

Treatment and management of bipolar disorder



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The fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) classifies bipolar disorder as a separate category of mental illness (5th ed.; DSM-5; American Psychiatric Association, 2013). Bipolar disorder is a condition where people can experience episodes of mania, hypomania, depression, and mixed mood states. Bipolar disorder is estimated to have a worldwide prevalence rate of 2–5%. The prevalence of type I bipolar disorder is estimated at 1–2% and type II bipolar disorder is estimated at 3–4% (Rybakowski, 2017). The difference in the two types of bipolar disorders is that type I is often associated with mania while type II is more often associated with depression. Bipolar disorder causes significant suffering for patients and their families and has an estimated 10–20% suicide rate (Rybakowski, 2017). Genetic predisposition for bipolar disorder is high, the heritability index is estimated at 0.85, and drugs with mood-stabilizing properties make the most promising pharmacological progress in the treatment of bipolar disorder thus far (Rybakowski, 2017).

While bipolar disorder is mostly heredity, there are some psychological factors associated with the cause and severity of bipolar disorder as well, childhood trauma and life events should be somewhat taken into consideration. Negative experiences in childhood, such as physical, sexual, and emotional abuse play a seemingly large role in the diagnosis of this disorder. Emotional neglect and separation from parents, occurs in patients with bipolar disorder much more frequently than in the rest of the population. In these patients, such events are associated with an earlier diagnosis of the disorder and a more severe impact of the illness. Suicidal behavior, substance abuse, and somatic diseases may also play a role in the

severity of the disorder. In adulthood, stressful life events can trigger manic episodes in type I disorder and depressive episodes in type II. A study of 222 patients with bipolar disorder shows that more than 60% of people with the disorder experienced at least one traumatic life event 6 months before a new episode (Simhandl, Radua, König, & Amann, 2015).

Recent epidemiological studies in 2014 have identified multiple environmental factors that could be related to bipolar disorder in adults. Along with factors occurring during pregnancy, the most important factor in being diagnosed with bipolar disorder could be a prenatal infection of influenza. Studies demonstrated that maternal injections with influenza exposure was related to a risk that was five times greater than children without the possible exposure. This may suggest that prenatal influenza can be a risk factor for bipolar disorders. The same group reported that the children of women who smoked during their pregnancy showed double the risk for bipolar disorder in adulthood (Uher, 2104).

Typically, the treatment for bipolar disorder entails a combination of at least one mood-stabilizing drug and an atypical antipsychotic, plus psychotherapy. The most commonly used drugs for the treatment of bipolar disorder are lithium carbonate and valproic acid (also known as Depakote). Lithium carbonate can be extremely effective in reducing mania, although doctors still do not know precisely how it works. Lithium may also prevent relapse of depression, but it seems to have a larger effect on the treatment of mania than it does depression, therefore, it is often given in a combination with other medicines known to have a greater value for depression symptoms, sometimes including antidepressants. (Uher, 2014)

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Depakote is a mood stabilizer that is helpful in treating the manic or mixed phases of bipolar disorder, along with Equetro, another antiepileptic drug. These drugs may be used alone or in combination with lithium to control symptoms. In addition, newer drugs are coming into the picture when traditional medications are ineffective. Lamotrigine, another antiepileptic drug, has been shown to prevent depression and, to a lesser degree, reduce manias. Other antiepileptic drugs, such as Neurontin, Trileptal, or Topamax, are regarded as experimental treatments that, only sometimes, have value for symptoms of bipolar disorder or other conditions that often occur with it. With these being discovered rather recently, there just isn't enough evidence out there proving how affective these treatments are.

A significant role of genetic factors in the development of bipolar disorder was presented by Craddock and Sklar in their review, published in 2013. In recent decades, previous findings from family and twin studies have been supported by family heritage and genetic association research, using mainly the candidate gene approach. The latest evidence comes from the genome-wide association studies, showing and replicating previous claims of bipolar disorder being related to numerous other genetic variations such as CACNA1C, ODZ4, and NSAN (Craddock & Sklar, 2013). This is further evidence showing that the bipolar disorder does indeed mainly come from genetics.

Some of the most recent research, as recent as of July 24, 2018, has suggested that inflammation of the mother's body during pregnancy can be a cause of all types of bipolar disorders. Inflammation is the body's natural response to environmental disturbances such as diseases. Inflammation can

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also be caused by everyday factors such as; obesity, diet, drugs, maternal depression, poverty, and stress. While these exposures don't normally cause bodily damage to the fetus, the real damage can be seen in the brain development of the child. Inflammation in pregnant mothers has been linked to mental disorders in their children. For example, studies suggest that the child of a pregnant mother who catches the flu may run an estimated four times higher risk for developing bipolar disorder. The studies suggest that the infant's brain is not affected by the mother's illness or drug use directly, but rather by the inflammatory response to stimuli. The evidence in this theory is found through emerging brain scan studies. The researchers measured blood levels of an inflammatory messenger chemical, IL-6 (interleukin-6), in 84 pregnant mothers - and followed-up with neuroimaging and behavioral assessments of their children. " By examining the brain shortly after birth, we were able to distinguish between the influences of prenatal and post-natal environmental factors on the brain's development," said Claudia Buss. Using MRI technology, they found the levels of the chemical IL-6 were abnormally high in the infants whose mothers had higher inflammatory rates during pregnancy. This is a problem because the higher level of the chemical seemed to be linked to poorer circuit connectivity in newborns and to reduced working memory at age two. Without the ability of memory, we know that functions such as inhibition and impulse control drastically decline. Without these very important functions it can be seen why these children have a higher chance of being diagnosed with any type of bipolar disorder (Buss, 2018).

While the discovery of antipsychotic drugs isn't new, being discovered by chance in the 20th century, Scientists funded by the National Institutes of Health have achieved a landmark of psychiatric neuropharmacology by deciphering the molecular structure of a widely prescribed antipsychotic docked in its key receptor. They hope this new research could be the key to designing new antipsychotic drugs to help treat bipolar disorders. With many unwanted side effects coming along with the current antipsychotic drugs we use today, scientists revealed a designer opioid compound that selectively acts through a different opioid receptor, that has a more subtle side-effect profile. We have discovered that the D2 receptor in the brain has a much deeper "pocket" that scientists believe could be targeted with new antipsychotic drugs that would cause way less severe side effects when attempting to treat bipolar disorders with antipsychotics. While no new drugs have been developed yet, this dopamine receptor could be the answer to reducing side effects when it comes to medicating people with the bipolar disorder (Roth & Soichet, 2018).

With most treatments to helping people with bipolar disorder are based on medicine, this study finds that instead of using drugs there is a possibility that bright light therapy might be an alternative answer. Mood stabilizers are not very effective in treating the depressive symptoms of bipolar disorder. Although there is little evidence to support the use of antidepressants in treating the depressed phase of bipolar disorder, many clinicians prescribe antidepressants even though there is a risk of triggering a manic episode. Clearly, there is a need for more effective options for treating bipolar depression. Scientists have found that patients who increase their exposure

to bright lights. In the study patients increased their exposure to bright white light from 15 minutes to 60 minutes a day over a four-week period. The study was only 6 weeks long, but 68 percent of those with a moderate severity of depressive symptoms were in remission compared to 22 percent who received placebo treatments instead. Most of the improvement took place between weeks four to six, but there could have been more improvement in the depressive symptoms if the study had gone on for a long period of time. The only problem with this study is the researchers have no idea as to why this treatment seemed to work. They speculate that it could have something to do with irregular body clocks caused by bipolar disorders. However, while the study was being conducted all patients were on normally prescribed mood stabilizing medications, and some were also taking antidepressant medications. The participants prescribed antidepressants were evenly spread out between the treatment and placebo groups. No changes in pharmacologic treatment of the patients were made for any participant during the study period. While this study did show some promising data, it could be due to the fact that patients were on their normal prescribed medications. This may mean that patients were just responding better to the medication they were on with the use of the light or it could be the use of the light alone that suppressed their depressive states (Rubin, 2017).

Even with all of the recent advancements in the treatment and cause of bipolar disorders we can't seem to find one treatment as the most effective and efficient. Lots over very recent research on the topic has been done due to public awareness steadily rising over time. I have shown countless

examples of possible treatments and causes of the disorder, but all scientists have seemed to discover is that it is in fact mostly genetically related with some effects of the outside world either increasing or decreasing the severity of the disorder. Until we find a sure way to treat this disorder with little to no side effects the research will continue in abundance and maybe even increase as it is one of the most difficult problems psychologists and doctors are faced with today. Characterized by drastic mood swings, mania, depression, and significantly higher suicide rates, the bipolar disorder really is one of the most troubling and challenging disorders scientists have even been faced with. So far, the best treatment seems to be through pharmaceutical means with lithium being the most common prescribed drug to help people deal with the devastating effects of the disorder. Will there ever really be a cure for this disorder? That is a question it seems only time can tell with much more research and continued experiments.

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