

# The Effects of the Self & Match Intervention on Self-Monitoring and the Reduction of Maladaptive Behavior

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## PARTICIPANTS

The participants in this study were six students 5-6 years old (five male, one female). All participants were diagnosed with Autism Spectrum Disorders (ASD), and 1 participant was also diagnosed with Attention Deficit Hyperactive Disorder (ADHD). All participants received between 8-15 hours of intensive behavior intervention in their home setting, approximately three to five days per week. A trained behavioral interventionist provided direct instructional services, while a Board Certified Behavior Analyst (BCBA) provided supervision. All participants had Naming in repertoire (i.e., had passed the Naming assessment with 80% accuracy or above) (Greer, Stolfi, Chavez-Brown, & Rivera-Valdez, 2005) prior to the start of the current study.

Participant	Age	Diagnosis
A	6 years, 2 months	ASD
B	6 years, 3 months	ASD
C	5 years, 4 months	ASD
D	5 years, 8 months	ASD
E	5 years, 1 months	ASD
F	6 years, 5 months	ASD, ADHD

## SETTING

The study was conducted within a major metropolitan area. Instructors conducted all phases of the intervention at a table within the participant's home.

## LITERATURE REVIEW

- Self-management consists of setting goals for oneself, recording one's own behavioral results, and self-reinforcement (Alberto & Troutman, 2009).
- Self-management teaches learners to discriminate between appropriate and inappropriate behaviors (Dalton, Martella, & Marchand-Martella, 1999).
- Peterson, Young, Salzberg, West, and Hill (2006) found that the addition of a match component to a self-management procedure was effective in increasing on-task behavior and accurate responses to vocal directions. Peterson et al. (2006) also observed marked increases in appropriate social skills in the classroom setting.
- Self-management skills can be used to influence a wide variety of behaviors, ultimately resulting in increased self-control and independent behavior (Koegel, Frea, & Surratt, 1994).
- The Self & Match system (Salter & Croce, 2014) is behavior intervention package that incorporates aspects of the Differential Reinforcement of Other behaviors (DRO) and a self-monitoring checklist.
- Self-monitoring is cost effective and not as intrusive or stigmatizing than monitoring performed by a clinician, therapist or other adult, thus facilitating easier generalization to other settings (Koegel, Frea, & Surratt, 1994; Kratochwill, Sheridan, Carlson, & Lasecki, 1999; Webber, Scheuermann, McCall, & Colean, 1993).

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## ABSTRACT

The researchers conducted a delayed AB (withdrawal) design across participants, in order to assess the effectiveness of the Self & Match (Salter & Croce, 2004) intervention in reducing individual target behaviors and increasing self-management skills. The study was conducted in each participant's home environment within a major metropolitan area. The researchers selected the participants based on pre-intervention measures showing high levels of the behaviors targeted for reduction. Each participant demonstrated the Naming capability prior to the start of the current study. The dependent variables included the frequency of the participants individual target behaviors. The independent variable was the Self & Match (Salter & Croce, 2004) intervention, which is a type of self-monitoring system that requires participants to respond to a series of individualized survey questions and compare parent and/or therapist responses. The results for Participants A-D are pending completion of the Self & Match intervention package.

## VARIABLES

**Dependent Variable:** The dependent variables for this study included the frequency of each individual target behavior, along with a duration measure for any tantrum or elopement behavior. Target behaviors were individually selected based on the needs of each participant, and were defined as:

- Elopement- physically leaving the table or instructional area during instructional session without permission from the instructor
- Tantrum- prolonged crying and/or screaming, stomping feet
- Vocal Protest- repeated verbal request and/or whining up to 2-3 seconds by participant to instructor to cease instruction
- Non-Compliance- refusal to complete a given task within 2-3 seconds as directed by the instructor, or placing head down on the desk, closing eyes, or folding arms in response to an instruction.

**Independent Variable:** The independent variable was the Self & Match intervention (Salter & Croce, 2004), which requires both instructor and participant to respond to a series of individualized questions regarding the latter's target behavior(s). Examples include: "Am I following directions?" and "Did I make good choices?" Each question was followed with supplemental clarifying questions, which were tailored to each participant's reading and comprehension skills and sometimes included picture prompts. Additionally, the duration of the initial interval for each participant was derived from his/her baseline data.

## PROCEDURE

### PRE-INTERVENTION BASELINE PROBE

The researchers collected baseline data on the total frequency (and duration, when appropriate) of target behaviors per hour for each participant. In addition, participants were asked a series of three questions throughout baseline sessions. Questioned asked included the following: "Did I ask permission to leave my seat or did I sit nicely in my seat?", "Did I use nice words with my parents/teachers/friends?", and "Did I follow directions?". The researchers collected baseline data for a minimum of five consecutive instructional sessions. All responses were unsequenced during the baseline phases.

### INTERVENTION

The instructor provided each participant with an individualized Self & Match data sheet that included the specific target behaviors (tantrum, non-compliance, elopement, and vocal protest). Instructors reviewed reflective yes and no questions designed to help participants identify their own behaviors, and discussed behavioral expectations for each response along with the specific time interval that would be monitored. After each interval, the timer was stopped and the Self & Match data sheet was reviewed with the participant. Participant responses were recorded one item at a time and followed immediately by the instructor response. If the Participant and the Instructor both circled the matching "yes" response, the Participant was given two points. If the Participant and the Instructor both circled the matching "no" response, the Participant was given one point. If the Participant circled an incorrect response, the Participant did not receive points for that trial. The Instructor explained his or her responses to the participant. Once all responses were recorded, the instructor and participant calculated the points earned during that interval as well as cumulative points earned. Once the data sheet was completed, the instructor and participant reviewed the total points earned and determined if the participant had earned the minimum points required to access his or her reinforcers. A short reinforcement break was given if the child earned the minimum 32/40 points. If the child did not earn the minimum points, the intervention immediately resumed. Additionally, the intervention resumed immediately following any reinforcement break. This continued until the child met the minimum instructional criteria of 90% accuracy across 3 instructors or 100% accuracy across 2 instructors, at which point the required time interval was increased. The intervention continued until the participant achieved the minimum instructional criteria across a 10 minute interval.

### POST-INTERVENTION PROBE

Following the participants achievement of mastery criteria across a 10 minute interval, the instructor withdrew the intervention returned to baseline for five days. During the baseline condition, the instructor asked each participant the three abovementioned questions, without providing any consequences. The return to baseline phase was conducted for a minimum of 5 consecutive instructional sessions.

## DISCUSSION

The results of the current study showed that measuring one's own behavior through a self-monitoring intervention with a match component functioned to decrease the overall frequency of the participants respective target behaviors. Participant B maintained the highest intervention interval (10 minutes) throughout all conditions. Participant B's decreased behavior frequency remained stable during the final return to baseline condition. While the current intervention was conducted in the home setting, it would be beneficial to conduct future experiments to test whether the target behaviors remained low in a variety of settings and without the presence of an interventionist.

## RESULTS

During the initial baseline phases, all participants emitted levels of target behavior exceeding their individualized exit criteria for these behaviors. Upon implementation of the self and match intervention, all participants demonstrated a reduction in the frequency of target behaviors. All participants were able to increase the interval within which the self and match intervention were recorded which directly correlated with marked decreases in target behavior.

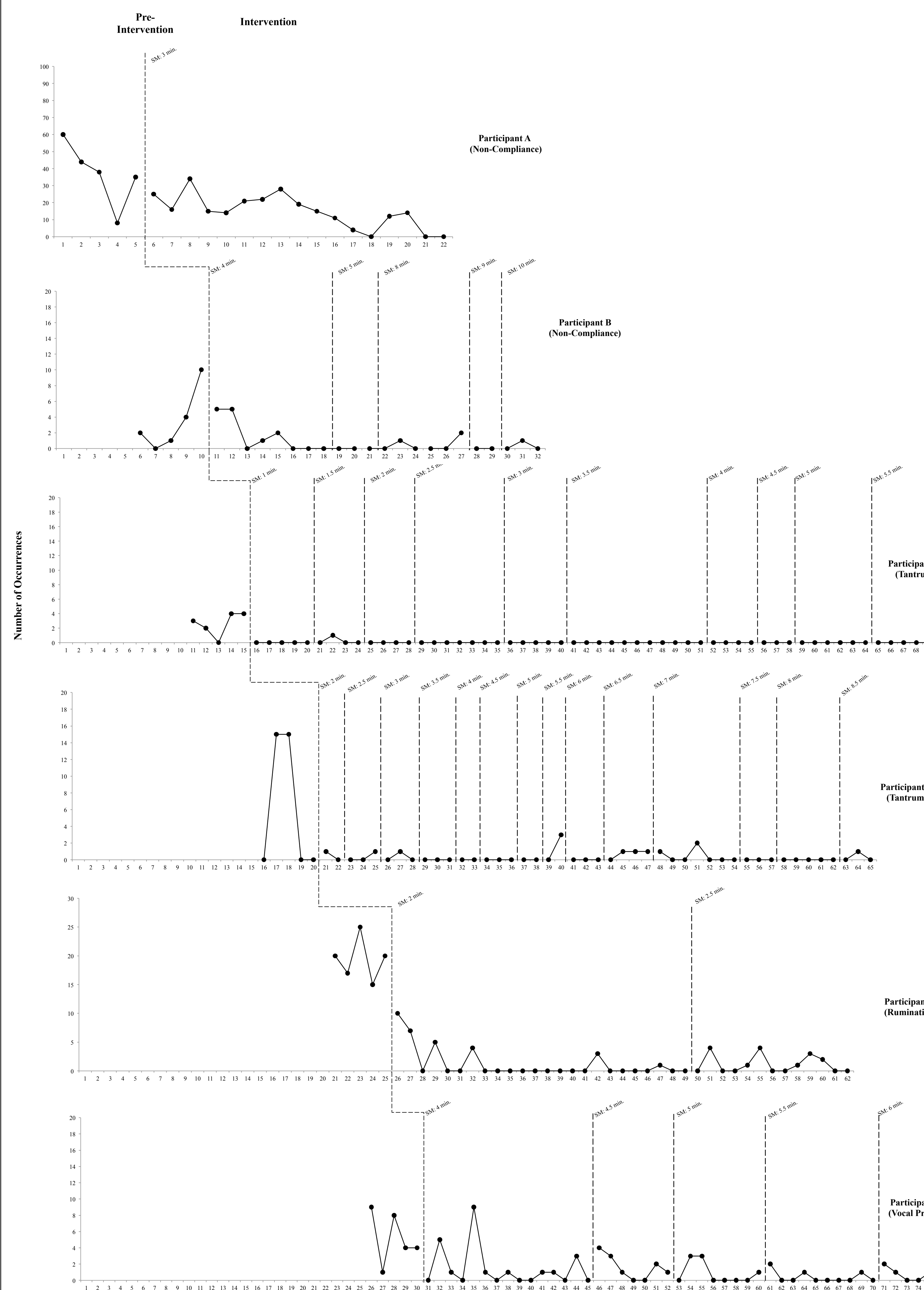


Figure 1: Baseline & Intervention Behavior Data