

Research on the Design Value and Influence of the Theme Park for Autistic Children from the Perspective of Social Aesthetic Education

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Abstract: This study focuses on the design value and application of theme parks for autistic children from the perspective of social aesthetic education. Through literature review, field investigation and case analysis, this paper summarizes the behavioral characteristics and psychological needs of autistic children. At the same time, combined with the specific requirements of Maslow's hierarchy of needs theory, this paper discusses the current situation, problems and design principles of theme parks for autistic children. It is proposed that design should integrate education, aesthetics, functionality, experience, inclusiveness and openness. This paper discusses the design value and application strategy of emotion, society, aesthetics and identity, summarizes the relevant data through specific analysis of practical cases, verifies the feasibility and effectiveness of the design concept, and proves the positive role of these strategies in improving the quality of life and social integration ability of autistic children. It provides theoretical support and practical reference for the design of autistic children's theme parks, which is conducive to jointly promoting the development and progress of autistic children's theme park design, and finally realizing the win-win situation of material wealth and spiritual wealth.

1. Introduction

With the increasing attention of the society to aesthetic education, the practice of aesthetic education in the field of children's education has attracted more and more attention. As an important carrier of aesthetic education practice, the design of theme parks for autistic children is particularly important. On the basis of combing the development process of social aesthetic education, this part deeply discusses its important role in children's growth, and provides a solid theoretical support for the follow-up research. Through literature review, this paper comprehensively reviews and summarizes the relevant theories and practices of the design of theme parks for children with autism, and provides reliable reference materials for follow-up research.

2. Analysis of the Characteristics and Needs of Children with Autism

2.1 Behavioral Characteristics and Psychological Needs of Autistic Children

2.1.1 Behavioral characteristics of autistic children

Autism, also known as Autism Spectrum Disorder, is listed as the first mental illness of children by the World Health Organization and has become a global public health problem that seriously affects the healthy development of children. In 1943, American psychiatrist Kanner observed and studied 11 children and found that they were different from ordinary people. In 1944, the Austrian scientist Eisberg, through continuous research, found that these children have social barriers, that is, Eisberg's disease; the American Psychiatric Association, on the basis of these proposed diagnostic criteria-DSM-5, and that autism is an obstacle rather than a disease [1].

The behavioral characteristics of autism are divided into three core symptoms: social communication disorder, communication disorder and repetitive stereotyped behavior.

Social disorder runs through the whole life of autistic patients. Due to their lack of interest and courage to communicate with the outside world, they often show eye avoidance, body curling, facial expressionlessness and so on in front of people. For a long time, they cannot perceive the emotional changes of others, and it is difficult to understand the emotions and needs of others, so that it is difficult to establish and maintain daily interpersonal relationships.

Communication barriers are mainly manifested in the fact that ' nodding ', ' shaking head ', and ' waving hands ' are rarely used to respond and express willingness, and more of them express discomfort by screaming and crying. This is because the brain of children with autism lack of abstract concepts, and the whole process of thinking tends to be compulsive, limited and poor, which leads to a certain degree of obstacles in their perception and expression of language.

Autistic children often show repetitive stereotyped behaviors and are very resistant to sudden changes. Autistic children are usually used to simple rigid body movements such as repeating the same sentence or singing the same song, repeatedly fiddling with their fingers, shaking their bodies and even self-injuring their heads. Stereotyped behavior is essentially an unconscious behavior, which is limited to the spontaneous ' ritual sense ' of autistic children, but once interrupted, they will feel uncomfortable and cry.

2.1.2 Psychological needs of autistic children

Through the comparative study with ordinary children, it can be found that autistic children have characteristics and complexity at the level of demand. Among them, the sense of security is very important for autistic children. A stable and comfortable environment can avoid many sudden changes and uncertainties. Combined with the characteristics of autistic children's stereotyped behavior, they are more expected to have an orderly and regular lifestyle. Although they have obstacles in expressing their emotions, they still yearn for their emotions to be expressed and understood.

At present, more and more children with autism enter ordinary schools, which has a positive effect on promoting their interaction with ordinary children [2]. Therefore, in order to meet the special needs of autistic children, the public needs to establish a respectful and inclusive environment. Schools and the public should remove the inherent ' colored glasses ', eliminate prejudice and discrimination against this special group, enhance the understanding and acceptance of autistic children, create a better future for them, help them better integrate into society, and improve the quality and quality of life.

2.2 Demand Analysis of Maslow's Hierarchy of Needs Theory

Based on Maslow's hierarchy of needs theory, the needs of autistic children in theme parks are divided into five levels: physiological needs, safety needs, social needs, respect needs and self-actualization needs (as shown in Figure 1). By analyzing the specific performance of these needs in autistic children, it provides targeted guidance for subsequent design.

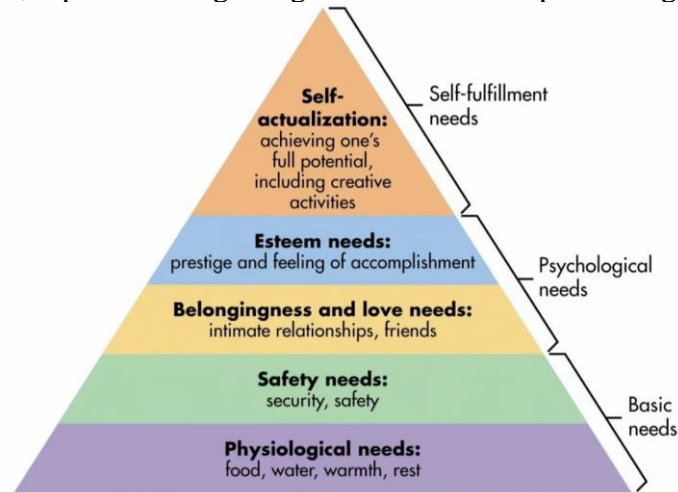


Figure 1: Maslow's hierarchy of needs

2.2.1 Physiological needs

Physiological needs are the basic needs of individual survival, namely clothing, food, housing and transportation. For autistic children, a comfortable and safe space environment is needed in the theme park to provide them with a place for leisure and entertainment. People have the basic need to know everything in the world, which is the inherent curiosity [3], so is autistic children. They use the senses to feel the art design in the park in the process of entertainment, and gain happiness in the senses.

2.2.2 Security requirements

Safety needs, including psychological and material security. For autistic children, they will feel uncomfortable and unfamiliar with the large facilities, noisy environment and past people in the park, which is also a manifestation of the lack of security. In theme parks, glass and sharp facilities should be avoided to prevent unnecessary harm to children.

2.2.3 Social needs

As a member of the society, people need friendship and a sense of belonging to the group, and interpersonal communication needs mutual sympathy, mutual assistance and praise. Social needs have certain obstacles for autistic children, but this does not determine that they do not have the need to establish communication. Based on this, the facilities of the theme park need to increase a certain sense of interaction, and increase communication and communication with peers and the public for autistic children.

2.2.4 Respect for needs

Respect needs include the respect of others and their own inner self-esteem. Anyone wants to be

respected and recognized by the outside world. Respect for the needs of autistic children is manifested in the support and encouragement of the public, non-discrimination, non-bias, and equal treatment. In the design of facilities, the relationship between space proportion and scale is emphatically considered, and the details are strictly controlled.

2.2.5 Self-actualization needs

Self-actualization needs through their own efforts, to achieve their expectations of life, so as to feel the true meaning of life. Because of the often closed self, autistic children lack the opportunity to express themselves. In the design of the theme park, the difference between autistic children and ordinary people should be taken as the entry point to stimulate the inherent creative potential and provide a platform for them to show themselves.

3. Theme Park Status and Design Principles

3.1 Present Situation Investigation and Problem Analysis of Theme Park

3.1.1 Theme park status analysis

This study takes Tanqian Park in Haining City as an example to carry out systematic investigation and analysis. Tanqian Park was founded in 2007. On April 26, 2023, the first autism science theme park in Zhejiang Province was officially opened in Tanqian Park, which is the first and only park with autism science in Zhejiang Province. With a blue tone and four functional areas, the park provides an immersive activity area for autistic children throughout the city.

In addition, Tanqian Park is specially equipped with a 600-meter-long love road and two autism-themed zebra crossings, which are the first in the country. The trail and zebra crossing run through the two children's places of Haining Children's Rehabilitation Center and Maqiao Central Kindergarten, which practice the new concept of " holistic rehabilitation " in the world and also meet the concept of " holistic design. " Compared with the training of the rehabilitation center, the environment of the park will be more beneficial to the rehabilitation and treatment of autistic children. There is a friendly experience space exclusive to them. While cultivating autistic children to live, entertain and learn independently, let more people understand that autism is inclusive of autism.

3.1.2 Theme park problem analysis

Through the investigation and analysis of the existing theme parks for autistic children, it is found that there are still problems and deficiencies in the design, function and facilities of the parks.

The theme park green space is currently the most important activity site for autistic children. Data show that the natural environment can effectively relieve their emotions. The park green space is open, and the autistic children are relatively free in the green space, which belongs to the most inclusive public space in the theme park. There are some difficulties in the use of most facilities in the park. The lack of facilities for all ages and different degrees of obstacles has affected the use of some facilities to a certain extent. The park was originally built to commemorate the relocation. The autism science popularization area only exists in the children's entertainment area, and is adjacent to the rehabilitation center and kindergarten. The entertainment space is very important for children. However, due to the theme of the early construction of the park, only less than 1 / 4 of the space is left to autistic children. Instead, many footpaths and more scattered seats were set up. However, there is a lack of space to truly show the theme of autism. At present, the entertainment style in the park is relatively single, which cannot meet the needs of autistic children at different stages.

Therefore, in order to attract more star families, the theme park needs to provide more diverse public interactive facilities to meet the diversified needs. Based on the characteristics of autistic children's psychological sensitivity, a quiet and comfortable environment is very important. The vegetation coverage in the park is not high, and it is impossible to form a quiet and natural space in the children's entertainment area to relieve the mood and relax. Therefore, the theme park needs to provide entertainment space to meet the psychological needs of autistic children in the later design and planning, so as to ensure the creation of a friendly healing space for autistic children and star families.

Compared with the leading areas, China's service for autistic children is in its infancy. The relevant policies and support of the state and the government are relatively weak. The folk forces with star families and public welfare organizations as the main body are also groping for a way out, and the society's understanding of autistic children is far from enough. This means that it is urgent to build a theme park for autistic children, which is an arduous social system project for building an inclusive urban environment.

3.2 Design Principles of Hierarchy of Needs

The public facilities in the theme park will become a medium for communication and contact between autistic children and the outside world. In order to enable the theme park to form an associated relationship with autistic children, it is necessary to explore their multi-level needs in the theme park. Based on this, the design principles with safety, education, aesthetics and experience as the core can be summarized. These principles are designed to meet the physical, psychological and social needs of children with autism, and to promote their comprehensive development and social integration.

3.2.1 Security

As a category of psychology, security begins with Freud's psychoanalysis theory. He believes that the anxiety generated by individuals when they lack love or receive harm will threaten their basic sense of security. Psychologist Aslo believes that security is the freedom and self-confidence that individuals show when they get rid of anxiety. Therefore, safety is the primary principle, including psychological safety and physical safety [4]. Psychological safety shows that autistic children have a lonely and sensitive heart. In the design of the theme park, it does not involve the elements of emotional fluctuation and stimulation for autistic children, but can provide comfortable, stable and safe space. Physiological safety shows that there should not be too large, sharp and cold elements in the theme park to avoid accidental injury.

3.2.2 Educational

Compared with the major rehabilitation centers, the theme park is a more safe, comfortable and educational place. The establishment of each part of the space and facilities has been carefully designed to help autistic children improve their social skills, cultivate their sense of solidarity and improve their cognitive ability. The facilities in the theme park can promote the interaction between autistic children and society, and infiltrate the concept of unity and cooperation while playing games and entertainment. The theme park experience helps autistic children "say and do" and encourages them to express their emotions and hearts. At the same time, the theme park integrates visual and tactile sensory experience elements into the design, and promotes the cognitive development of autistic children in a three-dimensional and concrete way.

3.2.3 Aesthetics

The theme park focuses on creating comfortable and safe space places, so soft, warm and quiet colors are the most suitable for children with autism. The colors of light green and light blue can calm their emotions, relieve anxiety and tension, and increase the interest of autistic children in theme parks. The design of the facilities in the theme park is unique and creative, showing different visual effects and psychological feelings with different materials. While expressing the inner world of autistic children, it brings a visual feast to the public.

3.2.4 Experientiality

Public places emphasize the experience and interaction between facilities and tourists and children, and enhance the pleasure and comfort of autistic children in the entertainment process through interactive decoration. The theme park is to guide the public to actively participate in it. By mapping the inner world performance of autistic children, the facility opens up an open spiritual dialogue and creates a special 'moment' for design, that is, interaction with the public [5]. With the development of science and technology, a series of facilities in the park are also presented to the public in a new and diversified form. The installations in the park should do more than enhance the space and guide the public through the experience of the surrounding environment. The truly successful and excellent installations should give the public and autistic children a visually and emotionally engaging experience, not only defined as space, but also through the spiritual and cultural connotation of the device to create a unique, iconic and meaningful experience.

4. Design Value Application Strategy and Practice Case

4.1 Emotional Value Application Strategy

Based on the theory of Stars' emotional needs and identity value, the theme park has created a safe and comfortable platform for children with autism, providing them with a way of emotional expression to relieve their inner anxiety and anxiety. In this study, the theme park was designed in a targeted manner. The themes and emotions expressed and conveyed in the facilities are helpful for the public to understand the hearts of children with autism. In turn, it also helps them to understand themselves, actively and effectively promote the mental health development of autistic children, so as to enhance their sense of security and happiness. By using the elements of the curve and the soft and warm colors to create a soft visual experience, according to the children's ergonomics, the proportion and scale of the facilities in the theme park are strictly formulated. The shape and placement of the facilities are based on the advancement of the inner story line of autistic children, and the emotional connection with the outside world is established by the expression and transformation of the inner world [6]. Presented in the most basic pattern and shape, it is intuitively displayed in front of autistic children and the public to help everyone understand and comprehend.

The expression of these emotional values in the theme park creates a warm and caring entertainment atmosphere and enhances emotional resonance and interactive experience. The theme park highlights the uniqueness of autistic children and the inclusiveness of the public, and helps to enhance their emotional experience and sense of belonging while helping autistic children integrate into society.

4.2 Social Value Application Strategy

The design and planning of the theme park for autistic children has laid a foundation for the public to pay more attention to vulnerable groups and special groups represented by autistic

children. As a medium of information transmission, theme parks promote the public's cognition and understanding of groups such as autistic children, thus eliminating previous prejudices and discrimination and giving them more understanding and respect. It provides convenience for autistic children to integrate into social life, promotes communication and communication between people, and enhances social cohesion. Autistic children are a unique and powerful link between us and the world. Compared with using various 'genius' words to cover up the difficulties faced by autistic children and face up to the pain they face, they can effectively improve their realm. Therefore, the emergence of theme parks for autistic children will help autistic children better integrate into society and establish social relations.

4.3 Application Strategy of Aesthetic Value

Children with autism generally have stronger sensitivity, observation ability and perception ability, and can pay attention to the details of things and express them in the form of art. The form of painting and art has greatly helped autistic children. When they are difficult to recognize and understand the emotional state, painting has become a way for them to express their emotions. Autistic children cannot effectively process sensory information from the outside world, but different lines, materials and shapes help to promote autistic children to process different sensory information. Through its rich and diverse forms of expression and unique visual effects, the theme park is conducive to helping autistic children accept these external information, stimulating the imagination and creative potential of autistic children, and providing them with a richer and more diverse artistic experience. The artistic quality determines that the aesthetic value will become a non-negligible significance, which will subtly improve the public's aesthetic level, and will also improve the aesthetic quality and creativity of autistic children [7].

4.4 Practical Case Analysis and Enlightenment

The sensory art garden of the Els Center for Excellence has set a precedent for highly specialized outdoor environments for people with autism spectrum disorders. The garden is located in the Autism Foundation of Florida, the United States, for children and adults. The garden has both healing and educational functions [8], so that the park can provide a meaningful experience through people's exploration of nature. The 13,000-square-foot garden roommate enables the Eis for Autism Foundation to expand the artistic integration of people of all ages and abilities by designing and becoming a 'creative place' that can be experienced through touch, vision, hearing, smell, taste and movement. The sensory art garden will provide treatment and education for children and adults, especially for those with sensory processing challenges, through a meticulous, continuous, distinctive and interesting independent garden open space. The design will allow all visitors to engage with nature in their own way, with their own conditions and rhythms. Encouraging autistic patients to socialize through collective activities has become an excellent case for landscape architecture to promote the treatment of autism. (as shown in Figure 2)

The design of sensory art healing emphasizes individual strength and preference, and adheres to the important role of nature in the process of health healing. It is an innovative pioneer project. Its transformative design of nature adheres to the spirit of the Els Foundation and integrates people of different ages and abilities to form a stylized 'creative garden'. The lush 'garden room' uses custom-designed barrier-free flower pots, seats and selected plants to provide concentrated sensory input. In addition to the 'garden room', the 'place' also provides an intimate and calm sensory experience for group or personal use[9]. Furniture, sculptural elements and plants are carefully considered for their efficacy, appropriateness and safety. The park has truly purified the soul with green, healed the body with landscape, and cured everything in sensory interaction. Every autistic

child has at least one moment to be healed. (As shown in Figure 3).



Figure 2: Els sensory art garden



Figure 3: Layered analysis of sensory art garden

As a new category of garden, healing garden refers to the main purpose of healing on the basis of garden, which makes people feel implemented and helps people reduce the pressure in life [10]. At the same time, there is also a rehabilitation garden dedicated to the recovery of various diseases. In design, the healing garden heals the mind of the experienter in different dimensions such as the five senses through the different senses brought by the different collocations of plants. The design of the garden focuses on creating a rich level of plant landscape, planting some plants that can produce refreshing smells and special touches. While creating a quiet and melodious healing place, we can feel the nature by touching soft plants and flowers at close range, so as to slowly open our hearts. Bring nature into the garden, let the plant heal life.

5. Conclusion and Prospect

5.1 Research Conclusions and Main Contributions

This study takes the theme park of autistic children as the theme, tells the public art form of the theme of autistic children from many aspects, and discusses the positive influence significance of the space design of the theme park of autistic children. By sorting out the factors that may affect the emotional and emotional expression of children with autism, it is considered as the basic characteristics and design methods of the theme park design for children with autism. The park is used as a medium to transform abstract meaning into concrete meaning to promote the development

of autistic children in communication, expression, cognition and other aspects. Through the understanding and interaction of public facilities, autistic children obtain their own emotional cognition and stimulate their potential creativity and imagination. A good communication ability is an important basis for autistic children to integrate into the social environment. This study draws the following conclusions:

First, it deeply discusses the design value and application strategy of the theme park for autistic children from the perspective of social aesthetic education, and puts forward the design principles and application strategies based on Maslow's hierarchy of needs theory and identity value. Through the verification of practical cases, it is proved that these strategies play an active role in improving the quality of life and social integration ability of autistic children, and provide theoretical support and practical reference for the design of theme parks for autistic children.

Second, the design of the theme park has a positive impact on the language expression, communication and interaction, and cognitive development of autistic children, and promotes communication with the outside world and emotional expression while entertaining. Through the intervention of design techniques, the theme park is used as a medium to create a growth environment with a sense of security and comfort for autistic children. Through the intervention of art, it helps autistic children express their inner emotions and help them better integrate into society and outside life.

Thirdly, the artistry in the design of the theme park is conducive to stimulating the potential creativity and imagination of autistic children, helping them to tap their inner emotions and express them in the form of art. Thirdly, through the expression of the artistic connotation behind it, the public's respect and tolerance for vulnerable groups such as autistic children are increased.

5.2 Research Limitations and Prospects

5.2.1 Research limitations

This study has less contact opportunities for special groups such as autistic children, and there are still many deficiencies in the design of theme parks. The limitations of the study are summarized as follows:

First, the relevant cases and practical experience are very limited, and the sample size is also very limited, and the research methods need to be further improved. In the design of the theme park, there will still be a lack of relatively scientific and systematic expression, which needs to be supplemented by further in-depth research and practice.

Second, the manifestation of facilities will be difficult to understand the deep meaning and emotional expression of children who do not belong to this special group. This phenomenon will not be limited to children, but more to the public, which will cause obstacles to information transmission.

Thirdly, there are some limitations in the expression of public facilities in theme parks, which can attract public attention to such special groups in the short term. However, due to the simplification of interaction methods, it is impossible to achieve long-term promotion of social attention to such groups.

5.2.2 Future prospects

At present, there are no relevant standards and policies in the design of outdoor entertainment space for autistic children in China, and there is a lack of standardized and systematic guidelines for further improving the integration of autistic children into interactive space. In the future, we can further study the specific manifestations and social influence in the design of theme parks for

autistic children in the future, so as to lay a foundation for providing more scientific basis and guidance. Secondly, it can combine more diversified expression techniques with the current, more vivid, complete and specific expression of the inner world of autistic children, and provide the public with more intuitive and shocking public works of art. In addition, we should strengthen the cooperation between art design and education, psychologists and other professionals in related fields, and jointly develop a more personalized and targeted theme design scheme for autistic children, so as to further enhance the influence and quality. This study conveys relevant knowledge and performance significance to the public through various channels, so that the concern of respecting autistic children becomes a long-term social issue rather than just short-term performance.

In the future, the theme park for autistic children can further expand the research field, deepen the research content, and improve the research methods to better meet the multi-level needs of autistic children in the theme park. With the continuous progress and development of society, the design of theme parks for autistic children will also face new challenges and opportunities. Through the continuous attention and discussion of the society, we will strive for more support and help for the social vulnerable groups represented by autistic children. It is expected that more designers and scholars in related fields will pay attention to the field of autistic children in the future, and jointly promote the development and progress of the theme park design of autistic children, and finally realize the win-win situation of material wealth and spiritual wealth.

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