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Mainstream Therapies for Post-Traumatic Stress Disorder and the Causes of High Dropout Rate in Treatment

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Abstract. Post-Traumatic Stress Disorder (PTSD) is a common psychological issue for individuals who witness trauma, for it threats the patients' lives chronically, with its destructive symptoms. Though there are many feasible treatments to reduce PTSD symptoms, including psychological and pharmacological interventions. However, dropout rate is a main factor that reduces the effectiveness and exists in most of the therapies, especially for traumatic focused treatment. As a result, article discuss causes and effect of dropout rate linked to first frontline treatment and emerging treatments are discussed. Different studies indicates that though treatments based on avoidance behavior theory have significant effect, the treatment process may cause intolerant distress for part of patients. As a result, withdraw will take place. Compare to it, some emerging treatment (e.g. imaginary rescripting, mindfulness) consist of techniques that can reduce distress during or after the treatment, and therefor have the potential to solve dropout rate problem. Additionally, we argue that improving psychological quality (like, emotional management and distress tolerance) of patients could play a vital role in treatment, which is usually ignored by mainstream theorem. According to the potential limitations of the theory, we provide suggestions that improve treatment strategy (like adding pretreatment training), and combining advantages of different therapies can reduce the dropout rate and enhance the treatment effectiveness.

Keywords: Post-traumatic stress disorder, Emerging treatment, Prolonged Exposure, Cognitive Processing Therapy, Dropout rate

1. Introduction

Post-Traumatic Stress Disorder (PTSD)is a type of mental disorder of individuals, usually resulting from experiencing trauma related event. For the reasons, it results from domestic abuse, sexual assault, accident, crime, war, disaster etc. According to the severity level, it can be classified as low, moderate, and high. The characteristics of PTSD is described below [1]. First, intrusive thought related to trauma influence the patents by nightmares or flashback, etc. Additionally, patients suffer from chronic, re-experiencing extreme sensation of the dangerous or terrifying memories. Finally, patients usually avoid the traumatic memories, or even avoid the neutral stimuli for some patients with severe symptoms. Patients with severe PTSD symptoms will suffer from more dangerous

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situation for they not only experience normal PTSD symptoms, but more risk to have other mental disorders, alcoholic and drug abuse, or even suicide. Thus, it is vital for patients to recover by taking treatments. The primary objective of this research is to provide a comprehensive review of empirically supported therapies for PTSD, with a specific focus on Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT). It aims to examine their respective treatment protocols, underlying psychological mechanisms, and clinical indications.

Also, past research concerning the treatment of PTSD mentioned a critical point: high drop out rate of PTSD treatment. Dropout rate is one of the main problems prohibits patients to complete the treatment. It means the percentage of patients start the intervention but quit halfway, and is usually related to that, patients are unable to tolerate the treatment or treatment ineffective for them, especially for therapies focusing on trauma [2]. As a consequence, it is important to solve this problem. This second focus of this study aims at introducing features of dropout rate in different treatments, and providing suggestions about how to cope with it.

2. Mainstream treatments to PTSD

PTSD treatment can be roughly classified as psychological and pharmacological treatment. Generally, considering the complexity of PTSD, it is difficult to reduce the symptoms with only pharmacological treatment. Additionally, meta-analysis revealed that the psychological treatment probably is superior to pharmacological treatment [3], and this conclusion is further affirmed by the review of Schrader and Ross [4]. Thus, psychological therapy is more recommended, except for the case of emergency. As a result, nowadays treatment take the strategy of psychological treatment as main method, with pharmacological treatment as supplementary. Consequently we focus on psychological treatment in this study.

Overall, nowadays mainstream therapies for PTSD are based on a theory, which consider PTSD symptoms is the result of avoidance of the traumatic events. Thus, if confronting and recalling the traumatic experience, problems will naturally be solved, the distress during treatment can be overcome if it can be tolerated. So far, many therapies are developed based on above theory, such as Cognitive Processing Therapy (CPT)and Prolonged Exposure Therapy (PE). They are recognized as ”gold standard” for PTSD therapy, demonstrating they are the most effective treatment. Furthermore, the actual effect size of CPT and PE is probably similar. A clinical trial, which involved 916 veterans, shows that the difference between the effect size of CPT and PE are not clinically significant [5]. In another research CPT perform slightly more ideal, with effect size of 1.33 compared to 1.06 of PE [6]. Besides, Eye Movement Desensitization and Reprocessing, (EMDR)can be proved to be effective. Thus, these three treatments are recommended to be the first frontline treatment of the PTSD.

However, regardless of PE and CPT’s large effect size have been proven, they face a common limitation of their high effectiveness has a trade-off of considerable dropout rate [7]. Parts of the participates are not able to complete all treatment sections, which will lead to the actual effectiveness is overestimated and reduce the effect of the treatment. For EMDR, some study argue that its effective part is not related to the eye movement. Furthermore, EMDR is considered not as effective as PE and CPT. Thus, develop new therapies and improve the first frontline therapies to reduce the dropout rate is a solution.

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2.1. Cognitive Processing Therapy

Cognitive Processing Therapy (CPT) is an effective therapy utilized to treat PTSD. It is based on cognitive-behavioral therapy, and was first used for victims of sexual assaults, later found to be useful in other situations. The main assumption behind is traumatic event will influence individuals' believes about self, others, and the world. As a result, distort cognition will appear repetitive and lead to traumatic event. Patients will take avoidance behavior to the related memories, which causes PTSD symptoms. Thus, to mitigate PTSD symptoms, it is necessary to challenge the irrational believes, and use reasonable opinion to replace it. Cognitive Processing Therapy can be utilized to individuals experienced childhood trauma, war and accidents. However, it has some limitations, such as people suffering from violent, or with suicide impulsive is not recommended to CPT.

The reasons for high dropout rate can be summarized below. First of all, the number of participants is large. Secondly, some individual experiments is not easy to control. Finally, there are some special reasons, such as physical discomfort, suicide, severe depression murder etc., will reduce the effect of therapy. Some experiments have low dropout rate, which probably due to taking therapy more than once, small number of participants. etc.

2.2. Prolonged Exposure

Prolonged Exposure (PE) is a special exposure therapy based on behavioral therapy. Similar to CPT, it also supposes avoidance behavior about the traumatic events causes the PTSD symptoms. Consequently, its main feature is encouraging patients to recall traumatic memory or avoided stimuli persistently and repetitively until patients' sensitivity about trauma reduced. Theoretically, these will reduce the fear and help emotional processing. This therapy is suitable for people experienced trauma like nightmare, natural, disasters, car accident, and war. However, it has many limitations, First, people with memory bias is unable to remember correctly, and the effect may be reduced. Additionally, severe depression and anxiety will be dangerous when applying this therapy. Furthermore, people who is still under dangerous environment is not suitable for it.

The reasons for high dropout rate and withdraw in PE are listed as: number of participants is very large, withdraw due to treatment exacerbates anxiety, and the effective lower than expectation, inadequate emotional management.

2.3. Emerging treatments

In addition to treatments mentioned above, there are other emerging treatments can be selected, including mindfulness, virtual reality exposure, yoga, acupuncture, imaginary rescripting etc. [8]. Though these therapies is not the first frontline treatment, they have significant potential to help the patients to recover [9]. Some researchers discovered that, some of these emerging therapies have evident effect compared with controlled group with low dropout rate. For example, Arntz [10] found, imaginary rescripting (IR) combined with imaginary exposure therapy (IE) reduce the dropout rate of the treatment at 51%, compared with the group only use imaginary exposure therapy at 25%. Furthermore, its severity level of PTSD symptom is lower than waitlist group. However, these treatments have many limitations. Due to some treatments are supported by very novel theory, the number of studies is not sufficient. As a result, the main stream researchers do not focus on them with low quantity of experiments and low convincingness. Using IR therapy as an example, the important breakthroughs of this area are mostly conducted by Antz's team. It is not easy to search other researchers' influential studies. Thus, whether Antz's experiments have repeatability and

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generalizability is still a question. Though their theories and experiments have high potential value, more supporting evidence is needed to find, which is still blanked of this area. Similarly, other emerging treatment have the same problems.

3. Trends of PTSD therapy in the future

So far, though first frontline treatment like, CPT, PE, EMDR is recommended, they are limited by patients' dropout rate, risk of suicide, and severity of anxiety. And they are based on a theory about avoidance behavior. However, in this article we argue that, the limitation of this theory should also be considered. First of all, the effect of therapy depends on various factors, apart from avoidance of traumatic memory, psychological characteristics of patients should be concerned. That is, mental traits probably determine whether patients take avoidance or not. The theory mentioned above emphasize role of avoidance in PTSD mechanism, and ignore the mental capability of patients, like mental adjustment capability, stress adjustment, acceptance, etc. Besides, if the types of patients are not considered, when choosing therapy, the effectiveness will probably reduce. Thus, this essay makes an assumption that improving the comprehensive psychological quality of patients, will be vital to reduce the dropout rate. Some emerging therapy reduce PTSD symptoms of participants may because it includes the part that improve the mental toughness of the patients. For example, mindfulness is proved to be feasible to reducing PTSD symptoms [11]. The main reason behind it maybe it cultivates acceptance of participants to the situation, and therefore enhances patients' tolerance to distress.

However, these emerging treatments are subjected to some factors. The concerns concentrate on, research is less considered and concerned, number of research cannot provide enough evidence, researchers not confident about the consequence, results of experiment need to be further confirmed. It leads to many potentially valuable treatments are not discovered. If the useful parts of that is confirmed, more effective, less adverse effect treatment will probably be developed.

Thus, it is suggested in this essay that, first give more concerns to experiments with significant effect but little concern, redo the experiments to confirm its results. Furthermore, combining the advantages of different therapies to compensate their own disadvantages. By these trying, problems of high dropout rate which reduce the actual effect of first frontline treatment will probably be solved.

4. Conclusion

This study systematically discusses the mainstream therapies for post-traumatic stress disorder, and firstly focused on the dropout rate in different treatments. It is proved that high dropout rate is the significant limitation for the first frontline treatment like CPT and PE. The reasons can be explained as the theory of avoidance, which support these treatments will require patients to face their traumatic experience directly and therefore results un acceptable distress. If the level of distress larger than the instant tolerance of patients, they will quit the treatment. Notably, this article discovered some emerging treatments, like imaginary rescripting, have potential to improve dropout rate while have considerable effect. It indicates that, exposure and focus to the traumatic related experience is not the only way to recover. By modifying the first frontline treatments, more patients will probably accept the treatment. These facts provide a solution for developing future therapies.

More important, this article provide critical thinking to today's theories about treatment of PTSD. We emphasize that stop avoidance behavior is not sufficient to solve the problem, for different psychological characteristics of patients should be one of the core factors. Patients who cannot

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tolerate the therapy are not only because their avoidance behavior, but also because they are lack of necessary psychological skills.

Based on the analysis above, we propose that:

Evaluate before treatment: To preparing for treatment like CPT or PE, tolerance and mental toughness of patients should be evaluated to match the most suitable treatment.

Improve comprehensive psychological quality:Before traditional treatment, courses like, emotional management, mindfulness, psychological education and tolerance training, can be combined with existing treatments to reduce the distress during treatment sections.

Introducing more resources to emerging treatments: Academic and financial support should be applied to confirming the emerging treatments that show potential effectiveness, with more strict and repeatable experiments and large sample size.

In conclusion, to solve the dropout rate problems, we need to think critically about nowadays theories behind the traditional treatment strategy and try more innovation. From single treatments to combining strategy and finally achieve effectiveness and acceptance.

Authors contribution

All the authors contributed equally and their names were listed in alphabetical order.

References

[1] WHO (2024). 6B40 Post traumatic stress disorder. ICD-11 for Mortality and Morbidity Statistics.
[2] Lewis, C., Roberts, N. P., Gibson, S., & Bisson, J. I. (2020). Dropout from psychological therapies for post-traumatic stress disorder (PTSD) in adults: systematic review and meta-analysis. European Journal of Psychotraumatology, 11(1).
[3] Watts, B. V., Schnurr, P. P., Mayo, L., Young-Xu, Y., Weeks, W. B., & Friedman, M. J. (2013). Meta-analysis of the efficacy of treatments for posttraumatic stress disorder. The Journal of clinical psychiatry, 74(6), 11710.
[4] Schrader, C., & Ross, A. (2021). A Review of PTSD and Current Treatment Strategies. Missouri medicine, 118(6), 546–551.
[5] Schnurr PP, Chard KM, Ruzek JI, et al. Comparison of Prolonged Exposure vs Cognitive Processing Therapy for Treatment of Posttraumatic Stress Disorder Among US Veterans: A Randomized Clinical Trial. JAMA Netw Open. 2022; 5(1): e2136921.
[6] Haagen, J. F., Smid, G. E., Knipscheer, J. W., & Kleber, R. J. (2015). The efficacy of recommended treatments for veterans with PTSD: A metaregression analysis. Clinical psychology review, 40, 184-194
[7] Najavits L. M. (2015). The problem of dropout from "gold standard" PTSD therapies. F1000prime reports, 7, 43.
[8] Cukor, J., Spitalnick, J., Difede, J., Rizzo, A., & Rothbaum, B. O. (2009). Emerging treatments for PTSD. Clinical psychology review, 29(8), 715-726.
[9] Rothbaum, B. O., & Watkins, L. E. (2025). An Update on Psychotherapy for the Treatment of PTSD. American Journal of Psychiatry, 182(5), 424-437.
[10] Arntz, A., Tiesema, M., & Kindt, M. (2007). Treatment of PTSD: A comparison of imaginal exposure with and without imagery rescripting. Journal of behavior therapy and experimental psychiatry, 38(4), 345-370.
[11] Sun, L. N., Gu, J. W., Huang, L. J., Shang, Z. L., Zhou, Y. G., Wu, L. L., ... & Liu, W. Z. (2021). Military-related posttraumatic stress disorder and mindfulness meditation: A systematic review and meta-analysis. Chinese Journal of Traumatology, 24(4), 221-230.