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Causes of Bipolar Disorder in Adolescents

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Abstract: Mood fluctuation is common in daily life, however, severe mood fluctuation may be a symptom of affective illness. Bipolar disorders as a severe affective illness have a high prevalence, especially among adolescents. Although one of the most frequently discussed psychiatric illnesses is bipolar disorder, the causes are still not precisely known. Through reviewing previous research, this paper analyzes the causes of bipolar disorder, including personal and social factors, as well as the intervention and treatment of bipolar disorder. Both personal and social factor serve as important variables in affecting bipolar disorder. Offspring of parents with bipolar disease undoubtedly have considerable genetic impact; nonetheless, an adolescent's individuality leads their mood to swing correspondingly, ultimately progressing to bipolar disorder. Social factors such as family environment have a huge impact on adolescents' mental state; interpersonal relationships strongly affect adolescents' mood status, and furthermore, social environment also hugely affects how adolescents interact with their peers, as a result causes bipolar disorder. The intervention and treatment of bipolar disorder should be further developed in future research.

Keywords: bipolar disorder, causes, intervention, treatment

1. Introduction

Depression, eating disorder, schizophrenia, all of which have caught the world 's attention, especially when a mental illness is happening among adolescents. These years, the prevalence of mood disorders have been rising significantly. One of the most prevalent mental illnesses in the world, bipolar disorders, also affect teenagers. Bipolar disorders (BP) is known as a group of brain disorders that can fluctuate a person's mood and mental state. Falret initially identified bipolar disorder as a unique condition in the 1850s [1]. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) includes cyclothymic disorders, bipolar I disorder, and bipolar II disorder under the heading of "bipolar and related disorders" [2]. The most recent edition of the International Classification of Diseases (ICD), which was just released [1], also includes bipolar illnesses. The related researches focus on the genetic and neurobiologic features of bipolar disorder and on the patients' behavior, as a major mental health issue, understanding the etiology of bipolar illness is crucial.

Recent researches mainly focus on its genetic and neurobiologic features, and its intervention and treatments, but causes of bipolar disorder focusing on adolescents are not enough, therefore, it is significant to ascertain the cause of adolescent bipolar disorder and its characteristics. In addition to providing a brief overview of the diagnosis, criteria, and prior teenage features, this essay will mostly focus on the personal and societal factors that impact bipolar illness.

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2. Bipolar Disorder and Adolescent Characteristics

There are numerous types of bipolar disorder (BP), bipolar I disorder and bipolar II disorder included [2]. These may contain various symptoms, which may cause substantial mood swings, for example, euphoric sensations and tremendous senses of melancholy. According to the DSM-5, sufferers may feel helpless and hopeless most of the time, even have suicide attempts, and may markedly diminished interest or pleasure during the depressive episodes [2]. During the hypomania or mania episode, they may have a high mood, decreased need of sleep, rapid thinking, and may speak faster than normal [2]. For a diagnosis of bipolar disorder, the patient must meet certain requirements during the manic or hypomanic phase, such as elevated self-esteem, a diminished sleep need significantly increased talkativeness, etc. Depressed mood, considerable weight loss, sleeplessness, weariness or loss of vitality, etc. are requirements patients must satisfy during serious depressive episodes [2].

Adolescents, in the time of growing, differentiate in characteristics. Physical characteristics, for example, they have significant increases in weigh, height, and young people may go through periods of lethargy and restlessness as a result of fluctuations in their basal metabolism [3]. In the aspect of psychological characteristics, young teenagers at these years look for their own feeling of originality and uniqueness [3]. They could also become more conscious of their ethnic identity [3]. Young adolescents seek to maintain peer acceptability while striving for an adult approval and adult acceptance [3]. Due to competing allegiances, young adolescents may face conflict as their affiliations expand to include family and peers [3]. Bipolar disorder is quite prone to emerge in teenagers since they are still developing their sense of self. Teenagers who suffer from bipolar illness may feel quite alone and have no social support [4]. In the US, 2.9% of teenagers are thought to have bipolar illness, and 2.6% of those have severe impairment [5]. To discuss the causes of BP in adolescents, the causes are divided into two basic aspects: personal and social factor.

3. Causes

3.1. Personal Factor

3.1.1. Genetic and Biological Factor

With an estimated heritability of 59-85%, family history of BP is the best indicator of developing bipolar disorder [6]. One in three children of parents who have severe mental illness (SMI) are at risk of having SMI [7]. A large number of genetic variants, each of which slightly raises the chance of developing SMI, contribute to the heritable risk of the disorder [7]. It is believed that several genes with tiny effect sizes contribute to the group of disorders [1], showing that genetics has great significance on bipolar disorder patients. Researchers have shown that adolescents with bipolar disorder frequently have metabolic syndrome, from a biological perspective [8]. In the research by Antonin Sebela and collaborators [6], adults from the medical registry of bipolar disorder patients and their offspring were requested to take part. Individuals with BD types I or II are included in the database, which was created at the National Institute of Mental Health in the Czech Republic [6]. An advertising was issued in the neighborhood's elementary and secondary schools to find the control parents and their children [6]. During school days and free days, independent analyses of sleep data were conducted [6]. Adolescents of bipolar parents had decreased physiological catch-up sleep on free days, which may indicate a reduced need for sleep in this group, based on the findings [6]. All these show that both genetics and biological factors have a strong impact on adolescents in bipolar disorder.

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3.1.2. Personality Factor

As adolescents are in the age of forming their own personalities and character, their varied personalities bring them to different mental state. Adolescents with high emotional exuberant temperament are likely to have bipolar I disorder, and adolescents who have higher melancholic temperament characteristics are likely to develop bipolar II disorder [9]. Zhu used TEMPS-A to evaluate bipolar disorder patients' types of emotional temperaments, including cyclothymic temperament, depressive temperament, anxious temperament, irritable temperament and hyperthymic temperament [9]. Zhu recruited the patients in Jining Psychiatric Hospital from September 2015 to September 2016, aging 18 to 60 [9]. There were no significant differences in to ratio of male to female, average age, age of onset, education level and occupation between the bipolar group and control group [9]. Bipolar disorder patients scored higher than healthy first-degree relatives and higher than the control group on the cyclothymic temperament scale. With depressive temperament and anxious temperament factor, the bipolar disorder group scored higher than healthy first-degree relative group and the control group. However, when compared with irritable temperament and hyperthymic temperament, the control group's scores were lower than those of the bipolar disorder group and healthy first-degree relative group [9]. And results were, the bipolar group have higher score in total of the five temperaments than the control group [9]. The differences were significant, showing that a person's personality, or temperament can have a massive impact on bipolar disorder.

3.2. Social Factor

3.2.1. Family

Family serves as a fundamental aspect in an adolescent's social life, and a major leading cause of BP is a strained family relationship. Researchers have found that compared with adults, adolescents have a more negative perception of family intimacy, especially for high school students, they are most likely to form a negative intimacy with their family [10]. And research have found that in a family, if a family member can't play his or her role effectively, he or her cannot take his or her own responsibility [10]. In daily life, adolescents will get less support from the family, which may cause some type of emotional issues, the perceived ability of family cohesion and family adaptability will get worse [10]. Lack of effective communication, care and support may cause individual's sensitivity, fear, and lack of security [11]. Also, when parents habitually adopt attitudes such as denial, rejection and punishment to adolescents and rarely praise or encourage adolescents, adolescents may lack sense of security and achievement, have low level of self-esteem, always feel fearful and anxious [11]. And the early onset of most adolescents with bipolar disorder is related to childhood trauma factors, especially children's emotional and behavioral trauma [10]. The psychosocial function of patients is impaired, and the number of hospitalizations is high. Most of the patients are related to emotional abuse and family neglect factors, especially those who have been physically abused and the frequency of bad mood is relatively high [10].

3.2.2. Social Environment

Stigma comes up while discussing how the social environment impacts BP sufferers. The term "psychiatric stigma" describes pervasive, internalized stereotypes that are hostile toward those who are classified as having mental illnesses. It is a social injustice that coexists with discriminatory actions and really harms the individuals it affects [12]. Stigma crosses three levels, including structural, social, and self-stigma, according to the theoretical framework for stigma. The term "structural stigma" is used to characterize institutional policies and practices that consistently limit the opportunities and rights of those with mental conditions [12]. Large social groupings adopting

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preconceptions about individuals with stigmatized conditions and acting against them is referred to as social stigma. The absorption of societal beliefs and discriminatory actions is referred to as self-stigma [12]. The negative effects of stigma include decreased functioning, worsened life quality, higher symptom levels, loss of social support, and decreased success in the workplace [12], and make people believe that these people are violent, weak and unpredictable. At adolescents' age, they are likely to experience social stigma and self-stigma, causing an unstable mood and a series of mental health issues which leads to bipolar disorder.

3.2.3. Interpersonal Relationships

During a person's lifespan, personal interactions and attachment continue to be key developing features of human existence [13]. Youth with BP experience substantial interpersonal difficulties [14]. Adolescents with BP may experience extreme loneliness [4]. They are prone to have relationship issues, which might act as a catalyst for developing BP. When adolescents have less social interaction with peers, they may have a low mood and develop depressive symptoms. Sewall and other researchers conducted a study to examine the association between stigma and suicide ideation in bipolar disorder patients [14]. 404 of the 446 juveniles in the intake sample, or youths, were participants; their ages ranged from 7 to 17 years and 11 months [14]. The differences between BP kids with and without suicidal thoughts were examined using standard parametric and nonparametric bivariate tests along clinical, familial, and demographic characteristics [14]. The present suicidal ideation group reported significantly lower connection quality with friends when the youth's average scores across the peer domains were considered. This study demonstrates the impact of interpersonal interactions on bipolar teenage patients [14].

4. Intervention and Treatment

4.1. Medical Treatment

The effectiveness of acute therapy for adolescent bipolar illness has been examined in a few small, placebo-controlled studies. Olanzapine, Risperdone, Quetiapine, and Aripiprazole have been shown to be more beneficial than a placebo in the acute management of bipolar illness in young individuals who suffer manic or mixed episodes [15]. Open-label research has suggested that the use of lithium monotherapy, lamotrigine by itself, and supplemental lamotrigine treatment may be helpful in reducing the symptoms of moodiness in adolescent bipolar disorder [15]. For young people who were resistant to treatment, open-label clozapine therapy has been demonstrated to be successful [15]. Ziprasidone, carbamazepine, lithium, lamotrigine, and clozapine have all been shown to be beneficial in open-label research, but more conclusive results will need to come from randomized placebo-controlled trials [15]. Although pharmacological therapies have shown some positive results, it's still important to find and improve non-medicine treatment.

4.2. Non-medicine Treatment

The treatment of bipolar illness in teenagers has benefited from several psychosocial therapies. For instance, it has been demonstrated that dialectal behavior therapy significantly lowers self-harming, suicidal thoughts, and depressive symptoms in teenage bipolar disorder sufferers [15]. Individual family therapy (IFT) and multifamily psychoeducation groups (MFPG) were also created to help relatives of adolescents with mood disorders by offering help and support, psychoeducation, and facilitating and problem-solving skills [15]. The usage of mental health services increases, mood symptoms are lessened, the family environment is improved, and IFP and MFPG both increase understanding of mood disorders [15]. Another therapy that addresses mood disorders by using some

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of CBT's behavioral techniques is interpersonal and social rhythm therapy (IPSRT). Yet, IPSRT also pays attention to the young person's expectations for their own interpersonal interactions and assists the patient in keeping regular social and sleeping schedules [15]. Adult patients have demonstrated that IPSRT is useful in extending the amount of time before they have a new mood episode. According to this adult research, IPSRT may be a successful treatment for bipolar teenage patients [15]. To summarize, a number of psychosocial therapies that have been shown to be successful are being developed to address challenges unique to young people with bipolar disorder. These strategies could help to improve medication adherence and offer extra assistance in cases of pediatric bipolar disease where medicine is unable to completely cure all symptoms [15].

The long-term maintenance therapy for young persons with bipolar disorder have gotten less attention, despite the fact that it is a chronic condition [15]. A double-blind maintenance trial was conducted on young people who had been taking a mixture of lithium and divalproex (DVPX) to evaluate whether drug was more effective for up to 76 weeks. Both the lithium therapy and the DVPX sodium therapy groups completed the experiment after a mean of around 20 weeks; there was no difference in the period of study enrollment between the two groups. These observations all seemed to confirm the idea that if a patient is treated to a combination treatment, discontinuing one of the drugs may cause symptoms to return [15].

Furthermore, people should stop labeling patients, because when someone is labeled as patients with some kind of severe mental illness, it would usually burden him or her [4]. It is important to guide adolescents treat and regard the illness in the right way, offer them all the help and guidance.

5. Conclusions

When discussing the causes of bipolar disorder among adolescents, this paper sorted the causes into two categories, including personal factor and social factor, further divided into genetic and biological factor, personality factor, family, social environment and interpersonal relationships. It is found that from the aspect of genetic and biological factor, family history of bipolar disorder shows that genetic factor has a severe impact in offspring, and multiple biological factors influence bipolar disorder. According to the personality factor, various temperaments may have an impact on how bipolar I disorder or bipolar II disorder manifests in teenagers. Family factors, similar to genetic factors, on one hand, influence adolescents in a genetic way, and on the other hand, influence youth by a bad family relationship and parents' way of treating. Social environment, or stigma, increased symptom levels and worsen the quality of life. Peer interpersonal relationships also affect adolescents' bipolar disorder symptoms significantly. Both medical and non-medicine treatment should all be developed, and currently methods such as IPSRT has been developed.

The prevalence of bipolar disorder among teenagers is rising faster than in previous years, which demonstrates that a variety of life circumstances might lead to adolescents developing the illness. Researchers and medical professionals need to be aware of how serious bipolar illness is in young people and discover remedies. Not only bipolar disorder but all the mental illnesses should be taken seriously. Besides, current research also has limitations, for instance, there are few researches discussing the prevalence of bipolar disorder in different gender among youth and its treatments. Future studies should pay more specific attention to special populations, including girl adolescents, senior citizens, etc. Moreover, more effective non-medicine treatments should be developed in order to treat the disorder.

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