

Treating PTSD in a cognitive-behavioral paradigm

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Summary

Significant advances have been made over the past two decades, associated with an increase in methodologically advanced research, into the treatment of post-traumatic stress disorder (PTSD). However, interest in the topic of PTSD has not only not waned, but seems to be gaining strength. The main reason for this is the difficulty in clearly defining the phenomenon, which is related to the constant updating of the criteria for post-traumatic stress disorder in medical classifications. The search for general standards and methods of measuring this disorder in relation to the age of the patient is another area of dispute among specialists. The conceptualization of the patient's problem, on the other hand, is based on knowledge of psychopathology, which describes the mechanisms of formation and maintenance of disorders. The accuracy of the conceptualization is linked to appropriate psychotherapeutic interventions that result in the patient's improvement or recovery. Cognitive models of PTSD largely explain the functioning of people after traumatic life events. This paper presents the classic transaction model of stress and coping by Richard S. Lazarus and Susan Folkman, Anke Ehlers and David Clark's cognitive model of persistent PTSD, and the cognitive model of processing trauma according to Brewin et al. In addition, cognitive-behavioral psychotherapy methods with empirically proven efficacy in the treatment of PTSD in children, adolescents and adults are reviewed. However, psychotherapy models and programs for children and adolescents with PTSD are mostly a modified version of an adult PTSD treatment and require further clinical development. In addition, due to the introduction by WHO of a new nosological entity in the form of complex PTSD, new theoretical models, diagnostics tools, and validated methods are needed to help treat this disorder.

Key words: cognitive-behavioral psychotherapy, posttraumatic stress disorder

Introduction

Empirical evidence for the effectiveness of cognitive-behavioral therapy (CBT) in treating PTSD in adults is extensive [1–7]. Despite the comparatively small number of research studies on the effectiveness of this therapy in children and adolescents, there are data in the literature indicating its usefulness and efficacy also for a variety

of childhood traumas [1, 8–11]. The multitude of theoretical assumptions, as well as treatment models for PTSD on cognitive-behavioral grounds, makes it impossible to present them fully in one study. Therefore, this paper aims to provide a general overview of the treatment of PTSD in the cognitive-behavioral approach.

Diagnosis of PTSD

Diagnosis is the first step in treatment. The patient's problem is conceptualized based on a clinical diagnosis. However, there are many difficulties in diagnosing PTSD in children and adolescents, as well as in adults [12–14]. Also, most questionnaire-based measurement tools aimed at determining stress levels and coping responses are designed for adults. Far fewer methods have been constructed to measure stress and coping in children and adolescents.

The American DSM-5 classification, which is the foundation of the new international ICD-11 classification, repeatedly highlights the differences in diagnosing the same disorders in children and adolescents versus adults. In the structure of the DSM-5 classification, the diagnostic groups „Reactive Attachment Disorder” and „Disinhibited Social Engagement Disorder”, which, as understood by psychopathology, are usually causally linked to childhood trauma, are placed at the beginning of the chapter „Trauma – and Stressor-Related Disorders” [15]. Also, diagnostic criteria for post-traumatic stress disorder have been distinguished for people over the age of six and children aged six and younger [16].

However, as Professor Władysław Łosiak has rightly pointed out, the processes and factors that lead to developing mental disorders know nothing about the existing systems for classifying such disorders [17]. This observation should be applied especially to the diagnosis of children and adolescents. In the treatment of PTSD in children, the greatest importance is attributed to developmental changes that depend on the age and stage of development of young patients. A subject of dispute among specialists is the symptomatology of PTSD in infants and children under 48 months. Differences in symptom expression are highlighted, depending on development in different age groups [9, 18–20].

According to Scheeringa et al. [20], the diagnosis of PTSD in children under 48 months can be reached if one of the following four criteria is met:

1. Re-experiencing – through constantly recurring themes of trauma during play that do not alleviate anxiety, play is less productive, with lower involvement of imagination, distress symptoms at reminders or episodes of dissociation are present.
2. Decreased activity or visible social withdrawal, restricted affect, loss of acquired skills.
3. Increased arousal expressed by sleep difficulty, attention deficits, hyperactivity and startled responses to stimuli.
4. Emergence of new fears, anxieties and aggression: aggressive behavior, staying close to caregivers, renewed separation anxiety, fears, e.g., of the dark, etc.

In connection with the 11th revision of the International Statistical Classification of Diseases and Related Health Problems, authors associated with the WHO also created a new group of disorders „specifically associated with stress” [21]. The latest ICD-11 classification, which is gradually being introduced into clinical practice in Poland, distinguishes complex PTSD (C-PTSD). This term was proposed by Judith Herman [22] and is defined as a disorder that may develop following exposure to an event or series of events of a highly threatening or horrific nature, most commonly prolonged or repetitive events from which escape is difficult or impossible (e.g., torture, slavery, prolonged domestic violence, etc.). All diagnostic requirements for PTSD are met. In addition, complex PTSD is characterized by severe and persistent: (1) problems in affect regulation; (2) beliefs about oneself as diminished, defeated or worthless, accompanied by feelings of shame, guilt or failure related to the traumatic event; (3) difficulties in sustaining relationships and in feeling close to others. These symptoms cause significant impairment in personal, family, social, educational, occupational or other important areas of functioning [21, 23–26]. A comparison of the symptom hierarchy of PTSD and complex PTSD is given in Table 1.

The introduction of an analogous disease entity in the DSM referred to as DESNOS – a disorder of extreme stress not otherwise specified – has been considered in numerous discussions. However, the developed constellation of DESNOS symptoms has not been granted the status of a separate diagnostic entity. For many psychotraumatologists, the DESNOS conceptualization remains an experimental construct [12].

Table 1. **Hierarchy of PTSD and complex PTSD symptoms [as cited in: 27, p. 2]**

Traumatic stress disorders	
“Gate” criterion: traumatic stressor	
PTSD Re-experiencing Avoidance Sense of threat	Complex PTSD Re-experiencing Avoidance Sense of threat Affect dysregulation Negative self-concept Interpersonal disturbances

The creation of a new nosological entity has stimulated researchers to debate the differentiation of the diagnosis of PTSD, complex PTSD, and borderline personality disorder. The work of Marylène Cloitre et al. [28] perfectly describes the essential differences between the three.

Conceptualization

Cognitive-behavioral therapy is a family of therapies in which an important role is attributed to cognitive processes – thoughts and beliefs; it takes into account learn-

ing processes; it is geared towards symptomatic and/or causal treatment of a range of psychiatric disorders; it takes into account personal experience and social context as well as biological factors, including temperament [3, 13, 29]. At the same time, in cognitive therapy, it is assumed that the processing of experiences and the interpretation of reality are founded on personal constructs, so-called cognitive schemas. Their essential element is a system of beliefs about oneself, other people, and the world, formed from early childhood and based on individual experiences, interactions with the environment and relationships with emotionally important people. Repeated adverse experiences can lead to the formation of maladaptive schemas, which cause irrational information processing and, consequently, dysfunction in the cognitive, emotional and behavioral areas [30]. In cognitive-behavioral therapy, conceptualization is based on the cognitive model of a particular disorder, on the one hand, and, on the other hand, on understanding how events in life, the way the patient was treated, and the messages they received from others have shaped the patient's schemas and beliefs [31].

Among the selected cognitive models, the cognitive-transactional theory of stress by Richard S. Lazarus and Susan Folkman should be mentioned first [32–34]. The cited concept of stress and coping continues to be the most frequently cited in stress research [35, 36]. The authors use the term „transaction” to describe the interaction between a person and their environment. Stress, on the other hand, is defined as a specific relationship between a person and their environment assessed by that person as burdening or exceeding their resources and threatening their well-being [32, p. 572].

Cognitive assumptions are most expressed in attributing to cognitive appraisal a key role in the emergence of stress. At the level of primary appraisal, a stress transaction can be perceived as harm/loss, threat or challenge. Harm refers to injury that has already occurred as loss of objects of value to an individual. Threat refers to injury yet to come, so stress is the anticipation of possible injury. On the other hand, challenge is also anticipatory but refers to a situation in which both gains and losses are possible. Each of these appraisals is associated with characteristic categories of emotion. In the case of harm/loss, it is anger, grief, and sadness. The threat is reflected in fear, anxiety, and worry. In contrast, challenge in terms of emotional experience is expressed through negative emotions, similar to those characteristic of threat, and positive emotions – hope, eagerness, excitement, and cheerfulness.

The primary appraisal of the subject-environment relationship that is considered stressful results in the activation of another cognitive process called secondary appraisal, which involves estimating the possibility of coping with such a situation. This appraisal relates to the possibility of taking remedial action that removes the causes of the stress or mitigates its effects and, in the case of a challenge, leads to available benefits. Secondary appraisal addresses both the sources of stress and the individual's resources. Both cognitive processes – primary and secondary appraisal – run concurrently and are coupled. Thus, this concept, in addition to explaining stress generation, also defines the human effort understood as coping with stress [35–37].

According to Richard Lazarus and Susan Folkman, coping can be defined as a person's „constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person”

[32, p. 572] Researchers distinguish two functions of coping activities: (1) mastering the difficult situation or changing the situation by actively working towards a solution (problem-focused strategies); (2) regulating the emotional response occurring in relation to the problem (emotion-focused strategies) [34, 35].

Richard Lazarus and Susan Folkman provide the following problem-focused strategies:

- (a) confrontational behavior (e.g., defending one's position);
- (b) planned solution to a problem (e.g., planning an activity in different ways).

Emotion-focused strategies, on the other hand, include:

- (a) distancing (“it does not concern me” behavior);
- (b) self-control (e.g., an overly rigid approach to a situation);
- (c) seeking social support;
- (d) escape/avoidance (e.g., alcohol consumption);
- (e) positive re-evaluation (e.g., looking for the advantages of a situation) [32].

Cognitive appraisal and coping are important because these processes mediate between the stressful situation and its effects on the individual. The effects of stress can be assessed in three spheres:

- (1) social functioning – social roles, interpersonal relationships;
- (2) psychological well-being – how the individual feels about themselves and others; feelings of happiness, satisfaction, well-being;
- (3) somatic health – stress can cause many diseases [32].

Figure 1 shows the short – and long-term effects of stress.

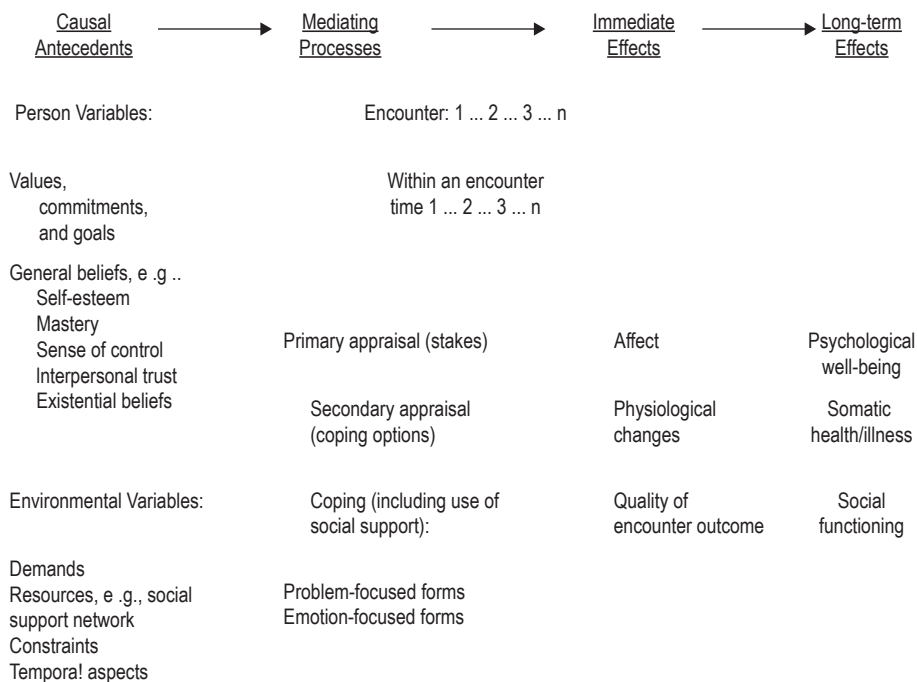


Figure 1. **Model of short – and long-term effects of stress by R. Lazarus and S. Folkman (1987) [as cited in: 34, p. 144]**

Susan Folkman continued her work on stressful situations among people with incurable illnesses. She sought answers to the question: Where do positive emotions come from in negative, stressful situations? It became apparent that the applicability of problem-focused coping was limited if the source of stress was unmanageable. The author then extended the model to meaning-focused coping: either global, relating to values, beliefs and higher goals, or situational, relating to the assessment of a specific situation in relation to close goals and one's well-being [35, 36]. Meaning-focused coping was exploratory and was applied to other concepts. Figure 2 illustrates S. Folkman's modified stress transaction model.

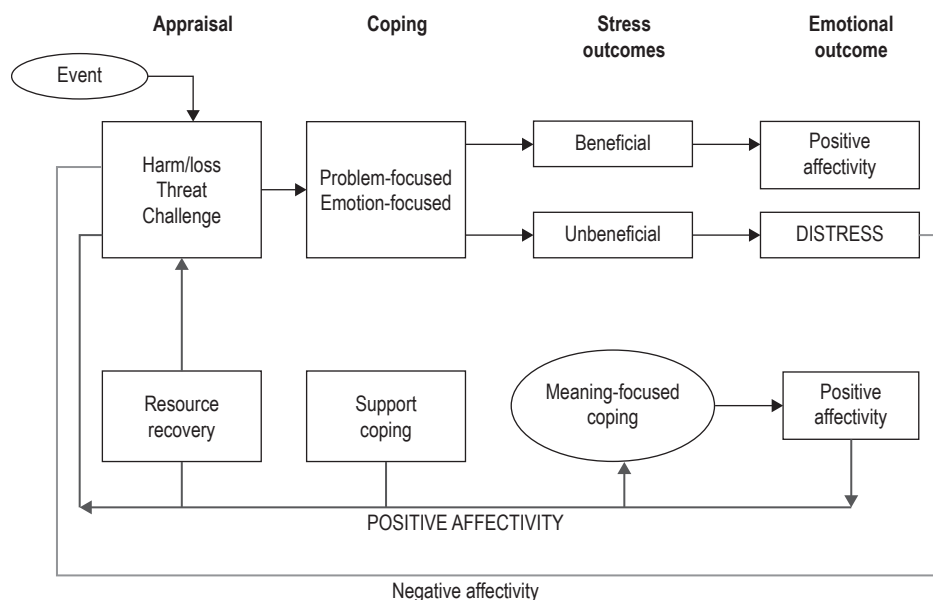


Figure 2. **The transactional model of stress and coping developed by R. Lazarus and S. Folkman, as extended by S. Folkman [as cited in: 36]**

It should be emphasized that the psychological mechanism for the development of PTSD largely relies on cognitive psychology and the concept of cognitive schemas. It is worth recalling here Horowitz's theory of mismatch, which assumes that an individual experiencing PTSD uses certain fixed cognitive schemas stemming from their experiences and concerning beliefs and expectations related to the future. When new information arrives, they attempt to process it and match it to existing schemas [38, 39]. This forms the basis for situating PTSD symptoms in the context of learning theories – neutral stimuli occurring during a traumatic experience become generalized and cause anxiety themselves [3]. Based on this principle, the patient perceives the surrounding world as extremely dangerous and sinister and other people as untrustworthy. Horowitz distinguishes five phases of post-traumatic reaction:

- (1) the outcry, as an immediate response to the event, in which emotions of fear, sadness and rage may occur;
- (2) the denial, in which the individual ignores the threat or loss;
- (3) the intrusion phase, during which thoughts, emotions and images associated with the trauma return;
- (4) working through, during which new schemas are formed or existing ones are revised, thus gradually re-establishing the inner balance;
- (5) the resolution, which finalizes the processing of the traumatic event, in which new schemas associated with the trauma are consolidated [38, 39].

In the chronic stress model, authors Anke Ehlers and David M. Clark (Figure 3) emphasize the importance of assessments of the trauma and its impact on the person's subsequent life (e.g., „The world is utterly dangerous”, „People are not trustworthy”), evaluations of themselves, their own attitude during the trauma (e.g. „It was my fault”, „I'm weak”), and possible subsequent feelings of shame for not coping with the threat, as well as assessments of PTSD symptoms (e.g., „Not coping with anxiety is a sign of mental weakness”). The consequence is a constant sense of threat, anxiety, and increased vegetative arousal symptoms, leading to the use of cognitive and behavioral avoidance strategies [3, 4].

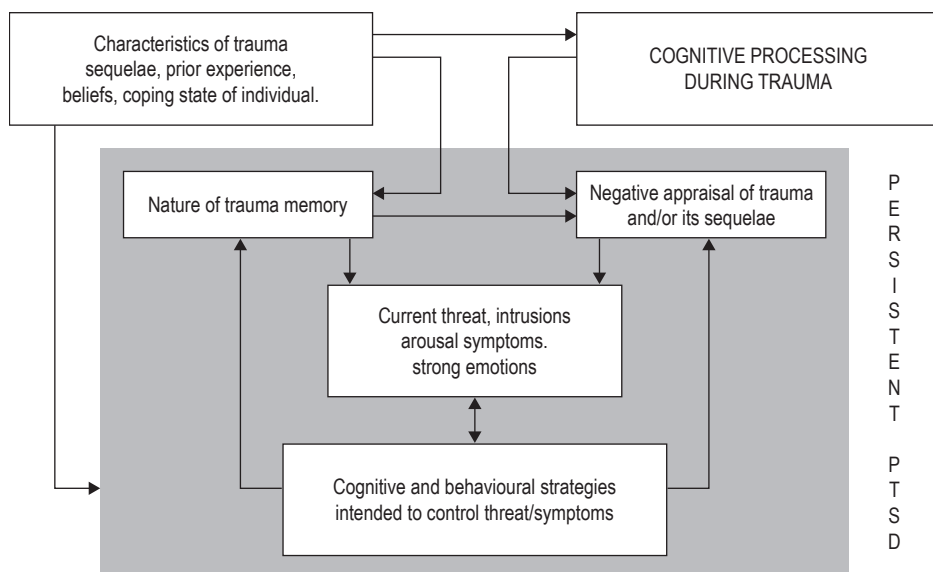


Figure 3. **A cognitive model of chronic PTSD according to Anke Ehlers and David Clark [as cited in: 3, p. 124]**

However, avoidance, both cognitive and behavioral, does not allow anxiety to be worked through, perpetuating it instead. Avoidance of memories of trauma and everything associated with it is maintained through a process of negative reinforcement, i.e., the elimination of unpleasant feelings of anxiety in the short term. In the long term, avoidance perpetuates the anxiety caused by trauma, making it more challenging to process it emotionally [10].

According to the theory of emotional processing formulated by Edna B. Foa and Michael J. Kozak, fear is represented in memory as a certain cognitive structure that is a “program of protection” against danger. This structure of fear encompasses an overabundance of stimuli that are erroneously associated with danger, as well as representations of physiological arousal and behavioral responses that are reflected

in symptoms of PTSD. Due to the multiplicity of stimuli perceived as threatening, the person affected by PTSD perceives the entire world as threatening. Moreover, the recollection of one's behavior at the time of the traumatic event, subsequent psychopathological symptoms, as well as negative interpretations of post-traumatic stress symptoms are associated with one's helplessness, defectiveness, and incompetence. The relationships between the different elements of the fear structure are fragmented, poorly organized and incoherent. Avoidance prevents a person from accessing the fear structure and introducing corrective information [10].

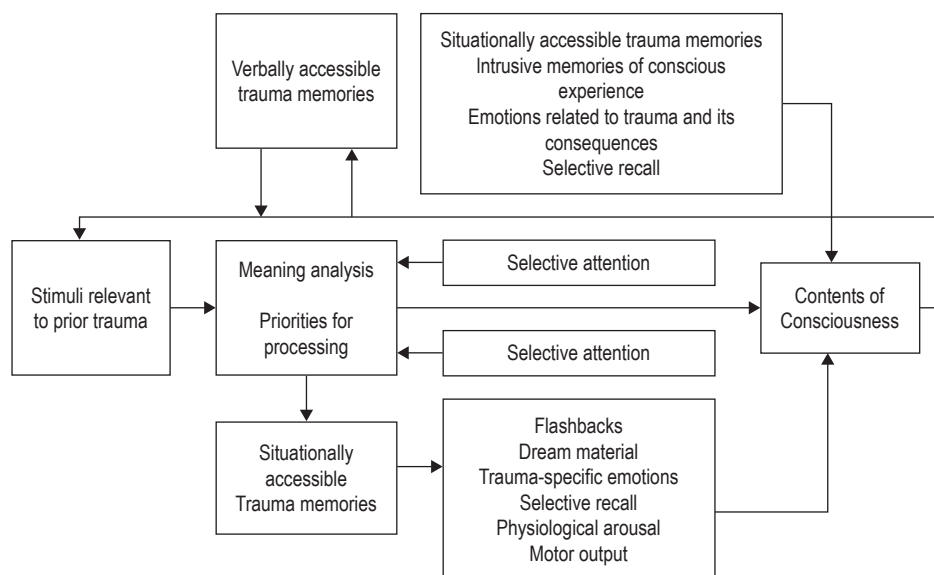


Figure 4. **Model of cognitive processing of trauma developed by Chris Brewin et al.** [10, p. 676] as part of the dual representation theory of PTSD

A similar negative role is attributed to avoidance in the cognitive model developed by the team led by Chris Brewin [40] within the dual representation theory of post-traumatic stress disorder (PTSD). This model is discussed third and last in this paper (Figure 4). The authors of the theory distinguish two distinct types of memories of the traumatic event: (1) memories situationally accessible as experiences of involuntary intrusion, flashbacks that are processed unconsciously; (2) memories verbally accessible as a consciously recalled narrative about the traumatic event.

In situationally accessible memories, features and details of traumatic events are stored, such as, for example, sounds, smells, and images, which are not subject to conscious control. They can only be recalled involuntarily from implicit memory in response to a relevant situational stimulus.

The second system of memories, i.e., the verbally accessible ones, on the other hand, is activated when the patient consciously reflects on and recalls the traumatic

event, for example, trying to understand it or integrate its features and details. Various volitionally accessible records of autobiographical events, emotions that accompany them and the ways they are interpreted are stored in explicit memory and can be altered. However, the anxiety response that accompanies trauma always leads to an impairment of short-term memory and the occurrence of selective attention.

The processing of trauma can be effective if the patient is given adequate support to repeatedly discuss painful memories, reduce negative emotional states and provide a new meaning to their experiences. On the other hand, an attempt to cognitively integrate a traumatic event may degenerate into chronic processing through the patient's persistent preoccupation with thoughts about the trauma when accompanied by symptoms of arousal and difficulties in attention and memory functioning. The trauma will then not be assimilated into one of the many events over a lifetime but will be perceived as a recurring fact external to the subject.

The third possible scenario is premature inhibition of emotional processing due to avoidance of thinking about trauma, as well as the unpleasant arousal associated with it. As a result, memories are not processed, and the patient is left vulnerable to their reactivation later in life, especially if exposed to a stimulus reminiscent of the traumatic event [40, 41].

It should be noted that only part of this concept has been empirically verified. Nowadays, it is emphasized that further research is required. At the same time, considerable difficulties are encountered due to the substantial expansion of the theoretical concept and because of ethical considerations of experimenting on humans with regard to the psychological consequences of traumatic events [41].

Various types of cognitive-behavioral therapies constitute the dominant psychotherapeutic paradigm used to treat PTSD. Strongly recommended forms of psychotherapy include cognitive-behavioral therapy (CBT), cognitive processing therapy (CPT), cognitive therapy (CT), and prolonged exposure (PE) [1, 21, 42].

Treatment of PTSD in children and adolescents

What becomes indispensable in treating PTSD in children and adolescents is the comprehensiveness of care. Many complex psychological, medical, legal, and child-protection issues need to be taken into account, and these need to be known to effectively address the therapeutic needs of this population [9, 43]. A review of the scientific literature concludes that trauma-focused cognitive-behavioral therapy (TF-CBT) has been found to be the most effective method for PTSD and related difficulties in children and adolescents [7, 41].

TF-CBT is a modular, hybrid approach that integrates trauma-sensitive interventions and cognitive-behavioral procedures, as well as aspects of attachment theory, developmental neuroscience, systems theory, empowerment concepts, and humanistic approaches. TF-CBT targets children and adolescents aged 3–18 as well as their parents who are coping with the consequences of traumatic life events. Components of TF-CBT

particularly apply to the symptoms of PTSD, including depression and anxiety as well as to the negative consequences of these disorders. Therapy sessions involve working with children and their caregivers to support their relationship with each other in the context of coping with the effects of trauma. TF-CBT has shown excellent effectiveness in helping children, as well as their parents, to recover and overcome PTSD [8, 44].

Trauma-focused cognitive-behavioral therapy, according to the model of Edna B. Foa et al. using the prolonged exposure method, is designed for adolescents aged 13–17 with post-traumatic stress disorder. It contains the same elements as prolonged exposure for adults, but the protocol has been modified to include specific developmental aspects. It has also been supplemented with a section covering work with parents. The main idea is that the therapist teaches the patient how to cope with the symptoms of post-traumatic stress disorder over 11 to 18 (on average 14) sessions. Only this one detailed program for the treatment of PTSD in adolescents is available in Poland, precisely the one developed by Edna Foa, Eva Gilboa-Schechtman, and Kelly Chrestman [10, 45–47].

Psychological interventions for the treatment of PTSD in children and adolescents, according to the UK's National Institute for Health and Care Excellence (NICE) recommendations, include:

- individual TF-CBT for children aged 5–6 with a diagnosis of PTSD or with clinically significant PTSD symptoms that persist more than one month after the traumatic event;
- individual TF-CBT for children and adolescents aged 7–17 with a diagnosis of PTSD or with clinically significant symptoms of PTSD that persist 1–3 months after the traumatic event;
- individual TF-CBT for children and adolescents aged 7–17 with a diagnosis of PTSD or with clinically significant PTSD symptoms that persist more than three months after the traumatic event [48].

Both NICE and the National Health Service in the UK recommend considering the use of eye movement desensitization and reprocessing (EMDR) for children and adolescents aged 7–17 with a diagnosis of PTSD or clinically significant PTSD symptoms that persist more than three months after a traumatic event only if there are no results of treatment or the child does not cooperate in TF-CBT [48, 49]. Eye movement desensitization and reprocessing (EMDR) therapy using repetitive and rhythmic eye movements (or tactile and auditory stimuli) combined with an imaginal representation of a difficult memory is designed to facilitate the processing of information that guarantees the elimination of the disorder on an emotional level. EMDR follows an eight-step protocol that aims to fully process the trauma so that its memory does not trigger distressing symptoms in the present. This therapy applies to both PTSD and C-PTSD [44].

Narrative exposure therapy can also be used effectively with young children and adolescents. This variant of CBT, which is inspired by the prolonged exposure proce-

ture, aims to reduce the symptoms of cognitive and behavioral avoidance of thoughts, emotions and situations related to the trauma. For a group of children who experienced the same type of trauma, it can be applied in group therapy [44].

Group therapy can be effective in overcoming PTSD and other post traumatic symptoms among children and adolescents. Moreover, it constitutes a practical tool, for instance, in war-torn countries, where many children are exposed to collective trauma on a large scale and where there is a shortage in therapists. The inclusion of pharmacological treatment in children requires more caution and consideration and is not recommended. Pharmacological treatment alone, without psychotherapy, is not recommended [8, 9].

There are few systematic studies on the effectiveness of CBT interventions targeting PTSD in children and adolescents. Nonetheless, it should be emphasized that, apart from implementing appropriate CBT approaches, which are dedicated strictly to PTSD, it is worth considering work on complex co-occurring reactions in children and adolescents (for example, on grief, anger, depression, anxiety), seeking social support and developing positive coping skills. In light of research findings, there is a need to create and evaluate complex, multifaceted interventions designed to treat PTSD in children and adolescents [50].

Treatment of PTSD in adults

Research on the treatment of PTSD in adults indicates that especially therapy using the cognitive-behavioral approach, such as prolonged exposure (PE), cognitive therapy, cognitive processing therapy (CPT), narrative exposure therapy (NET), eye movement desensitization and reprocessing (EMDR), and stress inoculation training (SIT) are considered effective [1, 4]. Also, the first cognitive therapy protocol for PTSD, *Effective in Stress*, has been tested in the Polish population, the main principles of which are the PTSD prevention program for people exposed to occupational traumas [51]. This paper will present the prolonged exposure and emotional processing method and cognitive processing therapy as the best-explored methods, both in terms of effectiveness and the results of their dissemination [1, 3, 4, 42, 52].

Prolonged exposure (PE) therapy consists of ten to fifteen meetings, during which the techniques that are mainly used are (a) *in vivo* exposure; (b) imaginal exposure; (c) cognitive restructuring; and (d) the patient's individual work. The therapy aims to overcome the pathological structure of fear by not using cognitive or behavioral avoidance but using the patient's observation of the habituation phenomenon by increasing the capacity to experience negative affect. The largest group of individuals who are treated with PE are victims of rape, warfare, and traffic accidents. The effectiveness of PE is 70–80%. The review of meta-analyses of CBT effectiveness includes empirical data that confirms its efficacy [1, 3, 4, 42, 53].

In Poland, clinical studies on trauma and post-traumatic stress disorder have been conducted under the TRAKT I-III programs, comparing the effectiveness of psycho-

therapy, pharmacotherapy, and combined treatment. The results in a group of 228 traffic accident victims showed a clear advantage of prolonged exposure therapy and an effectiveness of up to 65.4% [6].

Patricia A. Resick, who has received multiple awards for her outstanding academic achievements in the field of traumatic stress, developed with her colleagues cognitive processing therapy (CPT). The training and conceptualization take into account the interrelationship between the biological underpinning of PTSD and the reasons behind the effectiveness of CPT. The essential methods in CPT are Socratic dialogue and work based on handouts and worksheets, while CPT+A is mainly based on written accounts. One of the aims of CPT is to teach patients to be more flexible in their thinking – specifically, to think critically about the stories they tell themselves about the causes of traumatic events and their consequences for themselves and others. CPT's motto appears to be that „people can change their views” [7, 52, 54].

The manual for clinicians describes 12 sessions. The first half of the therapy (sessions 1–5) is focused on the trauma or traumas and exploring what story the patient tells themselves about it. It includes, for example, psychoeducation about PTSD symptoms, revision of the original trauma, learning about stuck points (erroneous thoughts and beliefs formed during the trauma), processing the baseline event. Sessions 6–7 are dedicated to learning to change oneself based on problematic thinking schema worksheets and challenging one's beliefs. Sessions 8–10 involve working through the themes of safety, trust, power/control. Sessions 11 and 12 discuss termination of therapy and the themes of respect, intimacy, and facing the future. After completion of the CPT protocol, follow-up meetings in aftercare can be provided [7, 52, 54].

A current review of the empirical foundations of CPT includes 14 randomized clinical trials (RCTs) testing CPT and extensive uncontrolled studies testing the effectiveness of CPT in real-world clinical settings. Patricia A. Resick et al. [54] compared CPT with PCT (present-focused treatment) conducted among the group of active US Army soldiers serving in Iraq and Afghanistan (or their close areas) who sought help for PTSD. Both therapies resulted in relief of PTSD symptoms, but CPT was significantly more often associated with relief of more PTSD symptoms. Furthermore, CPT led to a reduction in depressive symptoms, which also persisted at post-therapy assessment.

To date, CPT manuals have been translated into 12 languages, and the therapy itself has proved successful in a variety of cultures. The approach is individualized and takes into account the cultural contexts according to which the manuals have been adapted [7, 54].

The developing so-called „third wave” of cognitive-behavioral therapies is contributing to the treatment of mental disorders. The best-known third-wave therapies include acceptance and commitment therapy (ACT), dialectical behavior therapy (DBT) or, in an integrative approach, schema therapy (ST). The treatment methods proposed as a part of these therapies would require discussion in a separate paper due to the breadth of the subject.

Recapitulation

In the current situation of global crisis, caused by the ongoing wars, devastating effects of floods and tsunamis, by strong technological development and crucial changes in access to information and their proliferation, modern people face a constant need for stress prevention or seek support because of PTSD and C-PTSD. The complexity of this concept demands further development of the research tools as well as effective treatment methods of PTSD/C-PTSD among children, adolescents and adults.

As far as PTSD is concerned, it is particularly important to undergo evidence-based treatment, the effectiveness of which can be tested and side-effects predicted. Moreover, only properly trained specialists can conduct cognitive behavioral therapy. Only a qualified specialist is authorized to provide cognitive-behavioral psychotherapy [55].

In accordance with the most up-to-date meta-analyses of the CBT effectiveness and recommendations of the leading psychological societies, TF-CBT (including prolonged exposure therapy by Edna Foa, cognitive processing therapy by Patricia Resick, cognitive-behavioral therapy by Anke Ehlers, and narrative exposure therapy by Frank Neuner) is the first-choice therapy for the individuals of various age with the symptoms of PTSD after incidental trauma, and is dedicated not only for adults, but also for children and adolescents. In case of the multiple, complex trauma or C-PTSD, not only TF-CBT, but also IPT (interpersonal psychotherapy) and EMDR are effective. In case of children and adolescents who deal with a complex trauma, TF-CBT proved to be effective, but a larger amount of empirical data should be gathered, the same as with the effectiveness of „third wave” CBT [1]. Finally, we are hopeful that the approaches based on cognitive-behavioral paradigm will continue to evolve and help those, who struggle with PTSD or C-PTSD.

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