

A critical evaluation of the conceptual model and empirical evidence for current cognitive behavioral approaches to post-traumatic stress disorder from a counseling psychology perspective

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ABSTRACT

Recent innovations in post-traumatic stress disorder (PTSD) research have led to new and potentially significant psychological treatments. Parallel to that, new enhancements to empirically validated cognitive approaches have been identified. This paper aims to review the current literature and research evidence on cognitive-behavioral interventions for post-traumatic stress disorder. More specifically, the paper will examine the core principles of the most predominant theories informing trauma focused therapies, by providing an account and a critique, of the robustness and validity of each model. The review concludes with the claim that cognitive behavioral approaches do offer a coherent basis for the treatment of PTSD as evident by the plethora of multi-representational approaches to trauma; whilst their efficacy is being favoured by a rich body of research evidence. However, a number of methodological limitations related to randomized controlled trials (RCTs) and conceptual omissions that fail to capture the disorder in its entirety, point to the embracement of alternative approaches to PTSD such as psychodynamic and eclectic therapies,

which is in line with counseling psychology's pluralistic ethos. Future research may wish to focus on exploring these claims further, by conducting a meta-analysis of outcome studies across all major therapeutic modalities.

Keywords: Bonafide treatments, CBT models, Evidence base, Post-traumatic stress disorder (PTSD), Randomized control trials

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INTRODUCTION

Counseling psychology's epistemological framework is fundamentally plural in its nature, encouraging the multiplicity of approaches in theory and practice. It is largely informed by the science practitioner model while relying heavily on phenomenology and humanistic values [1]. Whilst those differing perspectives have traditionally generated varying professional approaches to mental health, their eclectic integration within Counseling psychology has created a multifaceted approach to psychological distress. Working with diagnostic categories is consistent with the science practitioner model and highly relevant to the practice of counseling

psychology, albeit often adapting a critical stance towards them [2]. In this paper, post-traumatic stress disorder will be introduced as a diagnostic category in relation to cognitive behavioral treatments, without however assuming superiority of the medical model over individual phenomenology.

Diagnosis of Post-traumatic stress disorder

Post-traumatic stress disorder was originally classified as an anxiety disorder and is characterized by aversive experiences of anxiety, maladaptive behavior, somatic symptoms as well as physiological responses that arise and develop following an individual's exposure to a psychologically traumatic event. Recent revisions in the diagnostic literature now classify PTSD within the Trauma and Stressor-Related Disorders spectrum [3]. Post-traumatic stress disorder symptomatology as outlined in the diagnostic manuals, is theorised to result in clinically significant distress or impairment, in several aspects of life activity, like occupation, social relations and other major areas of everyday functioning [3].

Regarding the biological basis of PTSD, three areas in the brain appear to be affected as a result of exposure to traumatic stress: the prefrontal cortex, the hippocampus and the amygdala [4]. As shown in neuroimaging studies, the amygdala is strongly related to the creation of emotional memories, especially those associated with terror and fear. Consequently, the disorder is related to the hyperarousal of the amygdala and the deficient top-down control by the hippocampus and the medial prefrontal cortex.

Cognitive approaches to Post-traumatic stress disorder

Trauma-focused cognitive behavioral therapy draws on psychological models that explain the relationship between feelings, thoughts and behaviors characteristic of PTSD symptomatology. A central feature of the cognitive model of PTSD and psychopathology in general, is the position that the mind processes information in multiple ways. Historically, cognitive theories introduced various models on mental representation like the schema theory, the dual representation theory, the distributed fear network theory and the imagined representation theory [5, 6]. Each representational model holds particular strengths and weaknesses in terms of its capacity to explain pathological states like PTSD.

Schema theory and Post-traumatic stress disorder

Horowitz's [7] schematic model, posits that within the cognitive system, the basic impetus for the processing of the information associated with the traumatic experience stems from a particular intrapsychic process known as the 'completion tendency'. This process refers to

the brain's need to match "new information with inner models based on older information, and the revision of both until they agree". In the initial reaction following the traumatic experience, trauma-related images, thoughts and memories cannot be organized within existing schematic meaning structures, which results to an initial failure to 'complete'. This leads to the operation of various psychological defence mechanisms, like numbing and denial, preventing entry into distraught and overwhelmed states of mind [7].

Horowitz's schematic position suggests that cognitive processing becomes biased in order to maintain existing, pre-traumatic schematic structures. During such defensive states, information related to trauma is maintained within the structure of 'active memory', which intrinsically tends to repeatedly forward its content into conscious awareness until the achievement of successful completion. As a result, the active memory of the traumatic event causes trauma-related information to override psychological defences and manifest itself through nightmares, intrusive thoughts and flashbacks. According to Horowitz's theory, the tension between the completion tendency and defensive operations, makes the individual oscillate between phases of intrusive symptoms and numbing/denial; whilst long-term schematic representational structures gradually incorporate the trauma-related information [7].

Dalgleish [6] argues that schema models of PTSD may "account for far more of the core data of the disorder than they fail to account for". The main strength of the schematic approach to PTSD is that it describes the organisation of abstracted levels of knowledge and experience. This is achieved through the employment of the following key explanatory principles:

- a) that the nature and content of schematic representations determine the way the individual processes all subsequent information; and
- b) that new, schema-inconsistent information can become problematic to this processing.

According to APA [3], the application of the above principles to trauma provides a strong account of the main symptoms of post-traumatic stress disorder. An important weakness of the schema model, is that it does not offer a conceptualization of the automaticity of some symptoms of PTSD, and neither does it account for the relationship between triggers and flashbacks or overwhelming emotions. Whilst the concept of active memory in Horowitz's theory does provide a descriptive account for their occurrence, the schema-based theory does not explain the mechanism of post-traumatic schema change, and how referential cognitive information such as automatic thoughts, appraisals and core beliefs, are represented and therefore altered in therapy.

Fear network theory and post-traumatic stress disorder

Foa and Kozak's [8] fear network theory of emotional processing in post-traumatic stress disorder

is based upon a previous exposure model for anxiety disorders supporting the extinction of fear through the reconciliation of the feared-object with the subject. The fear network proposed by the authors is an associative network in long-term memory that encompasses the following elements:

- (a) stimulus information about the feared event/object;
- (b) information about physiological, cognitive and behavioral responses to this event/object;
- (c) information connecting the stimuli and the response elements.

Thus, the task of therapy is to modify the fear network in order to become adaptive and functional. In order to modify the fear network it is essential to re-activate the network so that the individual experiences fear, and to incorporate into the network new ‘fear-incompatible elements’, in order to change its basic structure. In this model, the pathological symptoms of PTSD are understood to be caused by the activation of one or a number of elements of the fear network by external stimulation. This position according to Dalgleish [6], is a different account to the one proposed by Horowitz’s schema theory [7] in as much as it conceptualizes the intrusive symptoms as a result of the unintegrated nature of the traumatic content and its resulting representation in the ‘active memory’. The strength of network theory lies in its ability to model the connectivity between different representations and to account for the basic symptoms of PTSD in that way. However, although network theory appears to describe and account for automatic emotions experienced following the traumatic event it does not explain or elaborate on how appraisal-driven emotions are supported by theory as it fails to account for the idiosyncratic nature of the disorder. As a result, the model is weak in terms of its applicability to cognitive interventions like trauma-related appraisals as well as emotions emerging following these [6]. Foa and McNally [9] interestingly argue that the presence of emotions like rage and guilt may make recovery even more difficult since these emotions may not extinguish in the same fashion fear does, calling perhaps for additional interventions to be incorporated within the conceptual framework of the fear network model.

The dual representation theory of post-traumatic stress disorder

In the dual representation theory (DRT) of PTSD, Brewin, Dalgleish and Joseph [5] propose that memory processes in traumatic exposure may explain complex phenomena like the involuntary intrusive images and flashbacks, avoidance and hyper arousal. This model proposes that verbally accessible memories (VAM) and situationally accessible memories (SAM) representations are encoded in parallel during the traumatic event and it is precisely these structures that justify the range of PTSD symptomatology [6]. The theoretical model

suggests that flashbacks, nightmares and trauma-related emotions arise due to the activation of SAM structures, whilst the client’s ability to relive the trauma and its contents (emotions; appraisals; meta-cognitions) would be a result of accessing VAM structures. Consistent with the schema model and the fear network theory, denial as well as avoidance behaviors, are conceptualized as a way of dealing with unwanted re-experiencing through the activation of VAM and SAM structures [6]. Contrary to the network theory, the dual representation model offers a more detailed explanation of specific idiosyncratic cognitive experiences:

- the transformation of meaning after traumatic exposure
- the processing of appraisals and meta-cognitions;
- the action mechanism of a number of pre-trauma risk factors
- the process that might lead to the emergence of appraisal-driven emotions, in the form of VAMs that allows deliberate editing of traumatic information

The dual representation theory has been criticized for lacking a coherent account on the transformation of post-traumatic meaning making and pre-traumatic risk factors such as schemas, relational templates and core beliefs. Whilst the VAM representation may hold some information about the person’s cognitions and emotions relative to the trauma, the SAM representation may hold contradictory information and this is type of discrepancy is theorized to be a common characteristic of PTSD [7]. Whilst the model as a theory captures this relationship, it fails to account for the process by which VAM and SAM representations communicate with each other, thus creating what Dalgleish [6] termed the “interaction of components problem”.

Post-traumatic stress disorder maintenance model

The Ehlers’ and Clark’s [10] maintenance model extends the understanding of the dual representation model and suggests a model for PTSD maintenance and persistence of symptoms. The authors propose that PTSD is maintained when the individual’s way of processing the trauma generates a sense of serious, current threat which arises due to:

- (a) an extremely negative appraisal of the trauma and/or the trauma sequel
- (b) a disturbance of autobiographical memory that is characterized by poor contextualization and elaboration, strong associative memory as well as strong perceptual priming.

A series of cognitive and behavioral techniques are utilized in order to facilitate changes in trauma memory and negative appraisals. These techniques aim to:

- (a) change extremely negative appraisals;
- (b) correct the disturbance of autobiographical memory;

(c) eliminate problematic cognitive and behavioral strategies.

Extremely negative appraisals of the traumatic experience are identified through the process of careful questioning as well as through exploring the significance of 'hot spots', which refer to the moments of the utmost distress experienced in the trauma memory and the subsequent formation of a negative meaning. 'Hot spots' can be identified through exploring the content of intrusions [11] and through the use of imaginal reliving of the traumatic event. Once an alternative appraisal emerges following guided discovery, then the new appraisal is actively integrated into the trauma memory. This is generally achieved by adding the new meaning to a written account of the trauma memory as produced by the client; or by introducing the alternative appraisal into a following imaginary reliving.

As with the associative network theory and the dual representation theory, the model developed by Ehlers and Clark is trauma-centric. According to Ehlers and Clark [10], "victims with prior negative beliefs about themselves may see the trauma as a confirmation of these beliefs and those with extremely positive beliefs may find that the trauma shatters their trust in themselves or the world". What is implied within this model is that the nature of the relationship of the trauma to the pre-existing beliefs that the individual carries about the self and the world is what determines the type of appraisal of current threat the person creates. The Ehlers and Clark maintenance model has been criticised for lacking the specificity to provide unique, empirically testable predictions [6]. For example, although the major role of negative appraisals in the maintenance of the disorder is emphasized, the model generally does not clarify how certain appraisals may be construed as 'benign' and some others as 'toxic', nor does it provide an account as to how this might vary across individuals.

Empirical evidence of cognitive behavioral treatments for post-traumatic stress disorder

Trauma focused treatments address both simple and more complicated presentations of PTSD [12], with the majority of the studies focusing almost entirely on variations of cognitive therapy and exposure therapy [13, 14]. The clinical efficacy of exposure therapy as part of trauma focused CBT has been documented within a plethora of RCTs [14, 15] and is currently the first line of treatment for PTSD in most clinical settings.

Further evidence for the efficacy of trauma focused interventions has been provided by Monson, Schnurr, Resick, Friedman, Young-Xu and Stevens [16] who studied cognitive processing in a large sample of PTSD clients and by Bisson, Ehlers, Matthews, Pilling and Richards [17] who conducted a series of trials on the effects of trauma focused CBT and eye movement desensitization and reprocessing (EMDR).

In a consecutive case series [11], twenty PTSD patients who underwent cognitive therapy showed highly significant symptom improvement in anxiety, depression and post-traumatic stress symptoms. In a following RCT, comparing cognitive therapy to a three-month waitlist condition, cognitive therapy resulted in significant reductions in symptoms of PTSD, depression, anxiety and disability, while no improvement was noted in the waitlist group. In both studies, cognitive therapy was highly acceptable, with the patient dropout rate at only 3%, and six-month follow-up data showed that treatment gains were well maintained [11]. A five-session study involving cognitive reprocessing through the means of writing about trauma, resulted in a significant decrease of symptoms that was maintained over a two-month follow-up [18].

Trauma focused CBT has been found to be effective for PTSD following terrorist attacks in the surviving victims of the 9/11 terrorist attack in New York [19], the 7/7 London bombings [20] and the 1998 bombings in Omagh [21]. Preliminary outcome data on eighty-two individuals who met criteria for PTSD treated with trauma focused CBT and EMDR showed significant PTSD symptom reductions and a large treatment effect size [22].

A pilot study of seven patients with diverse traumas incorporated interoceptive exposure [23]. Treatment consisted of twelve, ninety-minute sessions, including interventions of interoceptive exposure, imaginal exposure and in vivo exposure. Results from this small trial showed that a post-treatment assessment indicated improvements in symptoms of PTSD like anxiety levels, negative self-cognitions, and depressive mood in five out of those seven clients. These gains were maintained at one month follow-up and at three month follow-up, four of those clients no longer met diagnostic criteria for PTSD.

Another randomized controlled trial [24] assigned participants from an outpatient clinic with varied forms of PTSD, to ten sessions of CBT with the main interventions being imaginal exposure and imagery re-scripting. This group was then compared to a waitlist group without any intervention. Results indicated great improvement in the CBT group compared to the waitlist with significantly greater anger control and reduction in anxiety and guilt scores.

Further evidence supporting TF-CBT for PTSD following sexual assault on females, and childhood sexual abuse comes from the studies of Foa, Zoellner, Feeny [25] and McDonagh, Friedman, McHugo [26]. These studies demonstrated that symptomatic changes were maintained at long-term follow-up assessments.

A meta-analysis of twenty six studies with forty four treatment conditions reported that overall, 56% of the clients who started therapy and 67% of those who completed it, no longer met diagnostic criteria for PTSD whilst reporting clinically meaningful improvement by standards defined by the authors [22].

Limitations of the evidence base

Whilst randomized controlled trials are considered powerful in determining the relative effectiveness of PTSD treatments, they are also subject to various threats to validity. Wampold, Benish, Imel, Miller, Flückiger, Del Re, Timothy, Baardseth & Budge [27] point out that some of the main limitations of RCTs include the selection of participants, the researcher bias and the interpretation of outcomes to favour the researchers' chosen modality. Furthermore, when comparisons occur between a treatment and a wait-list control group, outcomes are not in a position to claim superiority of a given one therapy. From a counseling psychology perspective, Barkham [28] in his discussion of the four generations of research, highlights how different approaches to the same symptoms show little difference in efficacy. The therapy equivalence hypothesis is emphasized, owing to the lack of methodological stringency across therapy comparisons and the overriding effects of common factors on clinical outcomes [28].

Indeed, substantial evidence now supports the efficacy of several other psychological treatments of PTSD, including eye movement desensitization reprocessing (EMDR), stress inoculation therapy, eclectic psychotherapy, trauma management therapy, Counseling and psychodynamic therapy [21, 29], but so far no consensus has been achieved regarding the relative efficacy of these approaches. CBT theorists passionately argue that CBT has more empirical support than other therapies based on trial comparisons vis-a-vis control subjects [30], while other researchers assert that no specific psychotherapy has proven to be a gold standard [25, 31].

When attempting to investigate efficacy by comparing treatments vis-à-vis controls in meta-analysis, then various significant threats to validity are introduced. Shadish and Sweeney [32] note that studies vary with regard to severity of disorder, number of participants, measure reactivity, outcome measures, treatment standardization and length, blinding procedures, and several other variables. Consequently, it could be argued that any differences between categorized treatments could be attributed to differences among these variables which inevitably create confounds. As a result, threats to validity may be minimised when studies compare outcomes amongst established psychotherapies and under the same experimental conditions.

A meta-analysis that included direct comparisons between psychotherapy treatments of PTSD like trauma focused CBT, exposure and EMDR revealed no differences between EMDR and exposure-based treatments [33]. In a series of studies, stress inoculation was not found more efficacious than exposure therapy and EMDR [15].

Brom, Kebler and Defares [34] compared hypnotherapy to trauma desensitisation therapy and found no differences amongst the two in treating PTSD. Similarly, the authors conducted comparative studies amongst psychodynamic Counseling, trauma

desensitization and hypnotherapy and found no significant differences among them either. Equally, McDonagh [26] found no significant differences between cognitive therapy and CBT, whilst person-centered approaches were also found to be as efficacious as exposure approaches to the treatment of PTSD [31]. Benish, Wampold and Imel [31] sought to control a number of confounding variables in randomized control trials, by carrying out a meta-analysis of clinical trials directly comparing 'bona fide' treatments for PTSD in order to ascertain the efficacy of each one of them. Bona fide treatments refer to all those forms of psychotherapy that have legitimate therapeutic features like a coherent rationale for the disorder being treated, a treatment plan based on psychological theory, therapeutic interventions consistent with the theoretical rationale, a focus on the alliance as well as collaborative principles between therapist and client [29]. These may include trauma focused cognitive behavioral therapies and EMDR; general cognitive behavioral therapies; psychodynamic therapies; integrative therapies and person centred counseling.

The results of Benish, Wampold and Imel's [31] review, showed little evidence supporting the differential efficacy of CBT treatments, proposing that, in former reviews, the inclusion of non-bona fide or established treatments may have led to misleading findings of differences among treatments. These findings have confirmed the view that technically different therapies result in similar outcomes which supports the "equivalence paradox hypothesis" and the prevalence of the common factors effect [28].

Ehlers, Bisson, Clark, Creamer, Pilling and Richards [30] however, reacted to Benish et al. [31] outcome, by accusing the authors that their results were biased by an inappropriate exclusion of studies, as well as arbitrary selection procedures thus attempting to maintain the superiority of trauma focused CBT in the literature. For Barkham [28], it is not disputed that models like CBT often yield more advantageous findings in clinical outcomes; it is their relatively small effect size which may pose further questions regarding efficacy and applicability in health care settings.

Emerging issues

Some important issues are raised by the debate about the efficacy of trauma focussed CBT for post-traumatic stress disorder, concerning the design and the interpretation of studies that investigate PTSD treatments. Examining the validity of the above reviews one could suggest that special care must be taken with regard to the design and the interpretation of RCTs as well as the conclusions drawn from these trials. In particular, for Benish et al. [31], when non-bona fide treatments are excluded from a trauma focused CBT meta-analysis, the benefits from treatments are almost equal. Ehlers et al. [30] acknowledge that the absence of differences can be related to the exclusion of these treatments; yet they believe that control comparisons are legitimate

and therefore persist in their claim which points to the superiority of CBT trauma focused therapies over other therapies including control treatments.

Reviewing the pool of outcome studies, evidence now exists in support of a diverse range of therapies for PTSD. Brief eclectic psychotherapy (BEP) for instance, refers to a manualized psychotherapy for PTSD which has proven effective for police officers in Holland [35]. Brief eclectic psychotherapy incorporates several cognitive behavioral interventions such as psychoeducation, cognitive restructuring, imaginal exposure and writing tasks. BEP equally includes a strong psychodynamic focus and the use of a farewell ritual at the end of therapy. The psychodynamic elements of the protocol focus on emotions such as shame and guilt, and the relational aspect of the therapeutic alliance which in itself, represents a key element in the therapeutic process. Research data from an RCT in Holland amongst twenty four outpatient participants, yielded positive outcomes in favour of the BEP protocol with recovery rates maintained at post-treatment follow ups as compared to the wait list controls [35].

In another randomized controlled trial, it was found that repeatedly focusing on hotspots in eclectic psychotherapy may help clinicians to enhance the efficacy of imaginal exposure for patients who would otherwise show insufficient response to treatment [36].

There is limited but growing empirical evidence for the efficacy of psychodynamic therapy, both generally [37–39], and in treating PTSD specifically [34]. The results of a randomized controlled trial conducted by Brom et al. [34] indicated that brief psychodynamic psychotherapy may be as effective as systematic desensitization for symptoms of PTSD, with an additional benefit of addressing various underlying personality characteristics [38]. A meta-analysis conducted in Germany, showed that psychodynamic psychotherapy is efficacious for a number of psychological problems including anxiety and mood disorders [39]. Psychodynamic therapy for PTSD includes addressing developmental, intrapsychic and interpersonal issues relevant to the experience and sequelae of trauma. Horowitz [8] and Krupnick [40] provide a short-term treatment model of psychotherapy for PTSD after a single traumatic event. Important elements of the model include bringing conflicts into conscious awareness, a focus on the therapeutic relationship and the analysis of defences and transference/countertransference phenomena. The treatment also focuses on interpersonal themes relevant to trauma in terms of relational cognitions, and the person’s self-concept following traumatic exposure. Positive outcomes for the effectiveness of psychodynamic therapy to date, imply that psychodynamic psychotherapy may work more slowly than other treatments like CBT for instance, but it establishes a residual process that continues to work after treatment ends [39].

The conclusion of the aforementioned studies and meta-analytic reviews, suggests that clients

receiving established therapeutic interventions (or ‘bona fide’ treatments) do better compared to those in control treatments; and these include all legitimate psychotherapies from a range of schools of thought [27].

An important outcome that emerges from Benish et al. [31] review, is that clinical trials that compare treatments classed as ‘trauma focused’ with other bona-fide treatments, find neither of them to be superior of the other, as was the case with psychodynamic therapy [34], stress inoculation training [14], and hypnotherapy [34]. Such outcome further suggests that a selection of different interventions and modalities may be effective for the treatment of PTSD other than CBT and EMDR. A systematic review of the empirical evidence of PTSD treatments, a thorough understanding of the nature of the disorder and grounding in therapeutic models of psychotherapy yields a rich array of possible therapeutic

Table 1: Possible factors important to successful treatments of post-traumatic stress disorder

Cogent psychological rationale that is acceptable to patient
Systematic set of treatment actions consistent with the rationale
Development and monitoring of a safe, respectful, and trusting therapeutic relationship
Collaborative agreement about tasks and goals of therapy
Nurturing hope and creating a sense of self efficacy
Psychoeducation about post-traumatic stress disorder
Opportunity to talk about trauma (i.e., tell stories)
Ensuring the patient’s safety, especially if the patient has been victimized as in the case of domestic violence, neighbourhood violence, or abuse
Helping patients learn how to avoid victimization
Identifying patient resources, strengths, survival skills
Identifying intra and interpersonal resources
building resilience
Teaching coping skills
Examination of behavioral chain of events
Exposure (covert in session and in-vivo outside of session)
Making sense of traumatic event and patient’s reaction to event
Patient attribution of change to his or her own efforts
Encouragement to generate and use social supports
Relapse prevention

Source: Wampold et al. [27]

ingredients for the effective treatment of post-traumatic stress disorder (Appendix table 1) in addition to trauma-focused CBT. This is consistent with Barkham [28] position in Counseling psychology, which highlights the prevalence of common factors in determining clinical outcomes.

Future directions

Despite the abundance of empirical evidence pointing to the efficacy of trauma focused cognitive behavioral therapy, post-traumatic stress disorder remains a complex condition to treat and identifying alternative therapeutic options is thus imperative. Although significant advances have evolved in the treatment of PTSD, treatment failures continue to persist [12]. There are currently a number of challenges that need to be addressed within the field of PTSD treatment. Although the use of CBT has been demonstrated to be effective in the case of acute and chronic PTSD, there is further an important need to enhance the efficacy of the treatment, by reducing clients' drop-out rates and improving recovery outcomes. It is essential for future studies to employ and evaluate strategies providing interventions that can address clients' resistance and non-compliance as described in Foa and McNally's [9] review, for instance. As such, a more relational focus in the treatment protocol as discussed within psychodynamic and eclectic approaches may provide additional interventions for clients who present with excessive denial, emotional arousal and excessive rage, shame and guilt. These presentations have not been fully conceptualized yet by traditional CBT approaches. Given the wealth of current empirical evidence supporting the efficacy of a range of legitimate 'bona fide' therapies [31], it is only conceivable that these begin to be applied more frequently within clinical settings. Moreover, considering the methodological limitations of the evidence base, new generations of research may soon adopt a complimentary paradigm to RCTs that could incorporate data from practice based research with a distinctive focus on common factors variables.

CONCLUSION

This paper reviewed current cognitive theories on post-traumatic stress disorder (PTSD): the schema approach; the fear network approach; the dual representation approach; and the PTSD maintenance model. A careful evaluation of the empirical evidence led to the conclusion that although there is a strong evidence base for the efficacy of trauma focused CBT alternative established psychotherapies have been also found to be effective in the treatment of post-traumatic stress disorder. In line with the pluralistic epistemology of counseling psychology, the paper concludes by encouraging the use of multiple approaches to the treatment of trauma

related conditions like PTSD, in an attempt to offer a more complete and inclusive approach to psychological distress that is reflective of up-to-date theory and research. Future researchers may wish to explore these claims further, by conducting a meta-analysis of outcome studies across different modalities that address and treat post-traumatic presentations.

Author Contribution

Catherine Athanasiadou-Lewis – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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