

# A Study of Health Prescribing for Children with Tourette's Disorders in Children's Health Education Specialty Care Clinics

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**Abstract:** *Objective:* This study designs and implements the health prescription of children's health education specialized nursing clinic based on the physical and mental characteristics of children with Tourette's syndrome. *Methods:* Applying the evidence-based nursing model and nursing intervention theory based on the survey research by searching China Knowledge Network, Wanfang Database and Wipro Chinese Science and Technology Journal Database, the study collected the literature on the health prescription intervention research in children's Tourette's disorders health education in children's health education of specialized nursing outpatient clinic for review and combined with the specialty characteristics to formulate "Children's Tourette's Disorder Health Education Prescription." *Results:* Tourette's syndrome in children is a common pediatric neurological disorder, mainly manifested as involuntary, rapid and repeated muscle twitching and vocal tics, which brings serious psychological pressure and life disturbance to the affected children. *Conclusion:* For children with Tourette's syndrome, healthcare professionals should give enough care and understanding to the children and their parents, provide timely and effective health education to them, help them improve their bad behavioral habits, establish correct cognitive attitudes, enhance self-confidence, improve patient compliance, reduce the frequency of recurrence, reduce the incidence of complications and promote children's physical and mental health development.

**Keywords:** Children's health education; Specialty care clinic; Childhood Tourette's disorder; Health prescription

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## 1. Introduction

In recent years, the incidence of childhood Tourette's disorder has been on the rise. Tourette syndrome in children is characterized by sudden, brief, involuntary muscular or vocal tics, including blinking, squeezing eyebrows, nodding, shaking the head, sticking out the tongue, shrugging and other movements. It is also manifested as verbal obscenities, imitation of language, repetition of nonsensical words or phrases, lewd behaviors and indecent language, etc. <sup>[1]</sup>. Tourette's syndrome (TS) is a group of disorders that are characterized by involuntary, sudden, rapid and repetitive neuropsychiatric disorders with neuromuscular motor tics as the main clinical manifestation. The tic symptoms involve the face, trunk and extremities with various forms of

vocal tics or obscenities, with oral tics being the most common. Depending on the severity of the disease, it can be categorized into 2 subtypes: Transient tic disorder and chronic tic disorder. The prevalence of Tourette's syndrome in children in China is about 1% to 5%. With the accelerated pace of life and increased competitive pressure in modern society, the prevalence of Tourette's syndrome in children is increasing year by year. Currently, internationally recognized treatment methods for Tourette's syndrome include medication, behavioral therapy, psychotherapy and educational interventions, and health education plays an important role in these treatment modalities. Although most children with Tourette's syndrome are in mild condition, some of them still suffer from prolonged and recurring episodes of the disease, which leads to a decline in their academic performance, fear of socializing, and even depression and other emotional problems and creates a heavy burden for their families. In addition, due to the lack of relevant knowledge, parents of affected children are also prone to anxiety, irritability, overprotection and other negative emotions, affecting the physical and mental health of children. Therefore, how to effectively improve the self-management ability of children and their families and encourage them to actively participate in disease management has become an urgent problem to be solved. Health prescription, as a health education model based on evidence-based medicine, can meet patients' individualized and multi-level needs, help improve the medical health outcomes of children and enhance their overall health. Therefore, it is of great significance to set up a specialized nursing clinic for children's health education, integrate the concept of health education into nursing practice, improve children's physical and mental health and increase their parents' satisfaction.

## **2. The need for the implementation of outpatient health prescriptions for the care of children with Tourette's disorders**

### **2.1. Improve patient compliance**

China's children with Tourette's syndrome are mainly preschool children, of which 30% to 60% of the children, due to the small age of the disease, cognitive function is still not sound, cannot fully understand the meaning and process of the disease treatment and rehabilitation, so it is easy to produce resistance. At present, China, in the field of children's developmental and behavioral diseases, has initially formed a multidisciplinary health education mechanism, including medical, nursing, psychological, social and other joint work. However, since Tourette's syndrome belongs to the category of neuropsychological diseases, the importance of health education is more prominent. A study on Tourette's syndrome showed that 95% of parents had misunderstandings and prejudice about their children's tics, 74.6% of parents did not have enough information about the disease, and 83.1% of parents thought that they did not have enough time to provide their children with health guidance in their daily life, which indicated that the domestic health education for Tourette's syndrome is far from enough and that it is necessary to strengthen the related publicity and education work further <sup>[2]</sup>.

### **2.2. Meet the health needs of patients and their families**

With the social and economic development and the improvement of people's living standards, people's demand for medical services is no longer limited to the treatment of patients. Still, it focuses more on the prevention of disease, treatment and rehabilitation of the whole management. Patients with Tourette's syndrome need the guidance and assistance of healthcare professionals to avoid over-reliance on medication, which may lead to side effects, as well as emotional problems caused by a lack of proper guidance. Health prescription is a new model to meet patient's health needs and reduce medical costs through individualized, precise and continuous interventions. Scholars at home and abroad have conducted a lot of research on health prescriptions and applied

it to the health education of many diseases. In the field of Tourette's syndrome, some scholars have used the Children's Behavioral and Mental Health Rating Scale as a tool to assess the health status of preschool and school-age children using health prescription and have found that the prevalence of Tourette's disorders among children in China is on the rise. Some studies have also shown that the use of health prescriptions can effectively increase the cognitive level of parents of affected children with Tourette's syndrome and enhance the social support of the family so as to improve the children's ability to self-manage <sup>[3]</sup>.

### **2.3. Reduce the occurrence of complications**

A foreign study found that patients who received health education had a lower relapse rate during the course of the disease <sup>[4]</sup>. Another randomized controlled trial showed that patients receiving health education had higher compliance and better prognosis than those without <sup>[5]</sup>. This shows that providing comprehensive and systematic health education is conducive to improving patient compliance behavior, reducing the incidence of adverse drug reactions and improving prognosis.

## **3. Feasibility of implementing health prescriptions for children's tic care clinics**

### **3.1. Children's specialized hospitals have a good health education environment**

At present, the diagnosis and treatment of Tourette's syndrome in children in China are still based on the traditional outpatient clinics in hospitals. Due to the lack of guidance from relevant nursing specialties, patients and parents generally have various confusions and doubts. Therefore, based on the "multidisciplinary children's association," the study has developed a specialized nursing clinic to meet the needs of children. Through cooperation with experts from pediatrics, neurology, psychology and other departments and relying on the children's health care clinic, the study provides professional health guidance to children and their parents by applying the method of evidence-based nursing care. Specifically, the children's health education specialist nursing clinic mainly focuses on the following issues:

- (1) Analyzing the characteristics of different disease stages according to the clinical manifestations of children;
- (2) Assessing the physical and intellectual development of children according to the characteristics of children's growth and development;
- (3) Analyzing the changes in children's psychology and behavior according to the characteristics of children's mental development and formulating a personalized intervention plan;
- (4) Formulating an individualized health education plan for the children and their parents according to the actual situation.

Most scholars in China use health prescriptions as the carrier of health education to carry out health education activities for children with Tourette's syndrome. Some scholars have explored the effect of health prescription on self-efficacy of children with Tourette's syndrome, and the results showed that self-efficacy of children with Tourette's syndrome increased significantly after the intervention of health prescription compared with the pre-intervention period <sup>[6]</sup>. A study found that after the implementation of health prescription intervention, the knowledge rate of the parents of children with Tourette's syndrome and the knowledge rate of related symptoms were higher than that of the control group, and the difference between the two was statistically significant ( $P < 0.05$ ) <sup>[7]</sup>. Some scholars believe that health prescriptions can increase children's learning ability with Tourette's syndrome, reduce negative emotions, improve interpersonal and social skills, and enhance parenting skills <sup>[8]</sup>. The study believes that a special nursing program for Tourette's syndrome

should be developed, and a special area should be set up in the outpatient clinic where specialized nurses can implement long-term health education services for children with Tourette's syndrome and their families to increase the parents' attention and cognitive level, improve their psychological state, prompt the children to actively cooperate with the treatment, and enhance their adherence to the medical treatment.

### **3.2. Having a professional healthcare team and a perfect management system**

Health prescription refers to the integration of evidence-based medicine into clinical nursing practice, based on the individualized health needs of patients, to provide them with a complete health management program. In 2014, the Society for Health Education and Promotion of the Chinese Medical Association and the Chinese Nursing Association jointly issued "China Health Education and Promotion Work Guidelines" (hereinafter referred to as "Guidelines"), which clearly states that health prescription is an effective method of disease education and intervention for patients by medical personnel and social support. states clearly that health prescription is an effective method of disease education and intervention for patients by medical staff and social support. The model consists of 4 main components: health assessment, health goal setting, health interventions and health guidance. Among them, health assessment is the prerequisite for carrying out the other 3 steps, which provides the basis for the development of subsequent intervention programs through the identification of the patient's existing health status and disease risk factors. Health goal setting is to set achievable short-term or long-term health goals based on the patient's needs, expectation level and treatment objectives, which helps to enhance the patient's self-efficacy and thus actively participate in the treatment process. Health interventions include health knowledge dissemination, psychological behavioral regulation, behavioral skills training, etc., which can enable patients to master basic health knowledge, change bad habits, and improve self-management ability. On the other hand, health guidance provides patients with continuous follow-up and scientific and reasonable life advice after they have achieved their health goals. Pediatric patients dominate current research on health prescription at home and abroad and focus on respiratory infections, oral care, etc. In 2019, Professor Wang Mengzhao's team at Peking Union Medical College Hospital innovatively proposed the concept of children's nutritional health prescription, which is to formulate personalized nutritional prescription based on the nutritional needs, dietary structure, and growth and developmental characteristics of the children to achieve the optimal nutrient intake and to promote the children's healthy growth<sup>[9]</sup>. In the same year, Prof. Chen Wei's team at Peking Union Medical College Hospital also released a health prescription for asthma in preschool children, i.e., to prevent and reduce the number of asthma episodes in children and improve their overall health by changing the family's feeding style and dietary structure and establishing good living habits.

Although Tourette's syndrome is a common neurodevelopmental disorder in childhood, there are individual differences in the clinical symptoms of children. Due to the complexity of the children's condition, their diagnosis, treatment and care are all difficult. Therefore, healthcare professionals need to be more standardized to improve the quality of care. For example, a hospital has 18 nursing units consisting of 35 nurses, all of whom have received formal clinical medical education and professional nursing training, of which more than 90% hold national or provincial continuing education credit certificates and pay attention to strengthening the training of nurses' business ability, actively carry out new technologies and projects, encourage nurses to innovate in their work, improve the quality and level of service, and create a high-quality, specialized nurse team<sup>[10]</sup>. Some researchers have proposed the nursing service should be patient's demand-oriented, and have the establishment of "Humanized service," "Refined management" and "Personalized care" as the main features of the quality service system to improve the quality of life of hospitalized children and reduce the burden on their families<sup>[11]</sup>.

Some researchers have found that, since the development of children's health education specialty care clinic,

through the integration of pediatric insurance, neurology and other multidisciplinary expert resources, the use of theoretical knowledge of evidence-based practice combined with the actual needs of the patients, to provide patients with a full range of health education, and personalized treatment plans, rehabilitation guidance throughout the entire process of the child's medical treatment, so that the formation of a good relationship of cooperation between the specialists, caregivers and parents, and effectively improve the quality of life of children hospitalized children, and reduce the burden on the family <sup>[12]</sup>. This has formed a good cooperative relationship between specialists, nursing staff and parents, effectively improved the quality of medical care for children with Tourette's syndrome, and achieved the expected results. In the author's opinion, the outpatient nursing team should also carry out health education for patients and disseminate it in the form of pictures and videos so that patients and parents can master basic self-care knowledge and reduce the recurrence rate of the disease.

#### **4. Health prescription for Tourette's syndrome in children**

- (1) Clear objectives: To reduce the symptoms of Tourette's syndrome, to improve quality of life, to increase children's adherence, and to reduce medical costs.
- (2) Design basis:
  - (a) Evidence-based nursing model (EBM);
  - (b) Nursing intervention theory (RTA);
  - (c) Patient-centered care;
  - (d) Psychosocial support theory;
  - (e) Health promotion theory <sup>[11]</sup>;
  - (f) Maslow's hierarchy of needs theory;
  - (g) Child behavioral development theory <sup>[13]</sup>;
  - (h) Hospital culture and humanistic care;
  - (i) People-oriented and patient-centered;
  - (j) Development of health prescriptions should be tailored to individual patient differences.
- (3) Specific measures:
  - (a) Help children to establish correct self-knowledge;
  - (b) Enhance children's self-confidence and actively participate in social activities;
  - (c) Improve parents' knowledge and skills of parenting and understanding of disease-related knowledge;
  - (d) Through the encouragement and guidance of children, identify and solve problems in time.

#### **5. Summary**

Based on the above analysis, it can be seen that there are still many problems in health education for children with Tourette's syndrome at this stage. On the one hand, due to the lack of scientific, comprehensive and standardized training provided by professionals, parents of children with Tourette's syndrome do not have sufficient knowledge about the disease, which affects their knowledge and understanding of the disease and is not conducive to standardized treatment. On the other hand, the existing forms of health education are too boring, which makes it difficult to mobilize the enthusiasm of the children and their parents and also fails to achieve the expected results. In addition, health education for children with Tourette's syndrome is only at the level of "didactic", failing to combine medical treatment with education, ignoring the complexity of the disease and the special characteristics of patients, and failing to meet their needs. Therefore, it is urgent to introduce a new model of health education to better promote the recovery of the disease.

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