

Research on Current Situations, Problems and Countermeasures of the Rehabilitation Model for Children With Autism Spectrum Disorder (ASD)

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Abstract: Autism is an abnormality in brain development, although autistic people often share the same mental world, similar ways of thinking, and sometimes even better reasoning ability and intelligence than ordinary people. However, they are missing certain basic functions which affect their emotions, which is why they exhibit unusual emotional or physical states and ultimately create misconceptions and prejudices among the public because of these manifestations. Using the literature research methods, survey method, and comparative analysis, this paper discusses the current situations and existing problems for children with Autism Spectrum Disorder (ASD). However, there are still many problems in the education and rehabilitation of autistic children, and autism has evolved from a severe intraindividual disorder to a complex social problem. In this paper, we suggest several ideas for establishing a rehabilitation system for children with autism to change the current situation of rehabilitation for autistic children.

Keywords: Rehabilitation model, Autism Spectrum Disorder (ASD), Current situations, Problems, Countermeasures

1. Introduction

1.1 Research background

With the increasing number of people with autism, about 1 in 44 children has been identified with autism spectrum disorder (ASD) [1]. ASD is abnormal brain development, and this disease has existed for a long time and has no treatment completely discovered. According to the data, the best treatment time for autism is 1 to 3 years old, but the diagnosis takes nearly half a year [2]. They have the same emotions as ordinary people, and some even show much stronger intelligence on certain things. But because they lack some basic brain functions. For example, they cannot express themselves fluently in spoken language, or their neural brain and body coordination are damaged. They cannot control their emotions very well, easily getting irritated and short-tempered. This has led to the misunderstanding of the public. These special groups of people are helpless and ignored in society nowadays. There are currently 1,000 training institutions in China, but 90% of the institutions report not having enough teachers, and the family cannot receive relevant treatment due to financial difficulties [2]. However, these kids are also growing up and becoming part of society. Helping them better integrate into society through various activities and therapies and improve their sense of belonging and well-being will be the ardent expectation of every family with autism and everyone who cares about this social issue and devotes itself to it. The study of this disease can promote the overall medical service and provide great opportunities for innovation in this field.

1.2 Literature review

Due to the limitation in technology and lack of resources, children with ASD face great difficulties accessing effective treatment and services and thus cannot be recovered. Cantor found that 43.0 percent of facilities reported providing healthcare services for children with ASD in the United States. Besides, 12.7% of these facilities have specialized training clinicians, and only 4.3% provide specialized treatment [3]. There is a lack of professional services for ASD, which causes difficulties in improving this disease. Besides, Barry analyzed the spending on ASD services costs by an average

of \$924 for children with ASD. These mandated spending put heavy burdens on ASD children's families' finances [4].

In addition, Stuart proposed that the treatment for ASD costs expensive and usually is not covered by the health insurance. Since the diseases require certain treatment throughout the lifespan, many families with autistic kids face the challenges of paying for services [5]. This article offers a great aspect for evaluating the problem of ASD by focusing on insurance and certain policies. Furthermore, LiangWu has mentioned that the diagnosis of autism still has many limitations even though the technology has developed. There is a lack of uniform diagnostic criteria throughout the medical system, a lack of professional staff with diagnostic skills, and a lack of interventions pathway. This leads to an incomplete rehabilitation of the intervention system for autism in different counties. The treatment for ASD is not highly effective, and many problems occur in various aspects.

Most importantly, the flaws in the recovery system cause a small, limited-scale number of institutions. The demand for treatment has far exceeded the supply in the whole system. Almost half of the children with autism have to be within the line to receive rehabilitation training, which brings a new problem for the rehabilitation pathway [6].

1.3 Research gap

With the great resources and data on the cost of treatment, many researchers provided several solutions to address the financial problem for autism families. In contrast, a few articles research current situations, problems, and countermeasures of the Rehabilitation model for children with Autism spectrum disorder. Due to the lack of professionals in autism rehabilitation and the existing rehabilitation personnel having uneven education and unbalanced professional distribution, it's necessary and pivotal to give some solutions for existing problems.

1.4 Research framework

This paper will use the literature research method and comparative analysis to analyze the overall situation of ASD. Firstly, this paper will describe the current situation of ASD in various aspects and compare it to each country. Then, some problems may be evaluated by using data support. Lastly, the paper will provide countermeasures of the Rehabilitation model to eliminate some limitations in the progress of treating ASD. This paper may offer a comprehensive perspective on treating children with ASD.

2. Methods

To get as much precise data and information, this paper will use three methods to analyze and evaluate: the literature research method, the survey method, and the comparative method. These can offer comprehensive information for the paper to discover and gather data. Besides, comparing different regions of treatment of ASD. Thus, the paper may address the difficulties faced by the ASD system and arrange to propitiate solutions for the Current status of autism rehabilitation.

2.1 Literature research method

The literature research method is a way to investigate and evaluate published articles and data. This method can provide an overview of the specific topic. Based on the comprehensive summary, professional perspectives are discovered. In this paper, through the relevant resources, we will find out the current treatment situations for ASD and point out the problems in the rehabilitation system to provide several measures to prove some systems.

2.2 Survey method

Questionnaires are released based on the existing problems of the recovery system for ASD. The survey method refers to getting actual data from a special group of people based on a particular topic. It can ensure the updated data for analysis. In this paper, the survey mainly focuses on the difficulties

of finance faced by the Autism institutions. This can directly provide a view of the willingness of the public to help with autism and reflect some potential social issues related to ASD.

2.3 Comparative analysis

Comparative analysis refers to comparing and contrasting two or more things together to find similarities or differences between each other. Hence, evaluate each to get the overall results or give different strategies. In this paper, the comparative analysis will compare the situation and rehabilitation state of ASD children in different countries. By comparing distant systems, we may analyze the positive sides of each Courtney and combine them with various situations to propose a countermeasure for the overall ASD rehabilitation.

3. Results

With a growing number of interests in ASD issues and deeper investigations, more and more autistic kids are being treated. However, the symptom is hard to identify and may cause a diagnostic error. Research has found that several factors cause ASD, such as inheritance, environment, and mutation [7]. In Asia, the average prevalence of autism is about 1%, with 5 times higher in boys than in girls. [7]The rehabilitation status can be categorized in three dimensions: (1) information on ASD children diagnosis and treatment; (2) overview of educational rehabilitation in institutions; (3) effectiveness of educational rehabilitation

3.1 Current diagnosis and available treatment for ASD children

A general fact that has reached consensus is that there are no special medications for ASD treatment, which means children with autism cannot get full recovery. Nevertheless, a lack of professional information resources at the preliminary diagnosis and intervention stage may delay the best treatment time [8]. Common symptoms may occur in children with autism with data comparing include speaking disorders (98.5%), sensorimotor disorders (95.5%), intellectual disabilities (89.4%), ADHD (83.3%), epilepsy (59.1%), sleep or movement disorders (59.1%), obsessive-compulsive disorder (54.5%), and gastrointestinal disorders (34.8%) [9]. The above symptoms intensified the pathway to recovery.

The most frequent therapy used in treating ASD is Behavioral intervention therapy. The way of intervention to improve the behavior of children. It's highly effective compared to other therapies. This therapy is based on the theory of learning and operant conditioning, which consists of specific interventions for particular behavior behaviors. Besides, this applies to Autism children between 12 months and 48 months of age [7]. Therefore, it can help reduce the symptoms and improve the child's cognitive, linguistic, and emotional issues during the preliminary stage. However, it's sometimes hard to identify children with autism at such a young age, which creates a treatment gap for bigger children

Another therapy that has been used is psychosocial treatment [7]. Autism children tend to have difficulties in controlling their emotions. Psychosocial interventions can eliminate children's fears and anxiety by finding out the regularity and influence of pathological behavior and hence provide symptomatic treatment. The ultimate purpose of psychological interventions is to offer the right emotional guidance by giving tolerance and encouragement. Furthermore, these treatments have to explain to the parents to correct some abnormal behavior and some responses to these behaviors.

Sensory integration training is also applied in one therapy for autism treatment. It refers to the simultaneous administration of multiple stimuli to the child, focusing on deep sensory combinations of behavioral training [7]. Such integration training may enhance autistic children's ability to listen, exercise, and communicate. Furthermore, some special treatment may offer to those children with a higher level of autism who have severe symptoms. They should apply some medication treatment to mitigate the disease, such as acetylcholinesterase inhibitors or Risperidone Peridone[7].

3.2 Overview of educational rehabilitation in institutions

The lack of sufficient teaching staff and educational resources is a key bottleneck in all autism institutions, prohibiting more autistic children from recovering and returning to society. Given little attention from the community and their unique characteristics, at least one working family member is negatively affected. Many families cannot provide good education and timely treatment for their children due to financial pressure. Children with autism need to receive support from a comprehensive treatment system, a basic education system, and social support mechanism and live a normal childhood.

According to the “Report On The Development Of Autism Education And Rehabilitation Industry In China”, over 10 million people have autism in China; children between the ages of 0 and 14 are over 2 million [10]. Based on the survey data, we noticed that the actual autism rehabilitation teachers in China could only cover 1.3% of the population, with 98.7% of the population unable to receive effective rehabilitation training for the time being [10]. Nearly 50% of institutions are founded by parents, especially parents of autistic children. It is difficult to establish consistent industrial standards and norms for private-owned autism rehabilitation institutions to ensure the quality recovery of those kids. Currently, it is difficult to find teachers who specialize in teaching autistic kids. The appropriate ratio between teachers and children in one school is usually 1:4. Still, this ratio in autism schools has generally reached 1:8, and some institutions are even above 1:8, which cannot meet the basic norms [11].

3.3 Effectiveness of educational rehabilitation

The rehabilitation center has established a training base for children with autism and has carried out a series of programs such as structured teaching, integrated sensory training, language therapy, and process teaching. A series of educational rehabilitation training for autistic children includes structured teaching, integrated sensory training, language therapy, and process teaching. The rehabilitation provides a good educational space to promote and develop the training of autistic children and to facilitate parents' mastery of rehabilitation knowledge. In addition, establishing professional institutions for rehabilitation training autistic children is effective. In the ranks of rehabilitation training for autistic children, most institutions, except for public hospitals, are non-profit organizations established by parents of autistic children or enthusiastic members of society. The majority of these organizations are non-profit organizations established by parents of autistic children or community members. Educational and rehabilitation institutions for children with autism generally have a team of professionally trained and caring teachers who can receive regular technical support from experts and supervisors. The institutions provide regular in-service training for teachers to update their professional knowledge and ensure the effectiveness of rehabilitation training for autistic children.

In a survey included in one literature, 56.9% of parents and 57.6% of teachers reflect the effective's of the children's current status was average and generally improving [9]. Only 2.8% of parents and 3.0% of teachers felt that there had been little improvement [9]. Among the supplemental options, parents generally reported that children made significant progress in the first two years of institutionalization and then stagnated after that, which warrants some reflection.

3.4 Issues in the overall system for autistic children

3.4.1 Lack of rehabilitation training institutions and shortage of professionals

The facilities of autism rehabilitation institutions are poor, and teachers are lacking. At present, there are more autism rehabilitation institutions in mainland China. However, most of the facilities in autism rehabilitation institutions are relatively rudimentary, with small venues and a lack of space that cannot provide enough activity room for autistic kids to educate. There is a shortage of professional teachers who can teach autism training techniques [8]. The training is almost sporadic and has not formed a scale. This rehabilitation work requires a high level of psychological and professional quality of teachers. This rehabilitation work requires a high level of psychological and

professional quality of teachers, and teachers must be selected, trained, and evaluated. In areas where it is possible, teachers should be certified. In the absence of such conditions, it is easy for children to develop emotional and behavioral problems, leading to serious risks for their future growth.

3.4.2 Unregulated system

The shortage of clinicians who can recognize and diagnose ASD social workers lead to a big problem ineffective treatment for ASD. The total number of special education professionals in China is 31,000, while the number of special education professionals in the United States is 380,000, and 340,000 are certified [12]. In the meantime, there is a huge imbalance between supply and demand, with large market demand and little competition in the industry. The demand is high, and the competition is low, resulting in the creation of many short-term training institutions, but the quality of practitioners is generally not high. Few people are willing to spend money on systematic quality training for their staff, which directly affects the ethics and quality of practice, making the orphanage rehabilitation training industry extremely unregulated.

Furthermore, the status of institutional, family, and community interventions for children with autism is not optimistic. The rehabilitation system in institutions is not sound, intervention methods are backward, and the quality of rehabilitation services is unsatisfactory. Family relationships have been restructured, and parents face greater economic and psychological pressure.

3.4.3 Financial issues

The cost of rehabilitation for children with autism is high and unaffordable for families with autistic children. Families of autistic children are under tremendous pressure and burden. Parents who brought their children here for rehabilitation training had to take time off work or give up their jobs to take care of their children. Diagnosing autistic kids is costly, and parents spend years of effort and money getting a diagnosis. After diagnosis, rehabilitation is another burden on the family. According to expert research, it takes at least two years to rehabilitate a child with ASD for \$2,000 per month [13]. Many families cannot afford such a huge fee and give up paying for training. Social support and protection systems are lacking. Based on a previous questionnaire survey, over ninety percent of visitors were willing to donate funds to rehabilitate autistic children. However, some people indicate that they don't know much about ASD and will not give their support.

4. Discussion

4.1 Government intervention

The government plays a huge role in support of Autism treatment. The government should regulate all policies and financial support. They should actively coordinate with relevant departments to establish and improve the service network mechanism for prevention, screening, diagnosis, and rehabilitation training for children with autism. In addition, they can increase support for special education schools to ensure the implementation of rehabilitation work by subsidizing.

The government's policy support is necessary to develop community-based rehabilitation work for children with autism. It can formulate specific policies and carry out practical work. For example, they can conduct a nationwide survey on autistic children and provide policy support to rehabilitation institutions. In addition, since children with autism, unlike deaf, blind, or physically disabled people, can become legally competent, their rights and interests depend mainly on their guardians to fight for them. Therefore, the government must promote support for autistic children by increasing the public's acceptance of and concern for autistic children.

4.1.1 Expand the scale of rehabilitation institutions

Government should build more public rehabilitation training institutions (non-profits) for autistic children. These institutions should mainly research rehabilitation training for autistic children, guide training in autistic institutions, and professional training for autistic teachers. The government should

also encourage the community to establish rehabilitation institutions for children with autism through the “private sector”, and develop the rehabilitation of children with autism. Address the problem of excessing demand for education and rehabilitation of autistic children.

4.1.2 Improvements in the professionalism of special education teachers

It is necessary to strengthen the training of special education. The government should expand the number of special education recruitment and absorb more professional talents to enrich the special education teacher team by setting policies or regulations. At the same time, the quality of teachers should be assured. Regularly hire special education experts to provide professional skills training for practicing rehabilitation training teachers to improve their professional quality.

4.1.3 Investigations of scientific research

Government should put more effort into exploring the diversification of rehabilitation training methods and form an effective education and rehabilitation mechanism. By strengthening scientific research on the education and rehabilitation of autistic children, it may include some settings for the content of rehabilitation training courses, developments of educational assessment standards for autistic children, and the form of a mechanism for effective operation.

4.2 Family actions

Family is an important part of the rehabilitation for the pathway of autism treatment. It's a subsystem of social commotion and a necessary place for growth. The family can be transformed into a “family-centered” model for the rehabilitation of children with autism. It's important to treat the autistic child as a normal child. Besides, a relaxed and comfortable environment should be created for parents to interact and promote partnership between parents and community professionals at different levels. Also, encouraging and facilitating mutual support among parents of children with autism.

The family needs to build contacts with the school actively. Increasing family awareness of rehabilitation training for autistic children. Hence, helping parents to establish a sense of subjectivity and be participants in their child's training and assessors of training outcomes.

4.3 Social supports

The huge cost of autistic treatment becomes the biggest obstacle and creates heavy burdens for each family. Autism treatment should be included in the medical insurance system as soon as possible so that the vast majority of autistic children can receive better rehabilitation treatment. Besides, the educational environment should change by having more educational resources and better environmental conditions to compensate for their congenital social deficiencies through strong, linear, all-encompassing education. The rehabilitation of children with autism is not only a family issue but also a serious social issue. Children with autism should also receive positive support from society. It can be some eliminations of misunderstanding autistic children or even give more understanding when meeting a kid with autism. These children need to communicate more with the outer world, and more social support can help them get good.

5. Conclusion

5.1 Key findings

Nowadays, Autism children are challenged by the disease itself and outside support, which increases the difficulties of recovery. The language and social interaction barriers, a narrow range of interests, and stereotyped behavior patterns prevent children from receiving proper treatment. Although the public has started to follow this community, the issue of education and rehabilitation of autism needs to be addressed in various aspects.

5.2 Research significance

It's necessary to build mutual respect, understanding, and care between people who suffer between autism and the general population. They have suffered too many misunderstandings, so there needs to be a proper understanding of them, which is also a great opportunity to eliminate social inequality in the economy, besides the serious treatment problem. The rehabilitation model should be improved to give autism more support. Through this process, the new invention of drugs or technology innovations will all be great resources for the whole medical system to address many diseases.

5.3 Limitations

The findings in this paper have several limitations. Firstly, the government support for financing the institution seems easy to implement, and there will increase the burdens on the government's budget. It's hard to balance the cost of each sector for the government because the fiscal deficit or other economic problems may occur. Secondly, some solutions are hard to implement by limiting the technology. While ASD is treated and solutions like scientific work heavily rely on technology, it's hard for the medical system to have further inventions and policies. Thirdly, methods like social support may not work for every autistic child. These methods cannot completely help autistic kids become recovery, and they can only let them get more resources for their treatment.

References

- [1] Maenner, M. J., Shaw, K. A., Bakian, A. V., Bilder, D. A., Durkin, M. S., Esler, A., Furnier, S. M., Hallas, L., Hall-Lande, J., Hudson, A., Hughes, M. M., Patrick, M., Pierce, K., Poynter, J. N., Salinas, A., Shenouda, J., Vehorn, A., Warren, Z., Constantino, J. N., Cogswell, M. E, Prevalence and characteristics of autism spectrum disorder among children aged 8 years - autism and Developmental Disabilities Monitoring Network [J], 11 sites, United States, 2018. Doi: <https://doi.org/10.15585/mmwr.ss7011a1>
- [2] Shenzhen Autism Research Institute. (2013). Survey on the Status of Services for People with Autism in China: South China [J]. 2013. Retrieved May 15, 2022, from <https://www.doc88.com/p-73547190972149.html>
- [3] Cantor, J. (2020, June 1). Fewer than half of us mental health treatment facilities provide services for children with autism spectrum disorder: Health Affairs Journal [J]. Health Affairs. Retrieved May 15, 2022, from DOI: <https://doi.org/10.1377/hlthaff.2019.01557>
- [4] SM, M., P, H., LA, C., Al., E., C, G., AV, B., DL, L., G, C., PB, P., JN, B., RM, S., TC, B., DS, M., P, C., J, G., JB, B., Z, C., MB, B., WG, M., ... GA, J. (2017, October 1). Effects of state insurance mandates on health care use and spending for autism spectrum disorder: Health Affairs Journal. Health Affairs [J]. Retrieved May 15, 2022, from DOI: <https://doi.org/10.1377/hlthaff.2017.0515>
- [5] M, K., DL, C., Al., E., SM, M., AV, B., D, L., DS, M., L, B.-F., B, Z., G, C., PB, P., OT, L., E, S., KN, B., LA, B., TC, B., JP, B., HH, G., AB, B., ... Cantor, J. (2017, February 1). Increased service use among children with autism spectrum disorder associated with Mental Health Parity Law: Health Affairs Journal [J]. Health Affairs. Retrieved May 15, 2022, from DOI: <https://doi.org/10.1377/hlthaff.2016.0824>
- [6] Wang LJ, Ma Jun. Analysis on the Chaos of Rehabilitation of Children with Autism [J]. Medicine and Philosophy, 2018, vol. 39, no. 14. Pp. 64-67. DOI: <http://dx.chinadoc.cn/10.12014/j.issn.1002-0772.2018.07b.19>
- [7] Ting. Yu, Current status of treatment and rehabilitation for children with autism [J], Proceeding of Journal of Clinic Nursing's Practicality, 2018, vol. 3, no. 21, pp. 197-198. DOI: <https://doi.org/10.3969/j.issn.2096-2479.2018.21.156>
- [8] Laing Wu, Hongxia Li, Autism spectrum disorder and rehabilitation of autistic children [J], Proceeding of Foreign Medical Sciences (Section of Medgeography), 2018, vol. 39, no.2, pp. 101-103. DOI: <http://dx.chinadoc.cn/10.3969/j.issn.1001-8883.2018.02.003>
- [9] Fang. Wang, Guangxue, Yang, On the Investigation into and the Analysis of the Intervention and Rehabilitation Status of ASD in China [J], Proceeding of Medicine & Philosophy, 2018, vol. 38, no. 20. DOI: <http://dx.chinadoc.cn/10.12014/j.issn.1002-0772.2017.10b.15>

- [10] Peishi. Wang, China Autism Education and Rehabilitation Industry Development Report [N], 2018. Retrieved May 25, 2022, from [https:// http://www.txtepub.com/175579.html](https://http://www.txtepub.com/175579.html)
- [11] Ying. Wang, The province's autism special education teachers only four thousand shortage of up to 20,000 people [N], 2017, Retrieved from: <http://ah.sina.com.cn/news/2017-10-12/detail-ifymviyp0308616-p2.shtml>
- [12] Jialun. Sui, Current status and development of community-based rehabilitation for children with autism [J], Proceeding of Young & World, 2014, no.16, pp. 325-325
- [13] Hui. Wu, Current situation and reform ideas of rehabilitation assistance for children with autism [J], Proceeding of Journal of Changsha Social Work College, 2011, no.2, pp, 41-42. DOI: 10.3969/j.issn.1671-5136.2011.02.011