

Crisis Intervention in the Acute Stage after Trauma

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ABSTRACT: *The efficacy of crisis intervention, such as critical psychological first aid, critical incident stress debriefing, trauma-focused cognitive behavioral therapy, eye movement desensitization and reprocessing and pharmacotherapy, were all evaluated and reviewed.*

Key words: *Psychological trauma, Crisis intervention*

Crisis intervention is the urgent as well as the acute psychological intervention after trauma (Flannery & Everly, 2000). Its purpose is to mitigate acute distress of victims, stabilize emotion and restore the self-adaptation (Flannery & Everly, 2000). Numerous studies have suggested that crisis intervention may effectively prevent the onset or reduce severity of the stress and trauma related disorders, such as acute stress disorder (ASD) and post-traumatic stress disorder (PTSD). However, some studies have showed that improper use of crisis intervention may increase or aggravate the development of trauma related diseases (Gist, 2015; Nash & Watson, 2012). Thus, it is important to review and evaluate the efficacy of the common approaches of crisis intervention. In this article, the psychological first aid (PFA), critical incident stress debriefing (CISD), cognitive behavioral therapy especially trauma-focused cognitive behavioral therapy (TF-CBT), eye movement desensitization and reprocessing (EMDR) and even pharmacotherapy are the common approaches of crisis intervention reviewed (North & Pfefferbaum, 2013; Watson, Friedman, Ruzek & Norris, 2002).

Psychological First Aid (PFA)

PFA was developed in America by the National Child Traumatic Stress Network and the National Center for PTSD (Brymer et al., 2006). The purposes were to reduce the initial distress from the traumatic events (Brymer et al., 2006; Nucifora & Hsu, 2012), stabilize or facilitate the psychological and behavioral function (North & Pfefferbaum, 2013), and provide further medical care if needed (North & Pfefferbaum, 2013). PFA contains eight core factors: contact and promise to give help to survivors; maintain safety and comfort; stabilize the emotion if indicated, gather information; provide practical assistance; establish connection with families, friends and any other social support groups; cope with crisis effectively and mitigate maladaptation; link to cooperative services that may be needed in the future (Nash & Watson, 2012). Currently, PFA is widely used in the public health system and emergency medical response system (North & Pfefferbaum, 2013), and is strongly recommended by the humanitarian organizations, including the International Federation of Red Cross and Red Crescent Societies, World Health Organization and so on (Eifling & Moy, 2015). However, this approach is mostly based on accumulated experience and experts' advice. Few evidenced-based research was found. Recently, a study (Dieltjens et al., 2014) searched the evidence of PFA in five practicing guidelines and two systematic reviews. He found that rigorous randomized controlled trials (RCTs) were lacking in all guidelines. Furthermore, solid evidence that would prove the effectiveness of PFA was not found in the two reviews. Thus, more

evidenced-based research is still needed to prove the effectiveness of PFA.

Critical Incident Stress Debriefing (CISD)

CISD is a structural reviewed approach that includes psychological debriefing (Group, 2010). It is often used in a group format that helps people discuss the stressful experience after a traumatic event (Group, 2010). CISD is considered one of the seven core components in critical incident stress management (Jatczak). It is widely used to mitigate the post-traumatic stress reaction and restore the social function. It is divided into seven standard phases (Jatczak); including introduction phase, fact phase, thought phase, reaction phase, symptom phase, teaching phase and re-entry phase (Jatczak). CISD is often used from 2-10 days after critical incidents occur. In conditions of severe disaster, it can be postponed to 3-4 weeks post trauma (Jiang, Ma & Lv, 2007). Also some literatures suggested early intervention can be started optimally in 1-2 days after the crisis incident (http://www.placerchaplains.com/Documents/Chapter%204_Critical%20Incident%20Stress%20Debriefing.pdf).

Early CISD was used to help the members of specific groups which were potentially exposed to traumatic events (firefighters, policemen, etc.) (Group, 2010), but then it was gradually used in the general population. The efficacy of CISD has been validated by several RCTs (Chen et al., 2009; Tuckey & Scott, 2014). However, some scholars argued this approach would inhibit the natural recovery process of victims (Gist, 2015). A meta-analysis (Van Emmerik, Kamphuis, Hulsbosch & Emmelkamp, 2002) showed that CISD intervention carried out one month after the trauma did not improve the symptoms of PTSD, which were improved by non-CISD intervention or no intervention. Another randomized single blind controlled study also showed that CISD intervention used 72 hours post-delivery did not prevent the postnatal psychological disorders which included stress disorder and depression (Priest, Henderson, Evans & Hagan, 2003).

CISD, as the method of crisis intervention in acute stage of trauma, is easy to operate and highly used in clinical practice. However, evidence-based studies showed negative effect evaluation about psychological debriefing. The newly revised edition of the Department of Veteran Affairs/Department of Defense (VA/DOD) Clinical Practice Guideline (CPG) for management of post-traumatic stress did not recommend psychological debriefing as the routine method of early intervention (Nash & Watson, 2012). Therefore, the application of CISD in early intervention may require more evidence based research to support.

Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)

VA/DOD CPG suggested if post-traumatic stress symptoms exist or worsen more than two days, TF-CBT should be used (Nash &

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Watson, 2012). Four to five sessions of brief TF-CBT intervened two weeks after trauma was thought to be more effective in preventing PTSD as well as reducing depressive symptoms (Nash & Watson, 2012). Brief TF-CBT involved psychological education about trauma reactions, relaxation training, anxiety management, imaginary and vivo exposure and cognitive restructuring (Bryant et al., 2003; Bryant et al., 1999; De Jongh et al., 2011; Jiang et al., 2014; Liu, 2009). Psychological education has emphasized that sadness, numbness, anger, guilt and other emotional reactions are normal and hope is provided to survivors. Relaxation training, especially progressive muscle relaxation training and breathing restraining, were used to mitigate the physical state of hypervigilance (Bryant, Moulds & Nixon, 2003; Bryant et al., 1999; Jiang, An & Wu, 2014). Moreover, anxiety management was also included to reduce the elevated arousal symptom through self-talk practice (Bryant et al., 1999). During the session of imaginary exposure, survivors recalled and described the traumatic incident in a safe situation (De Jongh, Holmshaw, Carswell & van Wijk, 2011; Liu, 2009). Then they reported their feelings and ideas until subjective distress was released (De Jongh, Holmshaw, Carswell & van Wijk, 2011; Liu, 2009). During the session of vivo exposure, survivors exposed gradually to non-threatened and real situation based on the severity of fear (Liu, 2009). The purpose of vivo exposure was to reduce avoidance behavior and enhance the sense of control to the subjective experience ((De Jongh, Holmshaw, Carswell & van Wijk, 2011). Finally, cognitive restructuring was applied to identify and modify the negative or fear related belief (Bryant, Moulds & Nixon, 2003).

Many studies have proven that TF-CBT is effective to prevent and treat ASD or PTSD. A systematic review suggested that compared with supportive counseling and waiting list, TF-CBT was more effective to decrease acute traumatic stress symptoms (Roberts, Kitchiner, Kenardy & Bisson, 2010). Furthermore, a large body of systematic reviews and meta-analysis have confirmed TF-CBT can decrease the severity of symptoms in subjects with ASD (Forneris et al., 2013) and PTSD (de Arellano et al., 2014), effectively reduce trauma-related cognitions damage (Diehle et al., 2014b) and prevent chronic PTSD from initial ASD (Gartlehner et al., 2013; Kornør et al., 2008). TF-CBT has not only been used in adult groups, but also in trauma-affected children (Kameoka et al., 2015; Murray et al., 2015).

In conclusion, TF-CBT as the important approach of crisis intervention in the acute phase of trauma was clearly mentioned in many CPGs. Many evidence-base researches also support this view.

Eye Movement Desensitization and Reprocessing (EMDR)

The concept of eye movement desensitization (EMD) was first proposed by Francine Shapiro in 1989 (Devilley, 2002; Shapiro, 1989). She noticed that EMD successfully desensitized the memory from traumatic survivors and improved their cognitive function (Shapiro, 1989). The same effects still existed even in the follow-up period (Shapiro, 1989). In 1991, EMDR was developed to reflect the changes of cognitive and insights changes in the period of treatment (<http://www.emdr.com/history-of-emdr/>). EMDR is an exposure-based therapy, which is used to reduce the long-term impact of painful traumatic memory through the adaptive coping mechanisms. The session of EMDR procedure includes history, preparation for the assessment, desensitization, installation, body scan, closure and reevaluation (Hughes, 2014).

Although, some evidence-based research showed that EMDR did not appear more effective than other exposed psychological interventions including TF-CBT (Davidson & Parker, 2001). However, in the clinical practice guideline of PTSD (2004 edition), American Psychiatry Association still affirmed the efficacy of EMDR in the treatment of acute and chronic PTSD symptoms (Forbes et al., 2010). Moreover, more studies have proven EMDR's effectiveness and safety. A pilot study showed EMDR within 48 hours following trauma was more effective than eclectic therapy intervention to victims of physical violence and accidents (Brennstuhl et al., 2013). Single-blind randomized trial (van den Berg et al., 2015), not only empirical evidence (Bisson et al., 2013), also supported the efficacy of EMDR in the treatment of PTSD. A meta-analysis indicated that EMDR was better than CBT to decrease the severity of intrusion and arousal symptoms in PTSD (Chen, Zhang, Hu & Liang, 2015). Another meta-analysis of RCTs affirmed EMDR significantly attenuated the symptoms of PTSD, anxiety and depression in subjects with PTSD (Chen et al., 2014). When treating children with PTSD symptoms, EMDR and TF-CBT also showed large reductions after the intervention (Diehle et al., 2014a). However, the difference of reductions between the two methods was not found (Diehle et al., 2014a).

Although a meta-analysis revealed that pharmacotherapy may not replace CBT, which showed to be more effective (Scott III, Nipper & Smith, 2010), VA/DOD CPG pointed out acute symptoms aftermath of exposure such as insomnia and hyperarousal can be managed by brief medication regimens (Nash & Watson, 2012). There is a research (Zohar et al., 2011) reported that high dose hydrocortisone intervention used immediately after trauma can mitigate symptoms of acute stress and PTSD. A systematic review concluded that in the first month of trauma, pharmacological intervention including β blocks, hydrocortisone, selective serotonin re-uptake inhibitors were more effective to prevent ASD and PTSD than no intervention or placebo (Sijbrandij et al., 2015). The common pharmacotherapy is the one that can alter adrenergic function (Forbes et al., 2007). Another point of view thought that reducing noradrenalin which can consolidate the traumatic memory immediately after the trauma may prevent PTSD (Bryant, 2007). A RCT demonstrated propranolol (β blocks) given in 6 hours post trauma reduced the subsequent post-traumatic stress symptoms (Pitman et al., 2002), which is consistent with the conclusion mentioned above. However, another issue indicated that pharmacotherapy should be avoided in the first month after the appearance of traumatic symptoms, unless psychological treatment alone can not manage the severe distress (Scott III et al., 2010).

Pharmacotherapy

In conclusion, guidelines and evidence-based medicine have the strongest recommendation on TF-CBT as the method of crisis intervention in the acute stage of trauma. The suspicion of CISM and EMDR mainly concentrated on the advantages and disadvantages of traumatic explosion. In China, PFA and CISM have the positive evaluation and are mostly used during the crisis intervention (Chen et al., 2009; Wu, Wang & Yin, 2014; Yin et al., 2015). However, research of EMDR and pharmacotherapy especially RCTs in early intervention are still insufficient in China, and require more clinical practice.

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