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Therapeutic Effect of Cognitive Behavioral Therapy on Adolescent Post-traumatic Stress Disorder

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ABSTRACT
Adolescents who suffered from traumatic events are at increased risk for perpetrating emotional dysfunction as well as aggressive behaviors, or even self-harm and suicidal attempt. They are also at high risk for developing post-traumatic stress disorder (PTSD) that afflicts them constantly throughout life. To better understand and analyze the therapeutic effect of cognitive behavioral therapy on adolescent post-traumatic stress disorder, the author reviews many current studies from angles of therapeutic theories, populations, settings, etc. It also analyzes the efficacy of cognitive behavioral therapy (CBT) in the treatment of adolescent post-traumatic stress disorder. The study shows that CBT has been proved to be effective from various angles in treating adolescent PTSD. Meanwhile, the study finds evidence that CBT combines the strength of other therapeutic methods and extends to the next level. As a result, this study concludes that CBT shows the most significant effectiveness in treating adolescent PTSD compared to other therapeutic methods at the current level.

Keywords: *Post-traumatic Stress Disorder, Cognitive Behavioral Therapy, adolescent, psychology, treatment*

1. INTRODUCTION

When most people talk about post-traumatic stress disorder (PTSD), war veterans would be what they picture in mind. Although PTSD does affect military soldiers, it can affect anyone at any stage of their lifetime. Research shows that an estimated 70% of American adults have experienced traumatic events in life, and about 20% of them continue to develop PTSD. Women and children are two groups that are easily overlooked in this disorder. Women are twice more likely to develop PTSD than men. Children who have experienced abuse, serious neglect or harassment may develop PTSD at any time later in their life, most likely during adolescence [1]. Though some people do recognize the occurrence of PTSD beside veterans, they believe that only weak people develop it, and strong people will be able to "get over" it and move on with their lives. This dangerous thought builds a stigma that prevents sufferers from getting help. It can become fatal for those children and adolescents with resistant parents. Lacking proper aid, they develop other mental health comorbidities, and even suicidal behaviors. PTSD patients and their loved ones must understand that vulnerability is completely normal, and professional help is undoubtedly a necessary step for them to resume their normal life. Then what would be the best treatment for adolescents? The purpose of this study is to explore PTSD and its treatments in adolescents. By reviewing and comparing current studies, the paper discusses PTSD's causes and characteristics. Meanwhile, since most people holds a stereotypy that post-traumatic stress disorder (PTSD) is mainly for war veterans, this study could help society understand more about how PTSD is developed and affects young people in a malfunction way. On the individual level, adolescents who suffer from PTSD could understand more about themselves as well as how they could live a better life through treatment.

2. PTSD: DEFINITION, CAUSES, SYMPTOMS, AND MAIN TREATMENT

2.1 Definition

Post-traumatic stress disorder (PTSD) refers to the delayed emergence and persistence of mental disorders caused by individuals experiencing, witnessing, or experiencing one or more actual deaths involving themselves or others, or being threatened by death, or serious injury, or threatened physical integrity [2].

2.2 Causes

The occurrence of PTSD is related to many factors. These factors are mainly divided into family, socio-psychological factors (such as gender, age, race, marital status, economic status, social status, work status, education level, stressful life events, personality characteristics, defense style, childhood trauma, domestic violence, war, social support, etc.) and biological factors (such as genetic factors, neuroendocrine factors, neurobiochemical factors, etc.) Among them, major traumatic events are the basic condition for the onset of PTSD, which is highly unpredictable [2]. Trauma-related events that may lead to PTSD include sexual assault or fatal confrontation. It usually lasts more than one month after the traumatic event happens. The anxiety triggered by a traumatic event is the key that causes PTSD [2].

2.3 General symptoms and specialized symptoms for adolescents and children

People with symptoms of PTSD often experience intrusive thoughts such as flashbacks of thoughts and memories of the traumatic event. Which triggers them to generate more psychological anxiety related to that traumatic event. They also sometimes lost the memory associated with the anguish of a traumatic event since it triggers them about the traumatic event, which is known as avoidance [2]. Because of that, they often have difficulties memorizing the details of that traumatic event even though they would have flashback of agony feelings about that traumatic event. Their feelings usually become numb when they are associated with PTSD. Additionally, they often have a tendency to self-blame and negative feelings which makes it very hard for them to generate positive feelings and thoughts. Because of that, they are often at a high risk of self-harm and suicide [2].

The clinical manifestations of PTSD in children and adolescents are different from adults. Firstly, after major traumatic events, they have various forms of recurrent and invasive traumatic experiences. They often frequently experience this repetitive experience in a very clear and extremely painful way, including the re-experience of traumatic events composed of recurrent illusions and hallucinations. Secondly, after traumatic events, instead of blurry memories, they often have very clear dreams that are closely related to the traumatic events. Thirdly, adolescents and children take a continuous avoidance attitude toward trauma-related things after the occurrence of traumatic events. Finally, many of them may also have “emotional numbness” after the event. From the appearance, they often present others with a dull and lonely feeling. In addition, they are often alienated, unfriendly, afraid, guilty or unwilling to communicate with others. There may be symptoms of excessive alertness, such as sleep disorders, irritability, easy to be frightened, and inattention [3].

2.4 Main Treatment

As demonstrated by PTSD Alliance, there are primarily two categories of treatment: medication and psychotherapy (or talk therapy). Medications like SSRI (selective serotonin re-uptake inhibitors) and paroxetine are FDA-approved medicine for PTSD, and can relieve specific symptoms like anxiety, depression and sleeping disturbances [4]. However, it takes time to adjust the dosage and there are side effects. In addition, medications alone are unlikely to heal the psychological wounds of trauma. Thus, seeking emotional support from a psychotherapist is critical in PTSD recovery. Studies have shown several well-established psychotherapy approaches, which include but are not limited to Cognitive Behavioral Therapy (CBT), Prolonged Exposure Therapy (PE), Eye Movement Desensitization and Reprocessing (EMDR), and Stress Inoculation Training (SIT). Among these, CBT is strongly recommended by the American Psychological Association to treat PTSD [5] and is concluded to be the most effective treatment.

3. COGNITIVE BEHAVIORAL THERAPY

3.1 What is CBT: origin and characteristics

Cognitive Behavioral Therapy is a psycho-social talk therapy that focuses on discovering and altering negative thoughts, beliefs, and behaviors to improve one’s emotional regulation capabilities so that one can generate healthy and positive dynamics to cope with his problems [6]. The origin of CBT could be traced back to 1960s when cognitive therapy was officially established. Historically, ever since psychology became independent from philosophy, the theory of psychology has developed rapidly, and it has experienced the period when psychoanalysis and behaviorism psychology occupies the dominant position. In the 1960s to 1970s, the rise of humanistic psychology and cognitive psychology was the third force after psychoanalysis and behaviorism. Cognitive therapy as a systematic psychological counseling theory and technology was developed under this background. Therefore, it is closely related to humanistic psychology and cognitive psychology in theory.

Before the formal establishment of cognitive therapy, rational emotional therapy laid a certain foundation for cognitive therapy to enter psychological science as a systematic and scientific therapy. In this context, cognitive therapy was officially established by Beck in the 1970s. He has proved the effectiveness of cognitive

therapy with a large number of experimental studies and made this therapy as operable as a recipe [7].

Unlike traditional psychoanalysis from Freud which digs into childhood trauma for the root of disorders, CBT is more of a goal-oriented approach, targeting current problems and providing solutions. Thus, the treatment is typically short-term, ranging from eight to twenty sessions, and is often more affordable compared to other therapies. Clients attend one session per week, each session lasting approximately 50 to 90 minutes. Sessions may include individual, group, and family sessions based on the nature of symptoms. During this time, the client and therapist are working together to identify distorted thoughts, assess the accuracy of reality assumptions, and employ strategies to challenge the unhelpful ones and change to healthier behavioral patterns. In this process, PTSD clients re-conceptualize their understanding of traumatic experiences, and learn new coping strategies that can help them to deal with psychical and psychological discomfort [6].

3.2 Therapeutic mechanism and process of CBT

According to the Clinical Practice Guideline for the Treatment of PTSD by the American Psychological Association, CBT treats PTSD symptoms and boosts functionality and happiness by modifying dysfunctional emotions, thoughts, and behaviors [5]. Basically, CBT rests on the idea that our thoughts and feelings shape our behaviors. For example, feeling distressed may distort a person's perception of reality and perceive every event in his or her life as negative. Through CBT treatment, patients understand the underlying connection between their thinking and action. By altering the way of interpreting the world, they notice the improvement of their emotional regulation and behavioral performance. In addition, CBT also provides psycho-education about common reactions to trauma, relaxation training, and exposure exercises.

From a theoretical angle, several trauma-related theories illustrate how CBT can be helpful in reducing PTSD symptoms. For example, in Emotional Processing Theory, people who have experienced traumatic events can develop inaccurate associations among different elements from the event or reminders of the event and give meanings to those elements and respond unhealthily [8]. For instance, a survivor of a motor vehicle accident may rationally associate speeding with danger, but also irrationally relate black cars with danger since the car that hit him was black. So, he feels black cars are dangerous and avoid driving in black cars. This dysfunctional cognition lurked in his development and maintenance of PTSD. Changing these associations that lead to unhealthy functioning is the core of emotional processing, which is exactly what CBT targets. Another theory that supports the therapeutic mechanism of CBT is Social Cognitive Theory, which suggests people tend to incorporate what happens to them into their self-concept. PTSD patients try to blend the traumatic experience into who they are as human being. For instance, a girl would believe that she is bad inside as a rape survivor. This theory encourages people with PTSD to frame their self-awareness, establish boundaries between controllable things control and uncontrollable things, and work on self-efficacy [9].

3.3 Therapeutic effects in different populations especially in adolescent

CBT has been validated on multicultural aspects and can be used for different populations. In the study done by Beehler, Birman, & Campbell(2012), great quantities of CBT decreased PTSD symptoms and increased functioning among immigrant children and adolescents in the United States coming from world regions of origin including North and South America, Africa, Asia and Europe. Specifically, researchers discussed the flexibility of CBT [10]. CBT can be said to be a highly adaptable intervention that can be adjusted based on clients' cultural backgrounds and spiritual beliefs, which makes CBT a more worldwide therapy choice for PTSD. CBT was also successfully applied to PTSD treatment to groups like children with biological parents or caregivers [11], adopted adolescents [12], immigrant youth [10], street kids reside in foster care or shelters [13], and refugee camps [12], which further illustrates its effectiveness.

3.4 Therapeutic effects in different settings

Furthermore, CBT for PTSD has been provided in a variety of settings, including community centers, schools, primary care clinics and hospitals. For example, following natural disasters, CBT has been used in medical centers by mental health clinicians [12]. Community therapists have utilized CBT to treat chronic PTSD in community-based structures [11]-[13], and school settings [10]. Some therapists hold master's degrees from psychology, counseling, human development, or with years of working experience, and some of them graduated from short-term training on CBT treatment or internships. Symptom reduction from patients verified their professional performance and convinced CBT of its effectiveness in treating PTSD.

4. DISCUSSION

Yet there are other popular psychological theories that bolster CBT, such as Behavior Therapy, Person-Centered Therapy and Reality Therapy. As a matter of fact, some of these theories also support other PTSD interventions that have been mentioned above. Interestingly, after deliberate exploration of each intervention, these interventions are genuinely

subordinate forms of CBT. According to the most discussed one, Prolonged Exposure Therapy(PE), it trains individuals to gradually approach their traumatic memories, feelings and situations under the guidance of therapists, distinguish danger from safety, and learn to confront fears [4].

Multiple studies have claimed PE as an effective and safe treatment for adolescents with PTSD [14]-[15]-[16]-[17]. Among these studies, except for Van de Water, Rossouw, Yadin, & Seedat (2018), who reported breathing and imaginal exposure as the most helpful tools patients learned during treatment, the other three studies all pointed out the importance of psycho-education before going into anxiety-evoking exposure sessions. Recognizing and dealing with emotions is the main focus of psychological education, which is also the core of CBT.

Thus, it can be said PE is rooted in CBT and cannot be simply evaluated without weighing the contribution of CBT element. Not only do psychological theories explain the science of CBT, but numerous current studies also confirm that CBT is a reliable option for PTSD treatment. CBT has been proved to be effective for adolescents from natural disasters to man-made traumas. For example, reduced PTSD symptoms and improved functioning after receiving CBT were revealed in earthquake surviving adolescents [12] and disaster-exposed children who experienced an explosion of a fireworks factory [18]. The same was true when CBT was implemented for children who experienced sexual and physical abuse, experienced a significant loss of a family member [13] or with severe bullying history [11]. On the other hand, some voices express doubt about the effectiveness of CBT. For instance, a review of 55 studies of empirically supported treatment for PTSD found that the non-response rated to CBT could be as high as 50% [19]. However, it is unconvincing to simply conclude CBT as incompetent. In this study, two areas were discovered to limit the therapy as a specific number of sessions and methodological inconsistencies. Each session number is possible that some clients might respond relatively slower than others.

A fixed number of sessions is not practical. As shown above, the typical duration of CBT is 8-20 weeks, which can be adjusted according to the customer's response level, rather than conservative manual or settled insurance coverage. It should be attributed to the lack of treatment time rather than the effectiveness of CBT. For the methodological issue, researchers incorporate different strategies into CBT treatment structure, such as case management, motivation enhancement, etc. This may improve patients' experience but may change the nature of the CBT process to some extent. Taking motivation as an example, driven by the Motivational Interview technology which emphasizes the changing state of patients rather than identifying the cognitive distortion of patients. Sometimes, patients with PTSD are not ready to change because they are not aware of their distortion. Implementing elements that are holding a different view from CBT theory may impact its actual treatment efficiency.

5. CONCLUSION

The paper shows that CBT is an effective treatment for PTSD in adolescents, for multiple cultures and populations, with different settings, and follows a range of traumatic experiences. It also acts as a fundamental role to other psychological interventions' success and contributes to their effectiveness in treating PTSD. It is worth noting that in actual treatment cases, to make CBT play its real potential, it is necessary to follow the guidelines formulated by authoritative institutions and adjust the specific strategies according to the patient's background within the scope of standards. The limitation of this paper is that there are relatively few references to actual cases in the analysis. In the future research, the author will expand the scope of the case study and literature search, and further analyze the practical effect of CBT in the treatment of PTSD in adolescents.

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