ). The only observed difference was an improvement in depersonalization in the experimental group ( $p=0.031$ ).	The short intervention was not effective in decreasing the occurrence of burnout in pediatric workers, despite achieving an improvement in the area of depersonalization.
Le Blanc et al. (2007) [12]	Healthcare providers	664	Support group	6 months	MBI	Statistically significant decrease of emotional exhaustion ( $p<0.05$ ) and depersonalization ( $p<0.05$ ) in comparison with the control group.	The support group had the best effects in reducing burnout and depersonalization assessed 6 months after the intervention.
Kanji et al. (2006) [13]	Nursing students	93	Autogenic training and laughter therapy	8 weeks	MBI	Statistically significant reduction in state anxiety ( $p<0.001$ ) and trait anxiety ( $p<0.001$ ). No differences were detected in comparison with the control group as regards the level of burnout. After autogenic training blood pressure and pulse were significantly lower in the study group.	Autogenic training has at least a short-term effect of alleviating stress in nursing students.

Blonk et al. (2006) [14]	Employees returning to work after sick leave	122	CBT	4 months; 6-hourly sessions twice a week	MBI-NL	Statistically significant reduction of emotional exhaustion ( $p < 0.05$ ) and depersonalization ( $p < 0.01$ ).	Emotional exhaustion and depersonalization will significantly decrease during CBT.
Cohen-Katz et al. (2005) [15]	Nurses	25	Mindfulness (MBSR)	8 weeks; 20 minutes twice a week	MBI	A significant reduction of the level of job burnout in the studied group in comparison with the control group. However, no statistical methods were used in the study.	MBSR effectively increases a sense of relaxation and improvement in family and work relationships. In addition, participants noticed a lower level of anxiety and physical pain; they were able to better cope with difficult situations and demonstrated a lower level of job burnout.
Cohen & Gagin (2005) [16]	Healthcare providers	25	Psychosocial and communication skills development training	8 weeks	MBI	No statistically significant reduction of the level of emotional exhaustion ( $p > 0.005$ ), but a statistically significant reduction in the level of depersonalization was observed and participants reported a higher sense of personal accomplishment.	Authors emphasize that the study was conducted on a small group of participants and was a preliminary study, but that it demonstrates promising possibilities of reduction of burnout in healthcare providers. Further research is needed on the influence of skills development training on the reduction of burnout.
Van Rhenen et al. (2005) [17]	Employees of a telecommunications company	130	Relaxation training	8 weeks	UBOS	No statistically significant reduction of burnout either in short – or long-term.	Relaxation training did not influence the level of job burnout.
Żolnierczyk-Zreda (2005) [18]	Teachers	59	Relaxation and adaptive coping training	2 days; 6 hours each day (experimental group of 29 participants)	MBI	The study resulted in a statistically significant decrease of emotional exhaustion ( $p = 0.003$ ). No changes were detected in the level of depersonalization ( $p = 0.937$ ) and the observed increase in the sense of personal achievement was not significant ( $p = 0.616$ ).	The most important influence of the intervention was observed in the increase of control of work – participants were able to better manage their work environment. Relaxation training reduced emotional exhaustion and somatic ailments.

Van Dierendonck et al. (2005) [19]	Engineers	38	Transpersonal psychology (psychosynthesis)	10 days executed over 3 months	MBI	Statistically insignificant reduction of job burnout	Burnout prevention program based on psychosynthesis may be an effective tool in reducing burnout and increasing the sense of happiness, emotional intelligence and spirituality, but further research is necessary.
Sluiter et al. (2005) [20]	Pediatric nurses	61	Supervision	3 months; 30 minutes a day, 2 days a week	MBI	Statistically significant decrease of emotional exhaustion (p=0.009). No control group.	Emotional exhaustion decreased in the course of the study.
Bittman et al. (2003) [21]	Office workers	112	Recreational music-making	6 weeks	MBI	A statistically significant reduction of burnout was observed along with an improvement of mood in the study group compared with the control group. Economic analysis envisages savings of \$ 89,100 per typical firm with 100 employees. Prospective long-term savings for such a firm amount to 1460000 EUR	6 sessions of recreational music-making significantly reduced the level of burnout and improved participants' mood, and in the long term brought significant economic benefits.
Ewers et al. (2002) [22]	Nurses	33	Psychosocial skills training	6 months	MBI	Statistically significant decrease of burnout in comparison with the control group.	Providing nurses with the training enables them to better understand their patients' severe mental illnesses and helps them to assume a more positive attitude towards them. They experience less of the negative effects of stress resulting from their caregiver role.
Te Brake et al. (2001) [23]	Dentists	171	CBT	1 month	MBI-NL	Significant reduction of the level of job burnout in comparison with the control group 1 year after the intervention.	A year after CBT the achieved reduction of job burnout did not decrease. No changes were recorded in the control group in that period.

Gorter et al. (2001) [24]	Dentists	19	CBT	6 months	MBI-NL	Significant reduction of job burnout in comparison with the control group.	6 months after the therapy the effects of reduction of burnout did not decrease. In addition, combining different forms of burnout self-prevention may also give positive results, although further research is necessary.
Ossebaard (2000) [25]	Staff on addictions ward	42	Relaxation with a brainwave synchronizer	8 weeks	MBI	No statistically significant changes in job burnout were detected in comparison with the control group ( $p=ns$ ). Also, no significant changes in the level of experienced anxiety were observed either before or after therapy, or in comparison with the control group.	Relaxation with a brainwave synchronizer does not reduce the level of job burnout or anxiety.

CBT, cognitive-behavioral therapy; MBI, Maslach Burnout Inventory; MBI-NL, MBI German version; MBSR, mindfulness-based stress reduction; UBOS, Utecht Burnout Scale; MBI Dutch version

### Reduction of job burnout

In most publications (64.64%) authors managed to achieve the intended reduction of burnout. Of the 22 studies reviewed, psychological intervention was chosen in 54%. The techniques most commonly applied and also the most effective in reducing burnout were those used in psychotherapeutic interventions. Frequently, an auxiliary factor was a support group which, combined with training, enhances therapeutic effects. Few studies referred to techniques applied in the somatic sphere, e.g. physical exercises, which however proved to be highly effective. The combination of group support with training resulted in the longest maintenance of burnout reduction (up to 6 months after the end of the study): the results of the emotional exhaustion (EE) and depersonalisation (DP) scales compared with the control group remained at the level of  $p<0.05$ . An example of this is a series of strengthening and stretching exercises performed for 10 minutes each day for a period of 3 months. Although only 14% of the publications used physical exercise, they demonstrat-

ed the highest effectiveness in eliminating the symptoms of job burnout [7].

### CONCLUSIONS

Differences in the methodology used to assess job burnout in the reviewed studies make it difficult to compare the selected literature. In most studies assessment was performed using the MBI questionnaire. The MBI was developed in 1981 by Christine Maslach and Susan Jackson and is currently the most frequently used tool to study the job burnout phenomenon. According to Savicki & Cooley, we may talk about burnout when scores for all the subscales are elevated, however, no critical values have been determined [26]. Due to the screening nature of this tool, the results obtained should be viewed as a general reflection of the individual's mental state, not as a medical diagnosis.

Although the most frequently proposed therapy method was mindfulness, it proved to have different effects on different study groups. In the 301 examined students no significant changes

in the level of burnout were detected [5,6] while in 25 nurses the effects were significant [15]. The authors (Khoury et al.) of a meta-analysis on mindfulness explain that it has scant influence on the parameters of job burnout. Authors of another publication emphasize that the effects of mindfulness were negligible when compared with the control group, and certainly weaker than the effects of psychotherapy [27]. Special attention should be given to CBT and other forms of psychotherapeutic work, as in every cited study, irrespective of the length of therapy (1, 4 or 6 months), it had positive effects [14,23,24]. What is important, the positive effects, such as reduced risk of burnout, were maintained a year later [23]. Another significant factor was the support received either in the form of training sessions or lectures, or through support groups. It appears that the basic information (eg. the disease with which it faces) significantly reduces the level of burnout [22]. The received support diminishes stress, anxiety and depression experienced at work and is a significant factor in reducing job burnout and other consequences of the chronic stress of daily life [28]. Similarly, all forms of physical activity, be it stretching or strengthening exercises, became an important factor in job burnout reduction. Moreover, this kind of intervention may be perceived as a low-cost strategy, serving to improve the well-being of employees [7]. What is important, a higher level of mental and physical well-being is accompanied by a higher level of declared stress-coping ability and lower level of helplessness [29]. The combination of a support group and exercises resulted in the best results regarding the reduction of a risk of burnout 6 months after the end of the study. This confirms the psychosomatic aspect of burnout [1], but also sheds new light on the possibilities for a reduction based on the psychomotor model.

Critical analysis of the selected publications leads us to conclude that the available literature on this subject lacks research projects of a biopsychosocial nature, which would take into account all three perspectives – biological, psychological and social. Such an approach seems necessary and justified in studying job burnout. The most effective method of burnout reduction was combining psychotherapeutic techniques with support groups and exercise. The psycho-

therapeutic techniques are very effective but often depend on the therapeutic group, which is not sufficient. The strategy of low-cost physical exercise in the workplace brings the best results.

## LIMITATIONS

The limitations of the study result from the nature of cited research. The basic problem consists in significant differences in methodology in individual research projects, the duration of therapeutic interventions and the description of obtained results. At present it is not possible to perform a reliable meta-analysis of the available results. It is therefore necessary to standardize research methods and use more detailed descriptions of study groups and results. Job burnout is still a “new” topic, but at the same time it is a very promising one in terms of development of research in this field.

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