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The biology of cognitive behavior therapy

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Cognitive behavior therapy outcomes and the mechanism of change that are related to its effects have traditionally been investigated on the psychological abilities, personalities or social functioning. Many psychiatrists have also held the unfortunate dichotomized position that psychotherapy is a treatment for “psychologically based” disorders, while medication is for “biologically based” disorders. During the past several decades, it has become clear that all mental processes drive from mechanisms of the brain. This means that any change in our psychologically processes is reflected by changes in the functions or structures of the brain. Straightforward reductionist stances, however, are unfounded because there is clear evidence that our subjective experiences affect the brain. Plastic changes in the brain have been difficult to study in humans, but there has been more than one successful trial. Changes in the brain in relation to experience have been detected at the cellular and molecular level using different experimental approaches. The advent of functional neuro-imaging, including photon emission CT (SPECT), positron emission topography, and functional MRI, has made it possible to study changes at the brain systems level (by measuring changes in the brain blood flow or metabolism) associated with cognitive behavior changes. The presentation will shed light on the biological basis of CBT reviewing the evidence from a historical perspective. In addition the imaging studies will be reviewed with emphasis on future perspectives in the use of CBT in the treatment of various psychiatric disorders and the importance of clarifying the biological changes associated with improvement.

Section snippets

Disclosure of interest

The authors have not supplied their declaration of competing interest...

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