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Review Article

DEPRESSION: A REVIEW**Shiva Ramkisan Dhande¹, Ajay R. Zagade², Puja Bekatet³, Swati P. Deshmukh⁴**
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Depression is a prevalent and multifaceted mental health disorder characterized by persistent sadness, loss of interest in activities, and impaired cognitive and physical functioning. It affects individuals globally, with varying prevalence and symptomatology influenced by cultural and environmental factors. Traditional theories, such as the serotonin hypothesis, have recently been challenged, leading to broader explorations of genetic, neurobiological, environmental, and psychological contributors. Effective diagnosis relies on clinical criteria outlined in frameworks like the DSM-5. Treatment approaches are diverse, including pharmacotherapy (e.g., SSRIs), psychotherapy (e.g., CBT), lifestyle interventions, and alternative therapies like mindfulness and light therapy. Recent developments in research have highlighted the limitations of antidepressants and the need for personalized treatment strategies. This review underscores the complexity of depression and emphasizes the necessity of an integrated approach to its management, incorporating advances in research to improve.

Key words: Major Depressive Disorder (MDD), Seasonal Affective Disorder (SAD), Serotonin Hypothesis, Genetic Predisposition, Neurobiological Factors, Cognitive Behavioral Therapy (CBT), Pharmacotherapy (SSRIs, SNRIs), Psychotherapy, Mindfulness Meditation, Light Therapy, Lifestyle Interventions, Exercise and Mental Health, Suicidal Ideation, Diagnosis (DSM-5 Criteria), Emotional Numbing, Risk Factors (Environmental, psychological), Antidepressant Efficacy, Comorbidities (Anxiety, Bipolar Disorder), Neuroplasticity and Depression

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INTRODUCTION:

Depression is a prevalent mental health disorder characterized by persistent sadness, loss of interest, and physical and cognitive impairments. It is influenced by genetic, biological, environmental, and psychological factors. While the serotonin hypothesis once dominated, recent research suggests a more complex etiology. Diagnosis is based on DSM-5 criteria, and treatment includes pharmacotherapy, psychotherapy, and lifestyle interventions. Despite advancements, depression remains a complex condition, requiring ongoing research and personalized care for effective management.

Etiology and Theories:

Historically, the serotonin hypothesis suggested that depression is linked to low levels of serotonin in the brain. However, recent comprehensive reviews have challenged this theory, indicating a lack of consistent evidence supporting a direct association between serotonin levels and depression. This has led to a broader exploration of genetic, environmental, and psychological factors contributing to depression. Notably, a significant genetic study identified numerous genetic variants associated with depression, highlighting its complex biological underpinnings.

Diagnosis:

Depression encompasses various subtypes, including Major Depressive Disorder (MDD), Persistent Depressive Disorder (dysthymia), and Seasonal Affective Disorder (SAD). Diagnosis is primarily based on clinical assessments aligned with criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Common symptoms include: The diagnosis of depression is primarily based on clinical evaluation, guided by standardized criteria such as those outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). A diagnosis of Major Depressive Disorder (MDD) requires the presence of at least five of the following symptoms over a two-week period, with at least one being either a depressed mood or a loss of interest/pleasure: Depressed mood most of the day, nearly every day.

1. Markedly diminished interest or pleasure in activities.
2. Significant weight loss or gain, or changes in appetite.
3. Insomnia or hypersomnia.
4. Psychomotor agitation or retardation.
5. Fatigue or loss of energy.
6. Feelings of worthlessness or excessive guilt.
7. Difficulty concentrating or making decisions.
8. Recurrent thoughts of death or suicidal ideation.

These symptoms must cause significant distress or

impairment in social, occupational, or other areas of functioning and cannot be attributed to substance use or a medical condition. Additional tools, such as the Patient Health Questionnaire (PHQ-9), can aid in assessing symptom severity. Diagnosing depression also requires ruling out other mental health conditions, such as bipolar disorder, anxiety disorders, or grief, to ensure accurate treatment.

Depressed mood

1. Loss of interest or pleasure in activities
2. Significant weight changes
3. Sleep disturbances
4. Fatigue
5. Feelings of worthlessness or excessive guilt
6. Difficulty concentrating
7. Recurrent thoughts of death or suicide
8. These symptoms must persist for at least two weeks and represent a change from previous functioning.

A depressed mood is a core symptom of depression, characterized by persistent feelings of sadness, emptiness, or hopelessness. It often manifests as:

1. Emotional Symptoms:

Overwhelming sadness or despair.
Feelings of worthlessness, guilt, or self-blame.
Irritability or frustration, even over minor matters.

2. Cognitive Symptoms:

Difficulty concentrating, remembering, or making decisions. Negative thoughts about oneself, others, or the future.

3. Physical Symptoms:

Changes in appetite or weight. Low energy or fatigue. Sleep disturbances, such as insomnia or hypersomnia. A depressed mood is not limited to major depressive disorder but can also occur in other conditions, including bipolar disorder, persistent depressive disorder, or as part of grief and adjustment disorders. For clinical diagnosis, the mood disturbance must persist most of the day, nearly every day, for at least two weeks and cause significant distress or functional impairment. Treatment for a depressed mood often involves psychotherapy (e.g., cognitive-behavioral therapy), medication (e.g., antidepressants), or a combination of both, along with lifestyle modifications such as regular exercise and social support.

Treatment Approaches:

Effective management of depression often involves a combination of therapies tailored to individual needs: Effective treatment of depression requires a multifaceted approach tailored to the individual's needs. Common strategies include:

Antidepressants: Medications like Selective Serotonin Reuptake Inhibitors (SSRIs), Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs), and

tricyclic antidepressants (TCAs) are commonly prescribed.

Indications: Suitable for moderate to severe depression.

Considerations: Regular monitoring for side effects, especially in the early stages, is essential. Psychotherapy

Cognitive Behavioral Therapy (CBT): Focuses on identifying and modifying negative thought patterns.

Interpersonal Therapy (IPT): Addresses relationship issues and social functioning.

Dialectical Behavior Therapy (DBT): Useful for individuals with severe emotional dysregulation.

Lifestyle Modifications

Regular exercise to boost mood and energy levels.

Balanced nutrition to support overall well-being.

Adequate sleep to regulate emotions and improve functioning.

Alternative and Complementary Therapies

Mindfulness and Meditation: Helps reduce stress and improve emotional regulation. Light Therapy: Effective for Seasonal Affective Disorder (SAD).

Yoga and Relaxation Techniques: Enhances physical and mental well-being.

Social and Environmental Interventions

Building strong social support networks. Stress management strategies.

Work or educational accommodations as needed.

Severe Cases

Electroconvulsive Therapy (ECT): Considered for treatment-resistant depression or severe symptoms, such as suicidal ideation.

Transcranial Magnetic Stimulation (TMS): A non-invasive option for treatment-resistant cases.

Combination Treatments

Combining medication and psychotherapy often yields the best results.

Collaborative care models involving primary care and mental health professionals are effective.

Monitoring and Follow-Up

Regular follow-up appointments to assess progress.

Adjustment of treatment plans based on response and side effects.

By integrating these approaches, depression can often be effectively managed, improving quality of life and reducing the risk of recurrence.

Pharmacotherapy:

Antidepressant medications, such as Selective Serotonin Reuptake Inhibitors (SSRIs), are commonly prescribed. However, their efficacy has been debated, with some studies questioning their effectiveness and highlighting potential side effects, including emotional numbing and withdrawal challenges.

Classes of Antidepressants:

Selective Serotonin Reuptake Inhibitors (SSRIs):

Examples: Fluoxetine, Sertraline, Escitalopram.

Mechanism: Increases serotonin levels in the brain by inhibiting its reuptake. Advantages: Fewer side effects, well-tolerated.

Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs):

Examples: Venlafaxine, Duloxetine.

Mechanism: Increases serotonin and norepinephrine levels.

Indications: Effective for depression with comorbid anxiety or chronic pain.

Tricyclic Antidepressants (TCAs):

Examples: Amitriptyline, Nortriptyline.

Mechanism: Blocks reuptake of serotonin and norepinephrine.

Limitations: More side effects (e.g., dry mouth, drowsiness), risk of toxicity in overdose.

Monoamine Oxidase Inhibitors (MAOIs):

Examples: Phenelzine, Tranylcypromine.

Mechanism: Inhibits monoamine oxidase enzyme, increasing neurotransmitters. Indications: Used rarely due to dietary restrictions and side effects.

Atypical Antidepressants:

Examples: Bupropion, Mirtazapine, Trazodone. Unique mechanisms depending on the drug.

2. Indications for Use

Moderate to severe depressive episodes. Recurrent depressive disorder.

Depression with comorbid anxiety or other mental health conditions.

Treatment Guidelines

Start with a first-line agent (e.g., SSRIs or SNRIs).

Adjust dosage gradually based on response and side effects. Allow 4–6 weeks to evaluate efficacy.

Continue treatment for at least 6–12 months after symptom resolution to prevent relapse.

Side Effects

Common: Nausea, weight changes, insomnia, fatigue, sexual dysfunction.

Serious (rare): Serotonin syndrome, suicidal ideation (especially in younger populations).

Considerations

Personalization: Selection based on patient symptoms, comorbidities, and tolerability. Monitoring: Regular follow-ups to assess effectiveness and side effects.

Combination Therapy: May combine antidepressants with psychotherapy or other medications (e.g., mood stabilizers for bipolar disorder).

Pharmacotherapy is most effective when combined with other treatment approaches, such as psychotherapy and lifestyle modifications, for a comprehensive management strategy.

Psychotherapy:

Approaches like Cognitive Behavioral Therapy (CBT) and Interpersonal Therapy (IPT) have

demonstrated effectiveness in treating depression. These therapies focus on modifying negative thought patterns and improving interpersonal relationships.

Types of Psychotherapy

Cognitive Behavioral Therapy (CBT):

Focus: Identifies and modifies negative thought patterns and behaviors.

Techniques:

Cognitive restructuring: Replacing distorted thoughts with realistic ones.

Behavioral activation: Encouraging engagement in pleasurable and meaningful activities.

Effectiveness: Proven effective for mild to severe depression.

Interpersonal Therapy (IPT):

Focus: Addresses interpersonal issues contributing to depression, such as grief, role transitions, or conflicts.

Techniques: Enhancing communication skills, managing social relationships.

Effectiveness: Particularly useful for depression linked to relationship challenges.

Dialectical Behavior Therapy (DBT):

Focus: Combines CBT with mindfulness techniques to regulate emotions and tolerate distress.

Application: Effective for individuals with depression and emotional dysregulation or self-harm tendencies.

Psychodynamic Therapy:

Focus: Explores unconscious conflicts, unresolved past experiences, and emotional patterns.

Goal: Promotes insight into emotional struggles to facilitate healing.

Effectiveness: Useful for long-standing depression with complex emotional histories.

Mindfulness-Based Cognitive Therapy (MBCT):

Focus: Combines mindfulness practices with CBT to prevent relapse. **Techniques:** Promoting awareness of thoughts and feelings without judgment.

Effectiveness: Particularly effective for recurrent depression

Behavioral Therapy (BT):

Focus: Emphasizes behavior change by reducing avoidance and increasing positive reinforcement.

Techniques: Goal setting, activity scheduling.

Effectiveness: Suitable for individuals with reduced motivation

2. Benefits of Psychotherapy

Improves coping skills and resilience. Addresses root causes of depression. Reduces relapse rates.

Enhances emotional regulation and self-awareness.

Considerations for Psychotherapy

Individual Therapy: One-on-one sessions tailored to the patient's needs.

Group Therapy: Provides peer support and shared experiences.

Couples or Family Therapy: Addresses relational dynamics that may contribute to depression.

4. Duration of Treatment

Short-term: 6–20 sessions for structured therapies like CBT or IPT.

Long-term: Ongoing therapy for chronic or treatment-resistant depression.

6. Integration with Other Treatments

Psychotherapy is often combined with pharmacotherapy, lifestyle changes, and social support for comprehensive care.

Psychotherapy plays a vital role in helping individuals manage depression, fostering long-term emotional health and improved quality of life.

Lifestyle Modifications:

Regular physical activity has been shown to alleviate depressive symptoms, serving as both a preventive and therapeutic measure. Exercise promotes the release of endorphins and supports overall mental well-being.

Lifestyle changes play a crucial role in managing depression by improving overall well-being, reducing symptoms, and enhancing the effectiveness of other treatments like medication or psychotherapy.

Physical Activity

Benefits: Regular exercise boosts mood by releasing endorphins and reducing stress. **Recommendations:**

Aim for at least 30 minutes of moderate exercise, such as walking, cycling, or yoga, 3–5 times per week.

Incorporate enjoyable activities to maintain consistency.

Healthy Diet

Benefits: A balanced diet supports brain health and stabilizes mood. **Recommendations:**

Include omega-3 fatty acids (e.g., fish, walnuts), whole grains, fruits, and vegetables. Avoid excessive sugar, caffeine, and processed foods.

Stay hydrated throughout the day.

Sleep Hygiene

Benefits: Adequate sleep regulates mood and improves energy levels.

Recommendations:

Maintain a consistent sleep schedule.

Create a calming bedtime routine (e.g., reading, meditation). Limit screen time and caffeine before bed.

Stress Management

Benefits: Reducing stress improves emotional resilience. **Recommendations:**

Practice relaxation techniques like mindfulness, deep breathing, or progressive muscle relaxation. Engage in hobbies or creative outlets to manage stress.

Social Connections

Benefits: Strong social support reduces feelings of isolation and loneliness. **Recommendations:**

Spend time with supportive friends and family. Join social groups, clubs, or support networks.

Volunteer to build connections and boost self-worth.

Limiting Substance Use

Benefits: Avoiding alcohol and drugs prevents worsening symptoms and improves mental clarity.

Recommendations: Seek help if substance use becomes a coping mechanism for depression.

Sunlight Exposure

Benefits: Sunlight increases serotonin levels, boosting mood.

Recommendations: Spend time outdoors, especially in the morning. Use light therapy if natural sunlight is limited.

Time Management and Goal Setting

Benefits: Structured routines provide a sense of purpose and reduce overwhelm. Recommendations:

Set small, achievable goals.

Prioritize tasks to avoid unnecessary stress.

Self-Compassion Practices

Benefits: Cultivating self-compassion reduces feelings of guilt and self-criticism.

Recommendations: Practice affirmations, journaling, or gratitude exercises.

Professional Support

Integration: Lifestyle modifications complement professional treatments like therapy and medication.

Monitoring: Regular check-ins with a healthcare provider can track progress.

Incorporating these lifestyle changes can empower individuals to manage depression more effectively and promote long-term emotional well-being.

Alternative Therapies: Interventions such as light therapy, particularly for Seasonal Affective Disorder, and mindfulness meditation have been explored, with varying degrees of success. Light therapy aims to compensate for reduced sunlight exposure during winter months,

Mindfulness and Meditation

Benefits: Reduces stress, promotes emotional regulation, and increases self-awareness. Techniques:

Mindfulness-Based Cognitive Therapy (MBCT). Guided meditation or mindfulness exercises.

Effectiveness: Particularly beneficial for preventing depression relapse.

Yoga and Exercise Therapy

Benefits: Combines physical activity with mindfulness to reduce stress and improve mood

Techniques:

Regular yoga practice.

Aerobic or resistance exercises

Effectiveness: Enhances endorphin levels and reduces depressive symptoms.

Light Therapy

Benefits: Effective for Seasonal Affective Disorder

(SAD) and depression with sleep disturbances.

Application:

Daily exposure to bright light boxes, mimicking natural sunlight.

Effectiveness: Improves circadian rhythms and boosts serotonin production.

Acupuncture

Benefits: May help alleviate symptoms by balancing energy flow in the body.

Mechanism: Stimulates specific points to regulate neurotransmitters like serotonin and dopamine.

Effectiveness: Evidence is mixed but promising for mild to moderate depression.

Herbal Remedies

Common Supplements:

St. John's Wort: Potentially effective for mild depression.

Omega-3 fatty acids: Supports brain health and mood regulation. Saffron: May reduce symptoms with fewer side effects.

Caution: Always consult a healthcare provider before use, as some supplements interact with medications.

Music and Art Therapy

Benefits: Enhances self-expression and emotional processing. Techniques:

Listening to or creating music.

Participating in art activities like painting or drawing.

Effectiveness: Promotes relaxation and improves emotional well-being.

Aromatherapy

Benefits: Certain essential oils (e.g., lavender, chamomile) may reduce stress and improve mood.

Application:

Diffusion, massage, or baths with essential oils.

Effectiveness: Provides a calming environment but varies among individuals.

Hypnotherapy

Benefits: Helps uncover and address subconscious emotional triggers.

Application: Guided sessions by a trained therapist to foster relaxation and self-awareness.

Reiki and Energy Healing

Benefits: Promotes balance and relaxation by channeling healing energy.

Effectiveness: Evidence is anecdotal but may reduce stress and enhance emotional well-being.

Dietary Adjustments and Nutritional Therapy

Focus: Addresses nutrient deficiencies linked to depression (e.g., Vitamin D, B12). Application:

Personalized plans developed by nutritionists.

Considerations

Integration: Alternative therapies are most effective when combined with conventional treatments.

Evidence: While many approaches show promise, some lack extensive scientific validation.

Professional Guidance: Always consult a healthcare provider before starting alternative therapies.

Alternative therapies offer valuable options for managing depression, fostering a holistic approach to mental health and well-being.

Recent Developments:

Emerging research is reevaluating traditional understandings of depression. Critiques of the serotonin hypothesis have prompted a shift towards investigating other biological and psychological mechanisms. Additionally, the role of antidepressants is under scrutiny, with discussions about their benefits versus potential risks, such as increased suicide risk in certain populations.

CONCLUSION:

Depression is a complex and multifaceted disorder that affects millions of individuals globally. Its impact on emotional, physical, and social well-being necessitates a comprehensive approach to treatment. While pharmacotherapy and psychotherapy remain the cornerstone of depression management, integrating lifestyle modifications and alternative therapies can enhance treatment outcomes and improve quality of life.

Ongoing research continues to explore the underlying causes of depression, leading to more targeted and personalized treatment strategies. It is crucial to consider the individual needs of each person when developing a treatment plan, as depression manifests differently across individuals. Combining traditional treatments with holistic approaches, such as exercise, mindfulness, and alternative therapies, offers a more comprehensive and sustainable path to recovery.

Ultimately, managing depression requires a multifactorial approach that considers biological, psychological, and social factors. With early intervention, appropriate treatment, and support, individuals can experience significant relief and lead fulfilling lives. Continued research and improved access to mental health care will be pivotal in addressing the growing burden of depression worldwide.

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