

Example of research paper on bipolar 1 disorder

[Health & Medicine](#), [Nursing](#)



Abstract

Depressive Disorders is an umbrella title for a varied range of disorders that include, major depressive disorder, Bipolar disorder I and II, and dysthymia. Bipolar Disorder is a debilitating condition that has a lifetime prevalence of 1-1.6%. It accounted for a \$15.5 billion dollar loss in productivity during the 1990's in the United States (Soreff 2013). This paper hopes to expand your knowledge on the key characteristics of depressive disorders with a specific emphasis on bipolar disorder.

Depression and mania have been written about many times throughout the course of man's history on earth. King Saul was thought to suffer from depression, and his "evils" are described in the Old Testament. Centuries later in his work *De re medicina*, Celsius described the word *melancholia* as a depression caused by black bile (from the Greek: *melan* – black; and *chole* – bile) (Sadock & Sadock, 2007). More recently, in 1882 Emil Kraepelin described manic depression, and the criteria still stands today as those used for the diagnosis of manic-depression I.

As humans, we have a variety of moods. We are never just purely happy or purely sad, our moods have a wide spectrum of changes, but for the most part, people say that they feel like they are in control of their moods and feelings. Mood disorders are a broad spectrum of clinical symptoms characterized by the loss of that sense of control that a "normal" person would have. Bipolar disorder can be defined in a patient who has both episodes of mania and depression or in patients who experience manic episodes alone. Patients who experience symptoms of mania have an elevated mood, grandiose thoughts and behavior, and decreased sleep

(Sadock & Sadock, 2007). These symptoms have to last for at least a week. Patients that experience symptoms of depression feel a sense of constant guilt, loss in concentration, decreased appetite, and thoughts of death and suicide (Sadock & Sadock, 2007).

For a patient to be diagnosed with bipolar disorder I, they must have had at least one manic episode in the past ("AllPsych Online", 2011, Bipolar section, para. 1). During manic episodes, because of the intense feelings of these patients, they may get involved in promiscuous behavior, become violent, or spend excess amounts of money. When the manic episode goes away, and the patient enters the depressive stage, the weight of all the bad decisions they made further depresses them.

In the United States Bipolar disorder affects approximately 1.5% of the population (Harrison's, 2008). Age of onset is generally in the late 20's to early 30's; however there is evidence that shows symptoms can appear in late childhood. The prevalence rate of the disorder is nearly equal in both sexes, however women are more likely to experience symptoms of depression, while men are more likely to experience symptoms of mania (Harrison's, 2008). Recurrence rates are high, greater than 90% of patients that experienced one episode of mania in the past will experience another episode in the future (Müller – Oerlinghaus, Berghöfer, and Bauer, 2002). Studies have shown that more single and divorced people suffer from bipolar disorder, as compared to major depressive disorder; this could be due to the earlier onset of the condition, as well as the result of the swing of moods on the relationship of a married couple (Sadock & Sadock, 2007).

Evidence has shown a strong genetic predisposition to bipolar disorder.

Studies in monozygotic twins shows 80% concordance rate, and in first-degree relatives 5-10% (Müller – Oerlinghaused, Berghöfer, and Bauer, 2002). In a study by Sklar et al. (2008) they demonstrated a significant connection between patients who had bipolar disorder and the identification of the gene MYO5B. MYO5B is a gene that codes for a protein known myosin that is involved in structures of the brain. Myosins are used to transport proteins in neurons, and MYO5B is specifically used for vesicular trafficking. MYO5B also seems to have a regulatory effect on EGFR, which has an effect on downstream signaling pathways of the body. Further study is needed to understand the genes and the exact association between them and bipolar disorder.

Pathophysiological research has shown that changes to the function of the neurotransmitters norepinephrine, dopamine, and serotonin are associated with bipolar disorder. Lower levels of the precursor to acetylcholine, choline, were reported in the red blood cells of people suffering from bipolar disorder especially in people where they have a history of manic episodes. In people that suffer from predominantly depression research has shown that they have lower levels of homovanillic acid in their cerebrospinal fluid (Müller – Oerlinghaused, Berghöfer, and Bauer, 2002).

Until recently the brain could only be studied during autopsy, however the use of computed axial tomography (CAT) and magnetic resonance imaging (MRI) have revolutionized the ability to view the living brain in a non-invasive yet sensitive manner. In depressive disorders in the subcortical regions of the brain, such as the basal ganglia and the thalamus, there is an increased frequency of abnormal hyper intensities. In bipolar disorder specifically,

these hyper intensities reflect the degenerative effects of recurrent manic episodes (Sadock & Sadock, 2007). More recently positron emission tomography (PET) scanning has shown a decrease in brain metabolism of the frontal brain.

Psychosocial factors also effect the development of depressive disorders. One theory proposes that stressful life events can alter the brain biology such that neurotransmitters can be affected as well as neuronal pathways; this leads to the idea that the person is at a higher risk of developing another episode without an external stimulus. Psychodynamic factors are the psychological forces that underlie human behavior. In mania, most theories suggest that it is a defense mechanism against depression. Karl Abraham suggested that mania was due to the inability to tolerate a tragedy, for example the loss of a parent (Sadock & Sadock, 2007).

The diagnosis for bipolar disorder by the DSM-IV requires a distinct manic episode for at least one week. Diagnosis also varies for bipolar disorder with a single manic episode vs. bipolar disorder with recurrent episodes of mania. For the diagnosis of bipolar disorder I, with a single manic episode the patient must be currently in the manic state. This is due to the fact that patients who are experiencing bipolar disorder in their depressive state cannot be differentiated from those afflicted my major depressive disorder. Other specific features that can appear in bipolar disorder include, psychotic features, catatonic features, and woman that have post partum onset. Besides the mood stabilizing or antidepressant drugs that the patient would be on, patients that experience psychotic episodes also need to be put on antipsychotic drugs. Electroconvulsive therapy may also be need for the

patient to experience clinical improvement (Sadock & Sadock, 2007).

Catatonic features include extreme withdrawal, negativism, and severely decreased psychomotor function. While some doctors associate catatonic features with bipolar disorder other doctors do not like to associate them because there is a clear distinction between how a patient acts with catatonic features and a person experiencing a manic episodes. Post partum onset is usually associated with psychotic features and its onset must occur within the first 4 weeks after the birth.

Rapid cycling as defined by the DSM-IV is the appearance of atleast 4 major depressive, manic, hypomanic, or mixed episodes in the previous year in a person diagnosed with bipolar I or II. Each episode has to be separated by either two full months of complete remission or a switch of mood to the extreme opposite (Maj, 2006) Rapid cycling appears most often in women, and is extremely refractive to treatment. Dunner and Fieve (1974) first described rapid cycling and reported a failure of lithium to work as a mood stabilizer in 82% of rapid cycling patients as opposed to 41% in non-rapid cycling bipolar patients.

Lithium is used as the main treatment of bipolar disorder, though other drugs such as valproate and olanzapine are used (Harrison's, 2008). Lithium can help in the acute attack, but can also used for the prevention of further manic episodes, and to some degree recurrent episodes of depression.

Lithium is given in as a loading dose, and then is used at a maintenance dose to keep blood levels constant. Effects may not be apparent for at least a week, so other drugs such as, benzodiazepines can be given to control agitation. Lithium has serious side effects, which include, leukocytosis,

diabetes insipidus, tremor, hypothyroidism, and teratogenicity (Harrison's, 2008). Other treatments include, psychosocial therapy, cognitive therapy, interpersonal therapy, as well as vagal nerve stimulation. It was found that epileptic patients that underwent this method of therapy showed increased mood following it (Sadock & Sadock, 2007).

The differential diagnosis of mania include the effects psycho-stimulatory and/ or sympathomimetic drugs, as well as mania that can be part of other diseases such as, hyperthyroidism, AID's, Huntington's, as well as other neurological disorders. Due to the increase in poor judgment and poor self control alcohol and substance abuse in common.

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