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The Atypical Emotional Development in Adolescents with Bipolar Disorder and Relevant Interventions

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Abstract: Bipolar disorder (BD) has become a serious mental problem in the group of adolescents. The main symptoms of BD are depression, (hypo)mania, anxiety, and functional disabilities. The symptoms of the two subtypes of BD are different. The problem is that the probability of misdiagnosis is high, which may cause the non-serious symptoms to exacerbate. The methods of researching atypical emotional development include measuring the level of mood instability and examining the deficit in facial emotion and family factors. The symptoms of BD patients are highly connected with a high level of mood instability and a high level of inappropriate self-sacrifice from parents and relatives. The deficit of facial emotion is also one of the atypical processes. Dialectical Behavior Treatment is useful to decrease the level of depression and relieve BD symptoms. The probability of adolescents having BD is associated with mood instability. BD patients showed faster reactions to fearful faces and made mistakes in processing angry faces. Therapy barely influences BD symptoms, but dialectical behavior therapy had a great effect in remitting symptoms of BD. In that case, future study should pay more attention to the atypical emotional development and the precautions. This review can provide some guidance to relevant future intervention studies and practices for at-risk adolescents.

Keywords: Atypical Emotional Development, Mood Instability, Dialectical Behavior Treatment

1. Introduction

The main symptoms of bipolar disorder (BD) are (hypo)mania and depression accompanied by aberrant mood swings and cognitive dysfunction. The subtype of BD includes BD I and II, the symptoms of type one BD are mania and depression. Type two BD shows major depression disorder and an incomplete episode of mild mania, which is often misdiagnosed as unipolar depression. Puberty is an essential period of growth that the personality, the way of understanding, and the way of expression are still flexible during this period. The first episode of BD for adolescents is usually between age 15-17. 15% to 18% of bipolar disorder individuals first encountered symptoms before age 13 [1]. Almost 80% of patients experienced multiple recurrences [2]. The patients were faced with functional disabilities (e.g., social disabilities, fewer interactions with friends), low quality of life, and dissatisfaction with marriage life in later stages [3].

Almost 40% of BD patients were misdiagnosed with Major Depression Disorder (MDD) [1]. It is crucial to look into the atypical emotional development in adolescents because some typical

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emotional symptoms of other psychological illnesses which are similar to BD interfere with the doctor's diagnosis. The underdiagnosis may continue for more than 10 years, and the aggravation of the illness may happen. Emotional changes in adolescents are diverse and imperceptible. The previous study of atypical emotional development can help psychologists have more evidence to evaluate whether the symptoms of patients are accordant with BD and avoid misdiagnosis.

One of the ten most common disabilities worldwide is bipolar disorder [3]. The previous studies that investigated adolescents with BD concentrated more on the course, the outcomes, and the influences on functioning. For example, the research regarding the degree of functioning and disability assessed the level of functioning and impairment in bipolar patients, with a particular emphasis on the three functional domains of job, social, and family functioning, which have been suggested to be impaired in these individuals. Functioning is a complex concept because it involves the capacity to work, learn, live independently, engaging in leisure pursuits, and upholding interpersonal connections. Disability is defined as a challenge to one's ability to operate in a variety of spheres of one's life, whether on a physical, psychological, or social level, as they are experienced by someone who has a health condition in relation to environmental elements [3].

The social disability is obvious, the patients may experience difficulties in social functioning and 30-40% of patients had these symptoms for more than 10 years [3]. A large number of patients with BD cannot go back to their previous job due to the illness progression. For almost 50% of patients with BD, the unemployment rate is higher than the average. The family that has a patient with BD is undertaking a huge burden. The depressed phase of bipolar disorder lasts longer for patients than the manic phase, and the depressive period causes more psycho-social impairment or incapacity. Even after adjusting for the impact of extremely minor depression symptoms, spontaneous verbal recovery of knowledge was shown to be the measure that best predicted the psychosocial outcomes of euthymic bipolar patients in previous research. A higher level of attention and an increase in the language ability can predict functioning recovery [3].

The misdiagnosis rate is high, and the recurrence is continued for a long time, about 30-40 years after the first episode and even after age 70 [4]. The need to find important predictive, diagnostic, and therapeutic approaches to lessen the burden of this condition is alarming, given the great resistance to treatment seen in patients with BD. Children with BD experience more manic and depressive periods, and the time needed for them to recover is longer [5]. Previous findings showed the bouts of depression could decrease the time to the next episode. Lithium therapy is an effective way to intervene for the recurrence and is also useful in the early course of BD [4]. The prodrome characteristics make it difficult to differentiate between patients with BD and other disorders, such as schizophrenia [6]. Existing research is quite broad and the emotional symptoms have been well researched, but the connection between atypical emotional development and BD, and the relevant interventions, have not been extensively studied. This review demonstrated this relationship and discussed it in respect of atypical emotional development and the relevant interventions. This paper can provide some insights for future intervention research and applications.

2. The Relationship between Atypical Emotional Development and Bipolar Symptoms

2.1. Mood Instability and Bipolar Symptoms

Mood instability is the feeling of acute, quickly changing emotional states both during mood episodes and throughout remission [2]. Bipolar disorder (BD) is separated into two subtypes (I and II). Mania and sadness are the symptoms of type one BD, while major depressive disorder and a brief period of moderate mania. This is invariably misdiagnosed as unipolar depression. There are two measurements related to mood instability and BD. Firstly, the evaluation is measuring the level of depression every week through a severity scale from non-symptom to severe functional

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impairment. Secondly, Secondly, evaluating the global functioning over a period of two weeks. Global functioning is the most impaired of general functioning [2]. As a result, the relationship between mood instability and BD is that adolescents have 85% more chance to have BD II when depression instability increased for every 1 score. If the score of the second evaluation was decreased, 75% chance to have BD I and experiencing (hypo)mania instability increased [2]. In another word, the more serious the mood instability, the more obvious the bipolar symptoms. After the post-episode phase, the functional deficits may be helped by the establishment of a consistent degree of mood instability. It is challenging to differentiate between a manic episode and a (hypo)manic episode using retrospective accounts of symptoms.

2.2. The Facial Emotion Processing Deficits in Bipolar

Facial emotional processing deficits mean adolescents with bipolar disorder may have some drawbacks in recognising some facial emotions and make mistakes. For example, adolescents may be regarded as low emotional quotient because they cannot distinguish the types of emotions and make a wrong response. The study showed 40 colour pictures with four basic emotions (either joy, sorrow, rage, or terror) and expressionless, participants need to choose the correct emotion accurately and quickly. According to the previous study, adolescents with mental disorders were reacting faster to fearful emotion than normal [7]. The slower reaction times were predicted by greater psychological distress levels.

Another previous study also studies the deficits in facial emotion. The previous study used the methods of showing 24 photographs in each subtest, each of which depicts four emotions (angry, sad, fearful, happy) [5]. Participants select one of the emotions indicated when faces with two are displayed. The previous study using self-report questionnaires evaluated the mania symptoms and depression symptoms. Furthermore, all the participants can be aggregated as childhood-onset BD. The results showed that participants with BD have significantly influenced by age. Younger made more errors than older and BD participants made more mistakes than Healthy Control. the deficit of facial emotion is mainly on the emotion of anger and the BD participants always regard them as sadness [5]. According to two studies, the age of BD patients influenced the results and the deficits of facial emotion in BD patients are mainly in the emotion of anger.

3. Relevant Factors in Family Members

The family atmosphere and the behaviour of family members are two essential factors of mental health problems for adolescents. The family members who cannot control their emotions and behaviour like the family members with a lot of quarrels, the adolescents cannot learn correct expression way and will lead to depression, BD or other mental health problems. Firstly, there is a previous study that explored the relevant factors in parents. When the affective disorders of parents increased, their probability of a great level of expressed emotion (EE) attitudes increased [8]. The prediction that was supported by parents who have high EE includes greater levels of current emotional discomfort (such as depression, anxiety, aggressiveness, or interpersonal sensitivity), and a higher incidence of affective disorders in family pedigrees. What's more, more emotional disorders throughout a lifetime. The high level or low level of EE was evaluated by a task in which parents should take about their children and the way they get along with children for five minutes. The evaluation was used to evaluate the emotional distress that showed an obvious difference between high and low EE parents. The results show that the age or any of the adolescent demographic factors did not differ between parents with a high or low level of EE, and the high EE levels parents showed stronger past-week depressive, anxiety and anger symptoms. The result of this previous study is also related to the groups that have only one parent [8].

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Another study investigated whether relatives' apparent acceptable and unacceptable emotional participation (intrusiveness, self-sacrifice, and concern for the welfare of the patients) affected that outcome [9]. The results of this study are over two years, ten-minute problem-solving sessions also held with 108 bipolar illness patients and their families. Every three to six months, participants underwent interviews to assess their mood symptoms. When family members have shown insufficient or unacceptable self-sacrifice, manic symptoms in individuals decreased after receiving crisis management (CM) and family-based therapy (FBT). When relatives exhibit high amounts of inappropriate self-sacrifice, those in CM gradually develop higher degrees of manic behavior, but individuals in FBT get less manic [9]. As a result, the high EE parents and the high level of relatives' self-sacrifice will influence the symptoms of BD adolescents.

4. Relevant Interventions for Adolescents with Bipolar Disorder

In the case of the serious symptoms of adolescents with BD, the intervention is very important to relieve symptoms. The main interventions include medication treatment and psychotherapy. Two studies indicate two different therapies of BD treatment. Firstly, the Family-Centred Therapy Program that using questionnaires to research the effectiveness of adolescents with BD and their parents on marital contentment by using family-centred therapy [9]. Interpersonal strategies were applied within a cognitive-behavioural framework, using the concept of processing experience schema [10]. The abilities and Problems Questionnaire is used to measure the results of 25 items for adolescents. Afrouz Marital Satisfaction Questionnaire is the observation of the practice, reliability, validity and norm findings. As a result, despite significant advancements, while treating anxiety and depressive problems, Family-Centred Therapy Program has not yet proved very effective in treating the signs and symptoms of bipolar disorder [10].

Secondly, an investigation that compares dialectical behavior therapy (DBT) with standard psychosocial treatment (TAU) for young people with BD disease. Each youngster will get medication therapy from a child psychiatrist who is involved in the trial. DBT consists of 36 sessions (18 individuals, 18 family skills training). The evaluation is used to evaluate non-mood mental disorders, whereas evaluation is used to evaluate mood symptoms [11]. As a result, the treatment of DBT for adolescents showed markedly milder signs of depression over time compared to those receiving TAU, and they had a nearly thrice higher chance of showing improvement in suicidal thoughts. The Family-Center Therapy has made barely influenced the improvement of BD symptoms, but DBT has made a large improvement which can relieve symptoms [11].

5. Conclusion

The atypical emotional development in BD is associated with mood instability which includes depression instability and (hypo)mania instability, when the score of mood instability increases, the chance of having BD I and II will increase from 75% to 85%, and the signs of BD will be increasingly noticeable. Another atypical emotional development is the deficit in facial emotion. Most BD patients make mistakes with processing angry facial emotions. As the age increases, the mistake on facial emotions they made became less, which means that younger children made more errors. Moreover, BD patients have a faster reaction to fearful emotions than typically developing individuals. They also tend to perceive angry emotion as sad emotion. Different behaviors of family members also influence the atypical emotional development and the symptoms shown by BD patients. The parents with higher EE will lead to more symptoms of depression, anger and anxiety in BD. For the parents and relatives that show a higher level of Inappropriate self-sacrifice, the symptom of mania is more serious.

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There are two treatments that were used to remit the atypical emotional symptoms. Firstly, the Family-Centered Therapy is highly effective in treating the depression and anxiety disorder, but it is not useful for BD. Secondly, with Dialectical Behavior therapy patients' symptoms of depression disorder have improved a lot, and the tendency of suicide has decreased 3 times. After the research, the deeper understanding of BD I and II can provide references for future diagnosis and treatment methods. The studies mentioned in this article have covered almost all the content that needs to be included, but there is still something that needs to be improved. First, in the experiment on facial emotional processing, only five types of emotional faces were provided. In the future experiment, abundant facial emotions should be examined. Moreover, the study has indicated that medication therapy is the most useful method for the treatment of BD I and II, but only one psychological treatment showed improvement. Future studies should investigate psychological treatment for adolescents more comprehensively. This paper can provide some suggestions to the design of prevention and intervention programs and relevant research for at-risk adolescents.

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