

Survey on the Social Validity of Noncontingent Reinforcement

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INTRODUCTION

Noncontingent reinforcement is an intervention designed to decrease problem behavior. During NCR, a therapist/teacher delivers reinforcement (e.g. access to tangible items, attention) following a pre-determined amount of time regardless of the presence or absence of the problem behavior. The concept of social validity is the evaluation of works based on goals, procedures, and outcomes (Wolf, 1978). Though NCR is a highly used procedure and the significance of social validity is understood by researchers, the literature on social validity and NCR is limited in the field Applied Behavior Analysis (Meindl, Ivy, Glodowski, and Noordin, 2019).

The purpose of this research was to investigate the social validity of Noncontingent Reinforcement (NCR). This study sought to expand the knowledge relating to the social validity of noncontingent reinforcement procedures by addressing the following questions:

1. What is the perception of service provider's (e.g. behavior analysts, behavior therapists, psychologist, social workers) ease of implementation of NCR in various environments (clinical, school, community, home)?
2. What is the service providers preference in relation to time (various-time, fixed-time, or continuous) and schedule of NCR?
3. What is the perception of service providers as it relates to the effectiveness of NCR to address problem behavior?

METHODS

Participants

- Participants for this study were recruited through email invitations distributed from the databases of the Tennessee Association of Behavior Analysts (TABA), Autism Resources of the Mid-South, and the Memphis Shelby County Education Association (MSEA).

Setting

- Participants were able to access survey settings that provides internet access.

Materials

- Participants were provided with a link to access the survey in the recruitment email. The survey included 27-multiple choice, Likert-scale, and fill-in-the blank questions that addressed (1) Demographic information (e.g., gender, educational background, years of experience and certifications); (2) Experience with NCR procedure (e.g. behaviors addressed, environments NCR implemented, NCR difficulty); (3) NCR time and schedule (e.g., length of time NCR in place, length of time between reinforcer, and schedule of delivery); (4) NCR and the function of behavior; and (5) NCR effectiveness. Prior to completing the survey, participants were provided information that indicated by implied consent to participate in research and that results of the survey would be shared with professional and academic communities, though individual responses would remain anonymous. The survey took approximately 10 minutes to complete. Survey responses were then viewed anonymously via the hosted survey website (Qualtrics).

RESULTS

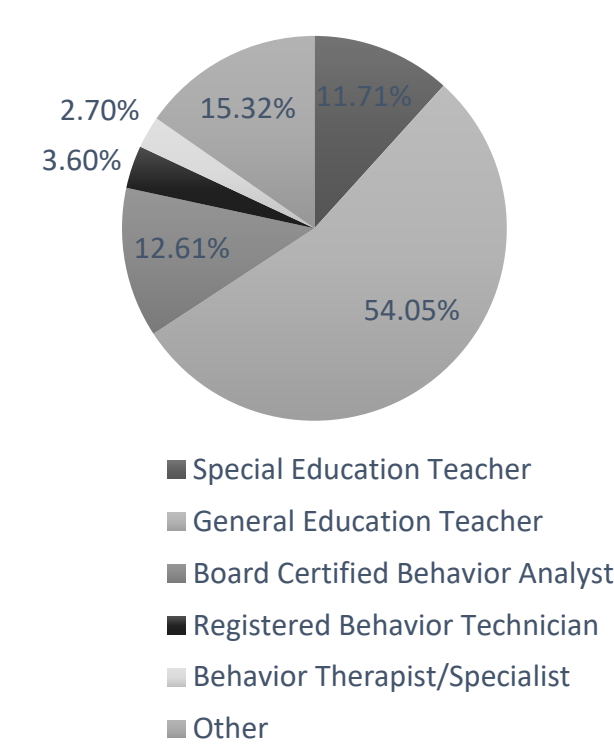


Figure 1. What is the bests description of your profession?

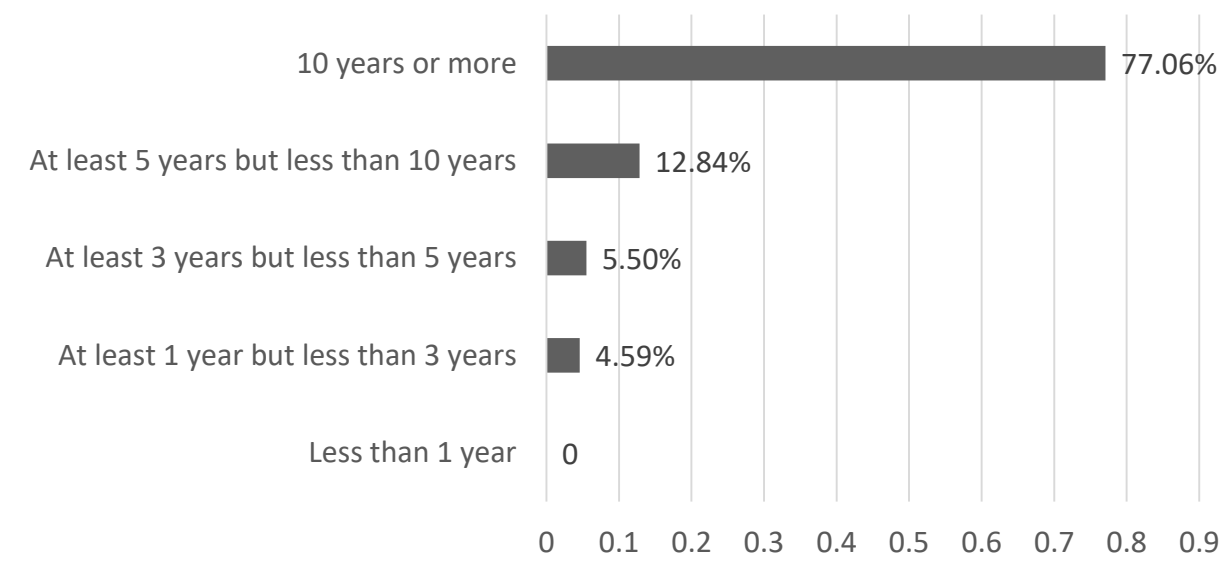


Figure 2. About how many years have you been working in your field?

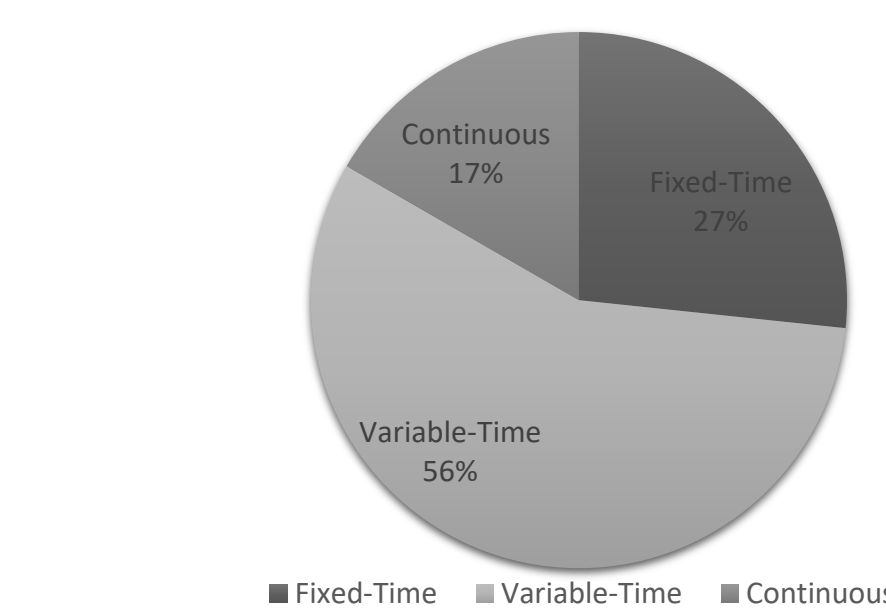


Figure 9. When NCR is being used in a program for several months, what schedule do you think is easiest?

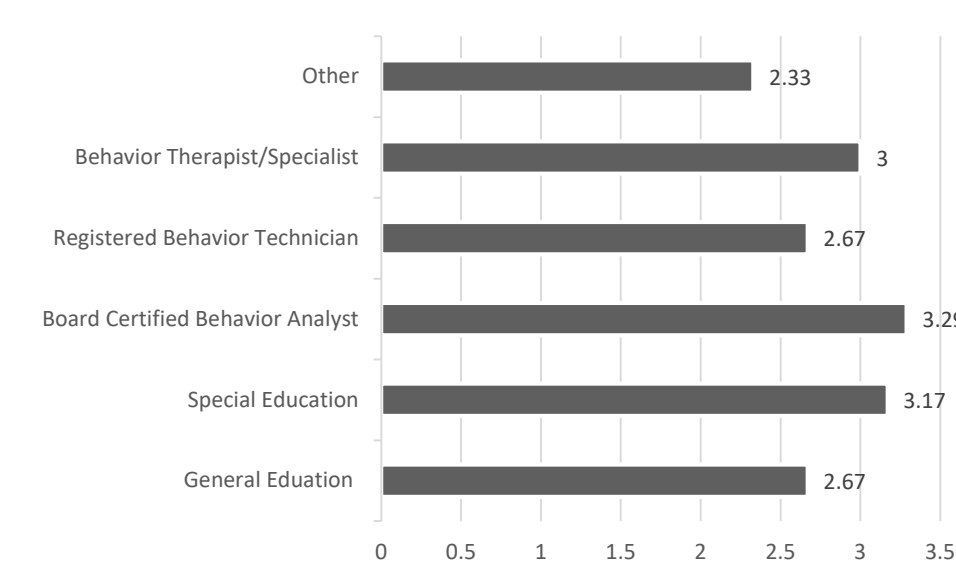


Figure 11. I have found NCR procedure to be effective in decreasing the problem behavior of the person I have used the procedure with. The following procedures were measured on a scale of 1 to 7, with 1=strongly agree and 7=strongly disagree.

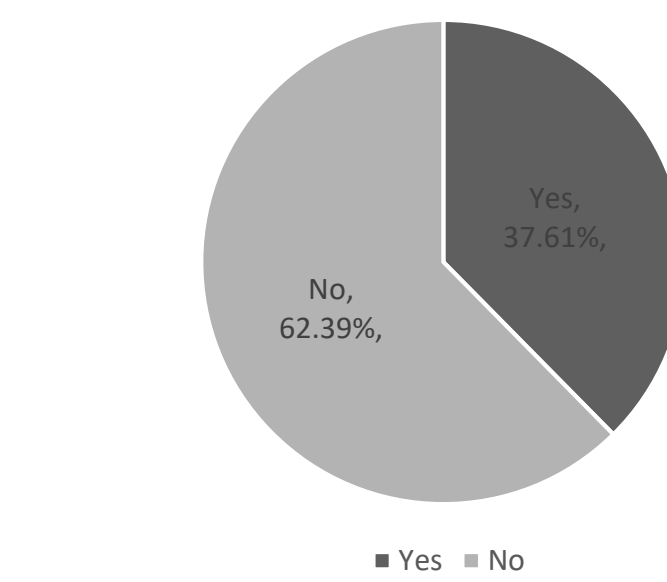


Figure 3. Have you ever implemented NCR before?

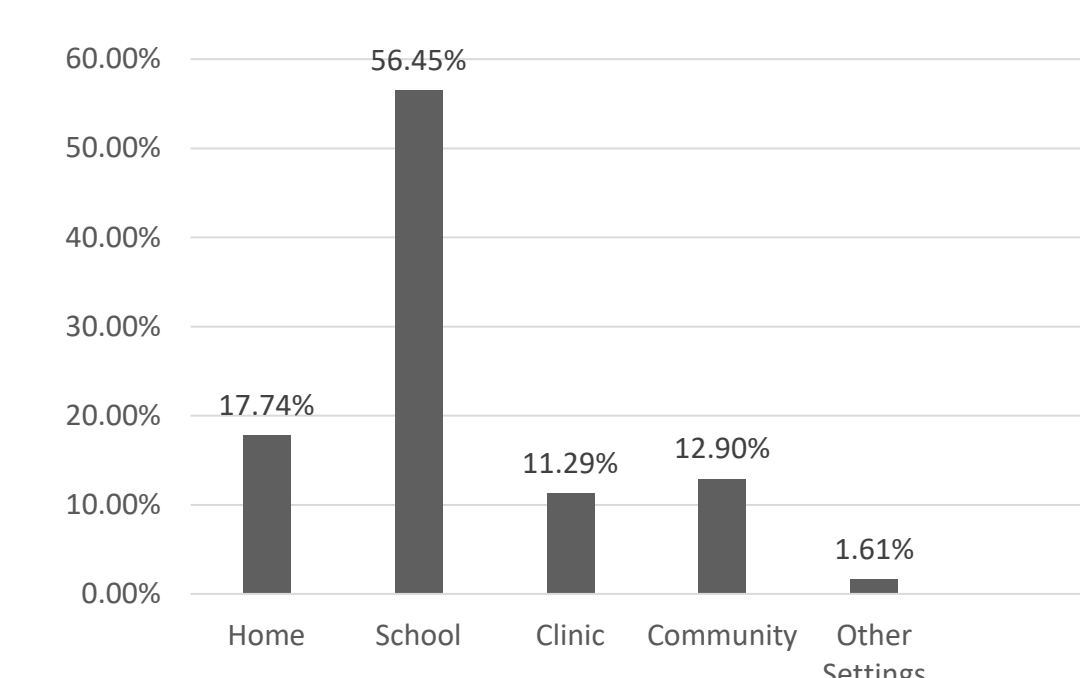


Figure 5. In what environments in which you have implemented NCR?

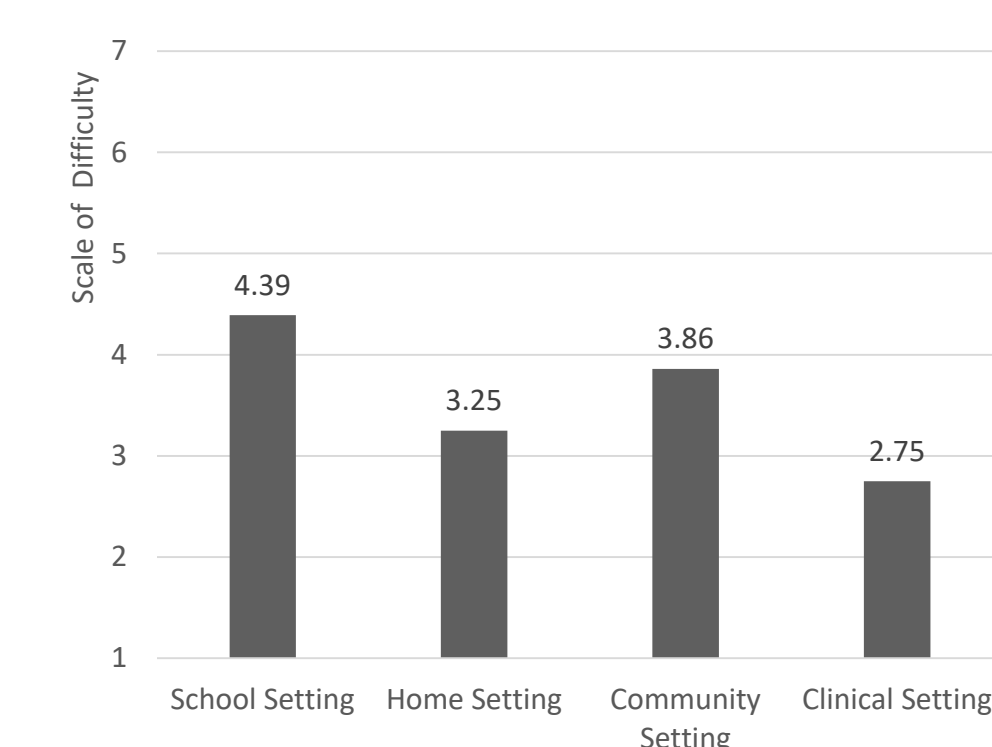


Figure 7. How difficult was it to implement NCR procedure? The following procedures were measured on a scale of 1 to 7, with 1=extremely easy and 7=extremely difficult.

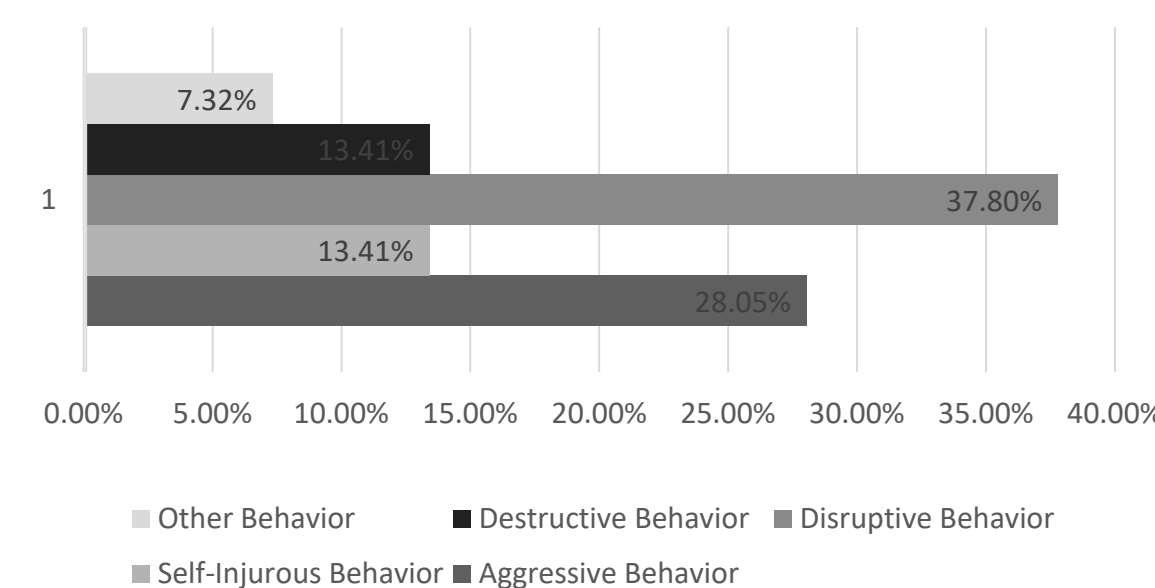


Figure 4. What behaviors have you tried to change with NCR?

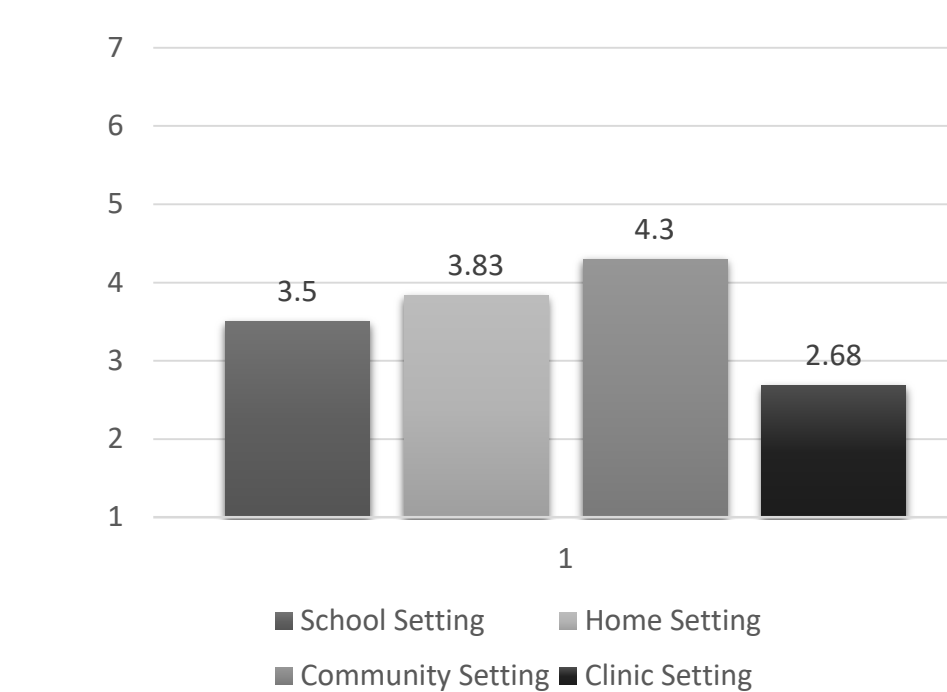


Figure 6. How difficult do you think it would be to implement NCR procedure? The following procedures were measured on a scale of 1 to 7, with 1=extremely easy and 7=extremely difficult.

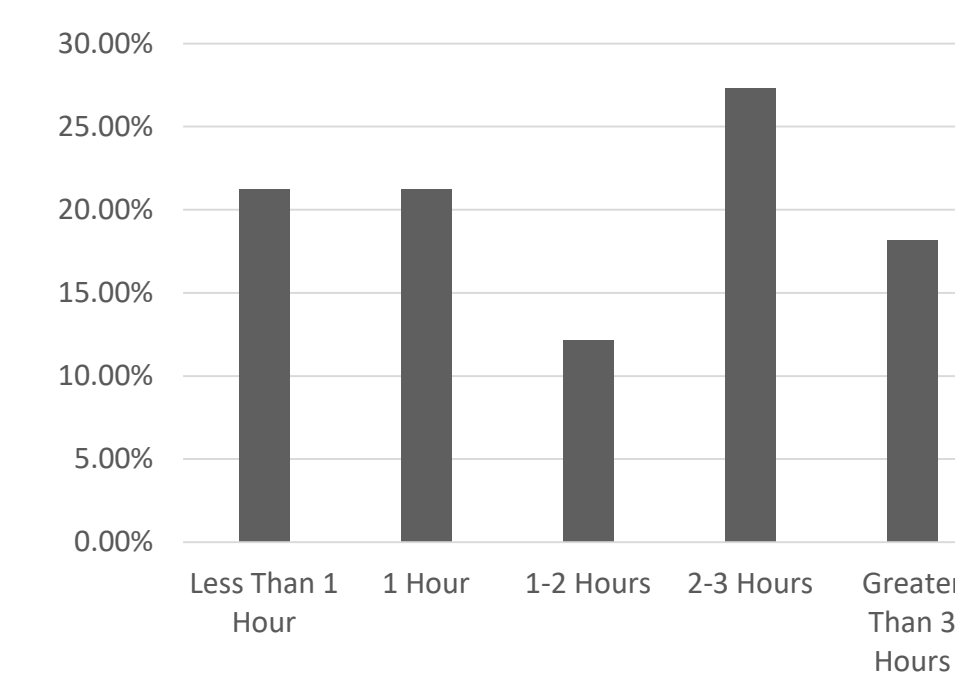


Figure 8. How many hours in a day is NCR in place?

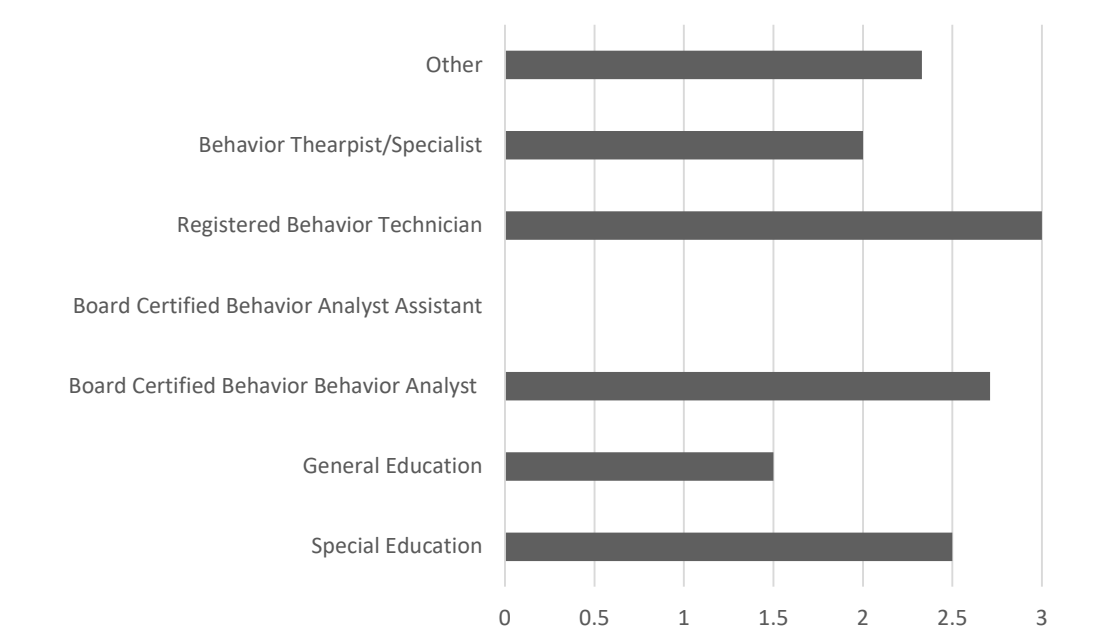


Figure 10. I intend to use NCR procedure in the future to decrease problem behavior. The following procedures were measured on a scale of 1 to 7, with 1=strongly agree and 7=strongly disagree.

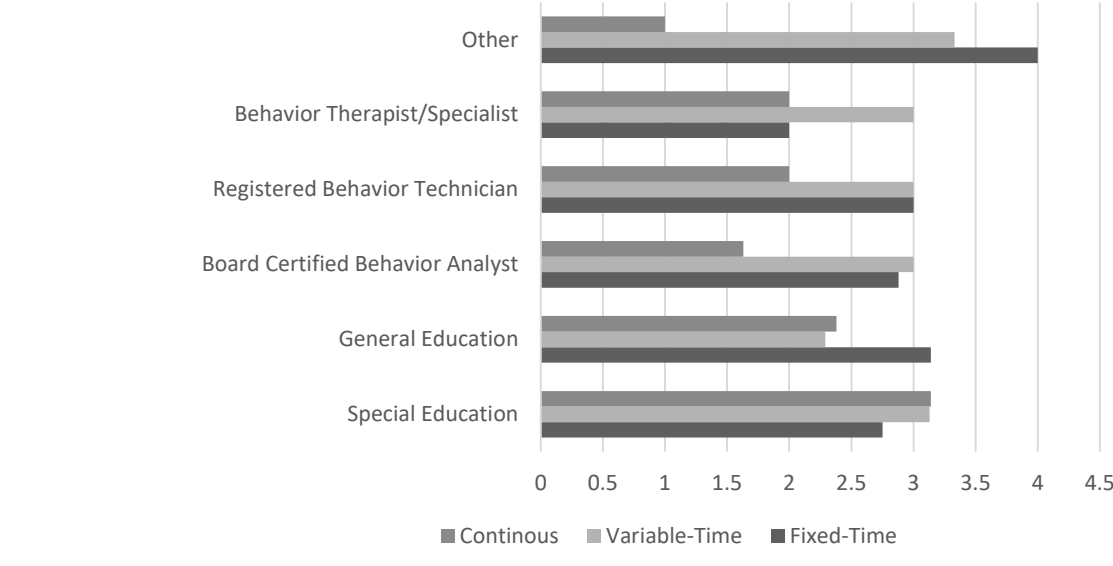


Figure 12. When using NCR, what type of delivery schedule do you typically use? This could be fixed-time (e.g., every 2 min), variable-time (e.g., on average every 2 min), or continuous (e.g., the reinforcer is not withdrawn after being provided). The following procedures were measured on a scale of 1 to 5, with 1=Never, 2=Sometimes, 3=Half the Time, 4=Most of the Time, and 5=Always.

RESULTS CONTINUED

- How difficult do you think it would be to implement NCR procedure in a community setting? (see Figure 6)
- In a home environment, how difficult is the NCR procedure to implement? (see Figure 7) In rating the difficulty of implementing the NCR procedure in a home environment, (n=8) mean was 3.25 Difficulty of NCR in a home environment, (n=23) mean was 3.85. The difficulty of implementing the NCR procedure in a school environment, (n=28) mean was 4.39.
- In a school environment, how difficult is the NCR procedure to implement? (see Figure 7) Respondent's(n=28) mean was 4.39.
- In a clinical setting, how difficult is the NCR procedure to implement? (see Figure 7)
- In a community setting, how difficult is the NCR procedure to implement? (see Figure 7)
- When you use NCR procedure, is the reinforcer you deliver based on the function of the problem behavior?
- I have found NCR procedure to be effective in decreasing the problem behavior of the person I have used the procedure with. (see Figure 11) Special education (n=6) mean 3.17; General Education (n=3) mean 2.67; Board Certified Behavior Analyst (n=7) mean 3.29; Registered Behavior Technician (n=3) mean 2.67; Behavior Therapist/Specialist (n=1) mean 3; Other (n=3) mean 2.33.
- When you have used NCR in the past, how many hours of the day is the intervention generally in place? (see Figure 8)
- If behavior improvement is maintained, what do you think is a reasonable length of time (i.e., would be seen as socially valid or acceptable by staff/parents/caregivers) in different environments?
- I intend to use NCR procedure in the future to decrease problem behavior. (see Figure 10) Respondents (n=28) mean was 2.68.
- When using NCR, what type of delivery schedule do you typically use? (see Figure 12) Special Education Fixed-Timed (n=8) mean 2.75; Variable-Time (n=8) mean 3.14; Continuous (n=8) mean 3.14. General Education Fixed-Timed (n=7) mean 3.14; Variable-Time (n=7) mean 2.29; Continuous (n=7) mean 2.38. Board Certified Behavior Analyst Fixed-Timed (n=8) mean 2.88; Variable-Time (n=8) mean 3; Continuous (n=8) mean 1.63. Registered Behavior Technician Fixed-Timed (n=2) mean 3; Variable-Time (n=2) mean 3; Continuous (n=2) mean 2. Behavior Therapist/Specialist Fixed-Timed (n=1) mean 2; Variable-Time (n=1) mean 3; Continuous (n=1) mean 2. Other Fixed-Timed (n=1) mean 4; Variable-Time (n=1) mean 3.33; Continuous (n=1) mean 1.
- How much time they allow a client to interact with the reinforcer before it is again removed?

DISCUSSION

- School was identified by a significant number of respondents where NCR was implemented the most, followed by home environments.
- Respondents feel that clinical settings provide the best environment for NCR to have optimal effectiveness; however, the school setting is where NCR is implemented the most. Future researchers should seek to replicate NCR's clinical settings effectiveness into more natural environments.
- Most respondents indicated that they agree in using NCR in the future to decrease problem behavior.
- Most respondents reported that the function of the problem is the basis in which NCR is delivered.
- In the write-in portion of the survey, responses indicate that using fixed-time technique was more natural and found it to be easier to use and afforded the best results for individuals.
- In the write-in portion of the survey,
- About two-thirds of respondents identified fixed time of delivery and variable time as being the preferred method of the delivery of NCR most of the time.
- Continuous-time delivery was the least preferred method; however, this contrasts the meta-analysis study by Meindl, et al., (2019), who found continuous schedule to be the second-most used and variable-time being the least reported schedule. Future studies should focus on the application of schedules that are aligned with the preferences of those who are implementing NCR in natural settings.

REFERENCES

References available up on request .