International Journal of
Psychotherapy, Counselling and Psychiatry:
Theory Research & Clinical Practice (Volume III)
URL: http://ijpcp.com/

Challenging Beliefs about the Psychotherapy of Post-Traumatic Stress Disorder (PTSD)

Louise Gaston

PhD (Psychology)
TRAUMATYS, Canada

Abstract

Clinical guidelines for treating post-traumatic stress disorder (PTSD) have recommended using cognitive-behavioural therapy (CBT) only. This is not surprising given that almost all randomized clinical trials were conducted by CBT researchers examining the efficacy of CBT. The two types of standardized CBT -- trauma-focused and non-trauma-focused – were both found to be equally efficacious for treating PTSD. However, their observed efficacy is limited -- only partial PTSD remission in only 50% of informed and selected volunteers. Beyond a limited efficacy, claims of high efficacy are often made for trauma-focused CBT, although these modalities were repeatedly found to be associated with attrition and iatrogenic effects. Whenever dynamic and supportive therapies were included in controlled clinical trials, these therapeutic modalities were provided in non-representative ways. Furthermore, any differential findings between therapies disappeared at follow-up, invaliding any conclusion about the superiority of CBT. Only one randomized clinical trial had compared the efficacy of dynamic therapy vs. CBT for treating PTSD, but no differential efficacy was found (Brom et al., 1989). Taken together, these findings suggest that there is a pro-CBT bias in funding, research, and guidelines in the field of PTSD. This pro-CBT bias needs to be acknowledged and corrected. In the meantime, clinicians need to rely on their own judgment, using integrative approaches for treating PTSD in a flexible manner.

Keywords: PTSD Psychotherapy, Trauma-focused, CBT, EMDR, Prolonged Exposure

Introduction

Wampold et al. (2017) re-examined the findings of meta-analyses claiming to demonstrate the superior efficacy of cognitive-behavioural therapies (CBT). They concluded that the evidence was weak or non-existent. Using a novel statistic, Ioannidis (2005) demonstrated that numerous biases exist in randomized clinical trials (RCT) and most published research findings are false. These two conclusions apply to the psychotherapy of post-traumatic stress disorder (PTSD). Biases inflate the efficacy of CBT over other therapies, while CBT efficacy in RCT is limited to partial PTSD remission in 50% of participants only, with substantial symptoms remaining (Bradley, Green, Russ, Dutra, & Westen, 2005).

In the present article, erroneous beliefs about the psychotherapy of PTSD are identified and challenged. This paper proposes divergent conclusions to best reflect research findings. Meta-analytic findings are reported, along with re-examinations of meta-analyses. Single studies are presented to illustrate the

20 January 2019 e-ISSN No: 25904272

invalidity of some conclusions. Our reliance on RCT is challenged. Clinical guidelines are also challenged by identifying some biases in PTSD research and underlying the regrettable impact of guidelines on policies and practices. Professional commentaries and experiences are reported to reflect the realities and choices we are facing.

Erroneous Beliefs about the Psychotherapy of PTSD

CBT as Most Efficacious, an Erroneous Belief

Claiming CBT to be most efficacious for treating PTSD is erroneous. In research on PTSD, randomized clinical trials (RCT) have almost exclusively been conducted by CBT researchers evaluating the efficacy of CBT.[1] Subsequently, the American Psychological Association (2017) has recommended all types of CBT for treating PTSD, echoing a document prepared by the Canadian Psychological Association (2015). In England, the National Institute for Health and Care Excellence (2005) has an even narrower approach, recommending only trauma-focused CBT.A review of meta-analytic findings is necessary to attest (or not) to the value of these guidelines.

Wampold et al. (2017) re-examined meta-analyses claiming superiority of CBT in treating most psychological disorders, including PTSD. They concluded that the evidence for CBT superiority was weak or non-existent. They also identified biases favoring CBT -- the quality of therapies, the interpretation of data, and the exclusion of trials finding no differences.

In research on PTSD, biases favoring CBT are also present. In the main meta-analysis of the field, Powers, Halpern, Ferenschak, Gillihan, and Foa (2010) attempted to prove that prolonged exposure (PE) is a superior therapy, but they found no differences across all CBT modalities. However, they also concluded that non-CBT therapies such as dynamic and supportive therapies are less efficacious than CBT, which is an invalid conclusion for three main reasons. First, they included trials comparing CBT to non-representative forms of dynamic and supportive therapies. Second, they excluded the sole randomized clinical trial comparing a genuinely-delivered dynamic therapy to CBT in which no differences were found (Brom, Kleber, & Defares, 1989). Third, non-CBT therapies were included in the controls, along with placebos and waiting-lists, reflecting a clear negative bias. A look at two RCT included in this meta-analysis is useful to illustrate biases.

Foa, Rothbaum, Rigg, and Murdock (1991) attempted to demonstrate that PE is superior to Stress Inoculation Training (SIT) and supportive therapy for treating PTSD. A few factors invalidate their conclusion. First, only SIT was found statistically to be superior to the waiting-list condition at post-test, but not PE. Second, the supportive therapists were instructed to avoid discussing the traumatic event, which is non-representative of clinical practice. Third, PTSD remission rates at follow-up were equivalent across the three therapies, indicating the presence of confounding variables. It is thus invalid to conclude, as Foa and colleagues did, that PE is more efficacious than supportive therapy and thus a therapy of choice.

Gilboa-Schechtman, Foa, Shafran et al. (2010) compared the efficacy of PE and dynamic therapy for treating PTSD. They concluded that only PE was efficacious, but this conclusion is invalid. First, these therapies were provided by master's degree

interns and the training in dynamic therapy lasted 2 days in contrast to 5 days for PE. Even though supervision was provided and treatment adherence was verified, such limited experience and training cannot insure the quality of therapies, especially for dynamic therapy. Second, no difference in PTSD remission rates was found at a 17-month follow-up, suggesting the presence of confounding variables. It is thus invalid to conclude that PE is superior to dynamic therapy for treating PTSD.

Trauma-Focused CBT as Most Efficacious, an Erroneous Belief

Trauma-focused CBT has been highly publicized as most efficacious for treating PTSD (Lilienfeld, 2011). According to meta-analytic findings, this claim is erroneous.

Purporting to demonstrate the unique efficacy of PE, a major meta-analysis (Powers et al., 2010) found that all CBT were equally efficacious -- non-trauma-focused CBT (cognitive therapy and SIT) and trauma-focused CBT (PE, EMDR, and CPT). Another meta-analysis found that Cognitive Processing Therapy (CPT) was just as efficacious whether it contained its trauma-focused component or not (Barrera, Mott, Hofstein, & Teng, 2013).

Another meta-analysis (Ehring, Welboren, Morina, Wicherts, Freitag, & Emmelkamp, 2014) concluded that trauma-focused CBT was superior for treating PTSD in adult survivors of childhood abuse, but such conclusion is invalid. First, they excluded a major randomized clinical trial finding no differences (Classen et al., 2011). Second, the authors admittedly found no superiority when trauma-focused CBT was compared to placebos and waiting-lists.

Consequently, trauma-focused CBT cannot be claimed to be superior in efficacy to non-trauma-focused therapies. This conclusion is of importance because trauma-focused CBT entails risks related to attrition, applicability, acceptability, and iatrogenic effects.

In a meta-analysis, 36% of participants abandoned PE and EMDR in contrast to 22% in non-trauma-focused therapies (Imel, Laska, Jakupcak, &Simpson, 2013).In another meta-analysis, CPT resulted in a 26% dropout rate in comparison to 19% in cognitive therapy only (Barrera et al., 2013).

In terms of applicability and acceptability, the use of PE also appears to be problematic. In a review of studies, only 7% to 57% of patients applied PE as prescribed (Scott &Stradling, 1997). In a survey, only 17% of psychologists reported using PE even though half were familiar with it (Becker, Zayfert, & Anderson, 2004). In another survey, only a minority of trauma experts reported using PE due to elevated risks of attrition and iatrogenic effects (van Minnen, Hendriks, & Olff, 2010).

Proponents of trauma-focused CBT claim that their therapy of choice does not entail particular iatrogenic effects, while others disagree. Wampold et al. (2017) recalculated the data of an article claiming the absence of iatrogenic effects from PE (Foa, Zoellner, Feeny, Hembree, & Alvarez-Conrad, 2002) and found adverse side effects ranging from 0.37 to 0.51. In an RCT, Pitman, Altman, Greenwald, et al. (1991) reported that 30% of participants in PE developed severe complications (major depressive disorder, suicidal ideations, relapses of drug or alcohol abuse, and/or panic attacks). In another trial, Tarrier, Pilgrim, Sommerfield, et al. (1999) reported that 31% of participants in PE experienced a worsening of PTSD symptoms. Illustrating

this point, Morris (2015) wrote "*I was offered an overhyped therapy built on the premise that the best way to escape the aftereffects of hell was to go through hell again."*

As for EMDR, iatrogenic effects were also reported, including an intense homicidal drive toward the therapist (Brunet, 2002; Kaplan & Manicavasagar, 1998). Iatrogenic effects are also reported on the internet -- *'I had a first session last week and ever since then I just feel dead. …I cut myself last night to see if I could feel and I couldn't"* (anonymous12713, 2011).

Trauma-focused CBT are thus not superior in efficacy and involve risks. In addition, these therapies may induce emotional inhibition according to preliminary neuro-imagery findings (Gaston, 2017). Thus, caution is recommended.

CBT Efficacy as Maintained Over Time, an Erroneous Belief

Claiming that CBT effects are maintained over time is erroneous. Over the past 25 years, numerous RCT have examined the efficacy of CBT for treating PTSD, but very few researchers ended up conducting long-term follow-ups. When maintenance of gains was examined after a few months, findings indicated a loss of efficacy. When follow-ups were conducted after several years, there was either a loss of therapeutic efficacy in comparison to controls or deterioration.

In their meta-analysis, Powers et al. (2010) concluded that the gains associated with PE persist over time. However, their own findings are contrary to their conclusion. The effect size of 1.08 at post-test had declined to 0.68 at follow-up, indicating a 40% loss.

In a recent RCT, Shalev, Anki, Gilad, et al. (2016) found that differences disappeared after 3 years, although PE and cognitive therapy had been found to be more efficacious at post-test than medication, placebo, and waiting-list. At the follow-up, differences were gone, indicating that PE and cognitive therapy failed to reduce long-term prevalence of PTSD.

With respect to EMDR, Macklin et al. (2000) found severe PTSD deteriorations after 5 years in both EMDR (d = -0.82) and untreated participants (d = -0.83). Admittedly, the sample size was very small. Nonetheless, such severe PTSD deteriorations should be of concern to the PTSD field. Over the last 15 years, however, no other study has examined the possibility of long-term PTSD deteriorations over many years after EMDR.

In sum, the therapeutic gains associated with CBT are reached by controls over time or are not maintained. Deteriorations were shown to occur over years. In contrast, therapeutic gains associated with dynamic therapy persist and even increase over years (Shedler, 2010).

Psychotherapies Other than CBT as Non-Efficacious, an Erroneous Belief

Considering psychotherapies other than CBT -- dynamic, interpersonal, supportive, emotion-focused, or others -- as non-efficacious for treating PTSD is erroneous.

So far, only one comparative clinical trial has been conducted to examine the efficacy of a genuinely-delivered dynamic therapy for treating PTSD. Brom et al. (1989) found that dynamic therapy (Horowitz, 1976, 1984) was as efficacious as systematic desensitization and hypnosis (imaginal exposure). Previously, this brief dynamic therapy had been found to reduce

PTSD in a pre-post design (Horowitz, Marmar, Weiss, DeWitt, & Rosenbaum, 1984). An integrative dynamic therapy based on Horowitz's model was also found to foster PTSD remission in 65% of patients treated in real-world conditions (Dickie, Brunet, Akerib, & Armony, 2011).

Other non-CBT therapies were also found to be efficacious for treating PTSD. Interpersonal therapy was found to be superior to a waiting-list (Krupnick, Green, Stockton, Miranda, Krause, & Mete, 2008). Emotion-focused therapy was found to be associated with PTSD reductions (Paivio, Jarry, Chagigiorgis, Hall, & Ralston, 2010).

Non-CBT therapies, especially dynamic therapy, were thus found to be efficacious for treating PTSD. Disregarding these therapies in research funding and RCT is thus regrettable, especially that dynamic therapy is effective for treating many other severe psychological disorders (Leichsenring, Leweke, Klein, & Steinet, 2015; Shedler, 2010).

Randomized Clinical Trials as Valid, an Erroneous Belief

Considering findings of randomized clinical trials (RCT) as necessarily valid is erroneous. Ioannidis (2005) has clearly demonstrated that most published research findings are false. Such lack of validity is due to biases in researchers, promoting their treatment of choice more in a marketing effort than a scientific inquiry. Moreover, the RCT methodology itself comprises confounding variables, rendering their use questionable in PTSD research (Shedler, 2017).

In PTSD research, confirmatory bias exists in a ubiquitous way, affecting both internal and external validity. For example, Taylor, Thordarson, Maxfield, Fedoroff, Lovell, and Ogrodniczuk (2003) aimed at demonstrating the superiority of PE over EMDR and relaxation. Although 80% of prospective participants were rejected and 33% dropped out of PE in contrast to 23% in the other therapies, Taylor and colleagues concluded that PE was superior for treating PTSD. Such an elevated rate of exclusion and a higher rate of drop out in PE, however, render their conclusion invalid.

Research allegiance is also a ubiquitous bias in PTSD research, seriously limiting the internal validity of RCT. Indeed, research allegiance was found to be a robust and substantial bias in psychotherapy research (Mundera, Brütscha, Leonhartc, Gergera, & Bartha, 2013) and the American Psychological Association (2017, p.95) acknowledged its influence in PTSD research, "… the potential effects of researcher allegiance should be addressed. Many psychotherapy trials for PTSD were conducted by individuals and investigators teams that developed or modified those techniques."

The external validity of findings in PTSD research is also curtailed by the use of RCT. It is noteworthy to remember here that there are two types of RCT-- explanatory and pragmatic. Explanatory trials are firstly employed to examine efficacy in ideal conditions, while pragmatic trials are subsequently conducted to determine effectiveness in real word conditions. Godwin, Ruhland, Casson, et al. (2003) have compared findings derived from explanatory and pragmatic trials and found perplexing results. The attempt to achieve methodological purity in explanatory trials can yield statistically significant findings, but such findings can be clinically meaningless. In the field of PTSD, only explanatory trials have been conducted so far, seriously limiting the generalizability of

findings and, therefore, the validity of clinical guidelines.

A lack of generalizability is also a salient issue in PTSD research due to comorbidity. Most randomized clinical trials have focused on treating PTSD alone. Whenever severe mental illness was included as comorbidity, findings were inconclusive (Sin, Spain, Furuta, Murrells, & Norman, 2017). As 80% of PTSD have at least one comorbid disorder (Foa, 2009), most RCT samples represent only 20% of PTSD. Given that observed efficacy has consisted so far of only partial PTSD remission in only 50% of participants treated by standardized CBT in trials, only partial remission can be expected to be obtained in 10% of PTSD in the real-world conditions. Ten percent of partial PTSD remission is insufficient.

Discussion

This paper challenges the beliefs about the psychotherapy of PTSD in an effort to assist clinicians to provide adequate psychotherapy to individuals with PTSD, beyond research conclusions and clinical guidelines. Many clinicians are dissatisfied (Sammons, 2018) and some even suggest that we should ignore published guidelines (Shedler, 2017).

Despite a lack of evidence for CBT superiority, the American Psychological Association (2017) has recommended the use of CBT only for treating PTSD. Despite risks associated with trauma-focused CBT, the National Institute for Health and Care Excellence (2005) has recommended the use of trauma-focused CBT only for treating PTSD. Given biases existing in PTSD research and, consequently, the above guidelines, clinicians should be cautious.

Over the last century, the mental health profession has succeeded in disengaging itself from under the spell of the psychoanalytical dogma. However, the field of psychotherapy in Canada, England, and the United States has succumbed to another dogma over the last 30 years -- the cognitive-behavioural dogma. This is particularly true for PTSD because pro-CBT biases exist in funding, research, and guidelines.

Since its inception, the PTSD Division of the National Institute of Mental Health has never allotted funds to evaluate the efficacy of non-CBT therapies, such as dynamic therapy. This lack of funding needs to be corrected because dynamic therapy has been found to be as efficacious as CBT for treating PTSD (Brom al., 1989) and for treating many other severe psychological disorders (Shedler, 2010; Leichsenring et al., 2015).

Beyond biases in funding agencies, morality problems are increasing in science (Steen, 2011). For example, a third of statisticians reported having received requests 'to remove or alter some data records in order to better support the research hypothesis' (Wang, Yan, & Katz, 2017). The field of PTSD is no exemption (see at www.retractionwatch.com).

Beyond political biases and morality problems, there are also methodological issues. Our reliance on randomized clinical trials (RCT) entails serious limitations. Shedler (2017) even questions the value of using RCT methodology in psychotherapy research and he has a valid point. Indeed, the sole participation in a RCT was found to be in itself the agent of change -- not the evaluated therapies (McCambridge, Kypri, & Elbroune, 2014). Therefore, phrases such as ‘controlled clinical trials’ or ‘evidence-based’ are misleading because they falsely

suggest that confounding variables were controlled and conclusions are valid. Maybe our faith in the experimental methodology – RCT -- needs to be revisited.

Biased findings and guidelines have practical consequences. Guidelines recommending CBT for treating PTSD are increasingly enforced by governmental agencies. Trauma-focused CBT are often favoured without any consideration of the patient's capacity to modulate emotions. Psychologists are even instructed at times to only discuss traumatic events in psychotherapy, nothing else. This situation is risky for patients when it interferes with the professional autonomy of psychologists. It would be important to realize that even the American Psychological Association (2017) added a provision, beyond their recommendations, stipulating that clinicians need to treat PTSD according to their own judgement.

Most importantly, what are the practical consequences on individuals suffering from PTSD? To optimize the effectiveness of psychotherapy for PTSD, some suggest disregarding research findings and guidelines altogether (Sammons, 2018; Shedler, 2017). The present author concurs and proposes that clinicians adopt a more comprehensive approach for treating PTSD. At a Canadian clinic offering psychotherapy in the context of compensation agencies, an integrative dynamic therapy was found to be associated with a 96% rate of PTSD remission, along with comorbidity remission, and 48% attained full PTSD remission (reported in Gaston, 2017). To successfully apply such an integrative approach, clinicians learned the major theoretical and therapeutic models for PTSD, mastered several therapeutic modalities, and applied them flexibly. These real-world findings may not have been derived from a RCT --presenting advantages and disadvantages -- but the observed effectiveness is far superior to the usual efficacy obtained with standardized CBT provided in ideal conditions.

This actual situation is worrisome because boards of psychology increasingly require in their ethics codes that psychologists only use 'evidence-based' therapies. Such requirement appears reasonable at face value, but research biases impede a true identification of 'evidence-based' therapies for PTSD. If this trend were to persist, policies and politics might end up superseding a concern for patient care. It is even foreseeable that, in a near future, some specific standardized therapies will be declared legal while all others will become illegal, as in medicine. We should be concerned -- research findings are biased, conclusions are inflated, efficacy rates are insufficient, PTSD remission rates are hardly generalizable, CBT is not proven efficacious beyond confounding variables, and valid options such as dynamic therapy have been discarded.

A return to true scientific inquiry and clinical wisdom may be necessary. After spending hundreds of millions of dollars to conduct randomized clinical trials, most research findings ended up biased and thus invalid. Given the observed limited efficacy of standardized therapies for PTSD, maybe we should reconsider our research methods and clinical guidelines.

Footnote

[1] There are two basic types of CBT for treating PTSD. Trauma-focused CBT comprises prolonged exposure (PE), Eye Movement Desensitization and Reprocessing (EMDR), and Cognitive Processing Therapy (CPT). Non-trauma-

focused CBT consists of cognitive therapy, relaxation, Stress Inoculation Training (SIT), etc.

References

Anonymous12713 (2011, April 12). Does EMDR have side effects? [Blog post]. Retrieved from http://forums.psychcentral.com/psychotherapy/207530-does-emdr-have-side-effects.html

American Psychological Association (2017). *Clinical Practice Guideline for the Treatment of Posttraumatic Stress Disorder (PTSD) in Adults*. Found at: www.apa.org/about/offices/directorates/guidelines/ptsd.pdf

Barrera, T.L., Mott, J.M., Hofstein R.F. &Teng, E.J. (2013). A meta-analytic review of exposure in group cognitive-behavioral therapy for posttraumatic stress disorder. *Clinical Psychology Review, 33*(1), 24-32.

Becker, C.B., Zayfert, C., & Anderson, E. (2004). A survey of psychologists' attitudes towards and utilization of exposure therapy for PTSD. *Behaviour Research and Therapy, 43*, 277-292.

Bradley, R., Greene, J., Russ, E., Dutra, L. &Westen, D. (2005). A multidimensional meta-analysis of psychotherapy for PTSD. *American Journal of Psychiatry, 162*(2), 214-27.

Brom, D., Kleber, R.J., &Defares, P.B. (1989). Brief psychotherapy for posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 57*, 607-612.

Brunet, A. (2002). Complications thérapeutiques suite au traitement EMDR chez un vétéran traumatisé. *Journal International de Victimologie, 1*(1).

Canadian Psychological Association (2015). *"Psychology Works" Fact Sheet: Post-Traumatic Stress Disorder*. Retrieved from www.cpa.ca/docs/File/Publications/FactSheets/PsychologyWorksFactSheet_PTSD.pdf

Dickie, E.W., Brunet, A., Akerib, V., & Armony, J. (2011). Neural correlates of recovery from post-traumatic stress disorder: A longitudinal fMRI investigation of memory encoding. *Neuropsychologia, 49*(7), 1771-1778.

Ehring, T., Welboren, R., Morina, N., Wicherts, J.M., Freitag, J., &Emmelkamp, P.M.G. (2014). Meta-analysis of psychological treatments for posttraumatic stress disorder in adult survivors of childhood abuse. *Clinical Psychology Review, 34*, 645-657.

Foa, E.B., Rothbaum, B.O., Riggs, D., & Murdock, T. (1991). Treatment of posttraumatic stress disorder in rape victims: A comparison between cognitive-behavioral procedures and counseling. *Journal of Consulting and Clinical Psychology, 59*, 715-723.

Foa, E.B., Zoellner, L.A., Feeny, N.C., Hembree, E.A., & Alvarez-Conrad, J. (2002). Does imaginal exposure exacerbate PTSD symptoms? *Journal of Consulting and Clinical Psychology, 70*(4), 1022-1028.

Gaston, L. (2017). Divergent mechanisms in trauma-focused vs. non-trauma-focused therapies for post-traumatic stress disorder. *International Journal of Victimology, 34*, 71-79.

Gilboa-Schechtman, E., Foa, E.B., Shafran, N., Aderka, I.M., Powers, M.B., Rachamim, L., Rosenbach, L., Yadin, E., & Apter, A. (2010). Prolonged exposure versus dynamic therapy foradolescent PTSD: a pilot randomized controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry, 49*(10) 1034-1042.

Godwin, M., Ruhland, L., Casson, I., MacDonald, S., Delva, D., Birtwhistle, R., & Seguin, R. (2003). Pragmatic controlled clinical trials in primary care: The struggle between external and internal validity. *BMC Medical Research Methodology, 3*(28). Doi:10.1186/1471-2288-3-28

Horowitz, M.J. (1976, 1984). *Stress Response Syndrome*. New York: Jason Aronson.

Horowitz, M.J., Marmar, C.R., Weiss, D.S., DeWitt, K.N., & Rosenbaum, R. (1984). Brief Psychotherapy of Bereavement Reactions: The Relationship of Process to Outcome. *Archives of General Psychiatry*, 41(5), 438–448.

Imel, Z.E., Laska, K., Jakupcak, M., & Simpson, T.L. (2013). Meta-analysis of dropout in treatments for posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 81*(3), 394-404.

Ioannidis, J.P.A. (2005). Why most published research findings are false. *PLOS Medicine, 2*(8), e124. Doi: 10.1371/journal.pmed.0020124

Foa, E. (2009). Guideline 18: Treatment of PTSD and Co-morbid Disorders. In E. Foa (Ed.), *Effective Treatments for PTSD: Second Edition*. New York: Guilford Press.

Kaplan, R., & Manicavasagar, V. (1998). Adverse effect of EMDR: A case report. Australian and Zealand Journal of psychiatry, 32(5), 731-732.

Krupnick, J.L., Green, B.L., Stockton, P., Miranda, J., Krause, E., & Mete, M. (2008). Group interpersonal psychotherapy for low-income women with posttraumatic stress disorder. *Psychotherapy Research, 18*(5), 497-507.

Leichsenring, F., Leweke, F., Klein, S., & Steinet, C. (2015). The empirical status of psychodynamic therapy - an update: Bambi's alive and kicking. *Psychotherapy and Psychosomatics, 84*(3), 129-148. Doi: 10.1159/000376584.

Lilienfeld, S.O. (2011, April 17). EMDR Treatment: Less Than Meets the Eye? Retrieved from https://www.quackwatch.org/01QuackeryRelatedTopics/emdr.html

Macklin, ML, Metsger, LJ, Lasko, NB, et al. (2000). Five-year follow-up study of eye movement desensitization and reprocessing therapy for combat-related posttraumatic stress disorder. *Comprehensive Psychiatry, 41*(1), 24-27.

McCambridge, J. Kypri, K., & Elbroune, D. (2014). In randomization we trust? There are overlooked problems in experimenting with people in

behavioral interventions trials. *Journal of Clinical Epidemiology, 67*, 247-253.

Morris, D.J. (2015). *There Evil Hours: A Biography of Post-Traumatic Stress Disorder*. New York: Houghton Mifflin Harcourt Publishing.

Mundera, T.B., Brütscha, O., Leonhartc, R., Gergera, H., & Bartha, J. (2013). Researcher allegiance in psychotherapy outcome research: An overview of reviews. *Clinical Psychology Review. 33*(4) 501–511. Doi: 10.1016/j.cpr.2013.02.002

National Institute for Health and Care Excellence (2005). *Post-Traumatic Stress Disorder: Management - Clinical Guideline [CG26])*. Retrieved from www.nice/uk/guidance/cg26

Paivio, S.C., Jarry, J.L., Chagigiorgis, H., Hall, I., & Ralston, M. (2010). Efficacy of two versions of emotion-focused therapy for resolving child abuse trauma. *Psychotherapy Research, 20*, 353–366. http://dx.doi.org/10.1080/10503300903505274.

Pitman, R.K., Altman, B., Greenwald, E., Longpre, R.E., Macklin, M.L., Poire, R.E., & Steketee, G.S. (1991). Psychiatric complications during flooding therapy for post-traumatic stress disorder. *Journal of Clinical Psychiatry, 52*, 17-20.

Powers, M. B., Halpern, J. M., Ferenschak, M. P., Gillihan, S. J., & Foa, E. B. (2010). A meta-analytic review of prolonged exposure for posttraumatic stress disorder. *Clinical Psychology Review, 30*(6), 635-641.

Sammons, M.T. (2018). *From the Executive Officer's Desk – So Let's Talk About Guidelines*. Retrieved from https://www.nationalregister.org/from-the-executive-officers-desk-so-lets-talk-about-guidelines/

Scott, M.J., & Stradling, S.G. (1997). Client compliance with exposure treatments for posttraumatic stress disorder. *Journal of Traumatic Stress, 10*(3), 523-526.

Shalev, A.Y., Anki, Y., Gilad, M., Israeli-Shalev, Y., Adessky, R., Qian, M., & Freedman, S. (2016). Long-term outcome of erlya interventions to prevent posttraumatic stress disorder. *Journal of Clinical Psychiatry, 77*(5), 580-587. doi:10.4088/JCP.15m09932.

Shedler, J. (2010). The efficacy of psychodynamic psychotherapy.*American Psychologist, 65*(2), 98-109.

Shedler, J. (2017, November 19). Selling bad therapy to trauma victims.*Psychology Today*.

Sin, J., Spain, D., Furuta, M., Murrells, T., & Norman, I. (2017). Psychological interventions for post-traumatic stress disorder (PTSD) in people with severe mental illness. *Cochrane Database of Systematic Reviews, 1*, CD011464. Doi: 0.1002/14651858.CD011464.pub2.

Steen, R.G. (2011). Retractions in the scientific literature: Is the incidence of research fraud increasing? *Journal of Medical Ehtics, 37*(4). 249-253. Doi: 10.1136/jme.2010.040923

Tarrier, N., Pilgrim, H., Sommerfield, C., Faragher, B., Reynolds, M., Graham, E., & Barrowclough, C. (1999). A randomized trial of cognitive therapy and imaginal exposure in the treatment of chronic posttraumatic stress disorder. *Journal of Clinical and Consulting Psychology, 67*, 13-18.

Taylor, S., Thordarson, D.S., Maxfield, L, Fedoroff, I.C., Lovell, K., & Ogrodniczuk, J. (2003). Comparative efficacy, speed, and adverse effects of PTSD treatments: Exposure therapy, EMDR, and relaxation training. *Journal of Consulting and Clinical Psychology. 7*(2), 330-338.

VanMinnen, A., Hendriks, L., & Olff, M. (2010). When do trauma experts choose exposure therapy for PTSD patients? A controlled study of therapist and patient factors. *Behaviour Research and Therapy, 48*, 312-320.

Wampold, B.E., Flückiger, C., Del Re, A.C., Yulish, N.E., Frost, N.D., Pace, B.T., et al. (2017). In pursuit of truth: A critical examination of meta-analyses of cognitive-behavior therapy. *Psychotherapy Research*, *27*(1), 14–32. Doi: 10.1080/10503307.2016.1249433

Wang, M.Q., Yan, A.F., & Katz, R.V. (2017). Identifying bioethical issues in biostatistical consulting findings from a US national pilot study of biostatistics. *BMJ Open, 7*(11), e018491.