

Impact Factors of Adult ADHD and Intervention Strategies

Yue Pan

EIC education, Guangzhou, China

soonniiaa00567@hotmail.com

Abstract. Adult Attention Deficit Hyperactivity Disorder (ADHD) is a condition that affects an individual's attention, impulse control and emotional regulation and is one of the most common neurodevelopmental disorders in our society today. It usually develops in childhood, but some patients who are undiagnosed or who do not receive immediate intervention in childhood continue to have the condition into adulthood, exacerbating their pre-existing symptoms. Existing studies tend to focus more on childhood ADHD and less on adult ADHD. According to World Health Organization (WHO) epidemiological survey data, the prevalence of ADHD in adults is between 2.6% and 2.8%. Attention deficit hyperactivity disorder in adults has a significant negative impact on the individual, the family and society. ADHD can make the patient unable to concentrate at school or work, cause some learning difficulties, and cause some stress and anxiety to themselves, as well as increasing the burden on families and society. This study will investigate the characteristics of attention deficit disorder, the factors that influence it, and intervention strategies. It is hoped that the results of this study will improve understanding of attention deficit hyperactivity disorder in adults.

Keywords: Adult attention deficit hyperactivity disorder; influencing factor; intervention strategy.

1. Introduction

Attention deficit hyperactivity disorder (ADHD) is a neurodevelopmental disorder characterised by attention deficit, hyperactivity and emotional impulsivity. It often develops in childhood, and if ADHD is not identified in childhood or is not treated in time, it will persist into adulthood. Depending on the age of the patient, attention deficit disorder is classified as childhood ADHD or adult ADHD. People with ADHD are unable to concentrate, which makes it difficult for them to pay attention in class and causes them to have difficulties in learning, which is shown by poor quality of listening and poor speed and quality of homework. In life, patients do not pay attention to details and often lose things. The symptoms of hyperactivity and emotional impulsiveness may cause the patient to have difficulty in engaging in quiet activities in their daily life, often running around and playing regardless of the occasion. Symptoms of hyperactivity gradually decrease during adolescence and adulthood. In this research, we investigated the level of knowledge of adults with ADHD by publishing a questionnaire on the Internet, and the results showed that most of the respondents had some knowledge of ADHD, but there were still some biases and deficiencies in the recognition and understanding of ADHD. There is still room for improvement in the promotion and education of ADHD, and there is a need to strengthen the popularisation of ADHD awareness and the dissemination of related knowledge in order to improve societal understanding and support for people with ADHD. This study examines the influencing factors and intervention strategies of attention deficit disorder to help us better understand the symptoms and causes of adult ADHD, and what psychological treatments are currently available to treat adult ADHD patients in order to improve the symptoms and quality of life of adults with ADHD.

2. The Influencing Factors

2.1. Hereditary Factor

ADHD is closely linked to genes. It has been found that heredity is a significant factor in the development of ADHD in children, with a heritability rate of up to 75%. The genetic factors of ADHD

prevalence have been highlighted mainly from candidate genes, genome-wide association studies (GWAS), epigenetics and gene copy number variations (CNVS) [1]. It is also interesting to note that genetic factors influence the time of first diagnosis of ADHD, the age at which ADHD is diagnosed, the persistence of ADHD into adulthood, as well as the emergence of comorbidities that can lead to a variety of different pathogenetic mechanisms [2].

2.2. Environmental Factor

2.2.1. Perinatal Environment.

ADHD has been linked to environmental factors, including the perinatal environment as well as the postnatal family environment, and the prevalence of ADHD is also strongly related to the mother's pregnancy and perinatal situation. One study found that maternal prenatal exposure to tobacco is a risk environmental factor for ADHD in children, and that nicotine exposure can lead to associated brain damage [3]. Brain damage increases the likelihood of developing attention deficit disorder. Caesarean section, intrauterine stress and intrauterine growth retardation have also been found to be risk factors for the prevalence of ADHD. And the presence of these factors makes children significantly more likely to develop ADHD than those without them [4].

2.2.2. Early Family Environment.

Environmental factors include early family environment factors, and some research has found that the prevalence factors of ADHD are strongly related to family environment factors. Some of the controlling behaviours of children are mainly imitated and learned from their interactions with their parents. Poor parental relationships, or both parents having behavioural problems, are likely to cause children to develop ADHD symptoms or exacerbate existing symptoms. Growing up in such a family environment, children are often tense, depressed, anxious and restless. As nervous excitability increases, hyperactivity, instability and difficulty concentrating may occur [5]. It has also been found that families with inconsistent parenting philosophies or families with an only child increase the prevalence of ADHD [6].

2.2.3. Today's Electronics Use.

With the continuous development of technology, times have changed. More and more electronic products have appeared in our world, and mobile phones have become an essential part of our daily lives. The relationship between digital media and mobile phones is closely related, and mobile phones are an important vehicle and expression as digital media. The prevalence of ADHD has some correlation with mobile phone addiction. One research study found that frequent use of digital media, including using social media, playing video games, sending and receiving text messages, watching short videos, listening to music or watching TV shows, increased the risk of ADHD prevalence by 10% [7].

3. Intervention Strategies

3.1. Cognitive Behaviour Therapy

Cognitive behavioural therapy (CBT) is the most commonly used psychotherapy for adult ADHD. It is a treatment that focuses on identifying negative information and changing cognitively distorted behaviours. Cognitive Behavioural Therapy is divided into two main components: behavioural interventions for learning compensatory skills and cognitive interventions for managing negative spontaneous thoughts and associated maladaptive emotions in adults with ADHD. It has 3 main modules and 3 optional modules. The main modules are psychoeducation, organisational planning, distraction reduction and cognitive restructuring and the optional modules are procrastination, anger and frustration management and communication skills [8]. Initially, the key to successful cognitive behavioural therapy is to establish a supportive and collaborative therapeutic relationship. The therapist will work with the patient to build mutual trust and understanding to ensure that the patient

feels safe and supported. This is followed by psychoeducation, where the therapist introduces the patient to the basics of their condition and the therapeutic model of cognitive behavioural therapy. This is followed by an understanding of the nature of one's illness and how it affects our thinking and behaviour. To help the patient understand what they are experiencing, they can begin to prepare for the treatment process. The third step is to identify negative thinking. An important part of cognitive behavioural therapy is helping patients to identify and challenge their negative automatic thoughts. These thoughts are often automatic, distort reality and lead to the patient's low mood and depressive behaviour. The patient should learn to observe his or her thought patterns. And begin to challenge negative thoughts that are inaccurate or illogical. The fourth step is to change the cognitive dissonance by learning techniques. With cognitive reframing, for example, patients reassess and reinterpret their experiences in a more positive, realistic way. This includes examining evidence, exploring and replacing negative thinking, reassessing the meaning of the situation and considering what outcomes are possible in different situations. The fifth step is behavioural activation. The patient gradually reduces their participation in activities that they used to enjoy after the illness, or the feelings of pleasure that they can give themselves while doing a task. The therapist will use behavioural activation techniques in therapy to encourage the patient to gradually increase the activities that provide positive experiences and feelings of achievement. This allows them to regain pleasure in their activities, which improves their mood and quality of life. The sixth step is skills training. Cognitive behavioural therapy also involves teaching people new skills. Such as problem solving, coping strategies, relaxation techniques and time management skills. to help them cope more effectively with the stresses and challenges of their daily lives [8]. Under the layered approach to treatment. It can help patients improve their self-efficacy and correct poor cognition from the behavioural and cognitive levels in sequence. This can improve the symptoms of ADHD.

3.2. Therapy Dialectical Behavior Therapy

Dialectical Behaviour Therapy (DBT) is another intervention strategy for treating adults with ADHD. It is a comprehensive form of psychotherapy [9]. Dialectical Behaviour Therapy can be divided into three parts: dialectical, behavioural and treatment. Dialectic refers to the ability to think and see problems from different perspectives. For example, it is possible to easily find the most concise and rational state of coherence between seemingly contradictory messages and positions. Behaviour is any behaviour that can be reinforced or rewarded. Reinforcers are anything that increases a behaviour or is likely to be repeated. Therapy means treating for the long term and making sure the visitor sticks with it. Allow the visitor to create a meaningful life and achieve their long-term goals [10]. Dialectical Behaviour Therapy is presented as skills training. The therapist teaches the visitor skills related to DBT in counselling. The visitor is expected to learn and use these skills to solve some problems in life, such as accepting himself and reality. The visitor needs to make changes to his or her behaviour that needs to be changed. And to achieve a balance between acceptance and change that brings the visitor closer to the goal. To make them feel that life has more meaning. Positive thinking is the first and most fundamental skill in Dialectical Behaviour Therapy. It involves two processes at its core: paying attention to the present moment and accepting the present moment without judgement. In the words of Joe Kabatkin, mindfulness can be described as "consciously focusing on the present moment, unfolding but not judging each moment of experience". Mindfulness allows a person to focus on one thing at a time and to better control and calm their strong emotions. Interpersonal effectiveness skills can help visitors learn the social skills of life. It allows them to gradually become more confident in a relationship. It also enables them to maintain and improve relationships and to deal with unexpected conflict situations that they may encounter in their relationships. Personal needs are met by gaining sufficient self-esteem. Emotion regulation focuses on skills training. The therapist conducts a series of cognitive-behavioural training sessions. The patient is taught how to identify and describe emotions, how to manage negative emotions more effectively and how to reduce unnecessary emotional reactions. Pain tolerance skills involve getting the visitor to accept the painful event or emotion in order to reduce the pain. It also uses methods such as distraction, self-soothing, relaxation and developing new coping strategies. It is the ability to face difficult situations calmly and take

informed action to reduce negative emotional reactions and improve quality of life. After a few sessions, DBT can help visitors become more aware of their own behaviour patterns. It can also help visitors to better control their impulsive behaviour and improve their ability to concentrate. In addition, the interpersonal skills of DBT can help adults with ADHD improve strained relationships with family, friends and colleagues. This reduces the social problems associated with ADHD symptoms [11].

3.3. Therapy Dialectical Behavior Therapy

Sensory Integration Training Therapy is also a psychotherapy for adults with ADHD [8]. Some research has found that Sensory Integration Training Therapy can significantly improve patients' audiovisual response control and attention span. It has been found that patients receive signals from the environment while simultaneously outputting information in the opposite direction. After a series of sensory integration sessions, the audiovisual responses are stimulated. This improves the brain's coordination of audiovisual functions, stabilises mood and improves responsiveness and concentration. The treatment may also improve symptoms of hyperactive behaviour. Behavioural problems related to body orientation and balance can be corrected. While improving the level of physical coordination, it also allows the patient to reduce hyperactive or impulsive behaviours. However, the improvement in hyperactive behavioural symptoms is generally more pronounced in childhood. After a series of specific activities and training. Sensory integration training therapy can help patients better combine their sensory information, improve their coordination and learning ability. It also improves their attention span and attention deficit symptoms of ADHD [12].

4. Conclusion

This study provides an in-depth look at the typical symptoms, age of onset, clinical presentation and intervention strategies of ADHD in adults. It was found that adult patients with ADHD have significant differences from the general population in terms of cognition, mood and behaviour. These differences may be related to family genetics, the mother's prenatal environment, some of the parents' behaviours, and the use of electronic devices. Cognitive behavioural therapy, dialectical behavioural therapy and sensory integration training therapy have also been shown to be effective in improving the symptoms and quality of life of people with ADHD. Although some progress has been made in the world of ADHD today. However, more research is needed. For example, how to better assess ADHD in adults and whether they have complications? How to choose different treatments for different types of patients? Our future research should focus more on these questions in order to improve the treatment and management of adult ADHD in some way. In conclusion, adult ADHD is a complex condition. It requires multidisciplinary collaboration, discussion and ongoing research to inform clinical practice. Collaboration is needed to jointly refine and create more treatments and intervention strategies for ADHD. It is also necessary to increase public awareness and education about ADHD. This will allow us to better understand the pathomechanisms of ADHD and related intervention strategies, and provide more effective treatment options for patients.

References

- [1] ZHANG Ling, LIU Huanzhong. Progress in the genetics of attention deficit hyperactivity disorder in children. *Chinese Journal of Practical Paediatrics*, 2023, 38 (8): 580-584.
- [2] Rajagopal VM, Duan J, Vilar-Ribó L, Grove J, Zayats T, Ramos-Quiroga JA, Satterstrom FK, Artigas MS, Bybjerg-Grauholm J, Bækvad-Hansen M, Als TD, Rosengren A, Daly MJ, Neale BM, Nordentoft M, Werge T, Mors O, Hougaard DM, Mortensen PB, Ribasés M, Børglum AD, Demontis D. Differences in the genetic architecture of common and rare variants in childhood, persistent and late-diagnosed attention-deficit hyperactivity disorder. *Nat Genet*. 2022 Aug; 54 (8): 1117-1124.
- [3] Braun JM, Kahn RS, Froehlich T, Auinger P, Lanphear BP. Exposures to environmental toxicants and attention deficit hyperactivity disorder in U.S. children. *Environ Health Perspect*. 2006 Dec; 114 (12): 1904-9.
- [4] GUO Yu, Deng Xiaohong. Correlation of pregnancy and delivery factors with ADHD in children. *China Maternal and Child Health*, 2008, (14): 1935-1937.

- [5] Johnston C, Jassy JS. Attention-deficit/hyperactivity disorder and oppositional/conduct problems: links to parent-child interactions. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*. 2007 May; 16 (2): 74-9.
- [6] Jiang Lijuan, Lin Zheng, Huang Ting, etc. Analysis of Impulsive Behavior and Fair World Beliefs and Family Factors in Children with Attention Deficit hyper-mortion Disorder. *Fujian Medical Journal*, 2024, 46 (03): 56-59.
- [7] Ra CK, Cho J, Stone MD, et al. Association of Digital Media Use with Subsequent Symptoms of Attention-Deficit/Hyperactivity Disorder Among Adolescents. *JAMA*. 2018; 320 (3): 255–263.
- [8] HUANG Fang,QIAN Qiuzhuan,WANG Yufeng. Psychological treatment of attention deficit hyperactivity disorder in adults (Review). *Chinese Journal of Mental Health*, 2013, 27 (9): 659-664.
- [9] Sun Jiazheng. Theoretical basis of cognitive behavioral treatment of depression. *Psychological progress*, 2024, 14 (4): 208-213.
- [10] Wang Yixin, Zhou Guangdong. Dialectical behavioral therapy and its application. *Psychological progress*, 2024, 14 (5): 188-195.
- [11] Su Chaoxia, Ye Lin. Group Dialectical Behavior Therapy - Introduction to Core Technologies. *Psychology and health*, 2024 (2): 44-46.
- [12] Zhu Yan. Study on the clinical efficacy of sensory integration training in the treatment of children with attention deficit hypermoretion disorder [J]. *Chinese Science and Technology Journal Database (Full Text Version) Medicine and Health*, 2023 (10): 86-88.