

Good research paper on cognitive depression

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Abstract

Low mood disorder, otherwise known as depression, is the product of distorted judgments and beliefs. As such, it can produce cognitive dysfunctions that indicate the impairment in attention, concentration, memory, and other aspects. The opening chapters of the project induct into the rationales behind depression and its phenomenon. Further sections analyze depression and cognitive outcomes, the negative cognitive triad, faulty information processing, the ways depression produces cognitive deficits, functional and structural abnormalities of the human brain caused by depression and associated with cognitive deficits, depression cognitive symptoms and cognitive abilities affected by depression. The opinions of prominent psychology and medicine scientists constitute the bulk of the research project.

Keywords: depression, cognitive, dysfunction, abnormality, memory, concentration

Oftentimes people face life challenges that leave them questioning their own worth, attributes, and achievements. Following such inner quest motivated by external factors, their self-perception and self-respect are at their lowest. Unpleasant life experience can also send people depressed and dispirited. Cognition refers to mental processes that are applicable in learning, knowing, and understanding various things. While in the state of depression, individuals have all of these cognitive components affected in some way on another. The point is that the low mood disorder has the potential of causing dysfunctional beliefs and the whole set of cognitive dysfunctions like impaired attention, concentration, and memory that cause the human brain

to deviate from its normal physiological functioning.

Nemade, Reiss, and Dombeck (2007) noted that irrational, maladaptive, and faulty cognitions in the shape of twisted judgments and thoughts led to depression. Depressive cognitions are possible to learn empirically or through observation, with children witnessing their parents fail to handle traumatic events or stressful experiences. Alternatively, depressive cognitions can stem from the lack of experiences that would otherwise enable the development of the so-called adaptive coping skills. According to Dr. Aaron Beck, negative thoughts produced by dysfunctional convictions are presumed the major causes of depressive symptoms. There has been a direct interrelation between the severity and amount of negative thoughts and the intensity of depressive symptoms established by the scientist, that is to say, the amount of negative thoughts is in direct proportion to the severity of depression that develops (Nemade et al., 2007).

Depression and Cognitive Outcomes. The Negative Cognitive Triad. Faulty Information Processing

As per cognitive behavior theory, the process of thinking of people in depression tends to differ from that of people not suffering from the feeling of dejection, which leads them to grow depressed. To quote an example, dispirited people consider themselves, the environment, and their future through the lenses of negativity and pessimism. Consequently, such individuals acquire the habit of negatively misinterpreting various facts and accusing themselves of all misfortunes that befall their destiny. Such negative judgment style and thinking serve as a negative bias, which facilitates perceiving situations as being worse than they actually are. The

risk of people developing depressive symptoms in reaction to stressful situations increases. Doctor Aaron Beck is one of principal developers of cognitive theory of depression. The scientist hypothesized about three major dysfunctional belief themes, otherwise known as schemas that prevail in the process of thinking. People with thoughts dominated by the first theme will not stop insisting they are inadequate or defective. The second category of themes makes people believe all of their life experiences necessarily culminate in failures or defeats. People obsessed with the third theme are of the opinion that the future is hopeless. The three themes constitute what Beck believes to be the Negative Cognitive Triad. The presence of these convictions in people's cognition generate depression if it has not already developed (Nemade et al., 2007).

Nemade, Reiss, and Dombeck (2007) noted that the process of becoming depressed was what helped illustrate the concept of the negative cognitive triad. To put an example, employees may consider being laid off as the unstable economic position of their employer rather than the outcome of a poor performance. No feeling of doubt, still less self-uselessness may transpire following the incident. If the negative cognitive triad were to prevail in the process of thinking, an individual would infer it from the negative experience that firing was nothing else but a personal failure. Hopelessness may creep into person's mind since he or she may think losing another job is bound to happen. Based on these negative judgments, a person is sure to become depressed. If one should not be under the influence of the negative triad convictions, he or she should not contest their worth that much. Their response to being terminated may be retrieving their resume and launching

the search of job.

Besides the negative meaning of dysfunctional thoughts, these convictions can distort and shape whatever draws people's attention. Dr. Beck claimed that individuals in depression paid selective or random attention to environmental aspects that confirm what is already known to them and did so even despite evidence to the contrary being in front of their eyes. The inability of paying attention properly is a cognitive phenomenon called a faulty information processing. Failures of information processing is indicative of the mind dominated by depression. To quote an example, individuals in depression have the habit of showing selective attention to information that meets their negative expectations as well as information that runs counter to such expectations. When faced with a near-perfect performance review, individuals in depression will switch their attention to its negative comments that prevent it from being absolutely positive. It is in such people's nature to reduce the meaning and importance of positive events and exaggerate the meaning and importance of negative experiences. These are unconscious processes whose function is instrumental in keeping the core negative schemas of people in depression regardless of contradictory proofs and maintaining the feeling of hopelessness as to the future even though all evidence may point to the contrary (Nemade et al., 2007).

Depression Produces Cognitive Deficits

Delgado and Schillerstrom (2009) suggested that individuals diagnosed with major depressive disorder reported impaired attention, concentration, and memory. The results of standardized cognitive tests have identified the correlation between MDD and cognitive irregularities, especially in patients

with psychotic or melancholic traits (Delgado and Schillerstrom, 2009).

Various forms of depressions affect cognitive processes and cause the brain to deviate from its normal functioning. Considering cognitive deficits in depression, Godwin (1997) came to a conclusion that depression was linked to a variety of deficits in episodic memory and learning (as cited in Austin, Mitchell, and Goodwin, 2001). Austin, Mitchell, and Wilhelm (1999) stated that the relationship engaged explicit visual and verbal memory deficits in patients diagnosed with non-melancholic and melancholic depression (as cited in Austin, Mitchell, and Goodwin, 2001).

Friedman (1964), Raskin (1982), and Silberman (1983) noted that palpable impairment in executive tasks was observable in subjects suffering from severe depression (as cited in Austin, Mitchell, and Goodwin, 2001). Austin, Ross, and Murray (1992), Beats, Sahakian, and Levy (1996), Purcell, Maruff, and Kyrios (1997), and Murphy, Sahakian, and Rubinzstein (1999) all described the deficits of executive functions, a subcategory of cognitive processes, caused by depression in their respective reports (as cited in Austin, Mitchell, and Goodwin, 2001). Channon (1996) and Shannon and Green (1999) claimed that executive function impairment was to be observed in younger patients with dysphoria as well as individuals with less severe cases of depression whose median age was between 20 and 40 years (as cited in Austin, Mitchell, and Goodwin, 2001).

Beats, Sahakian, and Levy (1996) examined elderly individuals diagnosed with acute depression only to learn that the subjects of their study were impaired on attention set-shifting and verbal fluency (as cited in Austin, Mitchell, and Goodwin, 2001). Purcell, Maruff, and Kyrios (1997) conducted a

study on younger ambulatory patients suffering from moderate depression. Their findings are suggestive of zero impairment on working memory; however, the scientists did detect impairment on the measures of attentional set-shifting and motor speed (as cited in Austin, Mitchell, and Goodwin, 2001). The effect of depression intensity on the performance of neurocognitive tasks was measured based on the correlation neurocognitive task scores and Hamilton depressive scores in an attempt that resulted in contradictory findings, with eleven studies finding the correlation and nine failing to do so.

According to Roy-Byrne, Weingartner, and Bierer (1986), individuals with depression had difficulties with verbal recall, though demonstrating a good performance on verbal recognition, which enabled Weingartner, Cohen, and Murphy (1981), Cohen, (1982), and Roy-Byrne (1986) to presume that patients diagnosed with depression had troubles with effortful, as opposed to automatic tasks (as cited in Austin, Mitchell, and Goodwin, 2001). Austin, Mitchell, and Goodwin, (2001) noted that the authors made presumptions based on correlation findings that cognitive and motor impairments observed in depression might be secondary to a major motivational deficit. Overall, the results of studies on the impact of depression on cognitive deficits indicate that there is a direct correlation between depression and mnemonic deficits, on the one hand, and executive impairment presumably selective for set-shifting tasks, on the other. These deficits and impairments are the case irrespective of factors like age, the subtype or severity of depression, motivation, task difficulty, and response bias (Austin, Mitchell, and Goodwin, 2001).

Marvel and Paradiso (2004) suggested that cognitive deficits induced by mood disorders had received an extensive coverage by scientists. In spite of relative inconsistency, the scope of impairments has become obvious. Both bipolar and unipolar patients have demonstrated worsened performance in tests assessing memory, attention, and executive functions, or areas central to human cognition. The greater severity of disorder symptom is the more intense cognitive dysfunction appears to be. This notwithstanding, cognitive deficits are persistent in the course of remitted or euthymic states, which shows certain categories of cognitive processing deficits stand for fundamental trait characteristics.

Recent studies have presented evidence confirming that mood disorders were accompanied by a decline in cognitive functions. A seven-year study of 600 healthy elderly clergymen at the age of 64 and upwards on the measures of cognition and mood has presented interesting findings. Healthy controls demonstrated mild, albeit progressive annual decline in cognitive functions apparently owing to the natural impact of aging. Each extra depressive symptom increased the annual decline in cognitive functions by 24%. Depressive symptoms were associable with the enhanced risk of Alzheimer's disease development (Marvel and Paradiso, 2004). The disease is the shape of dementia, a very grave brain illness characterized by the loss of reasoning and thinking abilities. Clearly, mood disorders result in brain abnormalities that can prove fatal to those affected.

However, the main cognitive areas mood disturbance affects are attention and working memory. Marvel and Paradiso (2004) noted that an impairment in immediate memory or attention affected every aspect of human life. To

identify the extent to which depression impacts impulse control, sustained attention, and vigilance, scientists conducted Continuous Performance Tests. While euthymic or non-depressed patients demonstrated no serious impairment, maniac and depressed patients who were in the acute phase of their disease made more attention-related mistakes. Performance deficits deteriorated as illness assumed severe shapes. Scientific reports allowed inferring from tests that patients diagnosed with mood disorders could experience moderate attention deficits in the course of disturbed and euthymic states (Marvel and Paradiso, 2004). Attention is a critical component of human cognition, the mental process responsible for learning and understanding things. With a prominent part of cognition affected by depression, the brain undoubtedly deviates from its normal physiological functioning.

Functional and Structural Abnormalities of the Human Brain Caused by Depression. Cognitive Deficits

According to Marvel and Paradiso (2004), depression can produce functional and structural abnormalities of the human brain. Along with cognitive evaluation, progress made in neuroimaging and neuropathological studies have allowed outlining the neural substrates of depression. Besides enabling scientists to look into the major neural systems of mood regulation, neuroanatomical findings facilitate the scientific understanding of cognitive characteristics linked to depression. Scientists have noticed abnormalities of neuroanatomical nature in limbic areas associated with the identification of social cognition, emotion, and homeostatic regulation. Specific paralimbic and limbic areas comprise rostral and subgenual gyrus, entorhinal and

orbital frontal cortices, ventral striatum, anterior insula, and amygdala.

Intense activity in ventral limbic areas is one of key findings in functional neuroimaging studies. Functional abnormalities in such limbic areas as the ventral striatum, the amygdala, and the cingulate gyrus, presumably reflect the autonomic and emotional depression symptoms.

As per study findings, abnormalities in other areas accountable for emotional behavior regulation like hippocampus prefrontal cortices, and putamen or caudate nuclei. Patients with both bipolar and unipolar mood disorders shared one common characteristic like reductions in the volume of brain and the flow of blood in the dorsal lateral prefrontal and dorsal medial cortices. Reductions in putamen or caudate volumes were common in patients diagnosed with unipolar mood disorder while reduction in hippocampus size were observable in unipolar and bipolar patients. Important is that localized functional and structural irregularities in the depressed brain were consistent with cognitive deficits expected on the basis of the putative functions of the impacted neuroanatomical areas. Disruptions that occur in hippocampus, striatum, and the dorsal lateral prefrontal cortex all can affect a number of cognitive areas symptomatic in depressions, such as executive function, recall memory, and attention or working memory. Neural systems involved in depression may be prone to mood-related cognitive deficits. The dorsal lateral prefrontal cortex plays its role in in unipolar and bipolar disorders. Cognitive impairment in both types of depression is similar, yet it does differ in intensity (Marvel and Paradiso, 2004). As seen from above, depression-induced brain changes result in the change in brain functioning, affecting its cognitive abilities like recall or working memory among other areas.

Depression Cognitive Symptoms. Cognitive Abilities Affected by Depression

Any disorder has its own symptoms, through which it becomes manifest. Since depression affects cognitive processes, cognitive symptoms are the ones that help identify the state of emotional despondency. According to Tartakovsky (2013), a clinical psychologist Deborah Serani suggested that cognitive symptoms were more prominent in depression, unlike conventional signs like fatigue, sinking mood, and the loss of interest. Unlike physical symptoms, cognitive ones are debilitating and pressing in nature, affecting people's relationships, work and school. The psychologist went on to note that depression, affecting cognitive functions, reduced higher thinking and problem solving. Clinical Associate Professor of Psychiatry and Doctor of Medicine William Marchland claimed that indecisiveness put strain on relationships while low concentration produced issues with communication (Tartakovsky, 2013).

William Marchland and Deborah Serani considered memory loss, forgetfulness, distractibility, reduced reaction time, concentration difficulty, distorted or negative thinking, and indecisiveness to be the main symptoms of depression. Serani noted that depression cognitive aspects comprised the distorted, sluggish, and negative quality of thinking (Tartakovsky, 2013). Beyond doubt, information perception and knowledge digestion are quite difficult given distractibility, forgetfulness, concentration difficulty, and memory loss all caused by depression. All these symptoms act as inhibitors that slow down brain functioning and affect all areas of human lives that require concentration and the perception of knowledge.

Conclusions

The low mood disorder or depression can result in a number of cognitive dysfunctions, such as impaired attention, concentration, and memory that lead the brain to lose its ability of normal functioning and performing all cognitive tasks. People in depression think differently, as opposed to healthy individuals, with the feeling of dejection, negativity and pessimism dominating their thoughts. The misinterpretation of facts and self-accusation are the ways the brain of those in depression works. Doctor Aaron Beck developed the Negative Cognitive Triad composed of three dysfunctional belief themes like conviction of being inadequate and defective, life experiences necessarily ending in failures, and the future being hopeless. Apart from dysfunctional thoughts, these convictions can distort and shape whatever draws people's attention. According to Dr. Beck, the inability to pay attention properly is a cognitive phenomenon referred to as a faulty information processing. Individuals who have their brain affected by this cognitive deviation tend to diminish the importance and meaning of positive events and exaggerate negative ones.

Depression is believed to produce a number of cognitive deficits. Impaired attention, concentration, and memory are all too common in patients diagnosed with MDD who have melancholic and psychotic features. Further scientific investigations allow inferring that depression is associable with a variety of deficits in episodic memory and learning. Patients suffering from non-melancholic and melancholic depression developed explicit visual and verbal memory deficits. Those suffering from severe depression demonstrated obvious impairment in executive tasks in charge of cognitive

processes regulation. Attention set-shifting and verbal fluency impairment was observable in elderly individuals in the acute phase of mood disorder. A number of studies established the negative effect of depression intensity on the performance of neurocognitive tasks. Overall, there is a direct relationship between depression and two deviations like mnemonic deficits and executive impairment presumably selective for set-shifting tasks. Bipolar and unipolar patients have showed worsened performance in tests assessing memory, attention, and executive functions. Cognitive dysfunction intensified as disorder symptoms assumed severe shapes. Attention and working memory deterioration and memory impairment are among the most serious cognitive deficits generated by the low mood disorder. Disruption in multiple brain structural areas can affect cognitive areas symptomatic in depressions, such as executive function, recall memory, and attention or working memory. Depression has obvious visual signs or symptoms like distractibility, forgetfulness, concentration difficulty, memory loss, and other cognitive dysfunctions. Overall, depression does cause a variety of cognitive dysfunctions that indicate the deviation from a normal brain functioning.

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