

Major Depressive Disorder in Adolescents: a General Overview

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Abstract. Major depressive disorder (MDD) is a common mood disorder characterized by persistent depressive moods, irritability, and helplessness feelings, which could negatively influence one's quality of life. Current research often concludes MDD in adolescents into MDD in general, whereas in reality, abundant differences exist between MDD in adolescents and MDD in adults. This article is an overview of major depressive disorder in adolescents incorporating its symptoms, future impacts, risk factors (academic pressure, attachment style, and peer relationships), and treatments. Although MDD in adolescents shares many similar symptoms as adults, it leads to long-lasting robust negative outcomes in adulthood, both physically and mentally. High academic pressure and insecure attachment style are both associated with the development of depressive symptoms. However, peer relationships have a much-complicated influence on depression. Positive interactions between peers and being regarded as belonging to a high-status group could prevent adolescents from developing depressive feelings. Surprisingly, close friendships could both bring positive and negative influences on depression, depending on the situation. This paper emphasizes the symptoms, importance, affecting factors, and current treatments of MDD in adolescence, which further reveals that treatments for MDD in adolescents still need more consideration and studies to improve effectiveness and avoid harm.

Keywords: Major depressive disorder; Academic pressure; Parent-child attachment; MDD in adolescents; Social media influence.

1. Introduction

Major Depressive Disorder (MDD) is a mood disorder that could cause severe negative influences on one's life in various aspects. Unfortunately, compared with studies on adult MDD, MDD in adolescents is relatively disregarded. Because of the long-lasting influence of adolescent MDD, it is urgent to research its etiology in order to find better ways of preventing the mental disorder or alleviating symptoms. The article discusses how academic pressure, parent-child attachment style, and peer relationships contribute to MDD in adolescents. The major aim is to provide a detailed and complete introduction to adolescents' MDD, raise people's attention, and give suggestions about future research.

2. Methodology

This paper is a review based on articles collected using Google Scholar, Web of Science, and UCI's Library Database in the field of major depressive disorder in adolescents. Keywords include MDD in adolescents, symptoms of MDD, how education relate to depression, family relationship and MDD, and more. Besides directly searched resources, auto-suggested articles are used as well. Due to the limited interest in this field, the range of published years of literature is widened to the last 2 decades. However, papers with basic information could be even earlier. The pieces of literature chosen are all from professional magazines or psychological seminars.

3. Results and Discussion

3.1. Concept of MDD in adolescent

3.1.1 Symptoms

Years ago, the psychological society did not diagnose adolescents with depressive symptoms as Major Depressive Disorder patients. Even after acknowledging the existence of MDD in adolescents, people still believed that adolescents with MDD experienced different symptoms until the publication of DSM-III-R. DSM-III-R and DSM-IV emphasize that symptoms exhibited in MDD patients are not related to age, which means that symptoms of MDD in adolescents are similar to those of adults.

One prior study contained a sample of 1,709 adolescents from 9th to 12th grade. The age range was from 14 to 18 years old. Those adolescents took interviews within 2 years. By calculating the data received from interviews of the first year and psychosocial measures, the research group ranked symptoms from the most frequent to the least frequent. The top 3 most frequent symptoms are sleep disturbances, depressed mood, and thinking disturbances, whereas the least frequent 3 symptoms are thoughts of death or suicide, anhedonia, and motor disturbance. The comparison of symptom prevalence values between MDD episodes occurred before and after age 14 shows no significant difference. The comparison of symptom prevalence values between MDD episodes occurred in adolescents and adults is slightly different. Compared with adults, adolescents experience worthlessness or guilt more than adults, but weight/appetite change, and thoughts of death/suicide less. Gender is another influencing factor of symptoms exhibits. Among OADP participants, 77% of depressed girls reported weight/appetite disturbance, and 82% reported worthlessness/guilt, while 58.5% of depressed boy reported weight/appetite disturbance, and 67.5% reported worthlessness/guilt [1].

The research group calculated point prevalence, lifetime prevalence, and incidence rate. The data reveals that the occurrence of depression in adolescents is much higher than people thought. According to the estimation of the research team, before turning 19, almost 30% of adolescents would encounter at least one episode of MDD. However, it is essential to realize that these rates are somehow inflated. After consulting with child psychiatrists, the result indicated that within those adolescents who met the criteria of MDD, most of them were only mild and moderate. In average, adolescents start to experience symptoms of MDD at 14.9 years old. The occurrence of depression in childhood is relatively low but increases as individuals age. MDD episodes could last from 2 to 520 weeks, with a mean of 26 weeks. Earlier onset, such as before 15 years old, is associated with longer MDD episodes. Even with those adolescents who recovered, 5% of them experienced recurring episodes in less than half a year, the percentage increases to 12% in less than 1 year, and about 33% of them would experience another episode in less than 4 years. Duration values of the episodes of adults are almost 3 times longer than adolescents, while recurrence rates are relatively the same [1].

3.1.2 Importance of avoiding MDD in adolescence

Several research reveal one significant characteristic of depression that is not emphasized enough when it comes to adolescents: the negative influence on health. Having physical impairment in adolescence increases the vulnerability of becoming depressed. Data showed that among over 1,700 participants aged from 14 to 18 years old, 19.4% of participants with a physical disability or disease developed MDD, compared with 7.3% of those who did not experience such disability. At the same time, MDD also has a negative influence on future health-related problems. Therefore, it is crucial to evaluate health-related variables in adolescents with MDD and pay more attention to the mental health of adolescents with functional impairment [1].

Moreover, MDD in adolescents also has other enduring and robust negative influence to adulthood. One study was conducted to examine the long-term impacts of being depressed during childhood and adolescence. By following up with adults who were diagnosed with MDD during adolescence, the researchers found that depression occurring early in life, particularly when symptoms persisted throughout childhood and adolescence, correlated with problems in adulthood. The negative

associations include elevated amounts of anxiety in adulthood and substance problems, along with poorer health conditions, criminal behaviors, and social functioning. Gender has no significant influence on this. Besides, it is necessary to realize how the age of being depressed affects long-term outcomes. More severe outcomes are related to later-onset depression during adolescence. Individuals with MDD onset during adolescence had more severe outcomes than those having early onset [2].

The research done by Weavers and her colleagues aimed to explore how the duration of MDD in adolescence matters. According to their data, individuals with early onset and persistent symptoms were associated with severe adult outcomes. 62% of them suffered from functional impairment, 27% suffered from suicidal self-harm, 25% suffered from mental disorders, and 16% of them were not educated, employed, or trained. Whereas individuals with early onset MDD but got relieved during adulthood had relatively mild outcomes. Therefore, the time of depression onset and duration of symptoms both influences the lasting outcomes of MDD in adolescents [3].

In summary, most adolescents with MDD are negatively influenced, both physically and mentally. Individuals' health conditions and mental health show reciprocal influences during adolescence, and MDD in adolescence is strongly associated with adult anxiety, substance-use problems, functional impairment, criminal behavior, social problems, and probably more.

3.2. Risk Factors

3.2.1 Academic pressure

Because of the current education system, adolescents are constantly evaluated by their academic performance. The fear of failing to meet self-expectation or their significant other's expectation (in this case, their parents and teachers) could rise adolescents' pressure. Parents might also show disappointment toward poor academic performance consciously or unconsciously, which leads to feelings of being unrecognized and unsupported. Students with academic difficulties often receive negative feedback from teachers, which obstructs the construction of positive self-schema and the development of confidence.

Ang and Huan examined how academic stress, depression, and suicidal ideation related to each other in over one thousand adolescents from middle school to high school seniors in Singapore. Based on the result from the adolescent's self-report, academic stress and depression are correlated with a positive r of 0.25, which means that the higher academic stress is, the higher depression is, and vice versa. With further analysis using multiple regression, the result also reveals that academic stress and adolescent depression show a significant association [4].

However, since the research only include adolescents from Asia, where academic achievement is valued the most around the world, the statistics could be exaggerated from the statistics worldwide. The fact that data is solely from adolescents' self-report could cause shared method variance, resulting in a high correlation. These limitations should be noticed, and subsequent research using other methods with varying samples is needed. In conclusion, low academic achievement leads to receiving negative feedback, increasing pressure, and loss of confidence, which all facilitate the growth of depression. Academic pressure is one of the most noteworthy influencing factors of depression in adolescence.

3.2.2 Attachment style

As how Bronfenbrenner's ecological systems theory indicates, family is in the microsystem, which means that family interacts with children directly while growing up. Thus, it is not hard to imagine how much influence family relationships have on adolescent depression. It is universally acknowledged that there are 4 basic types of attachment styles characterized by how parents and children interact and behave: secure attachment, avoidant attachment, ambivalent attachment, and disorganized attachment. A paper written by Burmariu and Kerns demonstrates the relationship between parent-child attachment and depression by analyzing previous studies [5]. The researchers employed both longitudinal and cross-sectional studies including over 1,000 participants. The

behavioral observation studies indicated that children with ambivalent attachments and disorganized attachments reported more depressive symptoms than those with secure attachments [6].

There is no difference found between secure attachment and avoidant attachment. The attachment representation study assessed adolescents when they were 13, 14, and 15 years old, and found that being securely attached was negatively correlated with self-reported depression. In addition, based on one sample where participants experienced elevated depressive symptoms, the researchers found that the more securely attached adolescents were, the lower level of depression they were. The questionnaire studies by De Minzi presented a more detailed picture. Instead of concluding parent-child relationships into attachment styles, De Minzi studied the specific characteristics of parents: the availability and dependency of the father, along with the availability of the mother. The result showed a correlation between these components and depression.

Based on all research discussed in the literature (2 longitudinal and 16 concurrent), the author illustrates that secure attachment is negatively correlated with depression. The author also points out that the result could be inflated by the influence of shared method variance and how depressed mood could affect their self-reports. More research are needed to explore whether insecure attachment style leads to depression or whether depression influences one's perception of attachment relationships [5].

3.2.3 Peer relationships

Adolescence is a stage when individuals expand social skills and connections, mainly with peers. During this period, the significance of close friends increases. Close friends become the primary provider of social support, even surpassing parents, and influence adolescents' self-perception. Meanwhile, romantic relationships start to develop during adolescents. According to their report, most adolescents have had a romantic relationship by the age of 16. A research group from University of Miami employed various questionnaires from previous studies to examine how peer relations, close friendships, and romantic relationships relate to depression in adolescents.

For peer relations, the researchers emphasize 2 constructs that reflect the social connections of teenagers within the broader peer system: adolescent peer crowds and peer victimization. Adolescent peer crowd means adolescents merge with their peers in order to get acceptance and support. Every peer crowd is characterized by similar gender, regions, hobbies, or ethnic groups. Based on the result of The Peer Crowd Questionnaire, adolescents mostly rate their own crowd significantly higher than others [7]. The researchers have also found that there are high-status crowds like Populars and Jocks, and low-status crowds like Burnouts and Alternatives. Adolescents identified with high-status crowds reported less depression compared with others. The reason behind is obvious: adolescents affiliated with high-status crowds are often regarded highly by peers [8]. Unexpectedly, identification with low-status crowds can also prevent them from excess anxiety, but not associated with depression.

Peer victimization is constantly connected with internal stress, loneliness, and depressive feelings. Peer victimization includes not only physical violence and threat but also relational victimization, which is more common. Typical relational victimization includes spreading rumors, creating obstacles between friends, and isolating others socially. Researchers found that relational victimization showed a significant correlation with adolescent depression [7]. One thing that should not be neglected is that peer victimization is interrelated with negative interactions with others. Findings in the research indicate that adolescents who experienced relational victimization have a higher exposure to negative experiences with peers, friends, and romantic partners. Many adolescents also report relational and overt victimization with their dating partners.

The Revised Beck Depression Inventory by Beck and Steer is a reliable and valid scale to assess the severity of participants' depression symptoms. It is used as an indicator of the level of adolescents' depression in this study. Through the employment of several questionnaires, the researchers found that exposure to negative experiences with close friends and romantic partners are positively correlated with depression. Nevertheless, whether negative interaction attributed to depressive feelings or depressive feelings influence adolescents to perceive their relationships negatively remains a question [7]. Good quality friendships and romantic relationships can protect adolescents from social anxiety, but interestingly, they cannot protect adolescents from depression. It is possible

that support and intimate friendship could even reinforce depressive feelings for some adolescents [9].

3.3. Treatments

Because of the robust lifetime outcomes, efficacious and safe treatment for MDD is among the highest priorities. Treatments for major depressive disorder are similar for adolescents and adults, including antidepressants, psychotherapy, and combined therapy. However, additional consideration should be given. Due to biological and psychological differences between adolescents and adults, some treatments could bring harm to the youth.

According to the recommendation of the US Preventive Services Task Force (USPSTF), early interventions could help alleviate MDD symptoms in adolescents. Popular interventions include selective serotonin reuptake inhibitors (SSRIs), psychotherapy (Cognitive Behavioral Therapy), and combined psychotherapy. Although psychiatrists have found SSRIs to be efficacious, there is adequate evidence showing that taking SSRIs brings a higher risk of suicidality in adolescents. According to the estimate from analyses, treatments with antidepressants result in an absolute increase of 1% to 2% in the risk of committing suicide. The use of SSRIs could also lead to an increase in risk of developing bipolar disorder. On the other hand, no evidence is found about psychotherapy's harm and limited evidence on harms of combined therapy, but they are both proven to be efficacious. More studies on this subject are needed to compare the effectiveness and estimate risks of pharmacological and psychological treatments [10].

Nevertheless, SSRIs are not a cure for everyone. If their symptoms are not relieved by SSRIs, these adolescents are diagnosed with TR-MDD (medication treatment-resistant MDD). They normally experience more severe depressive symptoms, higher rates of comorbidity, or more advanced stages of major depressive disorder. Meanwhile, it is crucial that clinicians are fully aware the significance of not diagnosing adolescents with TR-MDD until proving all other possibilities are wrong, such as pseudo-resistance. Based on Boylan and colleagues' study, neither ECT nor rTMS found any eligible comparative trial. TORDIA, the largest comparative study in this field, confirmed that abundant adolescents had persistent and complicated episodes of MDD which require sustained interventions.

Clinicians should be more cautious about accurate diagnoses and proper treatments, especially between MDD and TR-MDD. More in-depth studies are required to comprehend the epidemiology and course of MDD in adolescents [11].

4. Conclusion

MDD in adolescents has an interacting relationship with functional impairment and biological disease during adolescence, and it leads to higher levels of anxiety, an increase in the risk of mental disorders, substance addiction, social functioning problems, and health problems in adulthood. Academic pressure, parent-child attachment style, and peer relationships are all influencing factors of MDD in adolescents, which reveals that more studies emphasize how to prevent depression through these few aspects are needed. Because of biological and psychological differences between adolescents and adults, clinicians should be cautious when treating adolescents, and more research and experiments are needed to find both efficacious and safe treatments.

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