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ARTYKUŁY
[*Articles*]

COGNITIVE-BEHAVIORAL THERAPY IN THE TREATMENT OF POST-TRAUMATIC STRESS DISORDER (PTSD) IN THE GROUP OF PROFESSIONAL FIREFIGHTERS – A REVIEW OF STUDIES

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TERAPIA POZNAWCZO-BEHAWIORALNA
W LECZENIU ZESPOŁU STRESU POURAZOWEGO (PTSD)
W GRUPIE ZAWODOWEJ STRAŻAKÓW – PRZEGLĄD BADAŃ

Summary. Officers of the State Fire Service experience many stressful events, often associated with a threat to their own and other people's lives. Due to their nature, they can lead to the development of Post-Traumatic Stress Syndrome, and therefore require psychological help. The effectiveness of cognitive-behavioral techniques in the treatment of PTSD has been confirmed in numerous studies around the world in various groups of people. The aim of this article is to present the current state of research on the effectiveness of cognitive behavioral therapy in the treatment of post-traumatic stress disorder in the group of firefighters.
Key words: post-traumatic stress disorder, cognitive behavioral therapy, firefighters

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Introduction

The profession of firefighting involves high exposure to a permanent state of tension and stress. It is associated with responsibility for the life, health, and safety of others. The main factors associated with occupational stress which firefighters are exposed to include the aforementioned life-threatening situations, but also severe injuries, pain and suffering, and the death of those injured in incidents such as accidents, fires or drownings (Popiel, Pragłowska, 2009; Kliszcz, 2012; Zawadzki, Popiel, 2014; Ogińska-Bulik, 2015; Oskwarek, Tokarska-Rodak, 2018; Makara-Studzińska, Wajda, Lizińczyk, 2020; Popiel et al., 2020; Wagner et al., 2021). These situations fit into the definition of trauma (injury), which provides that it is: "a mental or physical state caused by the action of real life-threatening external factors (nature, people), often leading to profound and long-lasting changes in human functioning, which are expressed in somatic and mental disorders" (Zawadzki, Strelau, 2008, p. 47). Participation in a traumatic event, combined with the experience of severe helplessness or a threat to health or life, resulting in difficulties in recovery and functioning preceding the experience can cause the development of Post-Traumatic Stress Disorder (PTSD) (Ogińska-Bulik, 2015; Morrison, 2016; Popiel et al., 2020).

The purpose of this article is to present the current state of research on the effectiveness of Cognitive Behavioral Therapy (CBT) in the treatment of post-traumatic stress disorder. The review of the research focuses on a professional group – firefighters, due to the aforementioned factors related to the characteristics of their work. The effectiveness of cognitive-behavioral techniques in the treatment of PTSD has been confirmed in numerous domestic and foreign studies (Fisher, Etches, 2003; Meyer et al., 2012; Skogstad et al., 2013; Popiel, 2015; Popiel et al., 2020; Im, Kwak, 2021). Studies are also available on the effectiveness of pharmacotherapy, relaxation techniques or exposure in the treatment of PTSD (Popiel, 2015; Ash-Maheux et al., 2018).

I. Post-traumatic stress disorder (PTSD) F 43.1 – epidemiology and characteristics

The first descriptions of disorders caused by very difficult and frightening experiences can be found in ancient writers. In Homer's Odyssey, for example, in the description of recurring intrusive scenes playing out in the mind of Odysseus. Shakespeare, on the other hand, in Henry IV, described that after returning from the war, the main character experienced a loss of former interests, a search for solitude, excessive agitation, and reliving images from battle in his dreams (Dudek, 2003; Makara-Studzińska, Partyka, Ziemecki, 2012).

A significant increase of interest in psychological disorders caused by traumatic experiences and the development of research in this field occurred during World War I. At the time, it was called "artillery shock." The subsequent experience, World

War II provided clear evidence that war stress was the cause of many psychological, somatic and behavioral disorders (Friedman, Terence, Resick, 2010; Makara-Studzińska, Partyka, Ziemecki, 2012; Jakubiak, 2021). In the 1960s and 1970s, there was a renewed interest in the issue. This was due to the Vietnam War and the huge number of veterans who began to reveal various pathologies upon their return home. These included aggressive behavior, suicide, depression, alcohol, or drug abuse, among others. It also happened that veterans engaged in criminal activity. They very often manifested psychosomatic disorders, suffered from persistent anxiety and nightmarish dreams, and isolated themselves. Moreover, they presented strong emotional inhibition and an inability to talk about their experiences (Dudek, 2003; Baird et al., 2018; Rubin et al., 2020; Livingston et al., 2021). Subsequent observations of people who have experienced traumatic accidents, acts of violence, or disasters have shown that they manifest very similar symptoms to those affected by war (Dudek, 2003; Makara-Studzińska, Partyka, Ziemecki, 2012; Baird et al., 2018; Fekadu et al., 2019; Jakubiak, 2021; Livingston et al., 2021).

Years of research and accumulated material on post-traumatic stress resulted, in 1980, in the introduction of a new disease entity, post-traumatic stress disorder (PTSD), into the Diagnostic and Statistical Manual (DSM-3). The term was then used to describe an anxiety disorder caused by an unusual, extremely stressful event. It was thus recognized that a persistent disorder in healthy people could be caused by an external factor, such as an extremely unpleasant, difficult, and stressful experience (Rosen et al., 2010; Ogińska-Bulik, 2015; Morrison, 2016).

The definition of PTSD has evolved over the years. Among other things, an important criterion relating to the duration of symptoms has been added to it. A significant distinction was made, stating that a shock reaction occurring immediately after a traumatic event does not yet constitute post-traumatic stress disorder. It is treated as a natural reflex for human adaptation to the situation. By using the criterion of the time of onset and duration of the reaction to the experience, Acute Stress Reaction (ASR), Acute Stress Disorder (ASD) and Post-Traumatic Stress Disorder (PTSD) were distinguished. Symptoms of Acute Stress Reaction can appear "immediately" – up to an hour after exposure to a stressor. They can involve a mental or physical reaction of exceptional severity and usually fade gradually, up to 48 hours after the event. When symptoms do not subside after this time, the period when acute stress disorder can be diagnosed begins. It lasts at least two days and can occur within four consecutive weeks of the traumatic event. ASD can be diagnosed in people who have been involved in a traumatic event and manifest PTSD symptoms that last less than a month. Symptoms lasting longer than a month, on the other hand, meet the time criterion for the diagnosis of post-traumatic stress disorder (Odachowska, 2013; Zawadzki, Popiel, 2014; Morrison, 2016; Pietkiewicz, Tomalski, 2018; Reisick, Monson, Chard, 2019; Popiel et al., 2020). The distribution of the above-described disorders with time dependence is shown in the figure below.

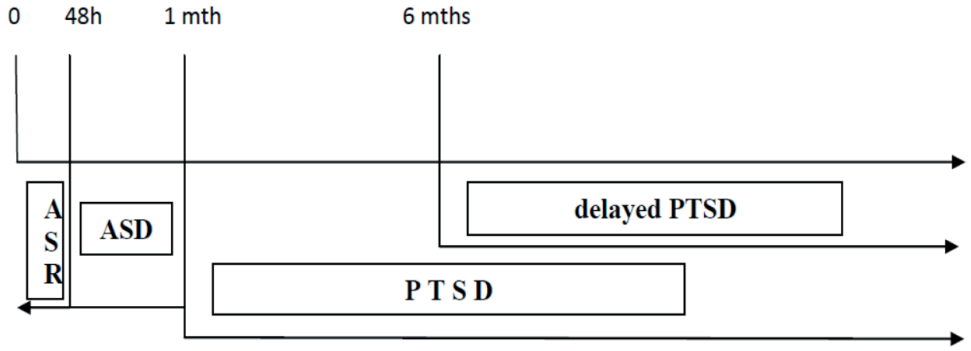

Figure 1. Occurrence of types of post-stress disorders over time
Source: own study.

The diagnostic criteria for making a diagnosis of PTSD (F 43.1), according to the ICD-10 (2000) classification, are as follows:

A. The patient has been exposed to a stressful event or situation (impacting for a short or long time) with extremely threatening or catastrophic characteristics that would cause penetrating suffering in almost anyone;

B. There is a persistent recollection or "re-living" of the stressor in the form of disruptive "flashes", vivid memories, or recurring dreams, or in the form of feeling worse when confronted with circumstances reminiscent of or related to the stressor;

C. The patient currently avoids or prefers to avoid circumstances reminiscent of or related to the stressor, which was not present prior to exposure to the stressor;

D. Any of the following is present:

(1) Partial or complete inability to recall certain important circumstances of contact with the stressor,

(2) Persistent symptoms of increased psychological sensitivity and a state of arousal (not present prior to contact with the stressor), in the form of any of the following:
   (a) difficulty falling asleep or sustaining sleep,
   (b) irritability or outbursts of anger,
   (c) difficulty concentrating,
   (d) excessive alertness,
   (e) increased surprise reaction;

E. All of criteria B, C and D were met either within 6 months of the stressful event or from the end of the period of exposure to the stressor (for some purposes, onset delayed by more than 6 months can also be included, but this should be made clear) (Pużyński, Wciórka, 2000, pp. 127–128).

The ICD 11, which was introduced for diagnostic use in 2018, introduced a new subcategory for traumatic stress disorder, namely *Complex Post-Traumatic Stress Disorder* (CPTSD). PTSD symptoms reduce the ability to cope with multiple traumas.

This is an aspect that the CPTSD diagnosis has been expanded. In individuals who have experienced more than one traumatic event, additional symptoms can be observed, related to, among other things, disturbances in affect regulation, impulsivity, attention and awareness, as well as distorted self-perception, difficulties in relationships with others or somatization and even suicidal behavior (Wilson, Guliani, Boichev, 2016; Gerber et al., 2018; Hendriks et al., 2018; Lanza, Roysircar, Rodgers, 2018; Stanley et al., 2018; WHO, 2018; Krawczyk, Święcicki, 2020).

One of the main factors contributing to the development of post-traumatic stress reactions in firefighters is at least the aforementioned exposure to potentially traumatic events. This is an aspect inherent, so to speak, in the characteristics of this profession. Most survivors of a traumatic event can expect not to be exposed to a similar trauma again during their recovery. Firefighters, on the other hand, cannot count on this natural period of calm that promotes recovery. While doing their job, they are aware that another traumatic event is only a matter of time (Ogińska-Bulik, Kaflik-Pieróg, 2006; Ogińska-Bulik, 2015; Boyd et al., 2018; Juczyński, Ogińska-Bulik, 2018; Straud et al., 2018; Popiel et al., 2020; Langtry et al., 2021). The higher the level of traumatic stress symptoms, the lower the satisfaction with service, the greater the readiness to leave service, the greater the physical and mental fatigue, and the worse the functioning in private life (Lee et al., 2014; McCanlies et al., 2014; Katsavouni et al., 2015; Onyedire et al., 2017; Theleritis et al., 2020; Mohamad, Ali, Makhbul, 2021).

There are few studies focusing on the relationship between traumatic experience and functioning in professional roles among Polish firefighters. The Institute of Occupational Medicine in Lodz, Poland, conducted a study in 2000 in a group of 974 firefighters to investigate the prevalence of PTSD in this group. It turned out that participation in service-related traumatic events was common. The vast majority, 86%, of the firefighters surveyed said they had participated in such an event, and 79% of them estimated that they had more than once. Half of the incidents described by the respondents were related to fires, 23% were related to accidents in action, while the rest of the situations involved, for example, accidents, the extraction of victims after a gas explosion, people who sank or died many days ago. The dominant emotion they experienced was compassion, but helplessness and fear were also disturbingly common. Emotions most associated with the presence of PTSD symptoms. A group representing 4.9% of surveyed firefighters who manifested symptoms from the PTSD spectrum that lasted or have lasted at least a month was also revealed (Koniarek, Dudek, 2007).

In 2018, another large study was conducted in the population of Polish firefighters, which resulted in the construction of a prevention program for this professional group. Tailored to the needs and expectations of this professional group, the program has proven to be a very valuable tool in preventing the negative effects of the occupational stress experienced. It is especially important for firefighters with the shortest length of service, as it shows how to deal constructively with occupational stresses (Popiel et al., 2020).

II. Therapeutic recommendations

The National Institute for Health and Care Excellence (NICE) guidelines, dated December 2018, include recommendations for the treatment of patients diagnosed with PTSD in sections 1.6.16–23. The results of the studies cited by the organization showed the effectiveness of individual therapy with a cognitive-behavioral approach. These included trauma-focused therapy, cognitive processing therapy, cognitive therapy and prolonged exposure therapy implemented by a CBT psychotherapist. All the methods mentioned are widely described in the literature and based on approved protocols. In addition to this, the effectiveness of the Eye Movement Desensitization and Reprocessing (EMDR) method of reprocessing and desensitization has also been pointed out – but with limitations that mainly apply to patients with war experiences (Gulcz, Polak, 2002; Popiel, 2015; Ash-Maheux et al., 2018; NICE, 2018, 2020; Mavranezouli et al., 2020). The NICE recommendations also include indications that CBT therapy should last about 12 sessions (with the possibility of extension for patients experiencing multiple trauma). A very important aspect of it is psychoeducation, which has been given special emphasis. Within the framework of the meetings, issues related to the trauma symptoms experienced and coping mechanisms (arousal, recurring memories, protective mechanisms) are addressed. In the therapy process, it is important to work through and process the traumatic memories and the emotions associated with it, especially shame, guilt or loss, and anger. Another important part of the therapeutic process is the restructuring of cognitive distortions related to the trauma and working on avoidance and regaining a sense of control over one's own life (in spheres such as work, relationships with others). As part of the closure of the therapeutic process, support sessions are planned that also take into account moments related to anniversaries of trauma (NICE, 2018, 2020; Mavranezouli et al., 2020; Allen et al., 2021).

In the 2017 recommendations of the American Psychological Association (APA), one can find convergent indications for PTSD therapy. Among the therapeutic approaches listed are cognitive-behavioral therapy (CBT), cognitive processing therapy (CPT), cognitive therapy (CT) and prolonged exposure (PE) therapy. In addition, short-term eclectic psychotherapy (BEP), eye movement desensitization therapy (EMDR) and narrative exposure therapy (NET) have also been described (APA, 2017; Watkins, Sprang, Rothbaum, 2018; Bufka, Wright, Halfond, 2020).

III. Cognitive-behavioral approach in the treatment of PTSD

The most commonly described treatment programs for PSTD that can be found in the cognitive-behavioral therapy literature are Cognitive Therapy (CT) by Ehlers and Clark (2000), Prolonged Exposure (PE) Therapy by Foa and colleagues (1998, 2020), and Cognitive Processing Therapy (CPT) by Resick (2021) and colleagues (2019).

Eye Movement Desensitization with Reprocessing (EMDR), according to Shapiro (1995, 2002) also has a growing number of proponents. The aforementioned techniques are also found in the aforementioned guidelines of international organizations setting standards for the treatment of PTSD (APA, 2017; NICE, 2018). They are also recommended by the International Society of Traumatic Stress Studies, International Society of Traumatic Stress Studies (ISTSS, 2019).

Cognitive Therapy (CT) for PTSD Ehlers and Clark (2000)

The PTSD therapy model presented by Ehlers and Clark (2000) addresses specifically the deficits in memory of the traumatic event. The authors emphasize that processing is based on sensory stimuli rather than the meaning of the situation in these situations, and the patient lacks his own perspective. The aforementioned deficits and the dissociation experienced prevent the integration of the event as a sequence of one's own life story, which is the goal of therapy.

The cognitive model of PTSD (Figure 2) highlights the specificity of cognitive processing of information related to the traumatic event. Ehlers and Clark (2000) underline that the mere recall of the memory of a traumatic event is only a pretext for modifying the dysfunctional beliefs, attitudes revealed during the exposure. The primary factor responsible for the persistence of PTSD is a sense of constant threat.

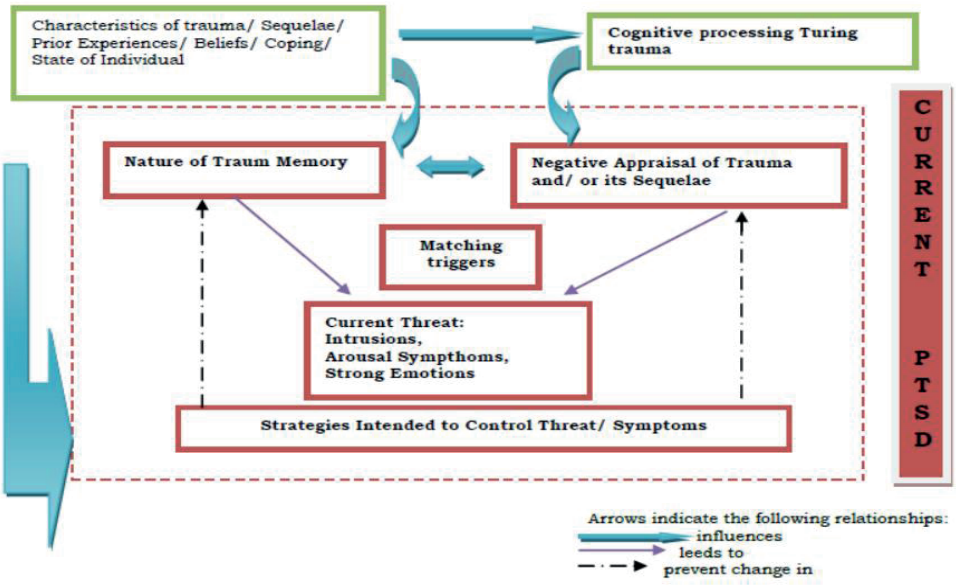

Figure 2. Cognitive model of PTSD development
Source: own elaboration based on: Ehlers, Clark (2000, s. 321).

It is formed as a result of dysfunctional evaluations – beliefs about the traumatic event and its impact on the individual's subsequent life, evaluations of oneself, one's attitude during the trauma and its impact on subsequent life, and evaluations of the PTSD symptoms themselves. Feeling threatened, experiencing anxiety, and increasing symptoms of vegetative arousal leads to the use of a series of strategies having the qualities of cognitive avoidance (thought avoidance) and/or behavioral avoidance (avoidance of places, situations associated with the trauma).

The main methods used during therapy according to this model include modification of beliefs using classical cognitive restructuring and imaginal techniques. Exposure-related behavioral techniques are also incorporated during the therapeutic process. In working with the client in the initial phase, the most important thing is to safely establish a relationship and build trust in the therapist-patient relationship. Subsequent stages deal with reducing fragmentation of trauma memories, modifying misjudgments and PTSD symptoms, and reducing dysfunctional coping symptoms (Ehlers, Clark, 2000; Ehlers et al., 2005; Kleim et al., 2013; Juczyński, Ogińska-Bulik, 2018; Köhler, Goebel, Pedersen, 2019; Wild et al., 2020; Ehlers, Wild, 2021).

Prolonged Exposure Therapy by Foa and colleagues (1998, 2020)

Foa and Rothbaum (1998, 2020), in the model they created for the development of PTSD (Figure 3), highlight that during the experience of a traumatic event, a complex cognitive structure is formed in the victim in the form of a memory image of the trauma. It determines the behavior activated by external and/or internal stimuli. It is also responsible for the activation of disorganizing anxiety. The authors foreground the role of cognitive schemas about the self, the world and other people, the aforementioned post-traumatic structure and the image of post-traumatic experiences as determinants of the development of chronic PTSD (Dudek, 2003; Foa et al., 2018; Peterson, Foa, Riggs, 2019; Popiel et al., 2020).

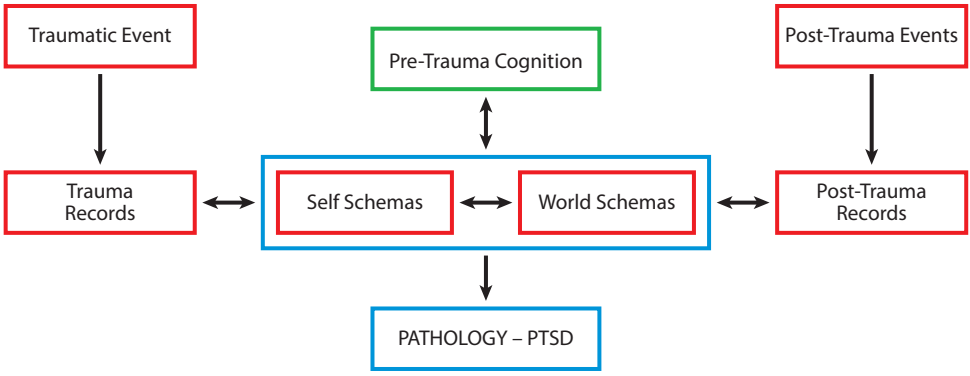

Figure 3. A model of the processes leading to the development of PTSD
Source: own elaboration based on: Foa, Rothbaum (1998).

The protocol created by Foa and colleagues (2018, 2020), describes the next steps in working with a patient, which begin with more data from an interview about the event and psychoeducation about PTSD itself and its treatment. Another element of therapeutic work is learning breathing techniques (diaphragmatic, square and others) and introducing tools for monitoring well-being. The primary tool is the Subjective Units of Discomfort Scale (SUDS), created for this protocol. However, other scales monitoring PTSD or depression, for example, are also recommended, depending on other symptoms. Another important moment of working with the patient refers to the establishment a hierarchy of in vivo exposures, which the patient carries out as part of their own work between sessions. During session with the therapist, these are discussed, and the proper work refers to the application of the imaginal exposure technique with trauma processing. Therapy ends when the patient scores low on the SUSD scale, their functioning improves, and therapy goals are achieved. Then there comes a moment of summarizing of the progress made by the patient and a discussion of the new competencies he has learned during therapy. Finally, the patient is given instructions for post-therapy exercises as part of relapse prevention. Sessions according to this protocol last 90 minutes and are recorded. Listening to them is one of the main tasks in the patient's own work between sessions (Foa, Hembree, Rothbaum, 2020).

Cognitive Processing Therapy (CPT) for PTSD Resick (2021) and colleagues (2019)

Resick (2021) and colleagues (2019) based their concept of PTSD therapy primarily on direct therapeutic exposure, referring to the information processing model. CPT therapy focuses on the cognitive processing of information, explaining the reaction to the traumatic event and describing the meaning the patient gave to the experience. An important step in working with the patient here, as in earlier protocols, is psychoeducation about emotions. Issues related to the role of emotions, their impact on our functioning and perception of ourselves, the world and other people are discussed. In the therapeutic process, the patient works on his beliefs regarding, among other things, guilt, and responsibility for the traumatic event. These emotions are analyzed in the context of other dysfunctional beliefs that have been reinforced by the traumatic experience (Popiel, 2014; Resick, Monson, Chard, 2019).

The author, along with colleagues (2019), created a protocol for therapeutic management that includes 12 steps to follow with the patient, during 12 sessions. At the first session, the patient is introduced to the method, a history of the traumatic event is collected, and the role of thoughts, emotions in human functioning is discussed. The next two meetings deal with learning about the blind spots of the event. The impact of the trauma is discussed with the patient and the work related to the analysis of thoughts, behavior, and emotions (ABC model) is expanded. This is followed by therapeutic work related to processing the initial event

(session 4 and 5) to then move on to work on changing the patient's cognitive patterns (session 6 and 7). The topic of safety, trust and a sense of control is the leading issue in sessions 9 and 10 and it is continued with issues related to respect, closeness and future perspective in sessions 11 and 12. At the end of the therapeutic process, issues related to sustaining the effects achieved in therapy are also discussed and follow-up meetings are scheduled, at a monthly interval. Patients can also benefit from group meetings. There are two variants of conducting therapy in this trend, which refer to the inclusion, or not, in the therapy process of written accounts of the traumatic event. This therapy can be conducted in both individual and group formats. For the protocol outlined above, patient work sheets were also created, which are discussed in detail in the book by the authors of this method (Resick, Monson, Chard, 2019). It is worth noting that this method has been found useful and effective in the context of online pandemic work with patients who experience PTSD (Moring et al., 2020).

Eye movement desensitization with reprocessing (EMDR) according to Shapiro (1995, 2002)

This is a therapy based on the adaptive information processing (AIP) model and experiential-exposure techniques (Shapiro, 1995, 2001; Shapiro, Maxfield, 2002). This method is still controversial in the therapeutic world, having both its supporters and opponents (Pasternak, 2006). The fact is that it is not based on a specific psychological, neurological, or other theory (Pasternak, 2006; Jeśka, 2012). The assumption of the author of this technique is based on the thesis that the information processing system is stopped by the symptoms of experienced PTSD. In this method, eye movement is an element that unlocks this process, which is most controversial among therapists due to insufficient scientific evidence supporting the effectiveness of this movement (Shapiro, Maxfield, 2002; Natcha, Daiches, 2016).

During an EMDR therapy session, techniques are used that involve rapidly following the therapist's finger with the eyes or receiving rapid alternating auditory or tactile stimuli. The patient's task at the time of stimulation is to recall the traumatic event in memory. EMDR therapy aims to completely process the traumatic experience and introduce a new, adaptive one. The process follows three phases: memory of the trauma, current problems, and future actions. The protocol involves 8 phases to be completed with the patient. The first one deals with the past and treatment planning, to move sequentially into the preparation, evaluation, and processing phases. This is followed sequentially by work on desensitization, installation and "body scanning." Once these steps are completed, closure and reevaluation of the experience takes place. The length of therapy depends on the type of trauma and the patient's history. Important elements in this method include exposure to the experienced event, as in the previously described meth-

ods (recall of images, emotions, cognitive restructuring of beliefs about oneself, the world, and other people) (Pasternak, 2006; Solomon, Shapiro, 2008; Jeśka, 2012; Natcha, Daiches, 2016).

IV. Review of existing research on the effectiveness of cognitive-behavioral therapy in the treatment of PTSD in the professional group of firefighters

The presented analysis includes only the results of scientific research that were accessed via the EBSCO database. This allowed a detailed analysis of their organization and the procedure of the subsequent stages of the studies described. The search phrase "CBT in firefighters PTSD/ cognitive-behavioral therapy for firefighters with PTSD" in the EBSCO database was matched by very few articles after discarding non-trivial results. Hence, the decision was made to replace the word firefighter, in English, with first responder. This phrase refers to a general group of emergency services and is very often used as a substitute in foreign literature. An effort was made to be vigilant and check whether firefighters were actually included in the study group of emergency service members. This expanded the pool of the collected data to 11 studies (Table 1). This quantity showed that despite such a widespread knowledge of the frequency of PTSD among firefighters, there has been little long-term research on its treatment methods in this occupational group.

Below, in tabular form, there is an overview of the studies obtained. The table includes information about the author of the study, the year in which the results were published, the country in which they were conducted, and the methods used.

Conclusions

As the findings presented above show, cognitive-behavioral therapy is effective in treating post-traumatic stress symptoms in the occupational group of firefighters. However, there is a great need for further exploration of this issue in order to obtain more data.

It is also worth remembering that experiencing traumatic events is not always associated with the development of PTSD. It also happens that such situations are followed by Post Traumatic Growth (PTG). This is an important phenomenon in the perspective of the service performed by firefighters. It gives hope for recovery and even development or reevaluation of one's life. It is also an invaluable experience for other firefighters who witness their colleague's recovery. It is a clear signal to pay attention to each other, their own mental and physical condition and care for their well-being. All these activities will contribute to greater job satisfaction and, more importantly, translate into life satisfaction as well (Ogińska-Bulik, 2015; Juczyński, Ogińska-Bulik, 2018).

Table 1. Overview of studies on the effectiveness of CBT in PSTD among firefighters

No.	Year	Authors	Country	Method used in the criterion group/ main techniques
1	2004	Kitchiner N.J.	USA	CBT , EMDR
2	2007	Difede J. i wsp.	USA	CBT, VR exposition in Virtual Reality
3	2013	Jarero I. i wsp.	Mexico	EMDR
4	2014	Park C.S.	Korea	CBT/ emotion regulation program
5	2015	Alghamdi M., Hunt N., Thomas S.	Saudi Arabia	CBT/ NET Narrative Exposure Therapy
6	2017	Mo J.M. i wsp.	Korea	CBT/ group therapy/ EMDR/ progressive relaxation
7	2018	Han D.S., Bae J.Y.	Korea	CBT/ psychoeducation/ EMDR/ meditation
8	2018	Yook Y.S.	Korea	Mindfulness
9	2019	Bryant R.A. i wsp.	USA	CBT exposure techniques
10	2019	Kim J.H., Yi I.S., Yoo Y.H.	Korea	Meditation based on cognitive theory
11	2019	Stanley I.H. i wsp.	USA	Mindfulness

Method of estimating the effectiveness of CBT	CBT effectiveness evaluation
DTS, GHQ, FQ	The results of the data obtained from the 3 case study showed a significant reduction in experienced PTSD symptoms
PTSD/CAPS	There was a significant improvement in the group of people using the VR method
PTSD/SPRINT	Participants in the study group showed long-term reductions in symptoms of experienced PTSD
PTSD/IES, Stres/ Stress response scale	Participation in the program significantly reduced PTSD symptoms among participants
PTSD/SPTSS, HADS, Brief COPE scale, Social support scale	The NET technique led to a significant reduction in PTSD, anxiety and depression symptoms
PTSD/ checklist for DSM-5, PCL-5, PHQ-9, insomnia/ AIS	The results of the study showed that the consequence of participation in the program led to a significant reduction in symptoms of PTSD, depression and sleep disorders
PCL-5, PHQ-9	Significant reductions in symptoms of depression and PTSD were shown among participants
Quality of life/ WHOQOL, PTSD/IES-R-K, Physiological Symptom Scale, SSAS	The results showed a subjective increase in quality of life and a reduction in PTSD symptoms and cardiovascular problems at a statistically significant level
PTSD/CAPS, BDI, AUDIT, WHOQOL, understanding/ PTCI	Large differences were achieved in the intensity of PTSD symptoms among participants in the initial measurement and final
PTSD/IES-R-K, ruminations/ K-EKRI	Participation in the program reduced symptoms of both PTSD and ruminations
FFMQ: Five Facet Mindfulness Questionnaire, PCL-5, SBQ-R: Suicidal Behaviors Questionnaire—Revised	There was a decrease in PTSD-related symptoms among study participants, and a significant reduction in suicidal thoughts and tendencies was recorded

References

Alghamdi, M., Hunt, N., & Thomas, S. (2015). The effectiveness of Narrative Exposure Therapy with traumatised firefighters in Saudi Arabia: A randomized controlled study. *Behaviour Research Therapy, 66*, 64–71.

Allen, L., Ashford, P.A., Beeson, E., Byford, S., Chow, J., Dalgleish, T., …, Meiser-Stedman, R. (2021). DECRYPT trial: Study protocol for a phase II randomised controlled trial of cognitive therapy for post-traumatic stress disorder (PTSD) in youth exposed to multiple traumatic stressors. *BMJ Open, 11*(7), 1–12.

Antony, J., Brar, R., Khan, P.A., Ghassemi, M., Nincic, V., Sharpe, J.P., & Tricco, A.C. (2020). Interventions for the prevention and management of occupational stress injury in first responders: A rapid overview of reviews. *Systematic Reviews, 9*, 1–20.

APA, American Psychological Association. (2017). Clinical practice guideline for the Treatment of PTSD, http://pathways.nice.org.uk/pathways/post-traumatic-stress--disorder, NICE Pathway last updated: November 4, 2020 (access: 10.12.2020).

Ash-Maheux, R., Bartczak, M., Monteferrante, J., Nurse, A., Persad, S., Zafran, H., & Lambert, H. (2018). *Spotting PTSD: A PTSD Toolkit for First Responders.*

Baird, T., McLeay, S., Harvey, W., Theal, R., Law, D., & O'Sullivan, R. (2018). Sleep disturbances in Australian Vietnam veterans with and without posttraumatic stress disorder. *Journal of Clinical Sleep Medicine, 14*(5), 745–752.

Boyd, J.E., Protopopescu, A., O'Connor, C., Neufeld, R.W., Jetly, R., Hood, H.K., & McKinnon, M.C. (2018). Dissociative symptoms mediate the relation between PTSD symptoms and functional impairment in a sample of military members, veterans, and first responders with PTSD. *European Journal of Psychotraumatology, 9*(1), 1463794.

Bryant, R.A., Kenny, L., Rawson, N., Cahill, C., Joscelyne, A., & Garber, B. (2019). Efficacy of exposure-based cognitive behaviour therapy for post-traumatic stress disorder in emergency service personnel: A randomised clinical trial. *Psychological Medicine, 49*(9), 1565–1573.

Bufka, L.F., Wright, C.V.E., & Halfond, R.W. (2020). *Casebook to the APA Clinical Practice Guideline for the treatment of PTSD*. Washington, DC: American Psychological Association.

Difede, J., Cukor, J., Jayasinghe, N., Patt, I., Jedel, S., Spielman, L., & Hoffman, H.G. (2007). Virtual reality exposure therapy for the treatment of posttraumatic stress disorder following September 11, 2001. *Journal of Clinical Psychiatry, 68*(11), 1639.

Dudek, B. (2003). *Zaburzenie po stresie traumatycznym*. Gdańsk: Gdańskie Wydawnictwo Psychologiczne.

Ehlers, A., & Clark, D.M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy, 38*, 319–345.

Ehlers, A., Clark, D.M., Hackmann, A., McManus, F., & Fennell, M. (2005). Cognitive therapy for post-traumatic stress disorder: Development and evaluation. *Behaviour Research and Therapy, 43*(4), 413–431.

Ehlers, A., & Wild, J. (2021). Cognitive behavior therapies for posttraumatic stress disorder. In A. Wenzel (red.), *Handbook of cognitive behavioral therapy: Applications* (pp. 99–147). Washington, DC: American Psychological Association.

Fekadu, W., Mekonen, T., Belete, H., Belete, A., & Yohannes, K. (2019). Incidence of post-traumatic stress disorder after road traffic accident. *Frontiers in Psychiatry, 10*, 1–7.

Fisher, P., & Etches, B. (2003). A comprehensive approach to workplace stress & trauma in firefighting: A review document prepared for the International Association of Firefighters 17th Redmond Symposium. October 5–9, San Francisco, CA.

Foa, E.B., Hembree, E.A., & Rothbaum, B.O. (2020). *Przedłużona ekspozycja w terapii PTSD. Emocjonalne przetwarzania traumatycznych doświadczeń*. Sopot: Gdańskie Wydawnictwo Psychologiczne.

Foa, E.B., McLean, C.P., Zang, Y., Rosenfield, D., Yadin, E., & Yarvis, J.S. (2018). Effect of prolonged exposure therapy delivered over 2 weeks vs 8 weeks vs present-centered therapy on PTSD symptom severity in military personnel: A randomized clinical trial. *Jama, 319*(4), 354–364.

Foa, E.B., & Rothbaum, B.O. (1998). *Treating the trauma of rape: Cognitive-Behavioral Therapy for PTSD*. New York: Guilford Press.

Friedman, M.J., Terence, M., & Resick, P.A. (2010). *Handbook of PTSD: Science and Practice*. New York: Guilford Press.

Gerber, M.M., Frankfurt, S.B., Contractor, A.A., Oudshoorn, K., Dranger, P., & Brown, L.A. (2018). Influence of multiple traumatic event types on mental health outcomes: Does count matter? *Journal of Psychopathology and Behavioral Assessment, 40*(4), 645–654.

Gulcz, M., & Polak, M. (2002). Zastosowanie terapii poznawczo-behawioralnej w leczeniu wybranych zaburzeń lękowych: Zespołu lęku napadowego i PTSD1. *Nowiny Psychologiczne, 2*, 29–49.

Han, D.S., & Bae, J.Y. (2018). Effects of a post-traumatic stress disorder management program on firefighters' post-traumatic stress and depression. *Journal of Korean Academic Psychiatric Mental Health Nursing, 27*(3), 240–251.

Haugen, P.T., Evces, M., & Weiss, D.S. (2012). Treating posttraumatic stress disorder in first responders: A systematic review. *Clinical Psychology Review, 32*(5), 370–380.

Hendriks, L., Kleine, R.A.D., Broekman, T.G., Hendriks, G.J., & Minnen, A.V. (2018). Intensive prolonged exposure therapy for chronic PTSD patients following multiple trauma and multiple treatment attempts. *European Journal of Psychotraumatology, 9*(1), 1425574.

Im, M., & Kwak, M. (2021). An Integrative Literature Review on Psychological Intervention Research for Firefighters. *Journal of Korean Academy of Psychiatric and Mental Health Nursing, 30*(2), 153–167.

ISTSS, International Society of Traumatic Stress Studies. (2019). Posttraumatic stress disorder prevention and treatment guidelines. Retrieved from http://www.istss.org/getattachment/Treating-Trauma/New-ISTSS-Prevention-and-

-Treatment-Guidelines/ISTSS_PreventionTreatmentGuidelines_FNL.pdf.aspx (access: 20.12.2021).
Jakubiak, T. (2021). Ginter Dzierżon, Kinga Szymańska, Wpływ zespołu stresu pourazowego na kanoniczną niezdolność do zawarcia małżeństwa, Wydawnictwo Naukowe UKSW, Warszawa 2020, ss. 208. *Studia Prawnicze KUL*, (3), 333–338.
Jarero, I., Amaya, C., Givaudan, M., & Miranda, A. (2013). EMDR individual protocol for paraprofessional use: A randomized controlled trial with first responders. *Journal of EMDR Practice and Research, 7*(2), 55–64.
Jeśka, M. (2012). Od fazy snu REM do terapii EMDR. Neuropsychiatria. *Przegląd Kliniczny. Review of Clinical Neuropsychiatry, 4*, 113–118.
Juczyński, Z., & Ogińska-Bulik, N. (2018). Cognitive processing of trauma as a predictor of the negative and positive consequences of experienced traumatic events. *Advances in Psychiatry and Neurology/ Postępy Psychiatrii i Neurologii, 27*(4), 318–333.
Katsavouni, F., Bebetsos, E., Malliou, P., & Beneka, A. (2015). The relationship between burnout, PTSD symptoms and injuries in firefighters. *Occupational Medicine, 66*(1), 32–37.
Kim, J.H., Yi, I.S., & Yoo, Y.H. (2019). Effects of a mind subtraction meditation-based healing program on the ruminations and posttraumatic stress disorder symptoms of firefighters. *Fire Science and Engineering, 33*(5), 118–129.
Kitchiner, N.J. (2004). Psychological treatment of three urban fire fighters with post--traumatic stress disorder using eye movement desensitisation reprocessing (EMDR) therapy. *Complementary Therapies in Nursing and Midwifery, 10*(3), 186–193.
Kleim, B., Grey, N., Wild, J., Nussbeck, F.W., Stott, R., Hackmann, A., & Ehlers, A. (2013). Cognitive change predicts symptom reduction with cognitive therapy for posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 81*(3), 383–393.
Kliszcz, J. (2012). *Psychologia w ratownictwie*. Warszawa: Difin.
Köhler, M., Goebel, S., & Pedersen, A. (2019). PTSD severity among emergency personnel: An investigation based on the Ehlers and Clark cognitive model. *Psychological Trauma: Theory, Research, Practice, and Policy, 11*(6), 677–684.
Koniarek, J., & Dudek, B. (2007). Zespół zaburzeń po stresie urazowym a stosunek do pracy strażaków. *Medycyna Pracy, 52*(3), 177–183.
Korgaonkar, M.S., Chakouch, C., Breukelaar, I.A., Erlinger, M., Felmingham, K.L., Forbes, D., & Bryant, R.A. (2020). Intrinsic connectomes underlying response to trauma-focused psychotherapy in post-traumatic stress disorder. *Translational Psychiatry, 10*(1), 1–11.
Krawczyk, P., & Święcicki, Ł. (2020). ICD-11 vs. ICD-10 – przegląd aktualizacji i nowości wprowadzonych w najnowszej wersji Międzynarodowej Klasyfikacji Chorób WHO. *Psychiatria Polska, 54*(1), 7–20.
Kuhn, E., & Owen, J.E. (2020). Advances in PTSD treatment delivery: The role of digital technology in PTSD treatment. *Current Treatment Options in Psychiatry, 7*(2), 88–102.

Langtry, J., Owczarek, M., McAteer, D., Taggart, L., Gleeson, C., Walshe, C., & Shevlin, M. (2021). Predictors of PTSD and CPTSD in UK firefighters. *European Journal of Psychotraumatology, 12*(1), 1849524.

Lanza, A., Roysircar, G., & Rodgers, S. (2018). First responder mental healthcare: Evidence-based prevention, postvention, and treatment. *Professional Psychology: Research and Practice, 49*(3), 193–204.

Lee, J.S., Ahn, Y.S., Jeong, K.S., & Choi, K.S. (2014). Resilience buffers the impact of traumatic events on the development of PTSD symptoms in firefighters. *Journal of Affective Disorders, 162*, 128–133.

Livingston, N.A., Lee, D.J., Mahoney, C.T., Farmer, S.L., Cole, T., Marx, B.P., & Keane, T.M. (2021). Longitudinal assessment of PTSD and illicit drug use among male and female OEF-OIF veterans. *Addictive Behaviors, 118*, 106870.

Makara-Studzińska, M., Partyka, I., & Ziemecki, P. (2012). Zespół stresu pourazowego: Rys historyczny, terminologia, metody pomiaru. *Current Problems of Psychiatry, 13*(2), 109–114.

Makara-Studzińska, M., Wajda, Z., & Lizińczyk, S. (2020). Years of service, self-efficacy, stress, and burnout among Polish firefighters. *International Journal of Occupational Medicine and Environmental Health, 33*(3), 283–297.

Mavranezouli, I., Megnin-Viggars, O., Daly, C., Dias, S., Welton, N.J., Stockton, S., & Pilling, S. (2020). Psychological treatments for post-traumatic stress disorder in adults: A network meta-analysis. *Psychological Medicine, 50*(4), 542–555.

McCanlies, E.C., Mnatsakanova, A., Andrew, M.E., Burchfiel, C.M., & Violanti, J.M. (2014). Positive psychological factors are associated with lower PTSD symptoms among police officers: Post Hurricane Katrina. *Stress & Health, 30*(5), 405–415.

Meyer, E.C., Zimering, R., Daly, E., Knight, J., Kamholz, B.W., & Gulliver, S.B. (2012). Predictors of posttraumatic stress disorder and other psychological symptoms in trauma-exposed firefighters. *Psychological Services, 9*(1), 1–15.

Mo, J.M., Bae, J.Y., Kwak, M.Y., Kang, S.M., Kim, M.K., & Bae, C.H. (2017). The development and effectiveness of an integrated management program for PTSD among firefighters. *Crisisonomy, 13*(7), 17–33.

Mohamad, M.S., Ali, N.F., & Makhbul, Z.K.M. (2021). Occupational stress, burnout, and intention to quit among Malaysian firefighters. *Journal of Psychiatry, 22*(7), 1–8.

Moring, J.C., Dondanville, K.A., Fina, B.A., Hassija, C., Chard, K., Monson, C., & Resick, P.A. (2020). Cognitive processing therapy for posttraumatic stress disorder via telehealth: Practical considerations during the COVID-19 pandemic. *Journal of Traumatic Stress, 33*(4), 371–379.

Morrison, J. (2016). *DSM-5 bez tajemnic. Praktyczny przewodnik dla klinicystów.* Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.

Natcha, F., & Daiches, A. (2016). Skuteczność terapii EMDR w zmniejszaniu dystresu psychicznego u osób, które przeżyły katastrofy naturalne – przegląd. *Journal of EMDR Practice and Research, 10*(4), 210–224.

NICE, National Institute for Clinical Excellence. (2018). *Post-traumatic stress disorder: The management of PTSD in adults and children in primary and secondary care*. London: Gaskell and the British Psychological Society (http://www.nice.org.uk).
NICE, National Institute for Clinical Excellence. (2020). *Post-traumatic stress disorder: The management of PTSD in adults and children in primary and secondary care*. London: Gaskell and the British Psychological Society (http://www.nice.org.uk).
Odachowska, E. (2013). Trauma powypadkowa: Przyczyny, przebieg i skutki dla bezpieczeństwa. *Autobusy: Technika, eksploatacja, systemy transportowe, 14*, 281–291.
Ogińska-Bulik, N. (2015). *Dwa oblicza traumy. Negatywne i pozytywne skutki zdarzeń traumatycznych u pracowników służb ratowniczych.* Warszawa: Difin.
Ogińska-Bulik, N., & Kaflik-Pieróg, M. (2006). *Stres zawodowy w służbach ratowniczych*. Łódź: Wydawnictwo Wyższej Szkoły Humanistyczno-Ekonomicznej w Łodzi.
Onyedire, N.G., Ekoh, A.T., Chukwuorji, J.C., & Ifeagwazi, C.M. (2017). Posttraumatic stress disorder (PTSD) symptoms among firefighters: Roles of resilience and locus of control. *Journal of Workplace Behavioral Health, 32*(4), 227–248.
Oskwarek, P., & Tokarska-Rodak, M. (2018). Stres w środowisku pracy strażaków. *Rozprawy Społeczne, 11*, 57–61.
Park, C.S. (2014). Redesigning education programs for alleviating disaster response officials' stress PTSD and it's empirical analysis for effectiveness. *Journal of Korea Safety Management & Science, 16*(4), 147–157.
Pasternak, J. (2006). Teoretyczne podstawy terapii odwrażliwiania za pomocą ruchów oczu. *Studia z Psychologii w KUL, 13*, 217–232.
Peterson, A.L., Foa, E.B., & Riggs, D.S. (2019). Prolonged exposure therapy. In B.A. Moore, & W.E. Penk (Eds.), *Treating PTSD in military personnel: A clinical handbook* (pp. 46–62). New York: Guilford Press.
Pietkiewicz, I., & Tomalski, R. (2018). Zaburzenia związane z traumą – perspektywa teoretyczna. *Czasopismo Psychologiczne – Psychological Journal, 24*(2), 261–268.
Popiel, A. (2009). Zorientowana na traumę psychoterapia poznawczo-behawioralna zaburzeń stresowych pourazowych. *Psychiatria, 6*(4), 124–133.
Popiel, A. (2014). Terapia poznawcza poczucia winy związanego z traumą u osób z PTSD. *Psychiatria Polska, 48*(3), 615–625.
Popiel, A. (2015). Pourazowe zaburzenie stresowe – dlaczego warto leczyć? *Psychiatria po Dyplomie, 5*, 10–15.
Popiel, A., & Pragłowska, E. (2008). *Psychoterapia poznawczo-behawioralna. Teoria i praktyka.* Warszawa: Wydawnictwo Paradygmat.
Popiel, A., & Pragłowska, E. (2009). Psychopatologia reakcji na traumatyczne wydarzenia. In J. Strelau, B. Zawadzki, & M. Kaczmarek (Eds.), *Konsekwencje psychiczne traumy: uwarunkowania i terapia* (pp. 31–36). Warszawa: Wydawnictwo Naukowe Scholar.
Popiel, A., Zawadzki, B., Pragłowska, E., Habrat, P., & Gajda, P. (2020). *Skuteczne działanie w stresie. Problem profilaktyki PTSD dla osób narażonych na traumatyzację zawodową.* Sopot: Gdańskie Wydawnictwo Psychologiczne.

Pużyński, S., & Wciórka, J. (2000). *Klasyfikacja zaburzeń psychicznych i zaburzeń zachowania w ICD-10.* Kraków–Warszawa: Uniwersyteckie Wydawnictwo Medyczne Vesalius.

Resick, P.A. (2021). *Cognitive processing therapy: Generic version*. St. Louis, MO: University of Missouri–St. Louis.

Resick, P.A., Monson, C.M., & Chard, K.M. (2019). *Terapia przetwarzania poznawczego w zespole stresu pourazowego (PTSD).* Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.

Rosen, G.M., Lilienfeld, S.O., Frueh, B.C., McHugh, P.R., & Spitzer, R.L. (2010). Reflections on PTSD's future in DSM–V. *The British Journal of Psychiatry, 197,* 343–344.

Rothbaum, B.O., Foa, E.B., & Hembree, E.A. (2020). *Odzyskaj życie po traumie. Przedłużona ekspozycja w terapii PTSD*. Sopot: Gdańskie Wydawnictwo Psychologiczne.

Rubin, M.L., Copeland, L.A., Kroll-Desrosiers, A.R., & Knittel, A.G. (2020). Demographic Variation in the Use of Prazosin for Treatment of Sleep Disturbance in Combat Veterans with PTSD. *Psychopharmacology Bulletin, 50*(2), 26–35.

Shapiro, F. (1995). *Eye movement desensitization and reprocessing: Basic principles, protocols, and procedures*. New York: Guilford Press.

Shapiro, F. (2001). *Eye movement desensitization and reprocessing: Basic principles, protocols, and procedures* (2nd ed.). New York: Guilford Press.

Shapiro, F. (2002). *EMDR as an integrative psychotherapy approach: Experts of diverse orientations explore the paradigm prism*. Washington, DC: American Psychological Association.

Shapiro, F., & Maxfield, L. (2002). Eye movement desensitization and reprocessing (EMDR): Information processing in the treatment of trauma. *Psychotherapy in Practice, 58,* 933–946.

Shapiro, F., Snyker, E., & Maxfield, L. (2002). *EMDR: Eye movement desensitization and reprocessing.* In F.W. Kaslow, & T. Patterson (Eds.), *Comprehensive handbook of psychotherapy: Cognitive-behavioral approaches* (vol. 2, pp. 241–272). New York: John Wiley & Sons, Inc.

Skogstad, M., Skorstad, M., Lie, A., Conradi, H.S., Heir, T., & Weisæth, L. (2013). Work-related post-traumatic stress disorder. *Occupational Medicine, 63*(3), 175–182.

Solomon, R.M., & Shapiro, F. (2008). EMDR and the adaptive information processing Model: Potential mechanisms of change. *Journal of EMDR Practice and Research, 2,* 315–325.

Stanley, I.H., Boffa, J.W., Smith, L.J., Tran, J.K., Schmidt, N.B., Joiner, T.E., & Vujanovic, A.A. (2018). Occupational stress and suicidality among firefighters: Examining the buffering role of distress tolerance. *Psychiatry Research, 266,* 90–96.

Stanley, I.H., Boffa, J.W., Tran, J.K., Schmidt, N.B., Joiner, T.E., & Vujanovic, A.A. (2019). Posttraumatic stress disorder symptoms and mindfulness facets in relation to suicide risk among firefighters. *Journal of Clinical Psychology, 75*(4), 696–709.

Straud, C., Henderson, S.N., Vega, L., Black, R., & Van Hasselt, V. (2018). Resiliency and posttraumatic stress symptoms in firefighter paramedics: The mediating role of depression, anxiety, and sleep. *Traumatology, 24*(2), 140–147.

Theleritis, C., Psarros, C., Mantonakis, L., Roukas, D., Papaioannou, A., Paparrigopoulos, T., & Bergiannaki, J.D. (2020). Coping and its relation to PTSD in Greek firefighters. *The Journal of Nervous and Mental Disease, 208*(3), 252–259.

Wagner, S.L., White, N., Randall, C., Regehr, C., White, M., Alden, L.E., & Krutop, E. (2021). Mental disorders in firefighters following large-scale disaster. *Disaster Medicine and Public Health Preparedness, 15*(4), 504–517.

Watkins, L.E., Sprang, K.R., & Rothbaum, B.O. (2018). Treating PTSD: A review of evidence-based psychotherapy interventions. *Frontiers in Behavioral Neuroscience, 12*, 1–9.

WHO, World Health Organisation. (2018). *ICD-11 Reference Guide*, https://icd.who.int/browse11/content/refguide.ICD11_en/html/index.html#2.45.06Chapter6MentalDisorders|chapter-06-mentalbehavioural-or-neurodevelopmental-disorders|c2-37-6 (access: 23.10.2021).

Wild, J., Warnock-Parkes, E., Murray, H., Kerr, A., Thew, G., Grey, N., & Ehlers, A. (2020). Treating posttraumatic stress disorder remotely with cognitive therapy for PTSD. *European Journal of Psychotraumatology, 11*(1), 1785818.

Wilson, S., Guliani, H., & Boichev, G. (2016). On the economics of post-traumatic stress disorder among first responders in Canada. *Journal of Community Safety and Well-Being, 1*(2), 26–31.

Yook, Y.S. (2018). The effects of mindfulness based body-psychological exercise program on the reduction of post-traumatic stress (PTSD) symptoms in fire officials. *Korean Journal of Sport Psychology, 29*(4), 57–73.

Zawadzki, B., & Popiel, A. (2014). Na rozstaju dróg: Struktura objawów stresu pourazowego (PTSD) po DSM-5, a przed ICD-11. *Nauka,* (4), 69–86.

Zawadzki, B., & Strelau, J. (2008). Zaburzenia potraumatyczne jako następstwo kataklizmu. *Nauka, 2*, 47–55.

Streszczenie. Funkcjonariusze Państwowej Straży Pożarnej doświadczają wielu stresujących zdarzeń, często związanych z zagrożeniem życia, swojego i innych osób. Ze względu na charakter mogą prowadzić do rozwoju Zespołu Stresu Pourazowego, w związku z czym wymagają pomocy psychologicznej. Skuteczność technik poznawczo-behawioralnych w terapii PTSD została potwierdzona w licznych badaniach na całym świecie w różnych grupach osób. Celem prezentowanego artykułu jest przedstawienie aktualnego stanu badań dotyczących skuteczności terapii poznawczo-behawioralnej w leczeniu zaburzeń stresu pourazowego w grupie strażaków.

Słowa kluczowe: zespół stresu pourazowego, terapia poznawczo-behawioralna, strażacy

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