PS385: Targeted Topics in Applied Behavior Analysis

**Discussion Board Lecture: Unit 4 Media Lecture**

**Unit 4: Antecedent Intervention and Differential Reinforcement**

**Lecture:**

Welcome, students! Thus far in the course, you have had the opportunity to learn about many basic concepts in applied behavior analysis (ABA), including the role the three-term contingency (antecedent-behavior-consequence) plays in triggering and maintaining - or reducing, behavior. You have also learned the effect reinforcement, punishment, and extinction have on behavior. In Unit 4, you will expand on these concepts by discovering how you can manipulate the antecedents and consequences of a target behavior to affect change in the behavior.

Modifications to the consequences of behavior, specifically reinforcement, punishment, and extinction, have long been staples in ABA modification programs and the focal point of research and practice. Recently, antecedent manipulation has garnered a great deal of attention and has become a critical element in behavior assessment and intervention. In Unit 4, you will discover the process of, and rationale for, antecedent modification and antecedent control in preventing and/or reducing the occurrence of target behaviors. You will also discover the many types and uses of Differential Reinforcement (DR) and the criteria for the selection of each of these powerful behavior modification approaches.

Antecedent interventions – or modifications, serve to prevent or reduce the occurrence of target behaviors through a variety of approaches. Rarely are antecedent interventions used in isolation. Instead, they are typically paired with extinction, DR, or other procedures.

Non-contingent reinforcement (NCR) is an antecedent intervention that can be used when a motivating operation (MO) increases the value of some reinforcer. NCR requires the presentation of stimuli with known reinforcing values on a fixed-time (FT) or variable-time (VT) schedule, independent of the individual’s behavior. Often, a NCR procedure may function as an abolishing operation (AO) that reduces the motivation to engage in the unwanted behavior. For example, Mrs. Jenkins has been a stay-at-home mom since Jenny was born 4-years ago. Mom and daughter have enjoyed going to the park three times a week, walking the nature trails, and having play dates with the children in Jenny’s Sunday School class. Recently, it became necessary for Mrs. Jenkins to find a job, as her husband’s hours were cut at work. Mrs. Jenkins was able to find a “tele-commute” position with a publishing company. However, even though she is still at home, she is working very long hours and has not been able to do all the things with Jenny that they both enjoy. Jenny has recently been engaging in some new behaviors, such as throwing her cereal on the floor and dragging all her toys into the living room and piling them in the middle of the floor. When Mrs. Jenkins asks Jenny why she is behaving this way, Jenny just frowns and runs to her room. Mrs. Jenkins consulted a Board Certified Behavior Analyst (BCBA) about the change in Jenny’s behavior. The BCBA asked Mrs. Jenkins to record some antecedent-behavior-consequence (A-B-C) data for a few days and send it to him via attachment to E-mail so he can provide some advice based upon the data. Mrs. Jenkins recorded the occurrence of the unusual behavior for three days and sent the data sheets to the BCBA. The BCBA told Mrs. Jenkins that, based upon the A-B-C data, it appears that the probable function of Jenny’s behavior is attainment of her attention. Each time Mrs. Jenkins sits down at her computer, Jenny engages in a behavior that forces her mother to “drop everything” and run to Jenny. She agreed that Jenny hasn’t been getting the attention she is used to and asked the BCBA what she could do. She can’t quit her job; the family is depending on that income. He told Mrs. Jenkins that the MO of deprivation of her attention is influencing Jenny’s behaviors. Mrs. Jenkins can satiate Jenny on her attention and, thereby, reduce the value of her attention and the behaviors that have recently served to command that attention. Mrs. Jenkins is to spend time with Jenny reading or playing a game before getting started on her work each morning. She will also set her watch to vibrate every 10-minutes, at which time, Mrs. Jenkins will give Jenny a hug, a pat on the back, or just a smile. These very quick bursts of non-contingent attention will satisfy Jenny’s need for attention and reduce the unwanted behavior. Mrs. Jenkins tried it and, within two days, the unwanted behavior disappeared!

High-p request sequences are very rapid presentations of requests with which the client reliably complies, followed by the request for a behavior with which the client rarely complies. This antecedent intervention has also been called, “behavior momentum.” Picture the game, Simon Says. How often do the players respond to every directive – even when “Simon Says” does not precede the demand? The momentum of doing everything the leader demands when saying, “Simon Says” (the high-p requests) elicits compliance with demands even when “Simon” has not directed them (the low-p requests).

Another antecedent intervention is Functional Communication Training (FCT). It is used when a client engages in unwanted behavior to gain access to things desired or needed or to escape/avoid aversive stimuli because there is a deficit in the communication repertoire. FCT provides an alternate communication response to replace the unwanted behavior, usually in a Differential Reinforcement of Alternative (DRA) behavior procedure. Typically, the reinforcer attained by the unwanted behavior will be used to reinforce the communicative response and the unwanted behavior will be placed on extinction, i.e., the usual reinforcer will be withheld.

Antecedent interventions, or modifications, are excellent approaches to prevent or reduce the occurrence of unwanted behaviors, but they are usually paired with other approaches, such as extinction or DR. DR is a very effective approach to behavior modification. It works by withholding reinforcement for the unwanted behavior (extinction) while providing reinforcement for the desired behavior. The four most researched approaches include Differential Reinforcement of Alternative (DRA) behavior; Differential Reinforcement of Incompatible behavior (DRI); Differential Reinforcement of Other (DRO) behavior; and Differential Reinforcement of Low Rates (DRL).

DRA requires that the target behavior be placed on extinction (the usual reinforcer is withheld upon the expression of the target behavior) and an appropriate, alternative behavior that serves the same, or similar, function as the target behavior is taught and reinforced.

DRI requires that reinforcement be delivered for behaviors that are topographically incompatible with the target behavior and withheld following occurrences of the target behavior. For example, if an individual had a habit behavior that had the potential to be damaging, such as twisting hair through and around the fingers, an incompatible behavior would be to fold the hands in the lap or engage in knitting. One cannot twist one’s hair if the hands are otherwise occupied.

DRO requires that reinforcement be delivered for the absence of the target behavior during, or at, specific intervals of time. Typically, you would divide the treatment session into intervals and if the target behavior did not occur at any point during that interval, reinforcement would be delivered. If the target behavior did occur, you would withhold reinforcement, thereby placing the target behavior on extinction. You would begin with short intervals of time and extend the interval over time.

Differential Reinforcement of Low Rates (DRL) of behavior is a process that can be used when you wish to reduce a behavior but not remove it completely. On a changing criterion design, you would reinforce reductions in the target behavior over time. You would not use DRL to reduce self-injurious or aggressive behaviors – or with behaviors that need to be reduced quickly.

When selecting behavior modification programs for your clients, you must insure that you are operating in their best interests. Code 2.0, and its subsections, of the Behavior Analyst Certification Board’s (BACB’s) Professional and Ethical Compliance Code for Behavior Analysts, requires you to only accept clients whose needs are commensurate with your education, experience, available resources, and organizational policies. The rights and prerogatives of the client must be insured. You must also safeguard your clients’ confidentiality both verbally and in client records. It is important that you discuss the limitations of confidentiality with clients at the onset of services and respond to any questions or concerns they may have.

We are called to “do no harm.” We can meet that obligation through the provision of evidence-based, compassionate, and ethical service delivery.

Thank you for viewing your Unit 4 lecture!