

Potential Aetiologies of PTSD and Possible Interventions and Treatment

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Abstract: Passive-traumatic stress disorder is a disorder frequently appeared in the world. The percentage of individuals who have this disorder is specifically high. In this paper, the causes and possible treatment for PTSD is investigated. The cause of PTSD is explored from two dimensions as social and individual angles. Such as personality or growing environment of an individual could be decisive or critical for whether this individual will suffer from PTSD. Potential intervention and treating methods are discussed and concluded from multiple studies reviewed. As an example, Mindfulness-Based Resilience Training (MBRT) could successfully help police officers being more relax and relief from their depression and anxiety in their work. This paper objectives to explore more studies to help scholars to investigate treatment of PTSD. Moreover, this paper could be helpful to other researchers who investigate on similar topic and researching answers. There could be more specific and generalized research made into methods and treatment for PTSD. Overall, there is a bright future for those PTSD patients, more and more treatments and methods will be discovered and found.

Keywords: PTSD, treatment, mental disorders, pharmacotherapy, dynamic psychotherapy

1. Introduction

Post-traumatic stress disorder (PTSD) is currently an illness with a significant incidence worldwide. This psychological disorder is a disease that could lead a huge negative impact on social functioning especially for police officers and veterans. This disease made individuals re-experiencing past traumatic events and having negative side effects as anxiety and depress problems. The results of this disorder could easily lead to casualties of innocent personnel and cause problems of social instability. In order to contribute to stability of society and help individuals who suffer the pain of PTSD, definitions and concepts of PTSD and related experiments is demonstrated to research to expand the extensibility of this topic.

Research shows that whether Mindfulness-Based Resilience Training (MBRT) can make a difference to veterans to help their symptoms of PTSD, describing details of the training of MBRT, and veterans do receive positive results, however, researchers might neglect the potential problems of influences of growing family background and the level of education [1]. Another investigation on symptoms of police officers using MBRT still focus on their main experiences and background information, and they even receive support of the police station, one single matter is not mentioned in the experiment [2]. Which is the time that how long they serve for the society. This factor could

significantly matter to police officers' conditions of symptoms of PTSD. Newly hired policeman for one year could have completely different experience compared to experienced officer with various conditions of symptoms of PTSD. To investigate causes of PTSD and whether symptoms of PTSD could have an effective treatment, the argument of what could be causes of PTSD and potential treatment will be discussed through reviewing multiple previous studies in this paper.

To find out the aetiologies of PTSD and its potential method for treating, the concepts and definition of PTSD will be brought up and expanded. Related diagnosis of PTSD will be mentioned to identify what kind of condition are PTSD. Then, the causes of PTSD will be explained in two parts as social and individual factors. Following part is possible treatment method of PTSD, this part including pharmacotherapy and dynamic psychotherapy, which will using various studies to explain process and effect of possible treatments. Lastly, limits of these studies will be referred to.

2. The Concept of Trauma-Related Disorder

Shell shock is one of the most popular illnesses, as it could be easily related to lots of elements in people's everyday lives. This is an illness that is connected to elements that are associated with and followed by individuals from their childhood to their adulthood, such as personal experience or social norms. As Widom described in his book, PTSD was first created as a syndrome for the needs of veterans during the post-Vietnam War to help them with extricating them from traumatic war experience [3]. To be more specific, PTSD is a syndrome that causes the patient to recall the tragic incident over and over again. According to Widom, the PTSD process might be the trauma that a patient experiences becoming something memorable for a very long time. After which the patient gradually adapts the avoidance and tries to escape from the attack of the emotion and symptoms of PTSD [3].

As PTSD could be diagnosed in a significant age group of people, the symptoms could also be severely different. Brewin also discovered that in the ability to memorize, and speaking might be influenced on a larger level than the visual part [4]. In simple words, patients with PTSD are experiencing brain degeneration that is simply expressed as losing part of the ability to memorize, see, and talk.

In the previous several decades, the diagnosis of PTSD has experienced some important alterations and questions. Brewin and his colleagues tried to remake the diagnosis of PTSD [5]. Their proposal decreased the core symptoms from seventeen to six, including five of them that are the most predictable symptoms that can detect syndromes of PTSD [6]. These are classified into three categories: repeatedly appearing painful dreams or flashbacks; avoidance from both physically and mentally, and excessive vigilance or panic. Additionally, these modifications would make it easier to detect comorbid illnesses and help identify effective therapies for PTSD [5].

3. Aetiologies

The aetiologies of PTSD involve a wide range of social and personal factors, from the influence of society and different cultures down to individual elements. In America, every two men out of five males who live in the city are likely to have symptoms of PTSD, which is like the condition for veterans. The elements of the causes that led to PTSD could be classified into two parts: individual factors and social factors.

3.1. Individual Factors

The reason that makes a person ill with PTSD could possibly be what an individual contacts from a very young age. Violence and PTSD have been linked in the following study [7]. The level of pressure generated by the perpetrators of the crimes may be a factor in both childhood and adult trauma, as

well as sadness brought on by PTSD [7]. Which is named adverse childhood experiences (ACEs), there will be an enormous impact on a child if this individual experiences unhealthy events such as improved use of weapons, drug abuse, and being abused [8]. Children do not have a proper value to identify whether events are positive or negative. As an example, children see parents fight badly in front of children with loud shouting and even knives. Normal children could hardly escape from an event that could be painful. The only thing is clear is that this event is likely to be remembered for them and stick with them for more than ten years. More importantly, the action of violence could be learned without conscious thought and later acted on by someone who is innocent, even lead to worst result for children of incorrect values of what is right and wrong with finally embarking on the path of imprisonment. The research mentioned earlier between violence and PTSD could describe this conflict in detail. The trauma from childhood and adulthood, including the depression from PTSD, could all be related to the degree of pressure released by the people who committed the acts [8]. It could also be blamed to the pressor which is the direct reason where the pressure comes from, and it is believed that the absence of the pressor could possibly lead to better illness condition for the patient. Even if the cause may have already been embedded in the patient's childhood memories.

Personality could also be a potential cause leads to PTSD. As this is a matter that could be decided by a person's growing environment and the different kinds of people that children know. As traits of a person is formed in his childhood with unique living environments. Since every individual own different attitude and response to different situations, what they experience is also various when facing difficult and bothersome situations. It is believed that certain negative traits are connected to syndromes of PTSD. Different traits and personalities could impact an individual with various results. A category of personality that called type D (distress) personality proposed by Denollet which is a combination of traits of neuroticism (Na) and considerable social inhibition could be related to the cause of PTSD [9]. As an example of this personality when dealing with difficult situation like reexperiencing traumatic event or facing thoughts related to previous trauma, and considering this individual is introverted and negative, the solving solution is likely to be escaping and giving up. Additionally, researchers discovered that those with negative qualities are proportionately more likely to exhibit symptoms of PTSD [10]. Though this thesis is disappointing as these are closely related between D personality and PTSD, it is undeniable that individuals with negative thoughts for most of the time are unlikely to live a positive life and higher risk of experiencing trauma is possible.

3.2. Social Factors

Another factor that contributes to PTSD, which can be acquired or learned, is the level of social influences. These social factors could be impossibly broad, as they could be the result of indirect trauma and social and cultural norms. According to Zachary and her colleagues' questionnaire investigation on patients who have been through gunshots, stab wounds, and physical assaults, they discovered that the percentages of participants who had PTSD attacks are extremely high [8]. To be concluded, these PTSD symptoms that patients experienced are probably connected with untreated long-term PTSD syndromes, depression, and anxiety disorders [8]. The comorbidity could eventually make symptoms of PTSD worse.

Exposure of traumatic can have certain level of effect for individuals who experienced PTSD. Another experiment related to experiences of post-traumatic stress reported about individuals' exposure to traumatic events can also lead to trauma-stress symptoms [11]. Following the terrorist events of September 11, America was attempted. This investigation proves the relationship between watching TV and the syndromes of PTSD may vary with time and method. They concluded that people who have experienced trauma in reality are more likely to have symptoms of depression and disability. It is indisputable that for people who have lived through some painful event of trauma,

watching other people go through some experience that is also hurtful and it might be the same, it is likely to have resonance and remind them of the past stressful memory.

The fact that culture and social values themselves can make a huge difference to normal people and even more to PTSD patients. As disadvantages, inequality between races and limited economic opportunities can lead to extreme negative results for people living a hard life, including experiencing despair and cynicism [8]. For example, when comparing some teenagers living in underdeveloped areas of India with children living in more developed cities in New York, it is found that their living environment, education level, and cultural influence are completely different. And the difficulties they face in life may also be vastly different. Perhaps the problem of tuition and miscellaneous expenses faced by an Indian teenager is only a problem that can be solved by the parents of a New York teenager by adding a few more days of work.

4. Intervention and Treatment

There are plenty of interventions and therapies for PTSD developed in the present day; however, as they might be positive and helpful to the patient's symptoms, the best hope is still decided and dominated by the patient's will. Since in the treatment of a patient, the most important thing is the cooperation between the doctor and the patient, even though sometimes it could be extremely difficult for the patient to get on with the therapy. Certain possible ways of therapy for PTSD suggested by Lahad and Doron are pharmacotherapy and dynamic psychotherapy [12].

4.1. Pharmacotherapy

Most of the time, pharmacotherapy is used for the syndromes of PTSD to reduce symptoms and comorbidities such as anxiety, pressure, and issues with sleep [10]. Until the present day, there has been nearly no medication made for patients to completely heal and recover from the symptoms of PTSD, but it can help patients temporarily alleviate the symptoms. Several antidepressants, such as medicine of Paroxetine and Sertraline, have been discovered by Van Etten and Taylor to be effective in relieving the symptom, and they are also recommended by multiple researchers, who suggest they have fewer side effects and relatively simple administration methods [13, 14]. From the one hand, since using this way for therapy as only taking medicine, it is a relatively easier and convenient treatment for PTSD patients, on the other hand, these are medicine not only for PTSD symptoms like avoidance, hypervigilance, and hyper-arousal, and for treatment of depression. Which means, these medicines are treating patients' illness from multiple dimensions of angle.

Since PTSD patients usually experiencing symptoms of PTSD: re-living past traumatic events repeatedly and escaping and refusing to accept painful trauma, and there are also other side effects like depression, anxiety and sleeping problems. When individuals having problems like these, they can use Sertraline and Paroxetine mentioned above, they can solve the problem of feeling pain and pressure which can help symptoms of feeling nervous and sad to some level, individuals can also feel emotional detachment by solving the difficulty of sleeping [12]. Though, this way of treatment is suggested and recommended, the experiment and research of these medicine are mostly based on theory [12].

4.2. Dynamic Psychotherapy

Dynamic psychotherapy is another area of treatment for PTSD that focuses on patients' experiences of trauma, especially on emotional conflicts that are connected with childhood [15]. To be more specific, the doctor who uses this method wants to help patients fix their trauma from childhood so that they can give up their burden and become stronger by using proper ways to see their past traumatic events in a positive light, and in this way, they can try to pick up the painful memory and

make it their own once again as their traumatic past. Through this, this might come back as attacks on the patient, in which case they might need treatment for a second time to avoid certain bothersome memories, flashbacks, and nightmares returning [12].

4.2.1. Process of Dynamic Psychotherapy

The process of treating PTSD patients through dynamic psychotherapy is complex and continuously that mostly depends on the patients. When treating PTSD using this therapy, the symptom of PTSD is commonly divided into two parts according to patients' conditions as intrusive stage and denial stage [15]. During the treatment, patients will be asked to describe painful and traumatic experiences, and the two stage will appear, individual could be especially anxious when talking about past traumatic events in the intrusive stage; when finishing describing the events, symptoms of avoidance and numb will be shown and patients might try to control the pain from the past [12]. Though this process could be scary, this behaviour is completely normal.

Therapist could help patients in these two stages by using both pharmacotherapy and dynamic psychotherapy to help reducing symptoms of PTSD and patients correctly control the trauma. Patients could experience hurtful events over and over again, but this is an indispensable step to heal. During intrusive stage which patients are re-experiencing the past troublesome event, the therapist will encourage patients to face the trauma with helping to build a supportive backup environment which is strong for patients to express themselves unreservedly [12]. So, the anxiety can be held and controlled with help instead of facing it alone by patients themselves. When patients have certain level of progress, therapist will help patients to associate and try to release the pressure from the trauma to face the past memory, when patients can gradually face up to their traumatic experiences, that means their symptoms of PTSD is better and therapist's interventions on patients' symptoms is successful.

4.2.2. Recovery Based on Mindfulness

Mindfulness-Based Resilience Training (MBRT) is another convenient and useful treatment for PTSD. It is one of the mindfulness-based therapies that has been shown that can lessen pressure, fear, disrupted sleep, exhaustion, and rage symptoms of PTSD. A study investigated whether MBRT could influence thirty police officers using MBRT for their PTSD symptoms, and they found reasons why they are successful [16]. Before the actual training of MBRT, police officers have shown symptoms of sleep interruption, distractibility, increase alertness and startle response [16]. This might be normal for police officers since they need these attitudes in their work, however, they might have trouble controlling it in their daily lives. More importantly, it can be controlled in their training of MBRT.

Another experiment investigated symptoms of PTSD of US veterans also using MBRT has described specific details on how this MBRT works, as the method is nearly same described in the last experiment related police officers [1]. MBRT is seen as a practice that the focus of mindfulness being aware one's experience in the present moment on purpose and without judgement [2]. In the training for veterans, the leader aims to help the participants to learn to decrease their ability to react and increase the ability to endure the pain; detailed course including learning, discussion, meditation training and family activities [1]. Though this could be complex and difficult at first, support will be given from researchers, and in the experiment for police officers, they are supported by their police station. It has been suggested by veterans that the training of MBRT provided a tool for them to reduce their pain and accept their painful past [1]. The result is especially positive when participants received helpful result when this solves the problem for them when dealing this symptom of PTSD.

5. Limitations and Future Direction

Though there are multiple talented researchers who suggest effective and strong methods and concepts for PTSD, limits of thought and technology still restrict their footsteps toward further studies and possible treatment for PTSD. In investigation of PTSD for people's wounds from certain attacks, when information about a broad range of types of wounds interviewed, the age and growing up environment of participants could be missed; the addition of the element might change certain variables of the investigation. In the survey that looking into whether watching traumatic events is related to a real painful experience, the current affairs news could be limited at the time; it is believed that the result could be different if the experiment were held in the present day. To conclude, though many victims may still suffer from PTSD at the present time, it is believed that there will be better medicine invented to help with PTSD in the future or even completely cure this illness.

6. Conclusion

This article specifically investigated on the aetiologies of PTSD and possible treatment. It can be concluded that, causes of PTSD could be various from up to social matters like what kind of people individuals meet and environment of neighborhood, down to personal experiences and personality. It could be uncertain and dangerous, but what could be decided is only personal matter. Treatment for PTSD, on the other hand, is unbelievable dependable, the treatment at the present day is more advanced with plenty of treating methods for officers and normal civilians. Even normal individuals could learn simple concepts of PTSD and find several treatment of treat PTSD. As MBRT could be useful not only for police officer, but any individuals also that suffers from depression could use this training against symptoms of PTSD, and there are treatment and medicine specially designed by therapists for patients with worst conditions of anxiety and trauma.

Moreover, this paper could be helpful to other researchers who investigate on similar topic and researching answers. It could help potential PTSD patients even find a treatment to help their illness and learn more about experiments about their similar experiences. Though, past studies are not perfect and are still constraint with past technology and thoughts, potential progress and improvement could be made. There could be more specific and generalized research made into methods and treatment for PTSD so that the prevalence of PTSD will be higher, and people will pay more attention to this disease. Overall, there is a bright future for those PTSD patients, under all these uncountable experiments and investigations of PTSD, more and more treatments and methods are discovered and found, it is believed that there will be a therapy that could completely heal this psychological disorder.

References

- [1] Miller, M.L., Bagley, J.M., Normand, P. et al. (2020). *Increasing Mindfulness Skills of Veterans with PTSD Through Daily Mindfulness Training Incorporated into an Intensive Treatment Program*. *Mindfulness* 11, 964–974. <https://doi-org.bham-ezproxy.idm.oclc.org/10.1007/s12671-020-01326-5>
- [2] Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z. V., Abbey, S., Speca, M., Velting, D., & Devins, G. (2004). *Mindfulness: A proposed operational definition*. *Clinical Psychology: Science and Practice*, 11, 230–241. <https://doi-org.bham-ezproxy.idm.oclc.org/10.1093/clipsy.bph077>.
- [3] Widom, C. S. (2012). *Trauma, psychopathology, and violence: Causes, consequences, or correlates?* Oxford University Press, Incorporated.
- [4] Brewin C. R. Kleiner J. S. Vasterling J. J. Field A. P. (2007). *Memory for emotionally neutral information in posttraumatic stress disorder: A meta-analytic investigation*. *Journal of Abnormal Psychology*, 116, 448 – 463. doi: 10.1037/0021-843X.116.3.448.
- [5] Brewin, C. R., Lanius, R. A., Novac, A., Schnyder, U., & Galea, S. (2009). *Reformulating PTSD for DSM-V: Life after Criterion A*. *Journal of Traumatic Stress*, 22, 366–373. <https://doi.org/10.1002/jts.20443>

- [6] Kilpatrick, D. G., Resnick, H. S., Freedy, J. R., Pelcovitz, D., Resick, P., Roth, S., & van der Kolk, B. (1998). *The posttraumatic stress disorder field trial: Evaluation of the PTSD construct: Criteria A through E. DSM-IV sourcebook*, 4, 803–844.
- [7] Gillikin C, Habib L, Evces M, et al. (2016). Trauma exposure and PTSD symptoms associate with violence in inner city civilians. *J Psychiatr Res*. 83:1e7.
- [8] Zachary J. Coles, Ann Tufariello, Stephanie Bonne, (2020). *Unpacking the Causes of Post-Traumatic Stress Disorder in Violently Injured Patients*, *Journal of Surgical Research*, Volume 256, Pages 43-47, ISSN 0022-4804, <https://doi.org/10.1016/j.jss.2020.06.015>
- [9] Denollet, J. (2000). Type D personality: A potential risk factor refined. *Journal of Psychosomatic Research*, 49, 255–266. doi:10.1016/S0022-3999(00)00177-X.
- [10] Pedersen, S. S., & Denollet, J. (2004). Validity of the Type D personality construct in Danish post-MI patients and healthy controls. *Journal of Psychosomatic Research*, 57, 265–272. doi:10.1016/S0022-3999(03)00614-7.
- [11] Naeem, F., Taj, R., Khan, A. and Ayub, M. (2012), *Can watching traumatic events on TV cause PTSD symptoms? Evidence from Pakistan*. *Acta Psychiatrica Scandinavica*, 126: 79-80. <https://doi-org.bham-ezproxy.idm.oclc.org/10.1111/j.1600-0447.2012.01876.x>
- [12] Lahad, M., and M. Doron. (2010). *Protocol for Treatment of Post Traumatic Stress Disorder: See Far CBT Model: Beyond Cognitive Behavior Therapy*, IOS Press, Incorporated, ProQuest Ebook Central, <http://ebookcentral.proquest.com/lib/bham/detail.action?docID=1640881>.
- [13] Van Etten, M. L. & Taylor, S. (1998). *Comparative efficacy of treatment for posttraumatic stress disorder: A meta-analysis*. *Clinical Psychology & Psychotherapy*, 5, 126-145.
- [14] Lahad, M., and M. Doron. (2010). *Protocol for Treatment of Post Traumatic Stress Disorder: See Far CBT Model: Beyond Cognitive Behavior Therapy*, IOS Press, Incorporated, ProQuest Ebook Central, <http://ebookcentral.proquest.com/lib/bham/detail.action?docID=1640881>.
- [15] Horowitz, M. (1976). *Stress Response Syndromes*. New York: Jason Aronson.
- [16] Grupe, D.W., McGehee, C., Smith, C. et al. (2021). *Mindfulness Training Reduces PTSD Symptoms and Improves Stress-Related Health Outcomes in Police Officers*. *J Police Crim Psych* 36, 72–85. <https://doi-org.bham-ezproxy.idm.oclc.org/10.1007/s11896-019-09351-4>