

# The Effectiveness of CBT on Panic Disorders in People from Different Age Intervals

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**Abstract.** Cognitive-Behavioral Therapy (CBT) is a common way to treat the mental disorders, such as anxiety disorder and depression. This article focuses on how different formats of CBT differs from each other and how effective CBT is to treat panic disorders in people from different age intervals. As the development of the technology, remote CBT turns out to have no significant difference with offline ones. Whether delivered as self-guided or face-to-face is also unimportant. Thus, these factors do not have an impact on the research to effectiveness of CBT while treating panic disorders. The result shows that for both teenagers and the older adults, CBT can have a positive impact on declining panic symptoms. However, limitations are also obvious, and are mentioned in the article. In both fields, research is still inadequate. There is a lack of studies with large sample sizes, and therefore insufficient sample diversity. For teenagers, parents' effect and the peers in the surrounding should also be taken in to account. For late-life adults, their mental health can also be affected by the social connections and the care from offsprings. There are also no specific studies on the effectiveness of remote CBT in older adults. These are the directions for future research.

## 1 Introduction

In the DSM-5, panic disorder is defined by the symptom of unexpected, recurring panic attacks. There must be a noticeable and continuous behavioral shift lasted at least a month, as well as a persistent fear of further attacks or their aftermath. In order to facilitate the understanding, panic attack is characterized as a sudden, intense period of discomfort that soars to a peak within ten minutes. It always accompanied by the symptom of intense fears of dying.

Cognitive Behavioral Therapy (CBT) aims to change the maladaptation between the patient's thought and behavior. CBT in different ages all target at recognizing false beliefs regarding physical symptoms and their implications. As a result, all the CBT for panic mean to eradicate the patients' connections between triggers and panic, and provide the patients with chances to acquire the ability to associate the behavior with non-anxious reactions. Avoidance behavior is also an important element in panic disorder. It always made patients stuck in the anxious belief or habitual behaviors. To weaken the avoidance behavior is also one of the ultimate goals of CBT.

Thus, a crucial component of cognitive behavioral therapy (CBT) for panic disorder involves facing fearful stimuli and circumstances. Research has already demonstrated that remote CBT had the similar effectiveness as offline one [1]. Four types of remote CBT are tested, including internet-delivered CBT (ICBT), videoconference-delivered CBT (VCBT) and

bibliotherapy-delivered CBT (BCBT), and similar influence has shown on the participants and last for a while. What's more, the format of the treatment shows no significant difference in efficacy [2]. No matter delivered as guided self-help, or in the face-to-face individual or group format in the treatment of panic disorder, all shows the same effect in reducing the symptoms of panic disorders. Over time, research has been conducted on the effectiveness of CBT in treating panic disorder in people of different age intervals, and there are more forms of treatment. However, deficiencies are still lying in the existing literature on the treatment of panic disorder. The accuracy of the research methods and the universality of the findings are still controversial, which may block some therapeutic ideas. Therefore, this review aims to figure out changes in the way CBT presented while treating panic disorder in teenagers and older adults and make recommendations for future research directions.

## 2 CBT for teenagers

### 2.1 Efficiency of CBT for teenagers

Face-to-face CBT has long been shown to have therapeutic benefits towards panic disorder for adolescents. 11-session cognitive-behavioral treatment of panic disorder has already been experimentally verified to be feasible and potentially efficacious towards panic disorder in teenagers [3]. Randomized controlled trial was used, and the questionnaire and therapeutic language were

tailored specifically towards teenagers to make it easier to be understood. One group of the adolescents received treatment immediately. The control group members were required to self-monitor the state of their mood for eight weeks before the therapy. The result of the experiment showed that in comparison to participants in the control group, those receiving CBT treatment immediately exhibited a substantial decrease in the symptoms, including the severity of clinical panic disorder, self-reported anxiety, anxiety sensitivity, and depression. The improvement could last for longer than six months. A few years later, intensive CBT turned out to be as effective as weekly CBT while treating panic disorder towards adolescents [4]. In the research, participants are divided into two groups. One received intensive treatment, which receive several therapies a week, and the other received weekly treatment. The severity of the panic disorder and overall anxiety symptoms were apparently and comparably reduced in both groups, and these improvements persisted over time. Although there is not significant difference in the effectiveness between different frequencies, weekly treatment can be a better choice. Because it can also have a great impact of the decrease on the symptoms of Generalized Anxiety Disorder. From the results of these experiments, conclusions can easily be reached. Adolescents should seek CBT for help as soon as they notice the symptoms of panic attacks (which can be referenced in DSM-5). Teenagers can also choose a treatment plan that is more suitable for them under the guidance of doctors according to their actual situation and needs.

## 2.2 Limitation

Pinus' research mainly focused on the Caucasian, and mainly the adolescents from middle-class family. For this reason, the conclusion is somehow one-sided. It cannot be arbitrarily extended to families of other races and income levels. Study has already explained that the economy status of the family can have an influence on juvenile's mental health. Low income indirectly may affect mental health due to the influence of physical environment and psychological experience [5]. Economic level can greatly affect the level of acceptance of new things in the outside world for the sensitive teenager. Whether they can form positive psychological qualities such as self-confidence and self-acceptance is also an important variate of the therapy results. Therefore, the author think future studies should be carried out with the level of income as a variable to define the effectiveness of CBT on adolescents. Since the teenagers' mental health could be affected by objective surroundings, impacts from their parents and peers should not be neglected [6]. Both parental attachment and school connectiveness are important to the development of teenagers' mental health. When teenagers are not in therapy time, they spend a significant portion of their spare time with their peer friends. The impact of this part of people on the mental health of adolescents naturally cannot be ignored. Positive relationship can effectively prevent the teenagers from suffering emotional disorders and behavior problems, and help teenagers

adjust their mentality in time. As a result, as research go into the treatment of adolescents' mental health, the effect of parents and peers should not be neglected. In future experiments, this variate needs controlling. Existed studies have now simply focused on the parents' affect, but still needs further research [7]. For this reason, future studies about the treatment of panic disorders in teenagers should pay more attention to the appearance of parents and peers, like classmates and friends, in the teenagers' everyday life. Several different types of CBT are used in the treatment of anxiety disorders. Previous study has already found no significant difference in the effectiveness between several types of CBT in treating generalized anxiety disorders [8]. This research separately examined effectiveness of Cognitive Therapy, Rational Emotive Behavior Therapy, and Acceptance-based Behavioral therapy on 75 GAD patients. It turned out that all of the treatments had positive effects on restraining the anxious symptoms and dysfunctional thoughts. Similarly, in the case of panic disorder, the different effects of various types of CBT should also be considered. The different effectiveness from all kinds of CBT for teenagers should be taken into account in the future research. Furthermore, figuring out how different forms of CBT more or less effective towards teenagers makes its own contribution to more targeted therapy. It is always important to find a suitable type of treatment for a specific group of population.

## 3 Efficiency CBT for late-life adults

Study conducted in the past has long provided evidence for the efficacy of CBT in treating panic disorder among late-life adults [9]. The study provided the twenty participants with a 12-week period of therapy. During the process, they received a task which last ninety minutes each time, and completed it under the instruction from the professional researchers. Participants demonstrated a substantial decrease in panic symptoms during the whole period of time. What's more, the result also showed a long-term effect. The participants showed better living standards during the twelve-week period and in the three months after the therapy than before they received treatments. They were more willing to pursue their former interests, reported fewer negative emotions, and were more likely to communicate with people surrounding. All of the patients' quality of life was enhanced significantly compared to the time before treatment officially started. The result suggested that intervention and therapy of CBT used during the process was effective while treating panic disorder for the elderly. In the later study, researchers made a comparison to the effectiveness of CBT towards panic disorder between the older patients and younger patients. CBT even seems to have a better influence on the older ones [10]. 172 patients were involved in this experiment, which included 31 participants over 60 years old, and 141 participants aged between 18 and 60. During the process, Mobility Inventory Avoidance scale was used to test the avoidance level of the participants before the official start. As the article has mentioned earlier in the introduction part, avoidance behavior is a very important

element of CBT while treating panic disorders. Whether avoidance behavior is obviously reduced or not and the degree of the reduction can both demonstrate the therapeutic effectiveness of CBT for panic disorders. The result turns out that avoidance behaviors had greater improvements in the old, and even a little bit better than the young. Furthermore, it has been discovered that CBT is a more affordable treatment choice over the long run than medical treatment for panic disorder sufferers [11]. CBT tend to have a lower requirement on cost. And the economic status of the elder people can really have a significant influence on their mental health [12]. Older people's current economic status also played a role in improving their panic symptoms. When these two conditions are combined, it can be found out that CBT can be a very effective treatment. On the one hand, older people can get treatment for panic attacks in a comparatively cost-effective way. On the other hand, since they do not need to keep worrying too much about the money costs, the mental state of the elderly can improve by the way. Under this situation, chances that the improvements achieved from the treatment will be reversed are small.

#### **4 Comparison between Panic-Focused Psychodynamic Psychotherapy (PFPP) and CBT**

Panic-Focused Psychodynamic Psychotherapy (PFPP) is also a popular treatment towards panic disorder, and has been verified effective long ago [13]. Compared to CBT, PFPP focuses more on patients' conflicts between fantasies, mainly from unconsciousness, and the defence of these wishes [14]. This explains how the panic attacks appeared and evolve into panic disorder. Patients often compromise between how they want to appear and what they actually want to express. In this compromise, the symptoms of panic attack can be aroused. Treatment of PFPP mainly pay attention to this part. Moreover, CBT focuses more on exposure. Through contact with the source of fear step by step, it enables the patient gradually to eliminate the incorrect association between minds and facts. There are considerable differences between the two treatments. However, there are always some patients who do not response well towards CBT while treating panic disorder or have adverse reactions to CBT treatments. Meanwhile, PFPP can be used as an alternative to reduce the harm or discomfort brought by CBT, and vice versa. When patients are unable to receive PFPP, CBT can in turn be used.

Pervious research showed that to some perspective, patients treated with CBT appeared to have a better improvement than those treated with PFPP [15]. In Barber's research process, 138 participants were involved in, which contains 52 men with a mixture of ethnic minorities. As mentioned in this article, Panic Specific Reflective Function (PSRF) is the primary problem addressed by PFPP therapy, while Brief Bodily Sensations Interpretation Questionnaire (BBSIQ) evaluates the misperceptions of the patient's physical sensation, which is the primary target in CBT therapy.

The participants in the research, were divided randomly into two groups, and both standards were measured through a therapy. But the results showed that patients who received CBT had better outcomes. They showed a significant decrease in panic, changed their former false compromise, and transformed the way to express actual requirements.

Barber's study did not make a distinguish between older adults and adolescents, and could not analyse the specific effects on both populations. Only the ratio of men to women is regulated and ethnic diversity is achieved. But it also demonstrates that, in spite of current studies, there is insufficient depth to the difference between PFPP and CBT. In another research, researchers used patients' expectant outcome for panic disorder to measure the effectiveness of PFPP and CBT [16]. 161 participants joined the research, most of which were white, half of which were male, and half of which were female. These patients were divided into randomized controlled trial groups, and finished a questionnaire on their expectance of the coming treatment. The results showed that patients with low expectations for treatment outcomes achieved better results in CBT compared to PFPP. People who had no particular or high expectations for treatment outcomes saw little difference in outcomes for both PFPP and CBT. For this reason, the current studies have shown undoubtedly that CBT is more beneficial to patients than PFPP is.

In this subject, more expenditures are needed and less research has been completed. Further thought should be given to the differentiation and particular studies of the influence of different age groups, such as late-life adults and teens, after the research of the effectiveness of therapy on the entire population. The present study has now decided unequivocally that CBT is more successful than PFPP. However, relevant researchers should also take into account the potential effectiveness of PFPP and CBT together. This topic has been discussed several times previously in this article. The difficulty is that some patients can adapt better to CBT while others adapt better to PFPP. It can be beneficial to integrate the benefits from both PFPP and CBT, especially targeting different kinds of populations. Therefore, the more various the treatments are, the more demands from different population can be fulfilled.

#### **5 Limitation & Future directions**

Participants inside the experiments were mainly the white. Due to the cultural difference and other factors, the conclusion may not be able to illustrate all kinds of results. It cannot be simply expanded to people in other ethnics. As a result, to solve the problem of various results in different ethnics, researchers can either make sure about the diversity in one research or set up more control groups to compare the results. Considering the age of them, some part of the treatment should be cancelled due to the concern of the dangerousness, such as the hyperventilation. Strongly breathing may have the chance to cause damage to the fragile respiratory system of the elders. They can be replaced with more gentle treatments.

In the process of getting older people with panic disorder to CBT, every part should be re-concerned and improved to make it more suitable for the elder people. Obviously, there are still much space for further research. Firstly, it has already been proved that the social connections play an important role in the mental health of the late-life adults [17]. Just like the teenagers' part mentioned previously, the people around the elderly while receiving the panic disorder treatment also need to be considered. The elderly's social surroundings must be considered. This may include their mate, their children or other family members, and their friends. The positive care from people around them during the treatment can stabilize the mental state of the elderly on a good basis. It is important to take these factors into account, because this can have positive effects on older people's mental health and preventing risk of mental disease, which means to make the treatment more effective. Throughout therapy, it has to be given more consideration. But this has not been explored in existing research. What's more, similar to the adolescents, different types of CBT should not be neglected among the older adults. In the future, it may be possible to discover which method is best for the elderly, and therefore it will greatly advance the progress of research in this area. But it is also different from the research on teenagers that existing studies have already demonstrated the effectiveness of remote CBT in adolescents, but this does not seem to have been further studied in older age groups. Especially in the post-epidemic era, remote therapy has become more common than before. So, the therapeutic effect of remote CBT on the elderly should also be taken into account. Since receiving treatment online can be realized at home, this can solve the problem that many old people have difficulties in moving outside their home or downstairs. Researchers should fill this gap in the future, because it could make a large contribution to the health of late-life adults. Also, considering the elderly's understanding of the use of electronic devices, it is worth studying the effectiveness of remote therapy, whether it is suitable for the older or not. If there are further researches focusing on this field in the future, it can bring along great convenience to elderly people suffering from panic disorders.

## 6 Conclusion

This article focuses on the effectiveness of CBT while treating panic disorder. Basically, there are two parts, for teenagers and for late-life adults. First of all, panic disorder in adolescents can be effectively treated with CBT. A randomized controlled trial showed that CBT can reduce panic symptoms significantly. However, the study mainly focused on Caucasian adolescents from middle-class families, it should consider other races and income levels in the future. Parents and peers' positive relationships also play a significant role in teenagers' mental health, and future research should consider these factors. Secondly, CBT has been proven effective in treating panic disorder among late-life adults. It can result in a significant decrease in panic symptoms and improved

their living standards. Additionally, the economic status of the elderly plays a significant role in improving their mental health, while CBT is more affordable than medical treatments. So, CBT is cost-effective towards the older adults. However, the study lacks diversity in research and setting up control groups to compare results. Older people with panic disorder should be given more gentle treatments and social connections during treatment. Remote CBT enables older people with difficulties in moving outside their homes to receive treatments, which benefits the late-life a lot. Further research is needed to explore the effectiveness of remote therapy for older people with panic disorders.

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