A Case Study on the Correction of Attack Behavior of Autistic Children

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ABSTRACT

Based on the natural observation, this study analyzes the difference causes of pushing behavior of autistic children in three situations, and has developed a correction plan including regression, punishment, and positive reinforcement to effectively correct the case of the aggressive behavior. The results show that: (1) the push behavior of the cases is reduced in three situations; (2) the combined use of regression and shaping has completely corrected the push behavior of the case free exercise; (3) the punishment and the molding method are obviously reduced (4) During the meal period, the transfer of attention and the addition of the sharing class make the case attack behavior twists and turns, although the period has been repeated, but until the end is still decreasing; the research also found that the behavior correction method has certain pertinence and precaution in the selection and application: (1) The long-term effect of eliminating the attack behavior is to form the appropriate substitute behavior; (2) Correctly deal with the regression method in the outbreak; (3) the correct use of punishment, to avoid side effects; (4) the effect of different attention to the transfer of attention.

KEYWORDS: autism attack behavior case study

1. Introduction

1.1. Research background

Autism is referring to a wide range of developmental disorders, the symptoms including sensory, cognitive, action, language, and social emotions. Autism has different degrees and the performance is also different. Typical symptoms are mainly reflected in the following aspects:

Communication problems include aggressive behavior, emotional outbursts, and stereotypical behavior. Social barriers include lack of social skills, and seem unreasonable. The attack behavior not only severely affecting the autistic child living and learning, and may endanger the children and the others lives. With the special education further research, more experts and scholars start to pay attention to the behavior of autistic children, and do a lot of research, which mainly include the causes of aggressive behavior and the correction strategy of the autistic children. In terms of cause, the study has shown that the causes of autistic children's aggressive behavior generally due to autism children own issues, family issues and school (rehabilitation center) issues. The attack behavior included to get the attention of others, pleasant, get away from doing something. In the correction strategy, there is research mainly using a variety of behavioral correction techniques, rehabilitation program, treatment techniques and other methods to correct the behavior of autistic children. Additionally, part of the research is restructuring the classroom teaching, establish self-guidance and language prompts, give full play to the role of parents, creating a good learning environment and other strategies are also effectively correct the aggressive behavior of autistic children.

With the development of special education, the study of the behavior of children with autism has achieved some results, but because of autistic children individual differences, the reason causes the attack behavior and characters are different. From the rehabilitation of education, there is a need of individualized interventions to aggressive behavior in autistic children. Therefore, the focus of this study is to conduct case studies on the same behavior of the same attack in three situations. The aim of this study is to explore the specific causes of the different attacks of autistic children and the relevance of behavioral strategies in selection and application and precautions to provide guidance for correcting the aggressive behavior of children with autism.
1.2. Research significance

1.2.1 Theoretical significance and academic value

Depth analysis of the specific causes of the behavior of children with autism, take appropriate strategies according to the reasons, focus on identify the behavioral correction technology from the selection and application of targeted and precautions for the supplement of previous research.

The scientific nature of the application of correction technology has certain value.

1.2.2 Practical significance and application prospects

Practically, intervening the behavior of children with autism can reduce, overcome the attacks on the case, help them integrate into the mainstream society, learn to communicate with people, improve their life and learning adaptability. In addition, this article will provide practical guidance for the correction of the behavior of children with autism in the future and improve the effectiveness of teachers and parents in correcting the behavior of children with autism, which can help more autistic children to effectively reduce the attack behavior so that they can live better.

2. Research methods

2.1. Case law

A 5-year-old autistic child is examined and recorded.

Examine and record a 5-year-old autistic child attack behavior, analyze three cases that specifically causes the attack behavior, to formulating corresponding behavioral correction plan. Base on the situation, during the intervention, appropriately adjust the intervention plan and progress, to reduce, overcome the individual aggressive behavior, improve the individual life and learning adaptability.

2.2. Interviews

Interview the case parents and teachers to understand the development of the case, daily performance, hobbies, etc., To analyze the reasons for the case of aggressive behavior and develop the behavioral rehabilitation program to provide the basis to ensure that the intervention method of relevance and effectiveness. In addition, explain the intentions to the parents and teachers, obtain their consent, and enable them to cooperate with the implementation of the intervention plan.

2.3. Observation method

This study analyzes the types of attacks, the venue, the time, the frequency and so on, and base on the details recorded, analyze the characteristics, and causes of the attack behavior, to develop the right behavior correction plan. The observation period is three months, three daily observation of the situation: 1, a random lesson 40 minutes. 2, during morning meal period of 30 minutes. 3, afternoon free time 40 minutes.

3. Research process

3.1. Select a case

Zhao, male, 5 years old, moderate autistic patients, no family history, had a rehabilitation center in Beijing for six months, is now studying at a special education school. Mother ran away from home for nearly a year, his father went out to work, and live together with grandfather and grandmother. He has a great dependence to his grandmother, and has aggressive behavior. Zhao autism mainly in the following aspects: 1, Communication barriers. Zhao can be reminded in a simple language to express their own requirements, no active language. He can have simple communication with grandmother, and while communicate with other people, needs to guess and infer his meaning. Sometimes he unable to follow teacher's instructions to make the appropriate action, can imitate the advertisement, sing songs, and memorize poetry. 2, Behavioral problems. Zhao arbitrariness is strong, energetic, hyperactivity, often run around, difficult to stabilize, unless there is very attractive toy. His attack behavior is serious. Beating, pushing people, biting phenomenon is often occurs. Has sabotage act such as others built a building blocks, he stepped forward to destroy. His stereotyped behavior is serious. 3, Social barriers. Unable to communicate with others, do not take the initiative to greet people when meet someone he knows, or even do not have eyes communication. He will hold his grandmother's hand when he meets his grandmother, without any language and eye contact. 4, Emotional disorders. Zhao emotionally excited, often
shouting, irritability, lose temper. When the teacher reprimanded the surrounding children, he felt uncomfortable, lose temper. When he does not like something or voice, he yelled 'DO NOT!', and use hand to push the things away from him.

3.2. **Determine the target behavior**

Zhao's aggressive behavior is very serious, which seriously affected his life and study. Zhao often push people, pushed then run, and is pleasure for this. In addition, he often hit people, and the more concerns he gets, the more serious he became. Zhao's most serious attack is bite. During the conversation with Zhao's grandmother, Zhao began hitting people when he was in four months. Due to grandmother was not too concerned that time, and did not correct him at the back stage, that is the why getting more serious. Observation show that Zhao's aggressive behavior is more serious, especially his pushing behavior is frequently happened. This is seriously affecting his normal communication with others, and because he has the attack behavior all the time, it is difficult to correct. It should be based on the strength of the aggressive choice of aggressive weak push behavior to give priority to correction.

3.3. **Early assessment of the behavior of the target and analysis of the reasons**

3.3.1 Pre-assessment

Through two weeks of observation found that Zhao's push behavior often occurs in the following three scenarios: 1, during free time. 2, during meal time. 3, during the class when answer questions. Specific observations are as follows:

<table>
<thead>
<tr>
<th>Situation</th>
<th>During the class</th>
<th>During free activities</th>
<th>During the meal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation week</td>
<td>first week</td>
<td>second week</td>
<td>first week</td>
</tr>
<tr>
<td>Frequency of push</td>
<td>40</td>
<td>46</td>
<td>39</td>
</tr>
<tr>
<td>behavior</td>
<td></td>
<td></td>
<td>41</td>
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<td></td>
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<td>27</td>
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<td>33</td>
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</tbody>
</table>

3.3.2 Reason analysis

After two weeks of observation, analysis found that Zhao in different situations under the behavior of the reasons for the attack is not the same, the specific reasons are as follows:

During the class, Zhao pushed others mainly is to escape from the task. When the teacher asked question during the class, he began to shout 'Do not! Do not!' if he unable or unwilling to answer. Then he cannot remain seated, and started to run around. If the teacher insisted him to answer, he began to escape, not willing to let people close to him, whoever is closed, he pushed. He even will bite when he is mad.

During the free period, Zhao pushed mainly to attract the attention of teachers or parents. When Zhao has nothing to do, he began to push the children or teacher around the side. He pushed and then run away, then turned around and looked at the teacher laughed, if the teacher stop him, the more serious the attacks, and higher frequency.

During morning large class meal, Zhao's pushed mainly is to grab food. When the teacher distribute the food, if it is his favorite food (yogurt) he will rush to eat, and asked to eat, if the teacher did not give him he began to yell, and grabbed from teacher, pushed the other children and teachers, he even will bite others or himself when is getting serious.

Apart from that, Zhao's aggressive behavior is not reducing in these years, to a large extent is due to family reasons. Parental compromising and the wrong way of punishment exacerbated his attack behavior. Zhao also has some emotional problems, when the teacher loudly scolding the surrounding children, Zhao will be disgusted and push the teacher, and not allow others to get close to him. When he failed to get things that he wanted, he will angry and push others. These are also the direct factors that cause Zhao’s attack behavior.

3.4. **Develop a behavioral correction plan**

3.4.1 Timing

Baseline: September 15, 2012 to October 2012, to determine the object of study, the establishment of emotional basis, and teachers, parents to talk to understand the basic situation of the case, the natural observation of Zhao attack and record, analysis of Zhao under different circumstances causes the attack behavior.

The first phase of the intervention period: from the beginning of October 2012 to October 30, 2012, according to the reasons, develop the behavior correction plan and the implement the first part, which is the first method is to correct the attack behavior. Observe and record the performance of autistic children.
The second phase of the intervention: from the beginning of November 2012 to November 30, 2012, implement the second part of the correction plan which is the second method is to correct the case of the attack. Observe and record the performance of autistic children.

Restoration period: December 2012 to December 14, 2012, the follow-up assessment of the case, parent counseling. To sort out the information collected and analyzed, summed up, reflect the intervention process, and draw conclusions.

### 3.4.2 Behavioral correction program

During the course, Zhao’s attack is to escape from the task. Because of Zhao has some emotional problems, formulated the punishment by create a new behavior (meditation) -based correction plan to improve his self-control ability. During the free period, because of Zhao has nothing to do, he always goes to push the other children to seek for people’s attention. Therefore, at this stage mainly use the regression and shaping method to reduce the frequency of Zhao push behavior and with a certain amount of punishment and reward. When Zhao sees his favorite food, he wants to get for himself. If unable to get, he will start to grab, losing temper. Therefore, during the meal session, can correct him by diverting his attention by using the food sharing method. Specific plans see Table 2:

<table>
<thead>
<tr>
<th>Correction strategy</th>
<th>Correction strategy</th>
<th>Reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>During the class</td>
<td>Punish</td>
<td>Shaping</td>
</tr>
<tr>
<td>During free activities</td>
<td>Subsided</td>
<td>Shaping</td>
</tr>
<tr>
<td>During the meal</td>
<td>Divert attention</td>
<td>Food sharing</td>
</tr>
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</table>

### 3.4.3 Intervention methods

In view of the formation of Zhao attack behavior, according to the situation developed three behavior correction plan, including the regression, shaping, punishment, strengthening, etc. which including six behavior correction methods. To achieve significant results, need to use variety of ways, and need teachers, parents in all aspects of efforts.

The decay is that in a definite situation, the actor occurred a previous enhanced reaction, if after having this reaction, he does not have big changes, which means that when he encounters a similar situation the next time, the frequency of the behavior will reduce. The bad behavior established by the positive reinforcement is easier to subside. Zhao's attack in a very large situation is due to strengthening (others concern) caused, so more suitable for the use of regression methods to correct its aggressive behavior.

Shaping refers to the establishment of a new behavior, starting from the beginning of the behavior of a series of reactions related to one by one is to strengthen, and continue to strengthen these close to the new behavior of a series of reactions to establish the ultimate goal of behavior. This study uses the modeling method to form Zhao's new alternative behavior, so that it uses a new good behavior to replace the attack behavior, in order to prevent it will not use the correct way to express themselves and other bad behavior.

Punishment refers to the fact that a person who produces a behavior in a situation or stimulus, promptly gives the act a person to dislike or remove the positive reinforcement that he is enjoying in order to reduce the rate of occurrence of the act in the same or similar context or stimulus. Because Zhao is active, and has strong feeling to the things that he likes and dislikes, so should be using the punishment to correct his bad behavior.

Positive reinforcement refers to the effect of under a certain situation or stimulus, which after the incident happened, immediately imposing the actor with positive reinforcement, then, in the same or similar circumstances or stimulus, the frequency of the behavior will be improved. When Zhao does not push other people, or use the right way to vent his emotions, then should use his favorite food (yogurt) as reward.

The diversion of attention is the transfer of attention from something that causes bad emotions to other things, so that people can be relieved from negative emotions, thus stimulating positive and pleasant emotional reactions. When Zhao had an aggressive act, he turned his attention to other things (watching the cartoon), so that he can be relieved from the negative emotions.

Food sharing is to cultivate children's ability to communicate, to share the awareness of people, to enhance the friendship between the companions, to share their own food to other children during the class, so that they can learn to share, not to fight because of food. Zhao always snatching food, and attack others during the meal is because of he does not know sharing. With such, during the meal, can adding food sharing method to correct Zhao for his push behavior.
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3.5. Implementation of the behavior correction plan

The most important step to correct the autistic children attack behavior is to implement the plan, under the guidance of the behavior correction plan, strictly follow the implemented plan with five days a week, from Monday to Friday, record the results objectively, use the data to conclude. The implementation process of each situation is as follows:

3.5.1 Implementation process of correction plan in class

Intervention period first stage, punishment. During the class when Zhao began to push people, immediately required him standing for 3 minutes as punishment or confiscated the flowers or rope that allowed to hold during the class. Until he is stable and then continue the class or returning the flowers and rope back to him.

The second phase of the intervention phase, shaping the new behavior. When Zhao appeared in the precursor of the attack (emotional, shouting, fled the seat), use hand to touch his head, pat his shoulder, so that his muscles is relax, and then teach him take a deep breath, sit quietly for 3 minutes, until he is calmed then only continue the class. Reward Zhao when he has good performance.

During the reduction period, withdraw all the correction methods, then do the observation.

At this stage, record down when each time Zhao has a push behavior. Frequently of pushing which caused by same reason, record it as once. Summarize the frequency of pushing daily. Every week (Monday to Friday) and then summarize again. Explain the reason to Zhao when there is punishment and reward.

3.5.2 Implementation of the Plan for Free Exercise

The first stage of the intervention period, the regression behavior. When Zhao has attack act, do not give attention to stop and eyes need to pay attention to is the punishment at this stage is also a kind of strengthening, and this will also strengthen its aggressive behavior, so this stage needs to be completely ignored his attack, without any punishment.

The second phase of the intervention phase, shaping the new behavior. During free time activities, led Zhao to learn rugby corner, demonstrated by the teacher, and auxiliary Zhao to learn. It is divided into two steps to complete. The first step, clutching the corner of the horns in situ bounce. The second step, riding a ball to move forward. After Zhao had learnt during the activities, conducting students to play rugby ball game.

Restore the period, withdraw all the correction methods, then observe.

At this stage, record down when each time Zhao has a push behavior. Frequently of pushing which caused by same reason, record it as once. Summarize the frequency of pushing daily. Every week (Monday to Friday) and then summarize again.

3.5.3 Implement process of the meal screening program

The first phase of the intervention phase, divert attention. During the class, before distributing the food, play the cartoon first. When the children are beginning to watch the cartoons, distribute the food by following each person principle. When Zhao has no offensive behavior, give him incentives (1 more set of foods) and tell him why he was rewarded. But when Zhao still snatch food, and push people, give punishment (no food distributed) and explain the reasons.

In the second phase of the intervention period, a food sharing section is added. Each class allows the children to bring some food to class, share their own food to other children. While sharing the food mentioned that ‘XX, can we eat the cake together?’. The teacher shows the way to speak and accompanied by certain language rewards and punishments.

During the reduction period, withdraw all the correction methods, then do the observation.

At this stage, record down when each time Zhao has a push behavior. Frequently of pushing which caused by same reason, record it as once. Summarize the frequency of pushing daily. Every week (Monday to Friday) and then summarize again.

4. Results and analysis

The entire interventions include a two-week baseline period, a two-month treatment period, and a two-week reduction period, as shown in the following figure. The horizontal axis 1-2 in weeks is the observation period for the first two weeks, 3- 10 indicates the intervention period of the correction plan, and 11-12 represents the reduction period. The vertical axis 0-50 indicates the total number of times the push behavior has occurred within a week.
4.1. Results and analysis during class

Figure 1 Zhao during the class to push the number of changes in the figure

Figure 1 shows the trend of pushing the number of times during Zhao having class, from the overall trend, push the behavior gradually reduced in the intervention period, the average duration of the baseline occurred 43 times a week, after the intervention period to reduce the push to 6 times, but in the reduction period has rebounded, and finally increased to 20 times. There is big problem with Zhao's emotions, punishment law is sometimes difficult to carry out, as will be resisted by him. Therefore, it is not significantly effect. In shaping the new behavior, the teacher's touch and gentle language and a deep breath, making Zhao slowly relax, pushing behavior gradually reduced. Because Zhao after the end of the intervention period has not learned to adjust their emotions, so the attack began to rebound.

4.2. Results and analysis during free exercise

Figure 2 during the free exercise Zhao push behavior changes in the number of plans

Figure 2 shows the changes in the number of push behavior during Zhao's free activities. From the overall trend, the push behavior is decreasing and gradually disappearing and the effect is remarkable. During the observation period, Zhao's push behavior averaged 40 times a week, the third week of pushing behavior rose to 55 times, the fourth week began to gradually reduce until the ninth week after the disappearance of never appeared. The use of regression method, the push behavior increased significantly, because the regression method will inevitably have a 'burst', then push the behavior gradually reduced because of the correct choice of corrective methods and application, so the effect is significant.

4.3. Results and analysis during the meal season

Figure 3 during the meal period Zhao push behavior changes in the number of plans

Figure 3 shows the trend of the number of people pushing during Zhao's meal. During the observation period, Zhao's push behavior averaged 30 times a week, and the third-week push began to decrease until the sixth week was reduced to 10 times. After the start of the seventh week to share the class, Zhao's push behavior began to show an upward trend, to the ninth week began to decrease until the reduction period reduced to 15 times. Although the transfer of attention method’s effect is significant, but because the effect is not stable, so there is substantial rebound after the withdrawal. An additional sharing class allows students to learn to share, although the effect is slow, but has been steadily declining.
5. Discussion

5.1. Overall, the push behavior in the three contexts has been reduced

Overall, Zhao's push behavior did not completely disappear, but compared with the observation period, the decline is obvious, especially during the free period of Zhao's push behavior completely disappeared. The reason of achieving such big effect, teachers, parents with the strong cooperation is inseparable. Due to the lack of professional skills of the researcher, the selection and application of various methods may not be scientific enough during the implementation of the rectification plan, or because the time is too short, Zhao's aggressive behavior is not completely corrected, and further research is needed.

5.2. During the course of the push behavior in the intervention period gradually reduced, but the reduction period has increased

The correction method used during the class is punishing the law and shaping the new behavior (meditation). In the use of punishment law correction, Zhao push behavior began to decline, but in the latter part of the rebound. This is because Zhao emotional aspects has a big problem which during the punishment sometimes he will resist. And because of long-term usage, Zhao had a side effect, in the later part of the Zhao punishment, his emotion is extremely excited, resistance is getting more serious, and this resulting in increased of attacks. After shaping the new behavior, Zhao's push behavior began to decline, is because there is action taken when Zhao has a symptoms of attack behavior to avoid the situation getting more serious by the formation of alternative behavior - sit, A certain ease of their emotions, thus effectively reducing the Zhao's aggressive behavior. In the reduction period, Zhao push behavior began to rebound because Zhao's meditation only can be completed under teacher's assistance. He still unable to control and adjust his emotions.

5.3. Push the behavior of free activities during the gradual decline, until the disappearance

During the free exercise for the correction of Zhao's aggressive behavior is used to subside and shape, during this period the effect is significant, and has completely correct Zhao's push behavior. In the first stage, Zhao to attract everyone's attention to push others, push behavior increased significantly, but when his behavior cannot receive the results that he wants then the push behavior will decline. This is the use of regression methods to correct the phenomenon often encountered. In the second stage, after Zhao learnt to ride the horn ball, its push behavior completely disappeared. It is because Zhao’s attention is mainly concentrated in the horns ball after he had learnt the horn balls, he has no time to do other things. So, during the free activities, Zhao began to play horn ball, and actively participate in the rugby ball game which organized by the teacher. Until now still not yet appeare pushing behavior.

5.4. The push-in behavior during the meal-eating period is declining and continues to decrease during the reduction period

The method used during the meal is to divert attention and add sharing classes. The first stage, morning classes to play the cartoon to attract the attention of Zhao, so that it no longer pays attention to food, so he will not grab food with other children. With this, pushing behavior gradually reduced. But because the use of this method is only the effect of the surface, it is unstable. So, when the cartoon is not playing to divert his attention, the push behavior has shown a sharp upward trend. Although the method of sharing the class is slow, but pushing people behavior has been a steady decline, especially in the reduction period, there has been a decline, which shows the addition of class to achieve the essential effect. If continuously using this method of correction, may be completely correct his push behavior during the meal.

6. Conclusion

6.1. Conclusion

Overall, Zhao's push behavior in each situation has been reduced. The combination of regression and shaping thoroughly correct the push behavior of Zhao during the free exercise. Penalty and Shaping Method Significantly reduces the push behavior of Zhao during class, but the rebound period has rebounded. During the meal, the transfer of attention and additional sharing class makes Zhao attack behavior twists and turns, although the period has been repeated, but until the last is still down.
6.2. Reflection

6.2.1 The long-term effect of eliminating aggression is the formation of appropriate alternative behavior

Most of the behavioral correction methods can reduce the behavior of children with autism, but its long-term effect depends on the formation of appropriate alternative behavior. Autistic children are often attacked because they do not properly vent their emotions. When correcting an aggressive behavior, he tends to produce other alternative acts that may be good or might be new attack behavior, so to ensure long-term effect, should help children with autism to create a new alternative behavior, teach the right way to vent their own, to completely correct the attack. However, due to the physical and mental characteristics of children with autism, shaping a behavior is often more difficult, need teachers, parents to highly support, and need for long-term adherence to achieve results.

6.2.2 Correctly deal with the 'outbreak period' of the regression method in the process of behavioral correction

The use of regression method to correct the attack behavior, the attack began to reduce the attack before it has increased, this is a critical period that 'burst', adhere to the past, the regression will make progress, so when the use of regression method to correct bad behavior, need to be adherence and should not interrupt the regression process when the bad behavior intensifies.

6.2.3 Distinguish the effect of distracting attention

The method of transferring attention will have a significant effect at the outset, but it may be repeated after the intervention. The method of transferring attention is only to shift its attention from one thing to another and the effect is surface, unstable. Therefore, in the choice of behavior correction methods, according to the specific circumstances to consider whether the application of the transfer of attention to the method, but also the effect of its analysis to ensure the effectiveness of long-term and effective.

6.2.4 Correct use of punishment, to avoid side effects

Reprimanded, suspended, or abolished certain rights and other penalties may have a significant effect at the outset, but long-term use is not effective and may have side effects. Generally, there is no punitive way to correct bad behavior, and punishment is also a negative concern, when the individual's purpose is to attract attention, better not to use punishment, especially using improper punishment while implementing the regression method.

References