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A Multidimensional Study on Depression in Junior High School Students Based on the Social Ecological System Theory

Kangning Su

Taishan High School of Shandong Province, Tai'an, China
15666761679@163.com

Abstract. Depression among junior high school students has emerged as a significant and growing concern in adolescent mental health research. Recent data from national surveys and psychological institutions in China indicate a rising trend in depressive symptoms and emotional distress among middle school students, often accompanied by self-harm or suicidal behaviors. This paper adopts the framework of social ecological system theory to systematically analyze the key factors contributing to depressive symptoms in junior high school students across five dimensions: individual characteristics, family environment, school climate, socio-cultural pressures, and media influence. The findings suggest that the transitional nature of early adolescence, combined with immature emotional regulation mechanisms, amplifies the risk of depression when students are exposed to external stressors such as academic overload, interpersonal conflicts, or unstable family dynamics. This study further highlights gaps in current school- and family-based support systems and proposes practical strategies, including enhancing mental health education, optimizing parenting approaches, and strengthening policy-level interventions. Despite its contributions, the research is limited by its reliance on theoretical review and lacks empirical validation. Future studies should explore longitudinal, cross-regional, and subgroup data to establish stronger causal inferences and inform more targeted interventions.

Keywords: Adolescent depression, junior high school students, social ecological theory, mental health education

1. Introduction

In recent years, adolescent mental health issues have gradually become an important topic of great concern to all sectors of society. In particular, the significant increase in depression among junior high school students has become a realistic challenge that needs to be addressed. According to survey data released by the China Youth Development Foundation and educational psychology research centers in many places, the reporting rate of emotional distress, anxiety and depression among middle school students has continued to rise in recent years, and the age at which depressive symptoms appear has also shown an earlier trend. According to the "China Center for Disease Control and Prevention Weekly", between 2010 and 2021, the suicide mortality rate among

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adolescents aged 15-24 increased, and the suicide mortality rate among urban and rural adolescents exceeded 3 suicides per 100,000 people [1]. Under the multiple pressures of academic pressure, interpersonal conflicts and identity problems, some junior high school students have shown typical psychological symptoms such as depression, loss of interest and negative cognition. Such issues not only disrupt students' academic performance and social functioning, but may also exert long-term negative effects on their emotional development, self-esteem, and behavioral regulation. Frequent media reports of adolescent psychological crisis incidents, especially the recurring cases of self-harm and suicide [2], further reveal the gaps in the current psychological support mechanisms for adolescents in schools, families and society, and also intensify the public's concerns and reflections on the lack of mental health education.

Junior high school is a transition period from childhood to adolescence. While the physiology is changing rapidly, the cognitive level and emotional regulation ability are not yet mature. However, existing research still has obvious limitations in the discussion of depression among junior high school students. Most of them focus on a single variable, such as learning pressure or family relationships, and rarely integrate the association mechanism between various influencing factors from a systematic and multidimensional perspective. There is also a lack of in-depth connection between theory and practice. Based on this, this paper will systematically examine the key factors affecting junior high school students' depressive symptoms from multiple dimensions such as individual, family, school, social culture and media influence through theoretical analysis. This study will also explore the potential interaction mechanism between these factors, aiming to provide theoretical inspiration and practical suggestions for mental health education.

2. Theoretical framework and conceptual review

2.1. Depression in early adolescence: definition, symptoms, and developmental context

Major Depressive Disorder (MDD) is one of the most common mental disorders among children and adolescents, and is highly hidden and persistent [3]. According to the diagnostic criteria of clinical psychology, depression is mainly manifested as a significant and persistent low mood, often accompanied by a series of physical and mental symptoms such as loss of interest, anhedonia, cognitive retardation, lack of energy, self-denial, decreased attention, sleep and appetite disorders [4]. In adolescents, depressive emotions often present in the form of violent mood swings, aggressive behavior, learning fatigue and social avoidance. They are somewhat atypical and stage-specific, and are therefore more likely to be misunderstood by parents and teachers as behavioral problems such as "rebellion" or "laziness", leading to delays in intervention.

Junior high school students are at a crucial developmental stage, marking the transition from childhood to adolescence, characterized by significant physical and psychological changes. During this stage, individuals are experiencing rapid hormonal changes and the emergence of secondary sexual characteristics, and are facing multiple pressures such as identity construction, the emergence of self-awareness, and the reshaping of interpersonal relationship structure. During adolescence, physiological changes and emotional regulation mechanisms develop asynchronously. This often results in emotions preceding rational control, causing junior high school students to exhibit heightened emotional sensitivity and instability when encountering stress, setbacks, or complex social interactions. In addition, although cognitive abilities improve significantly during this stage, individuals remain prone to dichotomous thinking and catastrophic interpretations. Also, the rapid awakening of self-awareness makes them more likely to internalize negative events and produce emotions such as self-blame, shame and hopelessness. At the same time, junior high school students

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face environmental pressures in many aspects such as academic, family and peer relationships. In this context, if individuals lack effective social support, emotional expression channels or self-regulation ability, they are more likely to fall into a low mood and even develop clinical depression.

2.2. Theoretical foundations

When exploring the causes of depression among junior high school students, it is crucial to adopt an analytical perspective that can integrate multiple influencing factors. The Social Ecological Systems Theory proposed by Urie Bronfenbrenner provides a systematic and clearly structured theoretical framework for this purpose [5]. The theory states that the psychological and behavioral development of individuals does not occur in isolation, but is in a dynamic system composed of multiple levels of environment, each of which has a direct or indirect impact on the growth of individuals.According to this theory, the factors affecting adolescent mental health can be divided into five main systems: microsystem, mesosystem, exosystem, macrosystem and chronosystem. In the study of depression among junior high school students, the first three are the most directly related [5].

Microsystem refers to the environment that students are in direct contact with on a daily basis, including family, school and peer groups. In the family, strained parent-child relationships, poor communication or improper parenting methods often lead to a lack of emotional support and security in adolescents. In terms of school, factors such as heavy academic pressure, poor teacher-student relationships, peer rejection, and school bullying are all likely to induce depression. The mesosystem emphasizes the interaction between the above-mentioned multiple microenvironments. For example, whether the communication between parents and schools is smooth and whether family support can effectively respond to school pressure will invisibly aggravate or alleviate the psychological burden of students. Although the external system does not directly contact students, parents' work conditions, community resource availability, and coverage of mental health services will indirectly affect students' emotional health. Finally, the macrosystem covers social and cultural values. Finally, the macrosystem encompasses broader social and cultural values. Contemporary society’s emphasis on academic achievement and external success intensifies adolescents’ competitive anxiety. Moreover, the persistent stigmatization of mental health issues discourages students from openly expressing psychological distress, thereby impeding timely intervention and support.

3. Analysis of risk factors affecting adolescent depression

3.1. Individual factors

Adolescence is a critical period of drastic physiological and psychological changes. As mentioned above, due to the rapid physical development and large fluctuations in hormone levels, junior high school students at this stage often have unstable emotional regulation ability, which manifests as emotional irritability, anxiety or depression. Also, adolescents' attention to their appearance has increased significantly. If they are dissatisfied with their body image, they are likely to have low self-esteem, which in turn increases the risk of depression. Personality characteristics are also important influencing factors. Introverted adolescents are usually not good at expressing emotions, tend to suppress negative emotions, and lack effective emotional catharsis channels; while extroverted individuals may also show a higher tendency to depression when facing high expectations and social comparison pressure. Studies have shown that the interaction between personality and environmental pressure is a key mechanism affecting the occurrence of depression

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[6]. In addition, adolescents' cognitive style also has an important impact on their psychological state. If they fall into a negative automatic thinking mode for a long time and habitually exaggerate negative results, they are likely to form cognitive biases, thereby increasing the probability of depression. Low self-efficacy further weakens their confidence and ability to cope with difficulties, making them more likely to retreat and give up in the face of setbacks, falling into a vicious cycle of "helplessness-retreat-depression".

3.2. Family factors

First, the quality of family communication is directly related to the emotional expression and emotional support of adolescents [7]. When open, respectful, and empathetic communication between parents and children is lacking, and negative patterns such as criticism, blame, or emotional neglect persist over time, adolescents are more likely to experience feelings of misunderstanding and emotional isolation. This disconnection can lead to the accumulation of negative emotions and significantly increase the risk of developing depressive symptoms. Good communication helps adolescents release pressure, build trust and security, and thus enhance psychological resilience. Secondly, parents' education methods have a profound impact on the formation of individual emotional regulation ability and self-worth. Studies have found that positive family education methods (such as authoritative) are moderately positively correlated with positive development indicators such as academic achievement, self-esteem and resilience of adolescents; while negative education methods (such as authoritarian and permissive) are negatively correlated with these indicators. Authoritative education methods that are highly consistent, both normative and emotionally supportive are more conducive to promoting the formation of healthy personality and emotional balance in adolescents [8].Third, family stability and parents' perceived emotional support have an important regulatory role in depression levels. Structural changes such as parental divorce, remarriage, and family reorganization are often accompanied by relationship breakdown, role confusion, or parent-child alienation, which impact adolescents' sense of security and belonging. When children are emotionally distressed, it is also important to get understanding, encouragement, and support from their parents.

3.3. School factors

As an important place in the daily life of adolescents during their growth, the school environment has multiple factors that profoundly affect students' mental health [9]. Above all, academic pressure is one of the main sources of depression among junior high school students. As students enter junior high school, the course content gradually increases and the difficulty is higher than that of primary school. Frequent exams and fierce competition for grades keep students in a state of high tension for a long time, and the academic burden is significantly increased, which easily leads to anxiety and frustration. Also, the quality of the teacher-student relationship also directly affects students' emotional experience. If students encounter unfair treatment, excessive criticism or neglect from teachers at school, they are likely to feel excluded and unrecognized, which in turn affects their learning enthusiasm and psychological stability. Lack of teachers' positive attention and emotional support may also lead to students' lack of self-confidence and sense of belonging when facing difficulties. Finally, peer relationships are particularly important in junior high school. Students who are bullied on campus are not only physically hurt, but also prone to long-term fear and anxiety psychologically. In severe cases, they may even fall into a state of persistent depression. In an environment where interpersonal relationships are tense, isolated or excluded, students often feel

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lonely and helpless, lack effective emotional communication channels, and this sense of social isolation will further aggravate their psychological pressure.

3.4. Social factors

The social environment also plays an important role in the psychological development of adolescents. Social and cultural values and media content have a subtle influence on the individual's emotional state. The current society's cognition of "success" is too simplistic, and academic performance and material achievements are generally used as the main measurement criteria, which makes junior high school students bear great pressure in terms of academic studies, further education and future planning. At the same time, the complexity of the media environment has also aggravated the accumulation of psychological risks. The proliferation of violent, pornographic and pessimistic information in cyberspace can easily interfere with the construction of values and emotional regulation of adolescents. The widespread use of social media has made adolescents frequently exposed to the one-sided display of "others' superior lives". Driven by the comparison psychology, they have emotional reactions such as inferiority, jealousy, and anxiety, and in severe cases may even cause identity crisis and depression symptoms. These external cultural and information factors are very likely to have a continuous impact on their psychological security and stability when adolescents' cognition is not yet mature and their self-awareness is unstable. According to a 2021 survey of 20,792 middle school students aged 11 to 20 in Jiangsu, Guangdong, Yunnan, Gansu and Hubei provinces in China, the detection rates of depression and anxiety were 19.70% and 13.97% respectively, while the incidence of suicidal behavior was as high as 23.54% [2]. This also shows that the incidence of depression and anxiety among adolescents is relatively high, reaching nearly 20% or even more, which shows that mental health problems in this age group are common and cannot be ignored .

4. Suggestions

Based on the analysis of the influencing factors of depression among junior high school students, all sectors of society should jointly build a complete psychological support system. Schools should systematically integrate mental health education into curriculum content and campus culture construction, and improve students' personal psychological literacy and ability to cope with stress through thematic education such as emotional management, interpersonal communication, and self-cognition. A more complete teacher training mechanism should be established to strengthen teachers' ability to identify students' psychological states. In terms of academic management, the Education Bureau and other relevant departments need to uniformly optimize the examination evaluation mechanism, reduce one-sided competitive pressure, focus on the cultivation of multiple abilities, and avoid the frustration caused by a single performance standard. From the perspective of the family, parents should adopt a more scientific, gentle, and supportive parenting style. Family communication should emphasize openness and respect, avoid continuous denial, criticism, and indifference, and parents need to help young people gain emotional acceptance and release space in the family. In addition, schools and relevant government departments should pay attention to the impact of changes in family structure on adolescent emotions, and provide more psychological counseling resources for adolescents from reconstituted families and divorced families.

In terms of social policy, the government should accelerate the promotion of mental health resources into campuses, establish a psychological counseling service system covering primary and secondary schools, and equip professional psychological teachers or counselors. For high-risk

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student groups, schools should also establish screening and referral mechanisms to achieve "early identification, early intervention, and early support." In addition, it is also crucial to strengthen media supervision and social advocacy, reduce the spread of online violence and bad information, and optimize the online environment for young people. Strengthening media regulation and promoting responsible online content are essential steps toward creating a safer and more supportive digital environment for adolescents.

5. Conclusion

This study systematically combed the multidimensional factors that affect depression in junior high school students through the theory of social ecological system. The study pointed out that junior high school is in a transitional period of rapid physical and mental development of adolescents, and the emotional regulation mechanism is not yet mature. At this stage, they are more likely to experience emotional imbalance when facing external stimuli such as academic pressure, interpersonal conflicts or family instability. Internal factors such as individual personality tendencies, cognitive styles and self-efficacy further amplify the risk of depression in multiple environmental interactions. Based on the analysis of these factors, this paper also puts forward a series of suggestions for improvement from the perspectives of school, family and social policies.

Although this study systematically combed and summarized the formation mechanism of depression in junior high school students from a multidimensional perspective, it still has certain limitations. The article mainly focuses on literature review and theoretical analysis, lacks statistical modeling and causal mechanism verification based on empirical data. Besides, mental health is significantly affected by variables such as region, culture and gender. Future research should further carry out cross-regional and group quantitative research to obtain more representative and explanatory conclusions.

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