



# The Biopsychosocial Approach to the Comprehensive Treatment of Mood Disorders

Edmi Y. Cortes Torres, MD  
Assistant Professor of  
Clinical Psychiatry  
University of Miami, Miller  
School of Medicine  
Department of Psychiatry  
& Behavioral Sciences

# Disclosures

A decorative graphic in the top right corner of the slide. It features a stylized neuron with a glowing green nucleus and several branching dendrites. The neuron is set against a background of a network of interconnected nodes and lines, also in shades of green and blue, suggesting a neural network or data connectivity.

- Dr. Cortes Torres has nothing to disclose

# Learning Objective

A decorative graphic in the top right corner of the slide. It features a stylized neuron with a glowing green nucleus and several branching dendrites. The background is a dark teal color with a network of glowing blue and green lines, suggesting neural connections or a digital network.

- Integrate evidence-based, best-practice options for the biopsychosocial treatment of mood disorders.

# Audience Response



With what percentage of your patients with mood disorders do you integrate the biopsychosocial model of treatment?

- A. 0%
- B. 1% - 25%
- C. 26% - 50%
- D. 51% - 75%
- E. 76% - 100%

# Audience Response



Which of the following is true of the biopsychosocial model of treatment?

- A. The model is a fractional, dualistic process
- B. Allows for a comprehensive assessment and individualized treatment plan
- C. Assumes disease to be fully accounted for by deviations from the norm
- D. Molecular biology is its basic scientific principle

# History of The Biopsychosocial Model



- The Biopsychosocial model was introduced by a psychiatrist by the name of George Libman Engel in 1977.
- The fundamental statement of the Biopsychosocial model is that health and illness are product of the interplay of biological, psychological, and social factors.
- The Biopsychosocial model presented a challenge to the existing Biomedical model.
- The Biomedical model assumes disease to be fully accounted for by deviations from the norm of measurable biological variables.

# Biomedical vs. Biopsychosocial Models



## ***Biomedical Model***

- Molecular Biology is its basic scientific discipline.
- Disease is fully accounted for by deviations from the norm of measurable biological variables.
- Reductionistic belief that complex phenomena are ultimately derived from a single primary principle and mind-body dualism that separates the mental from the somatic.
- Exclusionist since it leaves no room for the social, psychological, and behavioral dimensions of illness.

## ***Biopsychosocial Model***

- A medical model that also takes into account the patient and the social context in which he/she lives to design rational treatments.
- An inclusion model that gives importance to the exploration of all three spheres (biological, psychological and social).

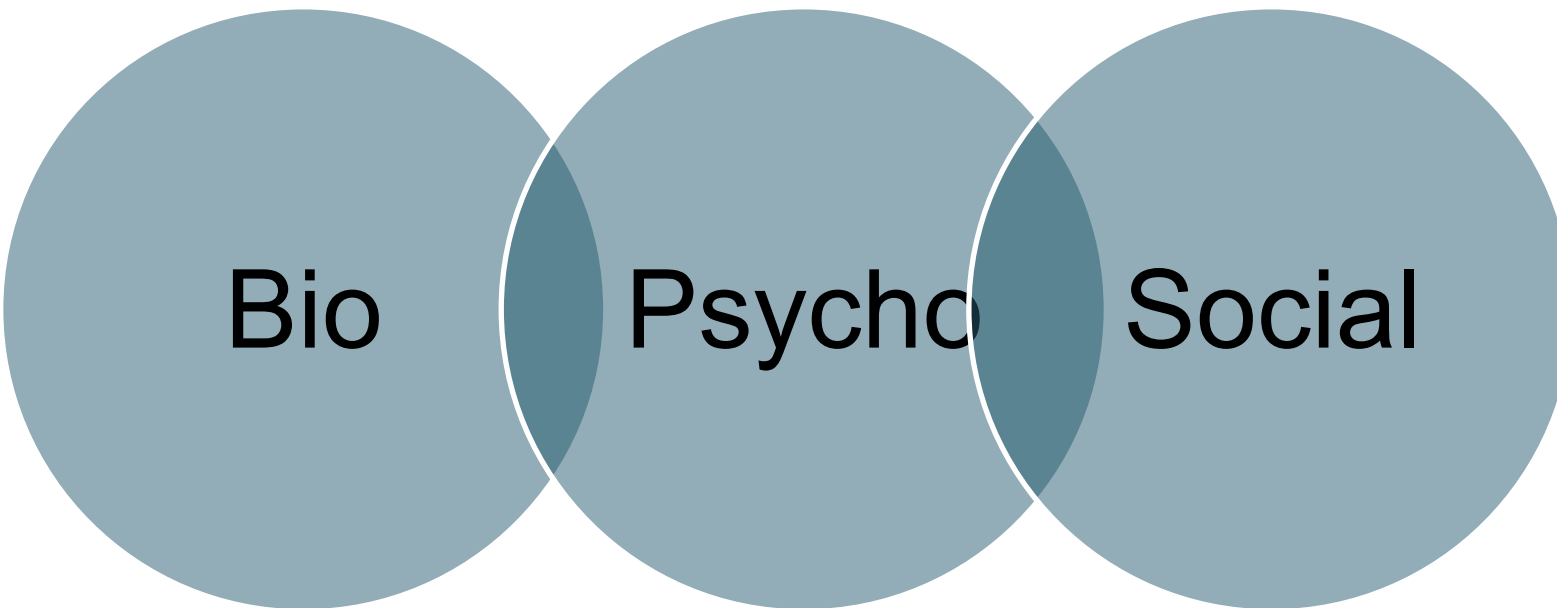
# Importance of the Biopsychosocial Model



- It's a model of inclusion instead of a fractional, dualistic process.
- Allows for a complete patient evaluation which is essential in the success of treatment not only in mental health but in medicine as a whole.
- Allows for a comprehensive assessment, formulation and individualized treatment plan design.
- Acknowledges that every patient, regardless of psychopathology, is unique from each other.



# Biopsychosocial Model: an Overlapping system



# Biological Factors



- General medical history
- Substances & medications
- Genetic predisposition (family history)
- Disturbances of the biochemical, neuroendocrine, or immune systems

# Psychological Factors



- Psychodynamic factors; childhood experiences
- Childhood abuse history
- Psychological traumas
- Temperament
- Personality disorders

# Social Factors



- Employment
- Finances
- Relationships
- Housing
- Legal issues
- Religion
- Culture
- Education

# The Biopsychosocial Approach to Treat Depression



- Biological models view depression as a consequence of genetic vulnerability or biological disturbances of the biochemical, neuroendocrine, or immune systems.
- Psychological models highlight the importance of cognitive and behavioral schemas. These schemas reflect the individual's fundamental views and may represent earlier experiences in life that dominate information processing at the present time.
- Sociocultural risk factors include changes and instability of many societal aspects that may have an impact on the vulnerability of the individual.

# The Biopsychosocial Approach to Treat Depression



## Biological

- Treating and stabilizing underlying medical problems.
- Treating substance abuse disorders with goal of achieving sobriety.
- Treating primary psychiatric symptoms with known biological treatments including: psychotropic medications, electroconvulsive therapy (ECT) and repetitive transcranial magnetic stimulation (rTMS).

# Biopsychosocial Approach to Treat Depression



## Psychological

- Psychotherapy modalities including but not limited to: Cognitive-Behavioral, Psychodynamic, Supportive, Dialectical Behavioral, etc.

# The Biopsychosocial Approach to Treat Depression



## **Social Interventions**

- Initiating referrals
- Assessing support systems
- Advocating for your patients
- Accessing community resources
- Funding
- Insurance coverage
- Case managers
- Social workers



# Two Main Critics to the Biopsychosocial Model



- Dichotomizes biology and psychology
  - The model may suggest that biology is separate from psychology.
- Reinforces stigma associated with mental health
  - The model may suggest that psychiatric diseases are volitional and not medical problems.

# How are Biology and Psychology Related?

## The Psychobiological Approach



- Both systems are essentially and irreversibly linked in that the psychological is a substrate of the biological and vice versa.
  - Ex. Psychologically traumatic experiences may lead to permanent dysregulations of many aspects of biological functioning and may lead to changes in brain structure.
  - Ex. Effective psychotherapies may influence various aspects and parameters of biological function.

# Case 1



- A 53 year old white female who presented to the hospital emergency room with altered mental status. She was admitted to the medical service for evaluation. She presented confused, non verbally responsive, with rigidity and atypical movements. She underwent numerous diagnostic testing including imaging studies, immunologic studies, lumbar puncture, etc. All diagnostic tests results were unremarkable. She also received empirical treatments without response. After 6 weeks in the hospital the medical service decided to consult psychiatry to evaluate.

***Any thoughts?***

## Case 1 (cont.)



- She was carefully evaluated by psychiatry and her family interviewed in extent. She was diagnosed with a conversion disorder and transferred to the psychiatry service for treatment. She showed gradual improvement and recovered fully within a two week period and was discharged home in stable condition.

## Case 2



- A 24 year old male patient with substance abuse history (hallucinogens) who presented to a psychiatric facility with acute psychosis and agitation. Over a 3-4 week period he failed to respond to antipsychotic medications and his condition worsened. He was often very aggressive and frequently required intramuscular medications and restraints. He was diagnosed with treatment resistant psychosis and he was referred for electroconvulsive treatments (ECT).

***Any thoughts?***

## Case 2 (cont.)



- He was evaluated at the medical receiving facility. He was found to be disorganized and confused. He was diagnosed with acute delirium. Diagnostic studies revealed a retro esophageal abscess which was drained and IV antibiotics initiated immediately. Within two days of medical treatment, the patient recovered, his psychiatric symptoms resolved and he returned to his baseline. Two days later, he was discharged home in stable condition.

## Case 3



- A 32 year old female who presented to the hospital seeking a comprehensive psychiatric evaluation. She reported a 15 year history of mental health treatment during which she had seen multiple different mental health providers and had been on “all kinds of medications” without benefit. She reported sudden mood changes, conflicts with people, alcohol binging episodes to “numb the feelings of emptiness”. She had been in multiple relationships over the years; some of them abusive. She also reported a history of cutting and burning herself, “to feel alive”.

***Any thoughts?***

## Case 3 (cont.)



- She was diagnosed with borderline personality disorder. The diagnosis was also supported by psychological testing results. She was referred to a residential treatment facility specializing in treatment modalities for borderline personality disorder including DBT. She participated in the residential treatment for 6 months with benefit and significant improvement.



# Audience Response



Based on this presentation, in what percentage of your patients with mood disorders do you now intend to integrate the biopsychosocial model of treatment?

- A. 0%
- B. 1% - 25%
- C. 26% - 50%
- D. 51% - 75%
- E. 76% - 100%

# Audience Response



Which of the following is true of the biopsychosocial model of treatment?

- A. The model is a fractional, dualistic process
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# References



- George L. Engel. The Need for a New Medical Model: A Challenge for Biomedicine Science, New Series, Vol. 196, No. 4286 (Apr. 8, 1977), pp. 129-136
- Hamid R. Tavakoli, MD. A closer evaluation of current methods in Psychiatric assessments: A Challenge for the Biopsychosocial Model. *Psychiatry* 2009;6(2):25–30
- .Francesc Borrell-Carrió, MD, Anthony L. Suchman MD, Ronald M. Epstein MD. The Biopsychosocial Model 25 Years Later: Principles, Practice, and Scientific Inquiry. *Annals of Family Medicine*, Vol. 2, No., November/December 2004, pp. 576-582
- Brody AL, Saxena S, Stoessel P, Gillies LA, Fairbanks LA, Alborizan S, Phelps ME, Huang SC, Wu HM, Ho ML, Ho MK, Au SC, Maidment K, Baxter LR Jr. 2001. Regional brain metabolic changes in patients with major depression treated with either paroxetine or interpersonal therapy: Preliminary findings. *Arch Gen Psychiatry* 58:631–640.
- Chris K.W. Schotte, Ph.D., Bart Van Den Bossche, M.D., Dirk De Doncker, M.A., Stephan Claes, M.D., and Paul Cosyns, M.D. Theoretical Review: A Biopsychosocial model as a guide for psychoeducation and treatment of depression. *Depression and Anxiety*. 23:312–324 (2006)
- Lari Meyera, Timothy P. Melcherta. Mental health intake assessments from a biopsychosocial perspective. *Procedia Social and Behavioral Sciences* 5 (2010) 301–305
- Micah R. Sadigh, PhD. Development of the Biopsychosocial Model of Medicine. *American Medical Association Journal of Ethics*. April 2013, Volume 15, Number 4: 362-366.
- Heim C, Newport DJ, Bonsall R, Miller AH, Nemeroff CB. 2001. Altered pituitary–adrenal axis responses to provocative challenge tests in adult survivors of childhood abuse. *Am J Psychiatry* 158:575–581.

Thank you so much  
for your attention!

