Application Plan 2: Reinforcement

PSYC 530

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Token Economy

A token economy is an essential technique in Applied Behavior Analysis (ABA) and plays a critical role in the learning process in ABA sessions. A token reinforcement system is an interconnected set of contingencies that specifies the relationship between token production, accumulation, and exchange (Hackenberg, 2009, p.259). A token economy consists of three elements: target behavior(s), tokens, and the back-up reinforcers (Aclan, Lecture 21, p2). The target behaviors should be in the clients' current behavior repertoire and socially significant to them. For example, if the main maladaptive behavior of a child is not paying attention in class, the BCBA can set up the target behavior as "raising hand." The child can easily perform the behavior of "raising hand," and he has to pay attention to the teacher to answer the question correctly.

The token economy is used to bridge the delay between the desired responses and back up reinforcers delivery which helps with learning patience. For example, a token would be delivered immediately after the child raises his hand in class; after he accumulated five tokens, he can exchange a 10 minutes break outside. The token should be easy to carry, not easy to replicate by clients, and, whenever possible, attractive and relevant to the learner (e.g. a self-designed "superhero dollars"). To increase the reinforcing value of the token economy, when the client performs a desired response, the practitioners should deliver a token as soon as possible

and pair the token with praise (Aclan, Lecture 21, p.26). Based on the level or personality of the clients, sometimes a response cost (i.e., negative punishment) will be implemented. A response cost procedure removes tokens from the client's total and delays the client access to the back-up reinforcement. For example, when the client walks away from the table without permission from his teacher, he will lose a token. The back-up reinforcers are the biggest motivation of the clients. Therefore, the reinforcers should be resistant to satiation and highly desirable to the learner. For some of the low-functioning individuals with Autism Spectrum Disorder (ASD), the back-up reinforcer could be an unconditioned reinforcer, such as a cookie. For some high-functioning individuals with ASD, the back-up reinforcer could be a more complicated conditioned reinforcer, such as reading a book. After a period of training, the token should be gradually faded out to less artificial things (Aclan, Lecture 21, p.26).

Here is an example of the Token Economy system. One of my clients is a 5-year-old boy who was diagnosed with ASD two years ago. He had severe separation anxiety. He would be compliant and had excellent social interaction with me as long as his grandmother sat inside the clinical room with him. Whenever his grandma decided to walk out of the clinical room, he would scream, cry, and escape to find his grandmother. This made our ABA sessions and his routine daily tasks at home with other family members challenging. Staying in the room without caregivers present is a basic skill that prepares children to go to school or hang out with friends. Therefore, our team decided to implement a token system for the client with the goal of increasing the duration of time the client stayed in the clinical room with the therapist and decreasing his tantrum behavior which he exhibited whenever separated from his grandmother. One of the client's preferred activities was playing with magnets and placing them on the

blackboard in different shapes, so we chose magnets as tokens. The back-up reinforcer in this competency was a 60-second break in which he could find his grandmother for a hug. The client will lose a token if he exhibits tantrum behavior of crying or escaping for grandmother. The target behavior was “remaining in the room without a caregiver present.” This behavior is operationally defined as the client stays with the RBT without his caregiver (grandma) around during the session in the clinical room.

In the first half-hour session, a countdown alarm on a cellphone was set up for every 1 minute. The time segments of the countdown alarm were extended to 3 minutes, 5 minutes and 8 minutes each 30 minutes (4 * 30 mins = a two-hour session). We placed the alarm in front of the client on the training table. Each time it vibrated and the client showed the target behavior, I gave a yellow magnet (the token) to the client; then he placed it on the whiteboard. The client was blocked immediately when he tried to escape; the therapist reminded the client of the countdown alarm by pointing to the alarm clock or count down with him. Once three magnets were earned (which means staying independently for 1*3, 3*3, 5*3, 8*3 minutes), the client earned his back-up reinforcer (finding his grandmother for 60 seconds). Additionally, the treatment team would increase the intensity of Discrete Trial Teaching during the sessions, and the tokens would be faded by teaching him to use an alternative response when he wanted to find his grandmother (e.g., politely asking, “Could I go to find my grandmother?”). The client is currently enrolled in a primary school and can stay independently with our RBTs and his classmates. He now enjoys independent leisure time when his grandmother goes to the grocery store. Therefore, it is socially significant to use a token economy system to help individuals with ASD.

Reference

Hackenberg, T. D. (2018). Token reinforcement: Translational research and application. *Journal of Applied Behavior Analysis*, *51*(2), 393–435. doi: 10.1002/jaba.439

Aclan, Megan (2019). Lecture 21.