

Intervention Name: Noncontingent Reinforcement

Function of Intervention:

Noncontingent reinforcement (NCR) is a powerful method to reduce problematic behavior. NCR involves giving the student access to a reinforcer frequently enough that they are no longer motivated to exhibit disruptive behavior to obtain that same reinforcer. A classic example of NCR is a teacher placing a child on his or her lap during group instruction such that the child has no motivation to seek the teacher's attention while the teacher is conducting story time with the class. There have been many empirical demonstrations of the effectiveness of the NCR interventions with a comprehensive demonstration of the evidence base by Carr, Severtson, and Lepper in 2008. In addition to being demonstrated effective in reducing problem behavior, NCR interventions have the distinct advantage of reducing problem behavior with less of a chance of an extinction burst period. Because the child is already receiving as much of the reinforcer as he or she could want, there is no brief increase in disruption that commonly follows treatments that involve withholding reinforcement from a child. There is a rich literature base on use of NCR. Two cautions are worth noting. When thinning the NCR schedule (i.e., reducing the amount of reinforcement the student gets), disruptive behavior may re-occur necessitating the use of extinction procedures. Second, reinforcer substitution may occur meaning the student may continue to exhibit disruptive behavior to obtain other reinforcers.

Brief Description:

Understanding that children will engage in problem behaviors if they are reinforced, one strategy to minimize the utility of the behavior is to saturate the environment with the reinforcer **prior** to the demonstration of the disruptive behavior. To understand why this intervention would be effective, think about a child who desires teacher attention who has found that calling out in class consistently results in the teacher focusing attention on him (albeit, not in a positive manner). A NCR intervention directs the teacher to provide him attention (in this case a more positive version) prior to the child "asking" with the problem behavior. As such, the child has no need to be disruptive, and will hopefully, in time, prefer positive attention on a leaner schedule than negative attention on a more consistent schedule. This brief has been developed to present a fixed time NCR delivery with extinction and schedule thinning as this version of NCR was found to have a well established evidence base by Carr and colleagues (2008).

Procedures:

1. Identify the reinforcer for the inappropriate behavior (e.g. verbal praise, escape).
2. Develop a fixed schedule to apply the NCR for the target child. The goal of this step is to develop an initial schedule that is likely to catch the child before he or she engages in the problem behavior thereby making the disruptive behavior unnecessary.

- a. Adapt the schedule based on the age, developmental level, and severity of the behavior problem. For young children, or those with severe behavior problems, the initial NCR schedule will need to be very dense (e.g., once every 30 seconds). For higher functioning children with more mainstream behavior difficulties the NCR schedule can be initially less ambitious (e.g., once every 15 minutes). Implementers can easily determine how dense it should be by examining the frequency of disruptive behavior that is followed by reinforcement in the classroom at baseline and ensuring that their schedule is more frequent at first. So, for example, if talking out occurs once every 5 minutes on average in the classroom, then NCR should be delivered in less than 5-minute intervals.
3. When initially applying the NCR, do not refer to the problem behavior or note that the child is behaving appropriately.
4. Once the NCR schedule has been initiated, do not respond to the target problem behavior if and when it occurs.
5. After a number of intervention days or sessions (for more severe cases), applying the NCR (e.g., 5 days or 20-25 sessions) showing a marked reduction in the problem behavior, start to thin out the reinforcement schedule. Thinning the schedule means reducing the frequency with which the child is provided reinforcement when NCR is in effect. It is important to make gradual adjustments to the schedule to minimize the chances of a burst in disruptive behavior. When thinning the schedule, the problem behavior will likely re-occur. When it does, research suggests that withholding reinforcement (i.e., extinction) or delivering a mild consequence like response cost can effectively mitigate the reoccurrence. The value of NCR is that the extinction period is often less pronounced because the disruption has been reduced to zero levels.

Critical components that must be implemented for intervention to be successful:

- Successful identification of the reinforcer for the problem behavior. This step is essential. NCR will not work if the function of disruption is unknown. This strategy is not the same as simply providing rewards on a very dense schedule.
- An initial schedule of NCR that minimizes the likelihood that the child will need to engage in the problem behavior to get the desired reinforcement.
- That problem behavior is ignored once the NCR schedule is initiated.
- A fading process that is gradual enough to minimize the degree to which the child reengages in the problem behavior.

References

- Carr, J. E., Severtson, J.M., & Lepper, T. L. (2008). Noncontingent reinforcement is an empirically supported treatment for problem behavior exhibited by individuals with developmental disabilities. *Research in Developmental Disabilities, 30*, 44-57.