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Congestive behavioral therapy (CBT) Vs Pharmacotherapy : A Comparative Review of Efficacy and Patient Adherance in the treatment of depression

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ABSTRACT:

Overall, both Cognitive Behavioral Therapy (CBT) and medication can help treat mental health issues like depression and anxiety. CBT works by helping people recognize and change negative thoughts and behaviors, while medication focuses on fixing chemical imbalances in the brain. Research shows that CBT might be better for long-term results, while medication often brings quicker relief at first. For some people, using both CBT and medication together can also be a good option. Recent reviews suggest that medication worked better than Cognitive Behavioral Therapy (CBT) for quickly treating outpatients with more severe depression in the National Institute of Mental Health's Depression Treatment Study (TDCRP). However, this result wasn't consistent across all study locations or with results from other research. D.F. Klein (1990) argued that those other studies were flawed because they didn't include a placebo pill group, and he said the same about studies comparing drugs and therapy for panic disorder. While it's true that having a placebo group would have made the results clearer, most researchers don't believe that missing it makes the studies useless. CBT is still seen as a good alternative to medication for depression and is especially promising for treating panic disorder.

Keyword: ADHD, cognitive-behavioral therapy (CBT), combined treatment methods, medication treatment, regular clinical care, adults

Introduction

There is strong proof that both cognitive-behavioral therapy (CBT) and medication work well for treating anxiety disorders. For some anxiety disorders, CBT is the main treatment. In posttraumatic stress disorder (PTSD), experts suggest starting with either CBT or medication, as both also help with related depression and anxiety. Studies show that adding CBT to treatment for people who don't respond well to medication can lead to better results than using medication alone. For obsessive-compulsive disorder (OCD), the best first treatments are either selective serotonin reuptake inhibitors (SSRIs) or CBT, especially a type called exposure and response prevention. In panic disorder, both medication and CBT are proven to work well as first treatments too. However, there isn't enough evidence yet to say that combining CBT with medication is better than using just one of them alone. Not fully recovering from anxiety disorders with medication or therapy has become a serious concern. Ongoing symptoms are linked to a higher chance of the problem coming back, lower quality of life, and more difficulties in daily functioning (Fava and Tomba, 2009). Because of this, it's important to consider other treatment options for people with anxiety who don't get better with medication alone. This article aims to look at and review the available research on how effective Cognitive Behavioral Therapy (CBT) is as a follow-up treatment for patients who haven't improved much with medication. To our knowledge, this is the first review that focuses specifically on this topic.[01] Major depressive disorder (MDD) is a common and serious mental health condition that affects millions of people around the world. Treatment for MDD usually includes either cognitive behavioral therapy (CBT), medication, or a combination of both. While both approaches can help reduce symptoms of depression, there is ongoing discussion about which one is more effective and easier for patients to follow.CBT is a type of therapy that helps people recognize and change negative thoughts and behaviors that contribute to their depression. In contrast, medication treatment involves using antidepressant drugs, such as SSRIs and SNRIs, to help improve mood and relieve symptoms.[01] [04] There is strong and consistent evidence that both cognitive-behavioral therapy (CBT) and medication are effective in treating anxiety disorders. In fact, CBT is often recommended as the first treatment option for some types of anxiety. For post-traumatic stress disorder (PTSD), experts suggest starting with either CBT or medication, as both can also help with related depression and anxiety. Research shows that adding CBT for patients who don't respond well to medication can lead to better results than using medication alone. In obsessive– compulsive disorder (OCD), the most effective first treatments are selective serotonin reuptake inhibitors (SSRIs) or CBT, especially a type called exposure and response prevention. For panic disorder, both CBT and medication have been shown to be effective, but there isn't enough evidence to say that combining them works better than using just one.

CBT has several advantages over medication. It tends to cause fewer side effects, leads to fewer relapses, is more likely to be followed through by patients, and is generally more acceptable. On the other hand, medications can cause more side effects and relapses when stopped. Still, CBT is not

used as often in practice because there aren't enough trained therapists. Also, drug treatments are promoted more by marketing compared to psychological therapies like CBT. As a result, medication is often seen—rightly or wrongly—as the first treatment option for anxiety disorders[05].

Cognitive Behavioural Therapy vs. Medication for Treating Major Depressive Disorder

Major depressive disorder (MDD) is one of the most common and long-lasting mental health conditions and is a leading cause of disability in North America (World Health Organization, 2020). It's a complex disorder influenced by many factors like genetics, personality, stress, and brain chemistry (CAMII, 2021). While there's no lab test to diagnose depression, doctors use guidelines from the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) to identify it. After diagnosis, treatment usually involves cognitive behavioural therapy (CBT), medication, or a combination of both (National Institute of Mental Health, 2019).This paper reviews research articles published between 2011 and 2020 to explore which treatment works best for MDD and to better understand how effective CBT is. The reviewed studies compare the effectiveness of CBT alone, medication alone, and a mix of both. Since a lot of research has been done on CBT's use for different types of depression (like postpartum and mild depression) in different age groups, this review focuses only on MDD in the general adult population. All studies are based on North American and British samples unless stated otherwise. The paper also looks at the strengths and weaknesses of these studies and suggests areas for future research.[02][09] In order to examine the benefit of adding pharmacotherapy to cognitive- behavioral therapy (CBT) for anxiety disorders, we searched for studies comparing CBT plus pharmacotherapy and CBT plus pill placebo for adults meeting DSM-III-R or DSM-IV diagnostic criteria for an anxiety disorder between the 1st available year and July 1, 2008. Of 874 studies that were initially considered, 11 studies were identified, representing 471 patients with posttreatment completer data and 236 participants with follow-up completer data.[11]

Background

People with anxiety disorders who don't fully improve with medication often have a higher chance of their symptoms coming back, a lower quality of life, and more trouble with daily activities. In this study, we looked at how effective cognitive-behavioral therapy (CBT) is as the next treatment step for patients whose anxiety didn't get better with medication alone [01] We don't know much about whether cognitive behavioural therapy (CBT) or medication works better for depression compared to anxiety disorders. To explore this, we did a meta-analysis by searching online databases and study references to find randomized controlled trials that compared CBT and medication (sometimes including a placebo) in adults with major depression or anxiety disorders. The main result was measured by looking at how much better or worse CBT and medication worked for each specific disorder[09] When anxiety patients don't improve with medication, they often have higher chances of the problem coming back, a lower quality of life, and more difficulty in daily functioning. In this study, we looked at how effective cognitive behavioural therapy (CBT) is as a follow-up treatment for patients with anxiety who didn't get better after taking medication.[01][06]

Method

We did a detailed review using the ISI, PubMed, and PsycINFO/PsychLit databases. We left out studies that didn't use CBT or didn't focus on patients who were resistant to medication. We defined resistant patients as those who didn't fully get better after trying medication properly and still showed some symptoms of an anxiety disorder. We followed up with 396 patients over 2 to 14 years (which was 51% of the people we were able to reach). We used structured interviews, checked their use of healthcare services, and asked them to report their symptom levels. This paper focuses on 336 of those participants who either had no disorder or had at least one anxiety disorder, along with records of their healthcare use during the follow-up period.[10]

Basic concept of depression

What we now call Major Depressive Disorder (MDD) used to be known as melancholia, a term that dates back to Hippocrates. It described an illness with both physical and mental symptoms (Horwitz et al., 2016). The word "depression" started being used in the 1800s to describe feelings of deep sadness. At that time, psychoanalysts and doctors had different ideas about what caused
depression. Psychoanalysts like Sigmund Freud believed it was a reaction to loss, whether real or imagined, while doctors thought it was a problem in the brain (De Sousa, 2011). In the 1960s, cognitive theories began to take shape. Aaron Beck, a cognitive theorist, suggested that how people think about negative events plays a big role in depression. His detailed research and treatment methods were key in developing Cognitive Behavioral Therapy (CBT), which is now seen as one of the most effective therapies for depression (Hofmann et al., 2012). [02]

Why use CBT to treat MDD

We present the best current estimate of how effective Cognitive Behavioral Therapy (CBT) is in treating major depression (MDD), generalized anxiety disorder (GAD), panic disorder (PAD), and social anxiety disorder (SAD). We considered factors like publication bias, the quality of the studies, and the impact of using waiting list control groups. In our meta-analysis, we included randomized trials that compared CBT to a control group (such as a waiting list, usual care, or placebo) for the short-term treatment of MDD, GAD, PAD, or SAD. All patients had a formal diagnosis through a structured interview. In total, we looked at 144 studies (with 184 comparisons) and found the overall effects of CBT for all four disorders were[03][08]

Why use pharmacotherapy to treat MDD

Pharmacotherapy means treating a disease or disorder with medication (Recovery Research Institute, n.d.). While therapy alone can work well for people with mild depression, doctors often recommend a combination of therapy and medication for those with Major Depressive Disorder (MDD) (Lopez et al., 2018). Common antidepressants used to treat MDD include second- generation antidepressants (SGAs) like selective serotonin reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs), and tricyclic antidepressants (TCAs) (Chesebro et al., 2019).[05]

Problem Statement

Major Depressive Disorder (MDD) is a serious mental health condition that affects about 17.3 million adults in the U.S. (National Institute of Mental Health, 2019). The latest data from the National Survey on Drug Use and Health (NSDUH) show that 44% of adults use a combination of medication and therapy, while 6% use only medication and 15% use only therapy (National Institute of Mental Health, 2019). Based on these numbers, does the research show that combined therapy is the best way to treat MDD? Also, is CBT more effective than medication alone for treating MDD? This literature review looks at how well CBT, medication, and combined treatments work for MDD. It also aims to figure out which treatment works best. The results should help counselors better treat adults with MDD and highlight areas for future [06][09]

Main Types of Treatment:

Psychotherapy (mainly Cognitive Behavioral Therapy - CBT) Pharmacotherapy (antidepressant medications like SSRIs, SNRIs, etc.)

CBT (Congestive behevioral therapy)

People with Asperger Syndrome don't have any visible physical differences, but others often see them as different because of the way they interact socially, communicate, and think. One key challenge they face is understanding and expressing emotions.According to the DSM-IV-TR (American Psychiatric Association, 2000), Asperger Syndrome includes difficulties in social interaction. This includes problems with nonverbal communication like facial expressions, body language, and gestures, as well as a lack of emotional give-and-take in conversations.[10] Both clinical experience and personal stories from individuals with Asperger Syndrome show that they often struggle with recognizing and showing emotions. Research also shows that mood disorders often occur alongside Asperger Syndrome. Current theories help explain these social challenges.Even though we are learning more about the unique social traits of people with Asperger Syndrome, we are still in the early stages of creating effective programs to help children and adults with the condition better understand emotions. There is also a need to adjust psychological treatments to fit their unique ways of thinking.Given the diagnosis and how Asperger Syndrome affects social skills, it's understandable that people with the condition may be more likely to face emotional difficulties.

Understanding the Mood Disorder in CBT

- The first step in Cognitive Behavioral Therapy (CBT) is to understand:
- What kind of mood disorder the person has and how severe it is
- The person's thinking and learning abilities
- Their personal and life situation

There are self-assessment tools made for children and adults with mood disorders, and these can also be used with people who have Asperger Syndrome. However, these tools might need to be adjusted. People with Asperger's may find it easier to rate how they feel using numbers or pictures. For example, they might use an emotion thermometer, bar charts, or volume-style scales to show how strongly they feel something. These tools help to get a starting point for therapy and are also used later during the emotional learning part of CBT.Because people with Asperger's may have trouble finding the right words, multiple choice questions are better than open-ended ones. A picture-based dictionary of emotions can also help, especially when keeping a mood diary during therapy.Part of the assessment also includes making a list of behavior signs that show a change in mood.[12]

These can include:

Spending more time alone or being overly focused on a favorite topic Becoming more rigid in thinking or behavior
Trying harder to control situations or people

Usual signs like panic attacks, saying negative things about themselves, or angry outbursts

It's important to gather information from many sources because people with Asperger Syndrome may behave very differently in different situations.[13]

Affective Education

Affective education is the next important step in Cognitive Behavioral Therapy, especially for people with Asperger Syndrome. The goal is to help them understand emotions—why we have them, how they are used, and how they can sometimes be misused. It also helps them recognize the different

levels or strengths of emotions.A key idea is to focus on one emotion at a time, using it as the theme for a small project.[14] The therapist usually chooses which emotion to start with, and it's often best to begin with a positive emotion like happiness or joy.One way to explore the emotion is by making a scrapbook. For younger children, this might include pictures of people showing different levels of happiness, as well as photos of things or situations that make them happy—like a photo of a rare lizard if the child loves reptiles.For adults, the scrapbook can be a collection of things that bring them joy. They might include a list of their favorite things, similar to the song "My Favorite Things."[15]

Self-Reflection

In typical Cognitive Behavioral Therapy (CBT), clients are encouraged to reflect on their own thoughts and feelings. This helps them understand themselves better, build a more realistic and positive self-image, and learn how to manage their emotions through inner dialogue (self- talk).However, for people with Asperger Syndrome, self-awareness may work differently. [16]Researchers Frith and Happé (1999) suggested that people with Asperger's or autism might have trouble with introspection—that is, thinking deeply about their own thoughts and feelings.Studies, personal stories, and clinical experience show that some people with Asperger Syndrome or high-functioning autism may not have an "inner voice" like most people do. Instead of thinking in words, they often think in pictures (as described by Temple Grandin, 1995). They also may find it hard to put these visual thoughts into words. One teenager with Asperger Syndrome explained how using mental images helped them understand things better.[17]

Key Points About CBT (Cognitive Behavioral Therapy):

- Looks at thoughts and actions: CBT helps people notice and change unhelpful thoughts and behaviors.
- Focuses on the present: It deals with current problems rather than past events.
- Teaches useful skills: CBT shows people how to cope better and handle challenges.
- Works as a team: The person and therapist work together and both take an active role.
- Has a clear plan: CBT follows a step-by-step structure with specific goals to reach.

These points explain the main ideas and benefits of CBT in a simple way[18]

CBT Treatment For MDD

Research studies using randomized controlled trials (RCTs) have shown that cognitive- behavioral therapy (CBT) is just as effective as other types of therapy for treating major depression in adults (Cuijpers et al., 2013). A review of more than 150 studies also found that CBT works just as well as medication when used on its own (Cuijpers et al., 2013). These studies were found to be reliable and valid. The Agency for Healthcare Research reviewed how well second-generation antidepressants (SGAs) work compared to non-medication treatments like CBT for depression. They found that both CBT and SGAs are equally effective for people starting treatment. However, SGAs are more likely to cause side effects than CBT. The review also said that when choosing a first treatment for depression, therapists should consider things like the patient's past treatments, their preferences, how practical the treatment is, and the benefits and risks of each option (Gartlehner et al.[19]

Limitation

Research reviews on how well CBT works for treating depression have shown mixed results. Some studies found it very effective, while others showed it was less helpful (Cuijpers et al., 2013). A review by Shinohara (2013) suggested that CBT worked better than other types of therapy, but the results were not very reliable. Some researchers believe that the strong positive results in some studies might have been exaggerated because only the more successful studies were published (Hofmann et al., 2012). Finally, because there are not many long-term studies, it's still unclear whether CBT is better than other treatments over time[20]

Pharmacotherapy

Pharmacotherapy (antidepressant medications like SSRIs, SNRIs, etc.) SSRIs

SSRIs (Selective Serotonin Reuptake Inhibitors) are a common type of antidepressant. They are used to treat depression, anxiety, and other mental health conditions. These medicines help increase the level of serotonin in the brain, a chemical that affects mood and emotions. SSRIs are often chosen first because they usually have fewer side effects than older antidepressants.[21]

How Do SSRIs Work?

Serotonin is a chemical that helps nerve cells in the brain communicate. Normally, after serotonin sends a message, it's taken back by the cell that released it (called reuptake). SSRIs stop this reuptake, so more serotonin stays in the brain. This can help improve mood and reduce symptoms of depression and anxiety.[22]

What Conditions Do SSRIs Treat?

SSRIs are used for several mental health issues, including:

- Depression: Often the first treatment option for major depression.
- Anxiety Disorders: Helps with generalized anxiety, panic attacks, social anxiety, and OCD.
- Other Uses: Also used to treat PTSD, bulimia, and premature ejaculation.[23]

Possible Side Effects:

- While SSRIs are generally safe, they can cause some side effects, such as:
- Upset stomach (nausea, vomiting, constipation, or diarrhea)
- Trouble sleeping or feeling very sleepy
- Headaches
- Sexual problems (low sex drive, trouble reaching orgasm, or erection issues)
- Suicidal thoughts in children or young adults (warning exists for this)[24]

Important Things to Remember:

Talk to your doctor before starting SSRIs.

Tell your doctor about other medicines you are taking to avoid harmful interaction

Take the medicine exactly as prescribed. Don’t stop suddenly without asking your doctor. Watch for side effects and let your doctor know if anything concerns you.[25]

Common SSRIs Include:

Fluoxetine (Prozac) Sertraline (Zoloft) Paroxetine (Paxil) Citalopram (Celexa) Escitalopram (Lexapro) Fluvoxamine (Luvox)

SNRIs

SNRIs, or serotonin-norepinephrine reuptake inhibitors, are a type of medicine used to treat depression and other conditions. They work by increasing the levels of two brain chemicals— serotonin and norepinephrine—which help control mood and energy. By keeping more of these chemicals active in the brain, SNRIs can help improve how a person feels.[26]

How SNRIs Work (in simple terms):

- Blocking Reuptake: SNRIs stop brain cells from quickly reabsorbing serotonin and norepinephrine.
- More Chemicals Available: This keeps more of these mood-related chemicals in the spaces between brain cells, helping the brain use them more effectively.
- Better Mood and Energy: Serotonin helps with feeling calm and happy, while norepinephrine helps with focus and energy. Increasing both can help ease depression and boost overall mood[27].

Common SNRIs:

- Venlafaxine (Effexor): Helps with depression, anxiety, panic attacks, and social anxiety.
- Desvenlafaxine (Pristiq): Mainly used for depression.
- Duloxetine (Cymbalta): Used for depression, anxiety, fibromyalgia, and nerve pain from diabetes.
- Levomilnacipran (Fetzima): Used for depression.
- Milnacipran (Savella): Used mainly to treat fibromyalgia (a condition that causes widespread pain).[28]

What SNRIs Are Used For:

Depression: Often prescribed for major depression.

Anxiety Disorders: Some SNRIs help with conditions like generalized anxiety, panic attacks, and social anxiety.
Pain Conditions: Duloxetine, in particular, is used for long-term pain like fibromyalgia, nerve pain, and muscle pain.[29]

Things to Keep in Mind:

Side Effects: SNRIs can cause nausea, tiredness, dizziness, trouble sleeping, and changes in appetite. It's important to talk to a doctor if side effects are bothersome.

Pharmacology Treatment For MDD

Many randomized controlled trials (RCTs) have shown that second-generation antidepressants (SGAs) are a useful treatment for people with major depressive disorder (MDD) (Boschloo et al., 2019; Jakobsen et al., 2020). A review by Kovich and Delong (2015) found that SGAs help prevent depression from coming back in patients who get better with medication[30]
A review comparing medication and non-medication treatments for adults with depression found that 40% of people treated with second-generation antidepressants (SGAs) didn't respond to the first treatment, and about 70% didn't fully recover during the initial phase. However, these results didn't apply the same way to people dealing with relapse or recurrence. A meta-analysis by Boschloo et al. (2019) showed that SGAs were slightly better than CBT at improving five specific depression symptoms. Although the differences were small, some symptoms—like suicidal thoughts—are very serious, so they must be carefully addressed. Two studies compared SGAs with CBT. They found that patients taking SGAs were about three times more likely to stop treatment—and five times more likely if they had side effects—compared to those in CBT. But when it came to response rates, full recovery, quality of life, or suicide risk, the evidence was not clear (Gartlehner et al., 2015).[31]

Limitation

Some studies on antidepressants may have underestimated their negative side effects when treating depression (Jakobsen et al., 2020). These studies often focus only on short-term results, which is a problem because around 60% of people with depression take antidepressants for more than two years (Jakobsen et al., 2020; Kovich & Delong, 2015). Although Boschloo et al. (2019) gave a lot of information about symptoms before treatment, the findings weren't reliable enough to tell which patients would do better with medication instead of CBT (Kappelmann, 2020). Also, several reviews have found that some antidepressant studies were funded by drug companies, which may have caused the benefits to be exaggerated and the side effects to be downplayed.**[32]**

Combined CBT Treatment Pharmacology For MDD

Studies comparing different treatments have shown that using both CBT and medication together is the most effective way to treat major depression (Cuijpers et al., 2013; Karyotaki et al., 2016; Vasile, 2020). Research published in the Journal of Clinical Psychiatry found that people with depression who don't respond well to medication (called pharmacotherapy-resistant depression, or PRD) benefit when CBT is added to their treatment (Nakagawa et al., 2017). This combined approach helped reduce symptoms and improve recovery in hospital patients with PRD. The study was reliable because it lasted six years and included a one-year follow-up. Another study looked at both short- and long-term results of combining treatments and found that it didn't matter whether patients started with CBT or medication—the order made no difference in how well the treatment worked. They also found that adding medication after CBT, or CBT after medication, helped people who still had symptoms (Dunlop et al., 2019). Finally, a study by Wiles et al. (2014) showed that adding[33]

Using CBT and Medication Together: Benefits and Things to Consider Benefits:

- Better results: Using both CBT and medication together may work better than using just one.
- Quicker relief: Medication can reduce symptoms quickly, while CBT helps build long-term coping skills.
- Sticking to treatment: CBT can help people understand their treatment plan and take their medication as prescribed.[34]

Things to Keep in Mind:

- Personalized treatment: The combination should be adjusted to fit each person's needs and situation.
- Monitoring: Doctors should watch for any issues that might come from mixing medication with therapy.
- Cost and availability: Using both methods can be more expensive and harder to access for some people.In the end, whether to use both treatments depends on what works best for the individual and their goals.[35]

Limitation

The results of the Nakagawa et al. (2017) study may not apply to everyone because it only included highly motivated patients from two hospitals who were actively seeking treatment. In the Nakagawa et al. (2017) study, most participants stuck with the treatment (97.5% adherence) and only a small number dropped out (8.8%). However, one limitation was that the researchers couldn't fully control which antidepressants were used, even though both

groups received similar types of medication.The main issue with Dunlop et al.'s (2019) study is that most participants were white, which makes it hard to apply the results to more diverse populations around the world. Still, for therapists in the U.S., the ethnic makeup of the study reflects the U.S. population fairly well.[36]

Efficacy comparative study CBT vs Pharmacotherapy

- Both CBT (Cognitive Behavioral Therapy) and medication can help treat conditions like depression and anxiety.
- Both methods have been shown to reduce symptoms and help people feel better.

Differences:

- How fast they work: Medication might work more quickly, while CBT may take longer but can give longer-lasting results.
- Preventing relapse: CBT may be better at helping people stay well because it teaches skills to manage problems.
- Side effects: Medication can cause side effects, but CBT usually does not.[37]

Using Both Together:

- Using CBT and medication together may work better for some people than using just one.
- This combination can help with quick relief from symptoms and also teach long-term coping skills.
- Keep in mind, every person is different, so the best treatment depends on their specific situation and needs.

Patient Adherence in CBT and Medication Treatment

CBT (Cognitive Behavioral Therapy) Adherence:

- Active involvement: CBT needs the patient to be fully involved and willing to take part.
- Motivation is key: Patients must be willing to learn and use new skills.
- Attendance matters: Going to therapy sessions regularly and doing homework tasks is very important.

Medication (Pharmacotherapy) Adherence:

Following the schedule: Patients need to take their medication exactly as the doctor tells them.

- Dealing with side effects: Some people may stop taking their medicine if side effects bother them.
- Check-ins help: Regular checkups and dosage adjustments can support better medication use.[38]

What Affects Adherence (for both CBT and Medication):

- Good therapist-patient connection: A strong, trusting relationship with the healthcare provider can help patients stick to treatment.
- Clear information: When patients understand their treatment, they're more likely to follow through.
- Support from others: Family, friends, or support groups can help patients stay on track.
- By understanding these points, doctors and therapists can help patients stay committed to their treatment plans.

Summary

All the research reviewed supports using either CBT or second-generation antidepressants (SGAs) to treat depression, with some important points to consider. While SGAs carry a higher risk of side effects compared to CBT, both treatments are equally effective as a first step for adults with depression (Gartlehner et al., 2015). CBT works just as well as medication, but its success often depends on how skilled and experienced the therapist is (Cuijpers et al., 2013). Although major health organizations like the American Psychiatric Association and the UK's NICE recommend using antidepressants—either alone or with therapy—the research shows that combining medication with CBT leads to better results (Cleare et al., 2015). Overall, using both CBT and medication together appears to be the most effective way to treat depression (Cuijpers et al., 2013; Karyotaki et al., 2016).

Implication

Health professionals should be aware of the limitations in the research before fully accepting the findings. Studies on depression use different tools to measure symptoms (like the HDRS and BDI-II), which can lead to differences in results and how they're interpreted (Vasile, 2020). Also, most of the

participants in these studies were adults from the U.S. or the U.K., mainly of Caucasian background, so the results may not apply to more diverse populations.

To improve accuracy, the author carefully selected studies for this review. Only research from 2011 to 2020 was included to avoid older studies that often favored just one type of treatment and had low reliability (Cuijpers et al., 2013). The author also checked that each study clearly stated its funding sources to reduce the risk of bias from industry-sponsored research (Ebrahim et al., 2016).These findings highlight the importance of teamwork between CBT therapists and doctors who prescribe medication, to give patients the most effective care for depression. They also suggest that university programs for counselors and medical professionals should include updated training. Counseling students need to learn about both therapy and medication, be open- minded about treatments, and develop skills for working together with medical professionals.[40]

Ideas For Future Research

Most depression research has focused on traditional causes and treatments. However, since the COVID-19 pandemic began in 2019, depression symptoms in the U.S. have tripled (Ettman et al., 2020). People who were already at higher risk have been affected the most, creating a need for new research that looks at how effective CBT and medication are in preventing relapses among vulnerable groups during a pandemic.[41]

Future research should also include people from different age groups, genders, and cultural backgrounds. Research tools, like the language used in materials, should be adjusted to improve accuracy and make results more widely applicable. Studies reviewed in this paper could be used in future long-term trials to strengthen reliability.

Another important area for future research is children's mental health. A key question is whether teaching CBT skills to kids could stop mild depression from turning into major depression. Researchers should explore how learning CBT early on might help prevent or reduce symptoms of depression described in the DSM-IV.[42]

Conclusion

Research shows that both CBT and medication are effective in treating major depression. However, the most effective approach is to combine the two—CBT and medication together (Cuijpers et al., 2013; Karyotaki et al., 2016). How well CBT works also depends on how skilled and experienced the therapist is (Cuijpers et al., 2013). Therapists should also think about past treatments, what the patient prefers, how practical the treatment is, and the pros and cons of each option before deciding on the best approach (Gartlehner et al., 2015).

More long-term studies are needed to understand how well CBT works over time. Important future questions include: Could teaching CBT in schools help prevent depression early on? Can CBT help maintain mental health and prevent relapse in people already treated for depression? Finding answers to these questions could improve treatment plans and encourage better collaboration between therapists and doctors who prescribe antidepressants, helping patients manage depression and avoid future episodes.

CBT could be a helpful next step for people with anxiety disorders who didn't get better with medication. However, more well-designed clinical trials are needed to clearly prove how effective it is for these patients.

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