

# The Association Between Social Influencing Factors and Bipolar Disorder

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## ABSTRACT

Many studies have shown that psychosocial factors play a role in bipolar disorder, but most of them mainly focused on the impact of a single factor on bipolar disorder, and the literature review on the social influencing factors of bipolar disorder is still lacking. Therefore, the present study selected three important factors: childhood trauma, life events, and social support to explore the relationship between social influencing factors and bipolar disorder using the approach of literature review. We hope that this article can help readers have a preliminary and macro understanding of the social influencing factors of bipolar disorder. In the main body, according to the order of childhood trauma, life events, and social support, the influence of each factor on bipolar disorder and the mechanism behind the influence are stated in turn. In conclusion, these effects are briefly summarized. All in all, childhood trauma, life events, and social support are all important social factors for bipolar disorder.

**Keywords:** bipolar disorder, social factors, childhood trauma, life events, social support.

## 1. INTRODUCTION

Bipolar disorder is a long-term illness characterized by mood and energy changes [1]. Mood swings are prevalent in everyday life, especially in stressful situations. If mood swings are strong and persistent, causing substantial distress or incapacity, there may be a potential affective disease. Affective disorders can be classified along a spectrum based on the breadth and severity of mood elevation, ranging from unipolar to bipolar II to bipolar I [2]. Unipolar disorder causes just depressive episodes, whereas bipolar II and I disorder cause more powerful mood elevation episodes. Manic and depressive cycles are characteristics of bipolar I, while bipolar II is characterized by recurrent major depression and hypomania. According to the diagnostic criteria listed in DSM-V, the core symptoms of mania are high mood or irritability, high energy, accelerated thinking and speech, reduced sleep needs, and unrealistic ideas that do not consider the consequences. The symptoms of hypomania are similar to mania but lower in severity. On the contrary, depression is characterized by depressed mood, inability to experience pleasure, loss of interest in previously interesting activities, abnormal

changes in sleep and appetite, fatigue, lack of energy, decreased attention and thinking ability, and suicidal thoughts.

The prevalence of bipolar disorder varies with different types. In a global study of mental health [3], bipolar disorders were shown to be prevalent across cultural and ethnic groups with a lifetime prevalence of 6% for bipolar I disorder, 4% for bipolar II disorder, 14% for subthreshold bipolar disorder and 24% for the spectrum of bipolar disorders. However, previous studies have shown that bipolar II disorders have a high frequency of episodes, a high prevalence of mental comorbidity, and recurrent suicidal behavior that affects life quality. Although bipolar I condition appear to have a more convoluted development and a terrible prognosis due to the severity of cross-sectional symptoms [4].

Many factors are related to bipolar disorder, such as genes, prenatal and perinatal factors, history of medical conditions, childhood trauma, life events, and social support [5-7]. Besides, the onset of bipolar disorder is the result of the complex interaction among neurobiology, genes, stress, and psychological vulnerability at different developmental stages [8]. At the start and progression of

the condition, interpersonal circumstances have a risky or protective role. Childhood hardship (e.g., sexual or physical abuse, neglect), life events, and highly expressed family emotions and discord seem to elicit or worsen some inherent vulnerabilities, leading to a more debilitating course in some patients [9-10]. In addition, social background such as socioeconomic status of subjects, unemployment, and income also have significant effects on bipolar disorder [11]. Hence, the etiology and onset of bipolar disorder are considered to be determined by biological genetic factors and social environmental factors.

Since bipolar disorder is a serious, recurrent and persistent disease with serious damage, such as alcoholism, suicide, divorce, and unstable work history [12], the importance of psychosocial factors in the pathogenesis, course, performance, and therapies of bipolar disorder has also attracted more and more attention in recent decades. Our aim of the review is to summarize the impact of three social factors which are childhood trauma, life events, and social support on bipolar disorder and discuss possible influencing mechanisms behind them. In this way, we hope to help readers understand the social influencing factors of bipolar disorder and how they affect bipolar disorder.

## **2. SOCIAL FACTORS**

### **2.1. Childhood Trauma**

#### *2.1.1. Impact of Childhood Trauma on Bipolar Disorder*

Childhood trauma, which has many subtypes involved, has been recognized as one of the significant factors leading to the onset of bipolar disorder. According to Garno et al. [13], the most frequent subtype of childhood trauma is emotional abuse, which was reported by 37% of patients with bipolar disorder in his study. 24% of others reported physical abuse, 24% of emotional neglect, and 12% of physical neglect. Each type of childhood trauma was interrelated, with a third of people with bipolar disorder experiencing two or more different types of trauma. The hypothesis that there is a link between childhood trauma and the occurrence of bipolar disorder has been supported by a series of studies.

Many bipolar patients have reported trauma in childhood. According to Garno et al.'s study [13], in order to assess the different types of childhood abuse and prevalence reported by grown-up bipolar disorder patients and in relation to clinical findings, they conducted an experiment comprising 100 patients and rated the presence of childhood abuse by the Childhood Trauma Questionnaire. Also, the clinical status is evaluated using standardized symptom severity indices. On the other side, statistical analyses were conducted using the SPSS. As a result, they found that nearly one-

half of the study group had experienced serious childhood abuse in at least one field, and the most commonly reported one is emotional abuse. Therefore, they reached the conclusion that extreme childhood trauma seems to occur in half of the bipolar patients. Also, the trauma may result in more complex psychopathological manifestations.

The occurrence of childhood trauma is proved to be more common among bipolar disorder patients compared with healthy subjects. In Watson et al.'s study [14], in order to examine the affection of childhood trauma on the clinical course of bipolar disorder, they designed an experiment including 60 bipolar disorder outpatients who received depressive episodes and 55 control subjects and used the Childhood Trauma Questionnaire to conduct the childhood trauma retrospective assessment. During the experiment, Spearman's rho was used to examine CTQ scales for pooled bipolar and found extremely high rates of childhood trauma in patients with bipolar disorder compared to controls. And then reached a conclusion that diagnosis of bipolar disorder is related to a higher total CTQ score.

Childhood trauma has a significant impact on the development of bipolar disorder. To investigate the link between clinical expression and subtypes of childhood trauma, Etain et al. [15] conduct an experiment including 587 DSM-IV-defined bipolar patients. The Childhood Trauma Questionnaire was used to obtain a history of childhood trauma. Clinical variables were evaluated using Structured Clinical Interview for DSM-IV Axis I disorders. As a result, an earlier age of onset of bipolar disorder, attempted suicide, rapid cycling, and an increased number of depressive episodes were all found to be significantly associated with at least one childhood trauma subtype. In conclusion, there was a consistent association between childhood trauma and more severe clinical features of bipolar disorder.

Childhood trauma can also make bipolar patients spend more time in complete remission. To investigate whether a history of exposure to assaultive trauma during childhood would lead the patients to experience a relapse of episodes with psychotic bipolar disorder in 6- and 24-month follow-ups, Neria et al. [16] conducted an experiment by using Structured Clinical Interview for DSM-III-R, or SCID (9, 10) to assess 109 first-admission patients. The analysis used in follow-ups 6 and 24 months is a Global assessment of functioning (GAF) for the best functioning during interview intervals. They found that patients who experienced assaultive trauma in childhood report greater distress and the unexposed patients are 3.3 times more likely to be incomplete remission in a single episode. To conclude, the occurrence of sexual physical abuse might influence the remission of bipolar disorder.

### 2.1.2. Mechanism of the Impact

There are several possible mechanisms that explain the association between childhood trauma and bipolar disorder. Garino et al. [13] stated that childhood is a critical period with significant vulnerability because of the maturation of the central nervous system, which is highly sensitive to factors related to the environment. During the period of childhood, significant processes such as proliferation and synaptogenesis that affect cognitive function and emotional regulation would take place. In other words, early life events or stressors may alter the organization of brain development. To be specific, these changes may depend on the severity and long-term nature of concerning events.

Another hypothesis that may help to understand the link between childhood trauma and the disorder is called an intergenerational transmission of childhood trauma in bipolar families [13], which is a controversial hypothesis that suggests that parents' own traumatic childhood experiences may have contributed to poor parental attitudes [17], and the resulting environment may make children more vulnerable to neglect and abuse. Even if this belief is easily accepted, evidence is needed to support this hypothesis. Another neurodevelopmental interpretation related to parenting style is proposed by MacKinnon et al. [18], which indicated a theoretical model based on mood instability for rapid cycling and borderline personality development. In more detail, since genetic factors, and abnormalities in brain structure and function may predispose children to emotional stability, such affective dimension and related behavioral disturbance may result in maladjusted or inconsistent parenting styles, which may lead to emotional abuse. Such inappropriate attitudes from caregivers may lead to stimulus both in the external and internal field, then reinforce mood instability.

## 2.2. Life events

### 2.2.1. Impact of Life Events on Bipolar Disorder

The term "life events" refers to any significant changes in one's environment that have personal and societal effects [6]. Many life events often appear in unexpected ways for they are influenced by the outside instead of individuals themselves. They often lead to people's emotional fluctuations or mood instability, no matter positive or negative life events. As a social factor, it has an important impact on bipolar disorder.

Many studies have discovered a link between stressful life events and the start of bipolar episodes. In Malkoff-Schwartz et al.'s study [19], they aimed to explore the role of social rhythm disruption (SRD) events and severe threat events in the emergence of mania and depression in bipolar disorder. Researchers used the Bedford College Life Event and Difficulty Schedule

(LEDs) to interview 39 bipolar patients with manic ( $n = 20$ ) and depressive ( $n = 19$ ) index episodes to measure the presence of serious events 8 weeks before the onset and in the control period. The degree of SRD was graded for all life events. Then the researchers discovered that more patients with bipolar disorder experienced at least one serious event and SRD event before onset than the control group. The only significant pre-onset difference was for manic patients with SRD events when subjects were separated into depressed or manic periods and compared to the control group. In addition, the proportion of pre-onset SRD events in manic patients was higher than that of depressive patients. Then they reached a conclusion that events featured by SRDs routines were linked to manic episodes, but not depressive episodes. And serious events seem to be related to the onset of bipolar disorder.

Studies have shown that life events and bipolar disorder interact. Koenders et al. [20] assessed the temporal link between life events and mood disruptions in 173 outpatients with bipolar disorder (BD I and BD II) through a two-year prospective follow-up study. Life events were assessed by Paykel's self-report questionnaire. Monthly functional impairment and emotional symptoms were evaluated by the Quick Inventory of Depressive Symptomatology-Self Report (QIDS-SR) and the Young Mania Rating Scale (YMRS). After analysis, temporal links were found between life events and mood disruptions in bipolar disorder. In the first direction, negative events occurred before both manic and depressive symptoms, as well as functional impairment related to them, while positive events preceded only mania and functional impairment due to it. This significant association mainly occurred in the BD I group instead of the BD II group. As for another temporal direction, researchers found that mania predicted positive events and depression predicted adverse life events. There was no significant difference between BD I group and the BD II group. Then they concluded that stressful life events were both the origin and outcome of mood symptoms in bipolar disorder.

Life events not only affect the onset of bipolar disorder but are also related to the recovery of patients with bipolar disorder. In order to investigate the effect of severe negative life events on the recovery time of BD patients, Johnson and Miller [21] recruited 67 participants to complete a longitudinal and naturalistic study. Participants' symptom severity was assessed every month, and they had a face-to-face interview about life events at the 2-, 6-, and 12-month follow-ups. LEDS and Life Events Summary Index were used for the interview. Researchers discovered that those who have had major bad life experiences take more than three times as long to recover as people who haven't had serious negative life events, and the influence of life events was not mediated by drug compliance. Even with adequate medication, patients experiencing severe stressors seemed to respond

poorly to treatment. As a result, they came to the conclusion that the timing of recovery from bipolar disorder episodes is affected by life events.

### *2.2.2. Mechanism of the Impact*

Life events that often happen in an unpredictable way and bring pain can disrupt social rhythms, and social rhythm disruptions are related to symptoms of bipolar disorder [22-23]. According to the social zeitgeber theory proposed by Ehlers et al. [24], social zeitgebers, that is, personal relations, social needs or tasks, may involve biological rhythms and are implied by the relationship between the appearance of life events and the stability of social rhythm. Some life events or difficulties are regarded as a loss of the social zeitgebers which is considered to lead to disturbances in the social rhythm or the rhythm of daily life activities. Changes in biological rhythms are hypothesized to result from disturbances in social rhythms. Disturbances of social and biological cycles, in turn, are thought to be a contributing factor in the initiation of mood episodes in sensitive people [25].

Moreover, the intervention of major life events in daily life may lead to sleep deprivation or sleep disturbance, which have an impact on depression and mania. According to American Psychiatric Association, the need for sleep reduces when manic episodes occur whereas depressive episodes can lead to insomnia or hypersomnia for bipolar patients. Sleep disturbances are a precursor to manic and depressive episodes [26]. Besides, a series of studies have found associations between sleep disturbances and emotional changes in bipolar disorder. In Barbini et al.'s study [27], researchers conducted a study with 34 manic bipolar inpatients to examine the relationship between nighttime sleep duration and the degree of manic symptoms. And they discovered a significant inverse correlation between the two, indicating that the shorter the sleep duration, the more intense the manic symptoms the next day. By analyzing the self-reported mood, sleep, and bed rest of 59 bipolar outpatients who received standard treatment, Bauer et al. [28] found an inverse relationship between changes in sleep and/or bed rest and changes in mood, and the incubation period between these events is usually 1 day. It changes to irritability/mania the next day after the decrease in sleep or bed rest, while after the increase in sleep or bed rest, it changes to depression the next day. Another research discovered that sleep loss can predict depressive symptoms during 6-month follow-up, but not mania after a longitudinal study with 54 bipolar I patients [29]. Although the results of the above studies are slightly different, they all reveal the longitudinal relationship between bipolar disorder and sleep disturbances. As sleep is an important part of circadian rhythms and changes in circadian rhythms are brought by social rhythm disruptions, the relationship between life events and sleep disturbance may be mediated by social rhythm

disruptions. Anyway, more empirical research is needed to explore the mechanism behind life events and bipolar disorder.

## **2.3. Social Support**

### *2.3.1. Impact of Social Support on Bipolar Disorder*

Humans have the need for social support, and while time alone is crucial, most of us flourish when we are surrounded by helpful others. Social support is often regarded as a vital component of successful relationships and mental health. It is defined as having a support system of family and friends to whom you may turn in an emergency. Whether you're going through a personal problem and urgently require assistance or simply desire to spend time with others who are concerned regarding your well-being, these connections are crucial to how you function in your daily life. The importance of having a strong social support system is frequently addressed by psychologists and other mental health professionals. According to research from Johnson et al. [30], Kazan Kizilkurt et al. [31] and Owen et al. [32], bipolar disease patients with more social support could recover faster from mood episodes and have fewer suicidal thoughts and behaviors. People who have more social support have fewer weeks of mood episodes, particularly depression, and have better overall functioning.

In order to examine the effects of stressful circumstances and social support on the recurrence of episodes in bipolar I disease, Cohen et al. [33] conducted prospective and cross-sectional studies. In this study, individuals have stated on their own with respect to receiving social support from a best friend, a parent, and a beloved one, which was then pooled to generate a total network support score. Over the course of a year, prospective appraisals of stressful life situations on a continuous basis, symptomatology, as well as medication adherence were undertaken. Logistic regressions were used to predict the occurrence of episodes. As a result, the researchers found out that lower levels of total social support and higher levels of stress over a one-year follow-up period, both indicated a depressed recurrence as expected, and social support did not reduce the negative effects of stress.

However, we must admit that social support still plays an important role during bipolar disorder even though it might not help to reduce the influence that stress brings to patients that much. There is research conducted by Johnson et al. [34], in which the goal was to explore the significance of social support in bipolar disease remission and recurrence. Researchers used two different questionnaires - the Interview Schedule for Social Interaction and the Interpersonal Support Evaluation List - that measure perceived social support to get feedback from 94 bipolar individuals who have been stabilized.



And they discovered that partial-recovery patients received far less social support than individuals who have fully recovered. Patients who relapsed had a much lower level of social support compared to those who did not relapse throughout a planned one-year follow-up period. Bipolar patients who attain complete interepisode remission report receiving greater social support than those who do not, according to the researchers. A lack of social support can increase the risk of relapse in bipolar disorder.

In addition to understanding the need for social support for bipolar patients, there is another research study by Johnson et al. [35] that focuses on determining which aspects of social support have the greatest influence on bipolar disorder's progression, with a particular focus on the symptoms of depression. The researchers invited thirty-one patients suffering from Bipolar I disorder to be observed for 9 months. Patients performed a standardized assessment of symptom severity every month, the 2-month follow-up Interpersonal Support Evaluation List, as well as a follow-up period of six months Self-Esteem Inventory by Rosenberg. Following that, the researchers concluded that according to multiple regression models the most relevant predictor was support for one's own self-esteem of depression change during a 6-month follow-up and revealed that self-esteem is a mediator in terms of the effects of social support.

### *2.3.2. Mechanism of the Impact*

Perspectives on social support from an anthropological perspective supplied when there is a conflict or a displacement [36] underline the necessity of considering the level of social assistance provided as preventative or intervention. Social support from family and friends can help bipolar people avoid the negative consequences of stress or improve their functioning directly [37]. According to the buffer theory, social support reduces the potential of psychosocial adversity to trigger sickness episodes [38]. Broadhead's group - Turner [39], Henderson [40], Kessler & MacLeod [41], Cohen & Syme [42] - suggested that hypothalamic systems could mediate the impacts of social support, and that if this is the case, the latter would be predicted to work by reducing the effects of stress. The intuitively accepted premise that being able to turn to people for help mitigates the consequences of adversities and attenuates linkages between adversity and the development of the psychiatric condition, which is represented in this way as the 'buffer theory' of social support. The buffer theory claims to explain the onset of psychiatric problems at its most ambitious level: excellent social support minimizes the likelihood of sickness in the face of hardship [38]. Another level is where the theory is used after onset and can only explain exacerbation: in this case, social support may protect against the potential for intervening stress to

prolong or intensify symptoms [38]. Furthermore, individuals and their degrees of support operate within cultural settings, which include people's perceptions, beliefs, and attitudes about others, as well as the social connections in which they engage. These factors can have an impact on an individual's idea of support, their perception of stressful situations, their evaluation of whether social assistance is genuinely supportive, and their willingness to supply, receive, accept, or reject support at all levels [43]. As a result, social assistance can aid in the development of a more just and inclusive society.

## **3. CONCLUSION**

In conclusion, childhood trauma, life events, and social support are recognized as significant factors that have a great impact on bipolar disorder, such as the onset and recovery process of the disorder. According to the literature review, childhood trauma subtypes which include emotional abuse, physical abuse, and sexual abuse are interrelated and frequently reported by bipolar patients. Also, the mechanism of childhood trauma is related to a possible hypothesis called intergenerational transmission of childhood trauma in bipolar families. Another possible explanation is that childhood is a vulnerable, developmental period of growth. Compared with childhood trauma, life events occur more frequently in everyone's life. In a sense, childhood trauma can also be regarded as a kind of life event. Both positive life events and negative life events have an impact on bipolar disorder, but the associated symptoms are different. As the occurrence of life events is often affected by the environment and society, they are often unpredictable. Consequently, life events are easy to cause social rhythm disturbances and then lead to changes in biological rhythms, which can cause mood instability and the onset of affective episodes. For another factor, social support is widely mentioned as a key component of happy relationships and mental wellness. People with bipolar disorder who have more social support, on the one hand, experience fewer weeks of mood episodes, particularly depression, and have better overall functioning. Furthermore, among the numerous types of assistance, self-esteem support has been identified as the most important predictor of change in bipolar disease. On the other hand, it has been established that a lack of social support increases the risk of relapse in bipolar disorder. The effect of social support on mental illness can be mainly explained by buffer theory, which shows that social support can buffer stress and prevent the potential for intensifying or prolonging symptoms. Overall, enough empirical evidence has pointed to the conclusion that the three social factors of childhood trauma, life events, and social support are critical for people with bipolar disorder.

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