The Comparison Between Autism and ADHD: Diagnosis and Clinical Treatment

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Abstract. Autism refers to a developmental disorder that affects social contact; attention deficit hyperactivity disorder is manifested as the disability of attention with hyperactivity, which interferes with function or brain development. Currently, the prevalence of both diseases showed an upward trend. Therefore, the importance of finding the correct diagnosis and improving effective treatment is becoming more and more urgent. For children suspected of autism and ADHD, choosing the correct diagnosis method can not only help clarify the symptoms and formulate effective treatment plans, but also reduce the pain and family economic burden caused by the children's own symptoms, and avoid the risk of misdiagnosis. At the same time, autism and ADHD should receive the timely and effective intervention. The paper here aims at introducing and comparing the diagnostic methods and treatment methods for the two diseases according to their commonalities and differences.

Keywords: Autism, ADHD.

1. Introduction

Autism, or autism spectrum disorder (ASD) is considered as a development defect happened on juveniles that has severe impacts on social contact. This disease may subsequently affect their ability to learn or focus attention. Attention deficit hyperactivity disorder (ADHD) is marked by an continuous pattern of the lack of attention, together with high but abnormal motivation. People with ADHD have these three following main symptoms: inattention, means a person may have problem with sticking to doing something, focusing attention, and keeping the work organized, but these problems are not because they are offensive or have trouble understanding; impulsivity, which means that a person may have some behaviors without deep consideration or be hard to control themselves. Impulsivity means that their desires need to be satisfied in a timely manner or they will become irritated. An impulsive person can also mean that they suddenly engage in behavior that others don't understand, and they don't think about the consequences of their behavior in advance; hyperactivity means that a person is constantly physically active, even in inappropriate situations. For adults, hyperactivity is usually characterized by endless talk or movement. In recent years, autism and ADHD have been widely concerned by medical staff, medical researchers and the public in child psychiatry, child neurology, developmental behavioral pediatrics, child health care and other related departments. According to statistics, the number of autistic patients in the world has already reached 67 million [65], which even exceeds the total number of diabetes patients, cancer patients and AIDS patients. In addition, the prevalence of ADHD is about 6.26% [66], among which up to 60%-80% of the patients can persist to

adolescence and more than half of them can persist to middle age. According to relevant data, there are 14.61 million to 19.79 million people affected by the disease in China alone, and about 7% of children and adolescents in the world are affected by the disease [68-70]. According to the relevant data in the past two decades, the appearance of both autism and ADHD is still going up. Thus, it is urgent to develop acute diagnosis approaches. For children with suspected autism and ADHD, choosing the right diagnostic means can not only help to identify the disorder and formulate effective treatment plans, but also reduce the pain and family economic burden brought by the child's own disorder and avoid the risk of diagnosis error. Currently, the diagnosis of ASD relies on subjective behavioral predictions and other scientific tests, including genetic tests and imaging tests. The diagnosis of ADHD also involves the observation of the patient's behavioral symptoms as well as scientific methods, including neuropsychological, imaging, and screening in a virtual reality environment. However, there has not been any detection method that can accurately diagnose autism and ADHD in a short period of time, and objective and stable diagnosis methods need to be further explored. This paper will review the diagnostic methods of the two diseases found in recent years and compare the two diagnostic methods. At the same time, autism and ADHD should be timely and effectively intervened. If not, the related symptoms will always accompany the life of patients, thus affecting their future work and life, which will have a negative impact on patients from all aspects. This paper will analyze the relevant literature in recent years, aiming to introduce the traditional and latest treatment techniques of ADHD and autism, mainly divided into drug therapy and non-drug therapy, and the comparison of the treatment techniques of the two diseases. It is hoped that this can improve the rehabilitation level of ADHD and autism children and reduce the impact of related symptoms on children.

2. The risk factors of autism

2.1 Genetic risk factors

The risk factor of having autism would increase when in cases where there is already one child with autism in the family. Moreover, the communication capacity of the parents or other relatives is also found to be problematic [1]. Besides, pieces of research illustrated that this condition that autism is superimposed in the family, mostly because they share the same genes, not because they live in the same environment [2-4]. Studies have shown that for most people, the genetic probability of autism variants is extremely high, although some data contradict this conclusion (heritability 40%-50%) [4,5]. The results of these data have naturally led to huge effort by researchers, each trying to explain the genetic factors behind autism on their own. In addition, significant gender differences are also a significant manifestation of autism. According to the study, autism is four times more common in men than in women [7]. However, no specific person reason had been found for the discrepancy. But some theories have sprung up, these include the genetic side of the sex chromosome problem. The extreme performance of the male brain is also a potential factor and one biological mechanism that might also explain the male bias due to the fetal testosterone [8]. Meanwhile, whether each symptom of autism has independent heritability remains a highly controversial issue.

2.2 Environmental risk factors

2.2.1 Gestational period factors. The recent studies have identified a number of dangerous factors. The prominent factors are hypertension of pregnancy, gestational diabetes, threatened abortion, antepartum hemorrhage, and cesarean [12]. In the meta-analysis, gestational diabetes is a particularly typical risk factor. A prospective study showed that gestational diabetes can be very damaging to the fetus, pregnancy complications can also be increased [14]. Besides, it can also cause the significant problem when studying and ADHD [14]. These opposite impacts on the fetal brain do not due to maternal diabetes itself, but may be due to increased exposure to fetal oxidative in utero [15]. In another analysis, which mentioned that potential symptoms of autism should also include feeding difficulties and congenital malformations. Giving birth in the summer was also identified as a risk factor. Relative

research showed that getting infected during pregnancy in the first phase also increases the danger of autism.

2.2.2 Inappropriate drug use and exposure to toxic substances. Exposure to drugs during pregnancy was considered as risk factor of autism. Meanwhile, it has been suggested that exposure to antidepressant drugs during pregnancy also contributes to an increased incident of autism. However, the relationship is indirect, since the association between antidepressant use during pregnancy and autism in offspring is unclear. But a new study suggested that taking antidepressant during pregnancy, especially venlafaxine and amitriptyline, may increase the risk of gestational diabetes, which also increases the risk of autism according to the study before.[14]

3. The risk factors of ADHD

3.1 Genetic risk factors

According to the research, the incident of ADHD in dizygotic twins is significantly lower than that in monozygotic twins. At present, more and more studies have proved that multiple genes are closely related to the occurrence of the disease. According to epidemiological investigations, three neurotransmitters, norepinephrine, dopamine and serotonin, and the genes metabolized by these neurotransmitters may be associated with the occurrence of ADHD to some extent. In addition, the study of Ruan also showed that ADHD is not only caused by a certain gene, it should be a polygenic disease, and it is also related to the environment, including some genes in the dopamine system [25]. One of the neurobiochemical hypotheses to explain the cause of ADHD also includes abnormalities in the system of 5-hydroxytoyptaamine(5-HT). The main reason for this hypothesis is that 5-HT2a receptors are distributed in the prefrontal cortex, which is a region closely related to human cognitive function [26]. Meanwhile, Several linear studies have found that the onset of ADHD is related to dopamine D1 receptor(DRD1). When the prefrontal cortex is damaged, the amount of D1 drops dramatically, preventing dopamine from sending signals through its normal pathways. At the same time, animal models also provide some support for this theory [28].

3.2 Environmental risk factor

3.2.1 Family social factors. Although the relationship between the occurrence of ADHD and many aspects of the family and society is not clear, it is undeniable that they will have a certain extent of influence on the symptoms of ADHD. At the same time, the psychological state of parents is also related to the occurrence of ADHD. Catherine et al. found that when parents have mental problems (depression, anxiety, or emotional problems), their children are significantly more likely to have ADHD than children whose parents are both mentally healthy [31]. Prof. WU found that eight other factors related to the development of ADHD in children - father's childhood activity, father's occupation, father's alcoholism, father's smoking, mother's mental trauma, mother's blood type, single twin, and parental relationship.

3.2.2 Exposure to the toxic substance. With the emergence of various environmental problems, whether the environmental exposure to toxic substances during pregnancy and at birth has an impact on the occurrence and development of ADHD has become a common concern of parents and doctors. Related studies have found that bisphenol A, polychlorinated biphenyls, lead and organophosphorus in the environment are all related to the occurrence of ADHD [33]. However, the direct association between lower doses of lead exposure and ADHD symptoms remains somewhat controversial.

3.2.3 Perinatal factors. At the same time, fetal and perinatal factors are also believed to be associated with the onset of ADHD. Related literature shows that low birth weight, premature delivery, cesarean section, and maternal age are all essential factors in the etiology of ADHD [37,38]. Besides, maternal smoking during pregnancy is the behavior most likely to cause neurodevelopmental and behavioral

development problems in children. Examples include intellectual disabilities, conduct disorders, psychological problems and ADHD [39-42].

4. The diagnosis of AUTISM

Until recently, autism diagnosis was also difficult to complete early, often delayed until mid-childhood [16]. Although some early signs of autism can be detected in videos taken by parents around the age of one, the difficulty of concentrating and a preference for solitude. These seemingly ordinary characteristics are naturally difficult for parents to detect. According to a report, most parents do not first notice autism until their child is 18 months old [17]. Indeed, there are often no distinctive features that doctors can identify as autism when children were only aged one year old. But at 2-3 years of age, there are some absolute indicators of referral. The first one is social barriers that the kids prefer to do activities alone but not play simple games with children of the same age. Lack of interest in other children's behavior, can only immerse in a certain kind of toy. There is no emotional reaction to other people's happiness or pain. The second one is the difficulties in communication that the kids cannot make any syllables and gestures at the first year and they cannot speak a word at a year and a half, leading to the loss of language skill all over their lives. The last one is hurting peers for no reason-biting, hitting, or attacking a peer.

Recently, the diagnosis mainly relies on doctors to judge children's behavior, but some developing techniques are promising, offering us reliable approaches to give an early and more efficient diagnosis on autism. For example, the chromosomal microarray analysis (CMA), CMA is characterized by high resolution, high detection rate and high sensitivity. It is able to detect whether patients have genomic segments of CNVs at specific chromosomal location. So if Child or even a fetus is found to have this CVN by genome-wide early screening, then there is a high risk, but even if there is no CNV, that does not mean the child is not at risk [20]. Imaging tests, neurophysiological tests and other tests are also included, but this paper will not outline all of them.

5. The diagnosis of ADHD

The diagnosis of ADHD is based primarily on the observation of the patient's behavior symptoms. According the research, both DSM-5 and DSM-IV are criteria that can be used to assess ADHD. As mentioned in the DSM-5, the diagnosis of ADHD remains the exclusion diagnosis- If the patient shows some behaviors that can be explained by another disorder (such as schizophrenia, mental retardation and transient tic disorder), then ADHD cannot be concluded. However, autism is sometimes not completely distinguishable from other disorders because it is also common with other mental disorders and conditions [21]. In one study, to compare the study of DSM-IV and DSM-5 in diagnosing children's ADHD, developmental behavioral pediatricians evaluated 946 patients for ADHD by taking history(the cause of the onset, symptoms, duration, treatment, and some negative signs) and physical examinations (imagological examination, hematological examination and surgical examination) , as well as psychiatric and cognitive tests. Then the parents were assessed with DSM-IV and DSM-5 questionnaires contained 18 diagnostic questions for parents to answer yes or no. The final result which were made a definite diagnosis by DSM-IV is 384(40.59%) ADHD cases, while that made by DSM-5 is 370 ADHD cases (39.11%). Attention deficit was the most common diagnosis in the two versions of diagnostic criteria [22]. As can be seen from the above table, both DSM-5 and DSM-IV had good coincidence rates in terms of positive detection rates in clinical applications, and most of their diagnostic items are consistent. Compared with DSM-IV, DSM-5 can give a more accurate diagnosis, because DSM-IV is mainly based on the behavioral symptoms of children described by parents. However, due to the different cultural background of each parent, which will affect the evaluation of doctors, and DSM-5 gives example of this. There are more specific examples, therefore, it can make the diagnosis of ADHD more accurate [22]. From the above studies, it can be seen that DSM-5 has a more accurate diagnostic mechanism, which provides a better direction for the diagnosis of ADHD. In addition, except for the behavior therapy, There are many scientific methods. For example, electrical nerve examination-the

power ratio of activity in the θ / β band in the electroencephalogram was used as a diagnostic criterion for ADHD [23]. Besides, imaging examination, using automated computer-aided diagnostic techniques were used to analyze multimodal features. There are also tests for specific executive deficits in children [24]. Compared with the traditional survey method, VR is a more novel evaluation method, which can not only provide a more realistic evaluation environment, but also give a more accurate diagnosis.

6. The comparison of diagnosis

6.1 Similarities

As can be seen from the above, observing the patient's behavioral symptoms is an important part of the diagnosis process, whether it is autism or ADHD. They all must meet a certain number of symptoms at the same time to be diagnosed with ADHD or autism, both of which are easily confused with similar psychological problems. Although for autism and ADHD has a corresponding scale, there are now more common in diagnostic criteria, but still cannot deny is that the scale is not perfect, it can only through the certain plate segmentation in detail, it is difficult to include all exceptions. Through literature research, it is found that in addition to behavioral prediction, there are also many scientific detection methods for autism and ADHD. The diagnostic methods for both include imaging tests, neurophysiological tests and other test. In addition, unfortunately, both autism and ADHD have not been detected prematurely so far, and there is some difficulty in diagnosing mild or atypical cases at younger ages. Although for young patients, both have corresponding symptoms, in general, parents cannot find out in time or doctors' diagnosis can only be a simple warning, and cannot get a final diagnosis.

6.2 Differences

On the other hand, autism and ADHD, after all, are two different disorders, and there are still many differences in the diagnosis. First of all, the symptoms presented in behavioral prediction are quite different. The main symptom of autism should be that they like to be alone and have no interest in anything outside except what they like. Children with ADHD mainly show inattention and hyperactivity. Although some of the scientific methods used to diagnose the two diseases are the same, their principles are very different, and the specific differences have been shown above. In addition, autism can be diagnosed at an earlier age than ADHD. According to relevant studies, ADHD can generally be diagnosed at the age of six, while autism can generally be found and diagnosed after 36 months.

7. Treatments of autism

So far, there is no effective way to treat the root cause of autism. However, researchers and doctors are trying a variety of other treatments. Although the treatment results were not very significant, they were effective to some extent. Now the common methods are biomedical intervention, psychological intervention and special education method. In addition, there are some treatments which are controversial. This also includes biological related therapy (antibiotic bacteria, antibiotics, gastrointestinal tract drug, secretin therapy, hyperbaric therapy) [45]. According to the relevant research statistics, bio-related therapy has been adopted by 50%-70% of autistic patients, but the effect is not good, and the safety and effectiveness of evaluation is always in an incomplete state [46].

7.1 Drug therapy

Although current drugs do not provide an effective treatment for ASD, there are still some antipsychotic drugs that can target some of the symptoms. They can be used to treat anxiety, depression, or to alter neurobiochemical systems such as 5-HT and DA [47]. The main autism medications for children aged 5 to 16 are risperidone and aripiprazole, which is also the only ones approved by the Drug Enforcement administration [49]. In addition, antidepressants have been shown to have some effect on some of the symptoms of autism. Patients often repeat stereotypical behaviors and have more severe obsessive-compulsive disorder (OCD) symptoms, which can be effectively reduced by these drugs. At the same time, it can improve emotional problems, improve social skills, and enhance communication skills.

7.2 Non-drug treatment

7.2.1 Behavior intervention. Applied Behavior Analysis (ABA)is by far the best know behavioral intervention for autism, which is the practice of applying the psychological principle of learning theory in systematic way to modify behavior. ‘Stimulus-reaction-reinforcement’ is a learning theory that applies behavioral analysis [50]. Among them, in the traditional applied behavior analysis method, discrete trial teaching (DTT) is undoubtedly the most prominent representative. DTT is the decomposition of the target task into tiny steps in a certain way and order. However, DTT is too structured. Nowadays more popular methods are opportunity learning and key response training, which break through the shackles of traditional behaviorism and can achieve a significant effect in the teaching process.

7.2.2 Psychotherapy. Psychological treatment is mainly through the psychological level of children to stimulate. The aim of this treatment is to create an environment in which the child can accept and be supported by those around him or her, because children will not get a warm environment and lack of respect and become withdrawn. In this environment, which is quite safe for children, children will gradually get in touch with the outside world and begin to express themselves in some ways. According to research, children with autism exhibit typically defensive behaviors. This kind of treatment allows the children to abandon those behaviors to a certain degree to build trust in other people and gradually accept the world [50].

7.2.3 Dietotherapy. Dietotherapy is easier to adopt because it has fewer risks and side effects than other therapies, and it also can be combined with other therapies [51]. At present, the dietary intervention method and theories that can be adopted mainly include the specific carbohydrate diet (SCD), gluten-free/casein free diet(GF/CF), low oxalate diet, ketogenic diet, and the Feingold diet [51].

7.2.4 Virtual reality technology. Virtual reality technology is a innovative treatments for autism. It aims to use computer simulation to produce a three-dimensional virtual world, so that users have an immersive experience whether in vision, hearing and touch. In this kind of space, users are not constrained by any restrictions, they can observe anything in the three-dimensional space [52]. In 1996, he came up with virtual reality and proved it was possible [53]. The effectiveness can be shown in the following aspects: (1)enhance the cognitive spirituality of patients; (2)according to the characteristics of autistic people’s thinking to provide information presentation; (3)improve patients’ theory of mind ability [54]. The study showed that the application of virtual reality technology can not only allow patients to improve their life skills in virtual situations, but also extend these skills to real life [55].

8. Treatments of adhd

8.1 Drug therapy

According to research, the short-term efficacy of medication for ADHD is very significant. There are more than 20 prescription medications for ADHD on the international market. There are two main first-line drugs recommended by domestic guidelines: one is the stimulant methylphenidate hydrochloride, the other is the non-stimulant tomoxetine hydrochloride. At present, because of the insufficient awareness of ADHD, many parents have been resistant to stimulants. In fact, studies have shown that treating children with ADHD with stimulant medications does not increase the risk of drug addiction and improves ADHD symptoms.[56]A mesh meta-analysis of 133 clinical studies involving 24,000 participants reported that stimulants were highly effective in reducing ADHD symptoms, especially in children [57]. However, it is still necessary to be vigilant about non-medical use, identifying risk factors and considering appropriate intervention options. According to the study, tomoxetine have a moderate effect size at all ages [59].

8.2 Non-drug treatment

For non-drug therapy to have an effective effect, it requires extensive clinical experience and individual programs. Its principle can be roughly summarized as the following: (1) Behavior evaluation, identify the behavioral symptoms; (2) Choose behaviors that require intervention, develop appropriate programs and strategies for individual. (3) Emphasize the importance of correct feedback to parents and teachers. (4) Supervise the execution at all times. (5) Once a problem is identified during treatment, it should be stopped immediately and change the scheme [59].

8.2.1 Biofeedback therapy. It is a new psychological treatment method that makes use of modern physiological scientific instruments, through the self-feedback of the endogenous theory or pathological information of the human body, so that patients can carry out conscious ‘idea’ control and psychological training after special training to eliminate the pathological process and restore physical and mental health. At present, EEG biofeedback is the most used treatment for ADHD, which allow the neurophysiological theory as the basis of treatment, so as to improve the clinical symptoms. Shereena and others divided children with autism into a treatment group that added EGG biofeedback training to their usual treatment and a control group that did nothing else. The study found significant improvements in memory, attention reflexes in the treatments group [60].

8.2.2 Environmental conditioning: Family therapy. Because family and school are the main living environment of school-age children, parents and teachers are important participants and feeders of non-drug treatment, both are indispensable, so environmental conditioning can be mainly divided into family therapy and school intervention.

ADHD is closely related to family factors, which are related to poor early attachment relationship, maternal deprivation, poor family structure and improper parenting style. Pan Meirong summarized the current family therapy techniques as the following aspects: (1) Carrying out parent training, many parents do not know how to face the symptoms of children, resulting in poor communication with children and ineffective treatment. Therefore, by training parents to cope with the symptoms of children, children and parents can form a benign communication to achieve an effective treatment. (2) Systematic family therapy-based on a systems view, systematic family therapy, focuses on family structure, subsystems and boundaries to change individuals and families by changing family dynamics and organizational structure. Family intervention can help parents systematically and systematically manage and treat children effectively, which is helpful to improve children's impulsive and hyperactive behaviors, and improve their learning and social skills [61].

8.2.3 Environmental conditioning: School interventions. Children with ADHD are prone to showing symptoms including hyperactivity, impulsivity, and difficulty concentrating at school than at home. For example, when listening to the class easy to wander, do homework cannot concentrate, cannot sit in the seat, often interrupt the teacher in class, and easy to conflict with classmates. At present, Yang Yue divides school intervention into two types. One is one-way intervention, which also includes behavioral intervention technology and cognitive behavioral intervention technology. Behavior change intervention techniques are mainly based on rewards and punishments to increase the occurrence of good behaviors and reduce the occurrence of bad behaviors. This intervention technique is carried out in the form of a game, under the supervision of the teacher, in accordance with established class discipline and reward and punishment mechanisms. The study found that after 24 months of intervention, ADHD-related symptoms were significantly under control. Cognitive behavioral intervention techniques emphasize more on children's self-supervision and self-assessment. Firstly, teachers and students jointly agree on one to three kinds of performance behaviors that need to be monitored and evaluate students' behavior performance through Likert scale. At the same time, students were also asked to rate their own behavior on the same scale. Then the teacher's ratings were then compared with those of the students. When the results are similar, teachers can gradually withdraw from the evaluation process and help students to supervise and manage themselves [62]. According to Du Paul’s research, children who have undergone

cognitive behavioral intervention techniques can use self-assessment to control their misbehavior without teacher supervision [63]. The other is integrated interventions, where the first two techniques can be used in conjunction with other interventions as well as alone. Examples include peer supervision, token therapy, self-command, emotional control, and social skills training. In addition to teachers' ability to supervise students, peers can also supervise each other. Its advantage is that it can examine itself while supervising others to obtain a kind of good behavior. Tokens can be directly regarded as a form of reward for children. Children can get different amounts of tokens for different behaviors, but the occurrence of bad behaviors will also deduct tokens; Self-command technique is a series of self-centered intervention techniques designed to allow ADHD children to regulate their own behavior through self-command, by combining self-command techniques and emotional control techniques, Barkley effectively corrected the problem behaviors of children with ADHD [64].

9. The comparison between treatments

9.1 Similarities

According to the specific analysis above, the treatment of autism and ADHD can be divided into drug therapy and non-drug therapy. Unfortunately, neither treatment so far addresses the root causes of ADHD and autism, only the underlying symptoms. In terms of drug treatment, there is no corresponding specific drug for either ADHD or autism. Drugs cannot treat the core defects, and the effectiveness of drugs is lower than that of other diseases, and there are even certain side effects [65]. In addition, in the non-drug treatment, it can be found that the treatment of both diseases includes behavioral intervention therapy, and this process requires the intervention of parents and teachers, who are important feedback in the treatment process. Both autism and ADHD treatment process need to provide a good treatment environment for children, which allow them to put down their guard to the outside world, in order to achieve effective treatment.

9.2 Differences

According to research findings, the best treatment period for autism is before the age of six, and 2-6 years old is the critical period of rehabilitation training for children. It is recommended to start active treatment after diagnosis. However, for children with ADHD, the optimal age for treatment should be between 6 and 12 years old, because this is when the symptoms of ADHD in children are most obvious. As can be seen from the above analysis, the drugs used to treat autism and ADHD are quite different. The main treatment for autism is antipsychotics. ADHD patients can choose drugs mainly divided into stimulants and non-stimulants.

10. Conclusion

Through analysis, this paper found that both autism and ADHD have similarities and differences in diagnosis and treatment, which may be because they are complex generalized neurodevelopmental disorders that often occur in early childhood. At the same time, they are more likely to have complications. This article reviews the common diagnosis and treatment methods of autism and ADHD in detail, hoping to provide references for future research. However, the current research still has many shortcomings.

For ADHD, the overall prevalence of ADHD in Chinese children and adolescents was 6.26%. However, the prevalence has increased because children have been staying home for longer periods of time during the pandemic. ADHD is still a disease with a high prevalence, which requires close attention and prevention from the whole society. However, it is worth worrying that although it has been proved that the main cause of ADHD is genetic factors, the genetic problems that have been clarified are still limited, and the rest of the problems still need to be considered and explored. In addition, in terms of diagnosis, most of them are still based on the subjective observation and diagnosis of doctors, but this method is obviously not reliable enough, and the objective and reliable scientific diagnosis technology needs to be further explored. At the same time, medication for ADHD is still not effective in treating

the root cause. Only treating the superficial symptoms is not long enough, and the side effects of medication need to be improved.

The research on autism has been going on for more than one hundred years, but the treatment progress of autism is still unsatisfactory both at home and abroad. As for the correction and rehabilitation of autism, it has not been found that there is any method that can completely cure autism from the root, and it can only be treated by improving the symptoms of autism. Like ADHD, the diagnosis of autism is still a question that deserves further investigation. At present, it is mainly based on the behavior of children to predict the occurrence and development of autism, but this often cannot get a clear diagnosis, thus delaying the best treatment time of autism. In terms of treatment, autism also has the same problem as ADHD treatment is not effective enough, only in a short period of time; drugs need to be taken for a long time, bring a lot of physical and mental side effects to children and so on. The above are still worth the attention and exploration of the world in the future.

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