

# OCCUPATIONAL BURNOUT AMONG UNIFORMED SERVICES – CAUSES AND WAYS TO COUNTERACT IT ON THE EXAMPLE OF FIREFIGHTERS

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## Abstract

In its broadest sense, how people function in the work environment is a point of interest for researchers from many scientific disciplines. Currently, research tends to focus increasingly on issues related to stress experienced in the workplace, various coping strategies and consequences manifested in many spheres of human life. Adverse working conditions can contribute to the emergence of the burnout syndrome, resulting, according to the classical concept, from a mismatch between the employees' intentions and realities of the job caused by inadequate coping strategies. Professional burnout has diverse effects on wellbeing and health of employees. Firefighters are particularly exposed to the adverse impact of stress and professional burnout. This paper presents the phenomenon of professional burnout, an analysis of its causes, symptoms and consequences, as well as methods of its prevention. Original articles and case reports on firefighter burnout published from January 2002 to November 2022 were reviewed in Web of Science. The review identified the problem of burnout in the professional group of firefighters including potential directions for burnout prevention.

**Keywords:** firefighter, stress, professional burnout, mental health

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## **1. Introduction**

Professional activity is an inherent part of human life. Over the past few decades, the phenomenon of burnout has been the subject of much research. Concepts and theoretical models have been developed to better understand both its causes and consequences. The prevalence of professional burnout, both in the context of the individual and the society, has been discussed in the several publications (Sęk, 2004; Maslach, Leiter, 2011; Maslach, 2010).

Literature defines burnout as a state of physical, emotional and mental exhaustion caused by prolonged stress (Maslach, 2000). Burnout is the result of the effects of chronic stressors which, over time, undermine resilience or the ability to cope with challenging situations. It can affect individuals and their co-workers.

Firefighters are an occupational group particularly vulnerable to stressful situations. Previous research has shown that they are regularly exposed both to chronic stress and traumatic events (Makara-Studzinska, Golonka, Izydorczyk, 2019; Makara-Studzinska, 2022; Makara-Studzinska, Wajda, Lizińczyk, 2020). Sources of chronic stress in the firefighting profession include poor control over work events, low pay, fear of losing the job, insufficient resources to ensure that duties are performed properly, working shifts and obligation of being on duty. Traumatic stress, on the other hand, encompasses events directly related to interventions, including direct threats to one's own life and the life and health of co-workers, and being a witness to other people's tragedies, and often death (Ogińska-Bulik, Kaflik-Pieróg, 2003; Sattler, Boyd, Kirsch, 2014).

Firefighters often experience severe psychological symptoms such as post-traumatic stress disorder (PTSD), burnout syndrome or depression. They are confronted with life-threatening situations, having to function in a state of constant tension and remain vigilant in anticipation of a call for help. Studies (Smith et al., 2018) have shown that occupational stress among firefighters and the conflict between fulfilling professional and social roles are predictors of job burnout, which in turn is associated with fewer behaviours leading to work safety. Risk factors for burnout are defined as young age, female gender, low education and lack of social and family support (Kindermann et al., 2020).

The purpose of this paper was to present the problem of occupational burnout in a group of firefighters, its background and ways of coping with stressful situations leading to the burnout syndrome. Given the social importance of firefighters' work and the great responsibility that comes with it, the prevention and mitigation of symptoms due to occupational burnout becomes an essential element of concern for wellbeing in this professional group. Defining the problem, identifying its underlying causes and consequences can be crucial to counteracting the professional burnout syndrome and reducing its social costs.

## 2. Materials and Methods

Original articles and case reports on firefighter burnout were reviewed in the Web of Science found after search based on keywords, such as firefighter, stress, professional burnout. Literature published in English or Polish was preferred, and time limits were set from January 2002 to November 2022. A total of 1,417 results were obtained, of which 20 literature items were analysed.

## 3. Results

### 3.1. Definition of burnout, its determinants and effects

Professional burnout is most often associated with chronic stress at work. The impact of working conditions on employees' health are relatively well understood (Seidler et al., 2014). Unfavourable working conditions can lead to professional burnout characterized by exhaustion, negative attitudes or lack of commitment to one's work, indifference towards the workplace and colleagues and ultimately dissatisfaction with own work performance. The consequences of burnout affect employees, their families and immediate environment, work situations and the organization itself (Maslach, Schaufeli, Leiter, 2001). From a psychosocial perspective, three dimensions of burnout are discussed in literature (Maslach, Schaufeli, Leiter, 2001; Maslach, Leiter, 2016); the first one, emotional exhaustion; the second one, depersonalization or cynicism, understood as detachment from work and emotional hardening, and finally, a sense of personal or professional ineffectiveness, as well as reduced productivity and inability to cope with the tasks assigned.

The term 'professional burnout' first appeared in the literature in the 1970s in a research paper by American psychologist Herbert J. Fruedenberger (1974) who defined professional burnout as a state of fatigue and frustration resulting from dedication to a cause, a way of life, or a relationship, which does not produce the expected outcome (Freudenberger, 1974). In her work, Sęk pointed out that "civilizational changes and growing demands on social services have resulted in an increasing psychological cost to teachers, doctors, nurses, social workers, emergency workers, police officers and others in their work" (Sęk, 2004). The stress associated with these professions and difficulties in coping with it can cause exhaustion, chronic fatigue and lack of job satisfaction. According to literature, distancing oneself and losing commitment are ways of coping with pressures (Sęk, 2004).

Maslach and Jackson define professional burnout syndrome as "(...) a psychological syndrome of emotional exhaustion, depersonalization, and reduced sense of personal achievements (...)" (Maslach, 2000). Maslach considers

professional burnout to be an ongoing “sense of inadequacy at work that gives rise to serious outcomes. He also describes burnout as (...) a syndrome that consists of emotional exhaustion, depersonalization and a lowering of the evaluation of one’s own professional achievements. Emotional exhaustion refers to feelings of emotional overload and a significant reduction in energy resources as a result of contact with others. Depersonalization, on the other hand, involves a negative, often callous, or at best overly indifferent reaction to other people who are the recipients of the person’s help (...)” (Maslach, 2010). Lowered appraisal of one’s performance also refers to a radical decline in the sense own competence and a loss of confidence in one’s ability to succeed professionally (Maslach, 2010).

Maslach Burnout Inventory (MBI) is a widely applied and standardized tool (Chirkowska-Smolak, Kleka, 2011) used to measure professional burnout (Maslach, 2000) and more specifically to assess emotional exhaustion, depersonalization and a sense of personal achievement. It allows comparing the results across different populations and cultural backgrounds.

Another widely used tool is the Oldenburg Burnout Inventory (OLBI) (Demerouti et al., 2003), which assesses the two dimensions of exhaustion and lack of commitment to work. Other measures of burnout focus solely on exhaustion although they distinguish between different aspects of it (Halbesleben, Demerouti, 2003).

According to Aronson, professional burnout is a psychological condition that often occurs in groups of people who work with others and who, in their professional relationships, offer help or are service providers. Furthermore, Aronson suggests that burnout mainly affects people who work in professions that involve helping others (Aronson, Wilson, Akert 1997).

Litzke (2007), on the other hand, points out that the professional burnout syndrome develops as a result of an ill-balanced interplay between what the world demands of a person and that person’s ability to bear the burden. It also depends on the personal ability to properly self-manage and recuperate. He also outlines the following stages of the professional burnout process (Litzke, 2007):

- Stage 1 – compulsion to constantly prove one’s worth. Excessively high expectations of oneself and the desire to work effectively can subsequently lead to a decline in one’s ability to assess personal limitations and resources. The key moment is to see the fine line between reaching the desired results and the inner compulsion to be self-sufficient and determine the right pace of work.
- Stage 2 – further disapproval of limitations, causing the employee to continue with the gruelling tasks in the process of trying to confirm their self-worth. Saying ‘no’ to a task is understood as a waste of time.
- Stage 3 – ambitions are put aside, the person starts to disregard them and turns to alcohol, cigarettes, psychoactive drugs, coffee, sleeping pills.

- Stage 4 – an imbalance occurs between one's own needs and external demands. A person has less and less vitality, lowered energy and suffers exhaustion on the physical, emotional and cognitive levels.
- Stage 5 – a re-evaluation of priorities. Life goals are suppressed, limited, irrelevant, interpersonal contacts are marginalized, sense of perception is weakened.
- Stage 6 – isolation from the world, ironic attitudes, lack of self-control and self-acceptance, a person begins to be hostile towards others, various physical symptoms appear.
- Stage 7 – further isolation and withdrawal occur. All actions become automatic, hope for improvement is lost, the external environment is perceived as hostile. The person begins to escape from reality by falling into drug addiction or alcoholism.
- Stage 8 – behavioural changes, isolation deepens, support from loved ones is treated as an attack, paranoid responses may occur.
- Stage 9 – loss of identity, all actions are performed automatically.
- Stage 10 – feelings of emptiness, discouragement, doubt, resignation, phobias, fear of society, panic attacks.
- Stage 11 – exacerbation of symptoms from earlier stages, onset of emotional pain, despair, fatigue, depression with suicidal thoughts.
- Stage 12 – total exhaustion in all spheres referred to as fully blown burnout, increased susceptibility to illness.

As outlined above, the symptoms of burnout vary. Among the most important are physical fatigue, somatic and functional dysfunctions, outbursts of anger or irritability, periods of inactivity at work, initiating conflicts at work, changing behaviour and lack of identification with the profession. Maslach (2010) also mentions being overwhelmed, stressed, exhausted, lacking energy or commitment to work.

### **3.2. Basics of operation, responsibilities of the fire department**

The State Fire Service is a professional, uniformed formation equipped with specialized equipment, designed to fight fires and to overcome natural disasters and other local threats.

The basic tasks of the State Fire Service include (Smith, 2018):

- identification of fire hazards and other local dangers;
- organizing and conducting rescue operations during fires, natural disasters or elimination of local threats;
- performing auxiliary specialized rescue operations during natural disasters or elimination of local threats by other rescue services;
- training of personnel for the needs of the State Fire Service and other fire protection units and the general civil protection system;
- supervision of compliance with fire regulations;

- conducting scientific and research work in the field of fire protection and civil protection;
- cooperation with the Head of the National Criminal Information Centre to the extent necessary to carry out his statutory tasks;
- cooperation with fire departments and rescue services of other countries and their international organizations on the basis of international agreements binding the Republic of Poland and separate relevant regulations;
- implementation of other tasks arising from international agreements binding to the Republic of Poland on the principles and to the extent specified therein.

### **3.3. Professional burnout in the context of firefighters' work – causes, effects**

Maslach points out that the burnout syndrome particularly affects professions linked to social services that require working directly with people, personal commitment, social skills and helping others. Among the professional groups at risk are firefighters (Sęk, 2004; Rosca et al., 2021). Considering the social importance of the work performed by this professional group and the great responsibility their service requires, prevention and mitigation of burnout symptoms become extremely relevant (Sawhney et al., 2017).

The working environment of firefighters has been the subject of much research (Makara-Studzinska, Golonka, Izydorczyk, 2019; Makara-Studzinska, 2022; Makara-Studzinska, Wajda, Lizińczyk, 2020). A study involving a group of Polish firefighters has shown that seniority is linked to a higher severity of stress and job burnout. Self-efficacy, on the other hand, has an impact both on reducing feelings of stress and on all other aspects of professional burnout (Makara-Studzinska, Wajda, Lizińczyk, 2020).

Potential physical, thermal, ergonomic and chemical hazards along with the effects of traumatic events were also analysed. Factors associated with firefighters' work that may contribute to an increased sense of stress include extreme physical and psychological demands, strain on the cardiovascular system during exertion in difficult physical and chemical conditions and when exposed to extreme danger, and altered circadian rhythm due to shift work (Kim et al., 2020). Shift work contributes to sleep disturbances, decreased productivity and is behind adverse health-related behaviours (Ángelo, Chambel, 2015; Katsavouni, 2016). Continuous exposure to occupational stressors can result in short- and long-term health consequences. Short-term consequences include temporary deterioration of respiratory and vascular function, arterial stiffness and altered cardiovascular parameters (Kwon et al., 2018). Long-term consequences include the development of chronic cardiovascular disease, respiratory disease, cancer or depressive disorders (Gianniou et al., 2018). The problem of suicide and suicide attempts is also significant among firefighters (Stanley et al., 2015). Among other things,

it has been shown that being female is a risk factor for suicidal thoughts among firefighters (Park et al., 2019).

The work of An et al (2015) has demonstrated that high levels of stress rooted in a firefighters' organizational system results in a significantly higher risk of depression. Stress associated with the organizational system has been largely related to the ways in which employees perceive the fairness of their organization, the level of organizational support available and whether they believed their position and professional progress were appropriate to their skills (Igboanugo, Bigelow, Mielke, 2021). Similarly, the authors (Ângelo, Chambel, 2015) noted that firefighters' perceptions of increased organizational demands predicted the likelihood of burnout, which in turn was associated with altered perceptions of their occupation. A positive relationship between job demands and exhaustion among firefighters was also indicated in a study by Rosca et al (Rosca et al., 2021). A sense of importance of the job was associated with lower levels of exhaustion in firefighters. The buffering effect of job demands on work-related exhaustion was also demonstrated.

Other effects of long-term stress on firefighters cited in publications include depression, anxiety, excessive alcohol consumption, impaired sleep quality, musculoskeletal problems and gastrointestinal disorders (Freudenberger, 1974). Furthermore, it has been suggested that firefighters' health resilience in a situation of occupational stressors may be moderated by personality traits such as self-esteem, social support and stress tolerance (Igboanugo, Bigelow, Mielke, 2021).

#### **3.4. Methods to counteract burnout in firefighters - prevention, treatment**

Professional burnout is one of the consequences of stress experienced at work, and therefore it can be argued that preventing it would help minimise the danger of burnout syndrome. Certain symptoms usually appear before professional burnout develops fully. Accurate self-diagnosis makes it possible to take remedial action and trigger change in the desired direction. Preventive measures for the resolution of professional burnout are also possible in the firefighter milieu. Physical activity, rest, relaxation and having hobbies are considered to be of great importance (Starostka, 2007; Gembalska-Kwiecień, 2017; Aburumman, Newman, Fildes 2019). Professional burnout is largely influenced by the quality of working environment; the safer and more employee-friendly the environment, the lower the incidence of burnout which is also easier to eliminate over time (Găureanu, Draghici, Weinschrott, 2019).

One of the most important resources, understood as potential and strengths that employees can use to balance excessive demands, is resilience, which is often described as a cognitive factor that helps with adaptation to difficult circumstances, despite previous adverse experiences. Resilience has been found to reduce the likelihood of psychiatric problems (Luthar, Cicchetti, 2000; Green et al., 2010). Employees who have support among their loved ones, and a sense of appreciation



among colleagues, tend to have greater resilience to the impact of adverse working conditions. A strengthened sense of self-esteem helps them balance the demands placed on them in the workplace. It has been observed that resilience buffers the impact of traumatic work-related events on the development of burnout symptoms in firefighters (Lee et al., 2014).

Another key factor that minimises the occurrence of the burnout syndrome among firefighters is self-esteem. It appears that low self-esteem is the variable that has the strongest association with an increased risk of depressive symptoms. Raising self-esteem in employees can undoubtedly reduce the chance of burnout, as well as contribute to improving the functioning of the Firefighting Service as such (Lee et al., 2014).

A resource that promotes resilience is also the ability to endure negative emotional or physical states, which can be captured by levels of distress tolerance or self-efficacy. Stanley et al. (Stanley et al., 2017) showed in their study conducted among American firefighters that stress tolerance was even able to mitigate the risk of suicide among firefighters. Also, in a similarly large group of 57 Polish firefighters, Makara-Studzinska et al. (2022) observed that self-efficacy clearly mitigated the effect of perceived stress on firefighters' burnout.

In a study conducted on a group of 121 rescue workers (firefighters, ambulance personnel), resilience was shown to act as a moderator of the effect of stress on emotional exhaustion and aspects of depersonalization (Vagni et al., 2022).

Other examples found in literature indicate another resource, social support, as being consistent with the previous work indicating that the sense of community may be an important predictor of mental health in firefighters (Tuckey, Hayward, 2011). It has been also shown that as the level of perceived support decreases, whether the source is one's superiors, family or friends, the manifestation of symptoms related to depression tends to increase. An association between psychosocial stress and suicidal thoughts has been proven only among firefighters who have reported inadequate levels of social support (Carpenter et al., 2015).

A number of activities can counteract the burnout syndrome also among firefighters. Regular physical activity, systematic breathing exercises, rest and recuperation as well as following a balanced diet are often mentioned in this context. Taking care of interpersonal contacts in particular relationships with relatives and friends is also an important aspect. A social network provides an opportunity to talk to loved ones about problems or just being aware of their support, which adds to our personal strength in stressful situations and helps us cope with reality. Visits to a psychologist can be beneficial; in many cases, regular use of professional assistance may be helpful when it comes to facing problems.

Research suggests that organizations can combat job burnout by providing (Lafuente, Abad, 2018; Stoffregen, Giordano, Lee 2019):

- stress management (especially addressing the causes of stress);
- stress relief (team building, training);
- helping employees to find sources of stress and to neutralise or reduce stress;



- changing employees' perceptions and evaluations of stressful situations;
- social support (company atmosphere and culture have a huge impact on incidence of burnout).

The consequences of firefighter burnout for the organisations themselves prompt managers and decision-makers to seek solutions, such as implementing mental health training programmes to mitigate the effects of the burnout syndrome. Interventions meant to protect the mental health of service personnel typically tend to focus on building resilience and coping with occupational stress (Di Nota et al., 2021; Kim et al., 2019; Dan, Roşca, Mateizer, 2020; Gulliver et al., 2019).

This knowledge can provide an important contribution to designing therapeutic programs for employees at high risk of burnout, including firefighters.

#### 4. Conclusion

This paper focuses on professional burnout among firefighters. The comparison of different aspects of professional burnout (including its determinants and consequences) in this professional group seems interesting and relevant, both from the point of view of burnout theory and from the perspective of the public work firefighters perform.

The severity or risk of professional burnout can be reduced by looking for the sources of stress and neutralizing or reducing it by employees themselves, changing employees' perceptions and evaluations of stressful situations, or ensuring good atmosphere and positive culture in the organization.

The prevention of professional burnout is most often discussed alongside the prevention of occupational stress. Although it seems to be an oversimplification, from the point of view of raising awareness of professional burnout, it is advisable to combine the issue of work stress prevention and the prevention of professional burnout which allows a broader overview of the problem, while at the same time analysing the specifics of the profession.

Results of the analysis point to the need of further research on burnout syndrome, especially to seek methods that allow preventing the adverse effects. The work points to suggestions for fire department executives on actions related to preventing the onset of burnout. In the first place, it would be necessary to reduce the intensity of stress through team building, carrying out workshops and training sessions, where knowledge concerning methods of de-stressing in stressful situations would be imparted. It is important to look for other ways to help employees find sources of stress and neutralize or reduce stress.

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## WYPALENIE ZAWODOWE WŚRÓD SŁUŻB MUNDUROWYCH – PRZYCZYNY I SPOSOBY PRZECIWDZIAŁANIA NA PRZYKŁADZIE STRAŻAKÓW

### Abstrakt

W najszerszym ujęciu funkcjonowanie człowieka w środowisku pracy jest punktem zainteresowania badaczy z wielu dyscyplin naukowych. Obecnie badania coraz częściej koncentrują się na zagadnieniach związanych ze stresem doświadczanym w miejscu pracy, różnymi strategiami radzenia sobie z nim oraz konsekwencjami przejawiającymi się w wielu sferach życia człowieka. Niekorzystne warunki pracy mogą przyczynić się do powstania zespołu wypalenia zawodowego, wynikającego, zgodnie z klasyczną koncepcją, z niedopasowania intencji pracowników do realiów pracy, spowodowanego nieadekwatnymi strategiami radzenia sobie. Wypalenie zawodowe ma szereg skutków dla samopoczucia i zdrowia pracowników. Strażacy są szczególnie narażeni na negatywne skutki stresu i wypalenia zawodowego. W artykule przedstawiono zjawisko wypalenia zawodowego, analizę jego przyczyn, objawów i konsekwencji, a także metody jego zapobiegania. Dokonano przeglądu oryginalnych artykułów i opisów przypadków dotyczących wypalenia zawodowego strażaków opublikowanych od stycznia 2002 r. do listopada 2022 r. w bazie Web of Science. W wyniku przeglądu określono problem wypalenia zawodowego w grupie zawodowej strażaków, a także możliwe kierunki profilaktyki wypalenia

**Słowa kluczowe:** strażak, stres, wypalenie zawodowe, zdrowie psychiczne