What are the Best Ways to Determine Effective Reinforcers for Children with Autism?

In 2012, the Centers for Disease Control and Prevention reported through the Autism and Developmental Disabilities Monitoring Network that approximately 1 in 88 children in the United States have been identified with autism spectrum disorder (Prevalence of autism, 2008). Autism is defined as a set of complex neurological disorders that impair social, communicative and cognitive functions. Behaviors range in severity and include stereotyped actions, insistence of sameness, resistance to change and in some cases aggression or self- injury ("Autism science foundation," 2012). All people with autism have some core symptoms in the areas of social interactions and relationships, verbal and nonverbal communication, and limited interests in activities or play ("Autism- Symptoms", 2010). According to the 1999 article by Smith, a number research articles in the past two decades have reported encouraging data about the efficacy of intensive early intervention approaches for children with autism. These intervention approaches have been focused on principles of applied behavior analysis, and specifically, the operant conditioning procedure of reinforcement. Reinforcement, in applied behavior analysis, is defined as an event that follows a behavior and increases the likelihood that the behavior will occur again. B.F.Skinner, a well-known research pioneer in the field of applied behavioral analysis presented a rule that said, "What behavior is strengthened is what behavior is reinforced." (Bijou & Baer, 1978). A challenge in teaching children with autism lies in determining what is reinforcing for individual children. Children with autism often do not respond to reinforcer that interest other children (Horner, Carr, Strain, Todd & Reed, 2002).

In a study by Saunders and Saunders (2010) four reinforcers (music, vibration, olfactory, and visual) were presented to individuals with severe disabilities and a familiarization time was provided. The researchers wanted to determine whether a two-choice preference was preferred

by subjects or a one-choice preference. The results of this study indicate that individuals preferred to be given two reinforcers in a given amount of time rather than one. Although the subjects were not children with autism, but rather adults with severe disabilities, the same tools can be used to find effective reinforcers for children with autism. It is highly likely that children with autism would also prefer a two choice reinforcer after a desired behavior has been completed.

In another study by Fisher, Piazza, Bowman, Hagopian, Owens and Slevin (1992), individuals with severe to profound mental retardation were presented with two stimuli at the same time, but they were only given access to the stimuli that they approached first. The results stated that the forced-choice stimulus preference assessment could be used to predict which stimuli would produce a higher responding level. This means that when the individual had a choice between two reinforcers the reinforcer that is chosen first may be stronger and more effective than the other. Like the previous study, this study was not specifically designed for children with autism, but the same procedures apply for children with autism.

In a study done in 1898 by Mason, McGee, Farmer-Dougan and Risley, individual preferences for reinforcers change were examined. A systematic assessment approach increased adaptive behaviors for children with autism. The author encouraged increased attention to reinforcer assessment based on an effective improvement of behavior change. This study confirms the findings of the previous two studies presented above, in that it supports allowing the participants to choose their own reinforcer.

The most effective reinforcers are often identified using a stimulus preference time; and then applying the highly preferred stimuli as the reinforcer. For example, a five minute time

period can be provided for a student to access an effective reinforcer. In an experiment by Roane, Vollmer, Ringdahl, and Marcus done in 1998 a stimulus preference time was used and followed by an additional study comparing a brief preference assessment and commonly paired stimulus preference assessment with individuals with developmental disabilities. The results concluded that the brief preference assessment found effective reinforcers for simple operant responses. When these reinforcers were used, fewer problem behaviors occurred and tasks took less time to complete. This study focused on individuals with a range of developmental disabilities, and clearly applies to children with autism who demonstrate a range of learning and behavior challenges.

Determining effective reinforcers is a critically important step when working with children with autism. Each child functions differently, and therefore, reinforcers must be individually determined in order to be effective tools for teaching and maintaining desired behaviors. When determining the most effective strategy for individual reinforcers for individual children with autism choice selection is supported by research.

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