Prospects for Internet-based Cognitive Behavioral Therapy (ICBT) in Bipolar Disorder (BD) Based on Cross-diagnostic Evidence

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Abstract. With the development of digital technology, Internet-based cognitive behavioral therapy (ICBT) has become an emerging form of psychotherapy as an extension of traditional cognitive behavioral therapy (CBT). Patients with bipolar disorder are under significant social pressure, which not only affects their personal well-being but also has a profound impact on society as a whole. They need more opportunities for psychological treatment and social support. Therefore, this article will systematically review the progress of Internet-based cognitive behavioral therapy (ICBT) and its treatment of bipolar disorder (BD), with the aim of summarizing and analyzing the trends and key issues of ICBT in the treatment of bipolar disorder. ICBT is a psychological treatment based on cognitive behavioral therapy, and its effects have been proven at various clinical and psychological levels. This review covers the field of psychotherapy in the field of mental health, focusing on the current research direction, the prospect of cross-diagnostic treatment, and the feasibility of ICBT.

Keywords: Internet-based cognitive behavioral therapy, bipolar disorder, cross-diagnostic application, efficacy, prospects.

1. Introduction

1.1. Research Background and Problem Statement

Mental health is a subject often talked about in modern society, with mood disorders being one of the top causes of disability globally. Bipolar disorder (BD) is a distinct type of emotional disorder characterized by chronic recurrence and alternate between depressive and manic states, which is different from unipolar disorder. It represents a significant sub-type of mood disorders. This is not just an emotional issue, but a neuro-psychiatric disorder that requires long-term medical intervention. Researchers investigated suicide risk among hospitalized patients with bipolar disorder (BD) and found that BD patients have a high risk of comorbidity and a high risk of suicide. One-third of the patients had tried to commit suicide, 10%-20% of patients died of suicide, and the risk of suicide was highest among patients in the BD severe depressive group [1]. This leads to serious damage to personal social and occupational functions, low quality of life, resulting in the cost of self-care and the loss of family and social productivity.

1.2. Current Status and Challenges in the Treatment of Bipolar Disorder

In today's society, drug treatment is still the main treatment for bipolar disorder. However, it still carries potentially irreversible side effects, imposing a burden on peoples' health. At the same time, psychotherapy, as an important component of supplementary intervention measures, has demonstrated positive effects in preventing relapse, alleviating symptoms, and improving functionality. However, traditional face-to-face psychotherapy has numerous practical obstacles: the shortage of therapists and varying professional standards, geographical limitations, high time costs, stigmatization related to mental illness, and financial burdens - all these are significant challenges that cannot be overlooked in this treatment model. Due to these limitations, many patients still cannot receive effective interventions and may even miss the best time for treatment.

1.3. The Positioning of CBT and the Emergence of Internet Interaction Models

Cognitive Behavioral Therapy (CBT) is a structured, short-term, goal-oriented psychotherapy method that breaks down complex problems into smaller components for understanding. These components include: situations , thoughts , emotions , physical sensations , actions. These five aspects are interrelated and influence each other. The key is to change the patient's unreasonable cognitive pattern and have a clear standard treatment plan. CBT can effectively reduce the severity of symptoms and reduce the risk of recurrence in patients with BD by adjusting cognitive bias and behaviour patterns. With the advancement of information technology, Internet-based Cognitive Behavioral Therapy (ICBT) has emerged as a crucial extension of traditional psychotherapy in modern society. Based on the theory of cognitive behavioral therapy, ICBT uses Internet technology to provide standardized, accessible and personalized psychological intervention services. This approach overcomes space limitations, reduces the stigmatization associated with mental health problems, improves cost-effectiveness, and expands the accessibility of psychological intervention services.

1.4. The Purpose and Significance of This Study

This article aims to systematically review the existing research evidence on the treatment of bipolar disorder by using ICBT, evaluate its effectiveness in preventing recurrence and reducing the severity of the disease, and explore future opportunities and challenges.

2. Overview of CBT and ICBT

2.1. Basic Concepts and Core Theories of Traditional CBT

Cognitive behavioral therapy is a short-term, structured, goal-oriented and present-focused psychological treatment. It helps patients identify and change unhealthy cognitive and behavioral patterns, so as to alleviate emotional distress and improve emotional, behavioral and physiological responses. The theoretical basis of cognitive behavioral therapy mainly integrates cognitive theory and behaviourism. Its core point is that an individual's emotional experience is not directly triggered by external events, but is mediated by their cognitive assessment of these events.

During treatment, the therapist and patient jointly apply the cognitive behavioral therapy model to understand the difficulties the patient is currently facing. Together, they establish specific, personalized, achievable, and time-bound treatment goals, employing behavioral techniques to break existing thought patterns. Patients continuously practice and apply the new cognitive and behavioral skills learned during treatment, internalizing them as their own abilities to prevent relapse.

2.2. Cross-Diagnostic Application Evidence of ICBT Across Different Mental Disorders and Comorbidity Groups

In recent years, ICBT has demonstrated promising intervention outcomes across a range of mental disorders. Researchers conducted a meta-analysis of the efficacy of ICBT for adolescent depression. Through online searches of databases, they identified randomized controlled trials (RCTs) evaluating the effectiveness of ICBT on depressive symptoms in adolescents. Ultimately, 12 randomized controlled trials involving 2,469 participants were included in the analysis. Meta-analysis results indicate that for control group comparisons of depression symptom scores following intervention, treatment duration ≤8 weeks showed greater reductions in the intervention group compared to the control group, demonstrating the efficacy of ICBT in improving adolescent depression [2].Additionally, researchers investigated the efficacy of ICBT in patients with anxiety and depression comorbidity following stroke, randomly assigning participants to either an experimental group or a control group, patients were divided into to an intervention group and a control group. At both 1 month and 2 months post-intervention, the intervention group demonstrated statistically significant differences in scores compared to the control group. This indicates that applying ICBT for patients with post-stroke anxiety and depression is beneficial. For improving anxiety, depressive

symptoms, and quality of life [3]. Some studies also indicate that CBT is effective in treating BD, with findings showing that adjuvant CBT significantly outperforms conventional treatment in patients with fewer than 12 prior episodes [4]. Researchers have also investigated the questions " Who seeks ICBT assistance? Where do they obtain it? " to elucidate user characteristics and access pathways [5]. ICBT has been extensively validated in international controlled trials as an effective intervention for anxiety disorders. This study reviews research advances in ICBT for panic disorder and agoraphobia, social anxiety disorder, and generalized anxiety disorder. It also proposes developing ICBT intervention protocols, establishing a team of counselors, building a mental health service platform, and creating channels for ICBT promotion and outreach to further localize ICBT treatment [6]. Researchers conducted a randomized controlled trial to investigate the effectiveness of ICBT in treating depression, the study recruited 945 adults aged 18 to 71 with mild to moderate depression, with assessments conducted at 3 and 12 months post-treatment, they were randomly assigned to groups, underwent a 12-week intervention, and had their depression severity assessed using the Montgomery-Asperger Depression Scale (MADRS), in the treatment group, the severity of depression showed a significant quadratic trend toward reduction over time [7].

2.3. Potential Advantages of ICBT in Treating Bipolar Disorder

ICBT is an advancement over CBT in certain aspects, such as: Accessibility and convenience—ICBT breaks through the limitations of time and space, allowing individuals to participate in online therapy at any time any where, with greater scheduling flexibility. Online anonymous or semi-anonymous format helps to reduce patients' feelings of shame associated with psychotherapy and increase their willingness to seek help; Costs and financial burden are lower than CBT -- eliminating venue and transportation expenses, some platforms also offer some standardized courses to reduce time consumption; Video materials facilitate archiving—suitable for repeated viewing after the treatment is over. They enable patients to gain deeper self-insight, clarify understanding of the therapist's therapies, and support long-term maintenance therapy and relapse prevention. This approach fosters higher degree of autonomy and peace of mind, promoting self-management and improvement of patients' psychological functioning; Digital platforms enable multi-faceted problem identification—enables multiple treatment experiences to be carried out simultaneously, facilitating the quick and convenient discovery of treatment methods suitable for patients, enabling real-time monitoring of symptoms and early intervention, and thus better addressing the problems.

3. Opportunities and Prospects for ICBT in Bipolar Disorder

3.1. Evidence of the Efficacy of Traditional CBT in Treating Bipolar Disorder

In recent years, multiple randomized controlled trials have demonstrated that CBT is highly effective in treating bipolar disorder. CBT is a structured psychotherapy that can significantly reduce relapse rates in patients with bipolar disorder by changing cognitive distortions and unhealthy behavioral patterns. Through randomized controlled trials, patients with fewer prior episodes may benefit from CBT. For example, a case report describes a high school girl: after suffering severe psychological trauma, she was diagnosed with bipolar disorder. Through the intervention of narrative therapy and externalization techniques, she gradually rebuilt her positive self-awareness[8]. This case proves the potential value of cognitive behavioral therapy and its derivative technologies in the field of emotional reconstruction and self-awareness recovery. The researchers conducted a study on patients with bipolar disorder with physical symptoms, aiming to check the effectiveness of the combination of cognitive behavioral therapy and drug treatment. The sample was divided into a conventional group (medication alone) and a combined group (CBT plus medication). The study proved that the combined group showed a more significant improvement in depressive symptoms, which confirmed that adding CBT to treatment was effective [9]. The researchers divided patients with bipolar disorder into control group and observation group. Then, they provide simple drug therapy or a combination of drug therapy and CBT for each group. They assessed changes using the

Young Manic Rating Scale (YMRS), the Social Dysfunction Screening Scale (SDSS), the Self-Stigma Scale for Mental Illness (SSMIS), and the Medication Adherence Rating Scale (MARS) at the initial stage of treatment and after three months of treatment. The research results indicated that CBT demonstrated good efficacy in treating bipolar disorder [10].

3.2. Comparative Analysis of ICBT and Traditional CBT

ICBT is essentially an extension and optimized improvement of CBT. Internet-based cognitive behavioral therapy should retain the core elements and therapeutic logic of traditional cognitive behavioral therapy. The core assumption of traditional cognitive behavioral therapy is that by altering the cognitive aspect (i.e., thinking patterns) and the behavioral aspect (i.e., action patterns) of an individual, it achieves the goal of reducing emotional distress and optimizing psychological functioning. It aims to educate patients to become their own therapists, emphasizes relapse prevention, and the treatment has a structural characteristic. ICBT will preserve these core assumptions, characteristics and objectives, and develop an innovative treatment approach that the same in theory but changes the delivery method. This enables the therapy to be used by more people who are excluded from CBT. The transition to ICBT represents a natural and significant trend for traditional cognitive behavioral therapy in the digital age.

3.3. Future Development Direction

The ICBT treatment protocol remains under development, in the future, the efforts should focus on refining the contents and target populations for each module. Future ICBT should be capable of providing personalized and precise intervention measures for different symptom stages, such as designing different modules for depressive and manic episodes: Future work should focus on developing specialized modules for different stages of bipolar disorder, such as depressive, manic, or maintenance phases; ICBT needs to become more structured and specialized: Start to develop a specialized ICBT protocol for bipolar disorder. The agreement not only provides a clear framework for the relationship between the two sides, avoids disputes and reduces uncertainty, but also emphasizes the basis of trust, thus providing a guarantee for a smooth follow-up; ICBT requires more comprehensive and enhanced collaboration: by combining drug treatment with community support to form a comprehensive intervention model. Providing group ICBT in community or school settings can enhance patient interaction, alleviate anxiety and depression, and improve patients' self-management skills.

4. Challenges and Coping Strategies in ICBT Treatment for Bipolar Disorder

4.1. Challenges in Promotion and Popularization

Although ICBT has shown great potential in the field of mental health intervention, its widespread application in the treatment of bipolar disorder still faces many practical challenges. First of all, the public's understanding of psychotherapy is still limited. Most citizens are still in the waiting stage. The treatment plan needs to be promoted and popularized more. It also needs to reverse the overall perception of the public and patients themselves, and improve the acceptance of the disease so that patients can actively or passively accept psychological treatment plans[5]. This cognitive bias not only affects the patient's own acceptance of the disease, but also restricts his willingness to accept non-drug treatment programs.

Furthermore, the implementation of the ICBT project depends on an effective recruitment mechanism. Research shows that participants recruited through different methods have significant differences in clinical characteristics: individuals who participate in the study through active channels (such as self-registration) often show more severe depression and anxiety symptoms, while those recruited through passive information dissemination methods have milder symptoms. This phenomenon shows that when promoting ICBT, attention must be paid to the representativeness of the sample, and the recruitment strategy should be optimized to cover a wider group. At the same

time, the challenges of cultural adaptation and localization faced by ICBT are inevitable. These problems should be solved through cultural sensitivity training and local content adjustment. By combining the patient's background and the cultural characteristics of the country where he is located, a more adaptive and acceptable method should be developed to improve the patient's acceptance.

4.2. Countermeasures and Outlook

More high-quality randomized controlled trials need to be carried out to evaluate the effectiveness of ICBT in the treatment of bipolar disorder, so as to provide evidence for the effectiveness of the therapy. In the future, it is necessary to strengthen the training of professionals and clearly define the guiding role of the trainers. In China's primary health care system, training primary health care personnel to implement graded Internet medical interventions for different types of diseases can achieve effective prevention and control, and also improve the reliability and effectiveness of Internet medical interventions. ICBT needs to become more structured: The core module of CBT must be included; Strengthen professional support: Specifically, the adoption of an automated ICBT model, supplemented by minimal therapist guidance, can significantly improve the treatment effect; In order to further improve the interactivity of the treatment process, functions such as online group discussion or virtual counselling can be introduced to increase participation. Communities or research institutions can recruit experimental subjects through multiple channels and carry out public education and publicity activities, such as community lectures, to improve access.

5. Conclusion

Based on interdisciplinary evidence and combined with existing research results, this paper expands the application of ICBT from the treatment of other mental disorders to the treatment of bipolar disorders. It demonstrates the efficacy of ICBT in treating bipolar disorder, offering new perspectives for future research directions in ICBT. This review not only summarizes the principles and effects of traditional CBT and ICBT, but also outlines the core concept of psychotherapy and its future development direction. It also reviews the researchers' previous research on other mental disorders. By analyzing the reasons why ICBT can demonstrate effectiveness in the treatment of bipolar disorder, this study clarifies future research directions and prospects for psychotherapy. It also identifies challenges and proposed solutions regarding the feasibility of using psychotherapy to treat bipolar disorder. However, this review remains limited as it did not investigate the accessibility of ICBT for treating bipolar disorder. Future research on psychotherapy and mental disorders should conduct more trials to validate the efficacy of ICBT for bipolar disorder.

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