



Assessment of Video Self Modeling on the Acquisition of Initiation Behaviors in Children with Autism

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Abstract

Video self-modeling (VSM) is defined as a procedure in which people see themselves on videotapes successfully performing adaptive behavior. VSM has been used effectively to teach prosocial behaviors and reduce unwanted behaviors across a wide range of ages and disability types. The current study examined the effects of VSM on social initiations using a multiple baseline across participants experimental design. Using VSM, each child watched him/herself engaged in typical, age appropriate social initiations related to playing in a recreational area. Students viewed the VSM videos in their classroom prior to going to the school's playroom. Subsequent social initiations were observed with each participant's triad of peers. The introduction of VSM led to an increase in initiation for all three participants, increasing to levels equivalent to typically developing peers. The data support VSM intervention as an effective tool to increase social initiations for children with ASD.

Method

Participants

Three participants, aged 4-7 years, participated in the study. Each participant was diagnosed with autism by an outside agency. Participant's teachers reported relatively similar behavioral deficits, including: (a) limited social skill repertoire, and (b) low frequencies of spontaneous social initiations.

Video Creation

The "hidden support" method of video creation was used. This entailed prompting the correct initiation behaviors of the participant toward a peer. The initiation behaviors were selected by observing the participant during baseline and using play preferences displayed. Afterwards, the prompts were edited out so that the child appeared to be engaging in proper verbal initiation behaviors with a peer.

Setting

The interventions took place in the children's school and assessment sessions were videotaped through a mirrored window. The assessment sessions were conducted in the school's indoor playroom which contained matted floors, a ball pen, and manipulative play materials. Intervention sessions were conducted in a classroom with a television, table in the center of the room, and a chair for the participant and the experimenter. Observers coded participant behavior using the videos.

Research Design

A multiple baseline across participants design was used.

Dependent Variable

The percent of intervals with initiations was the dependent variable. The total number of intervals with an initiation were divided by the total number of intervals to determine the percentage.

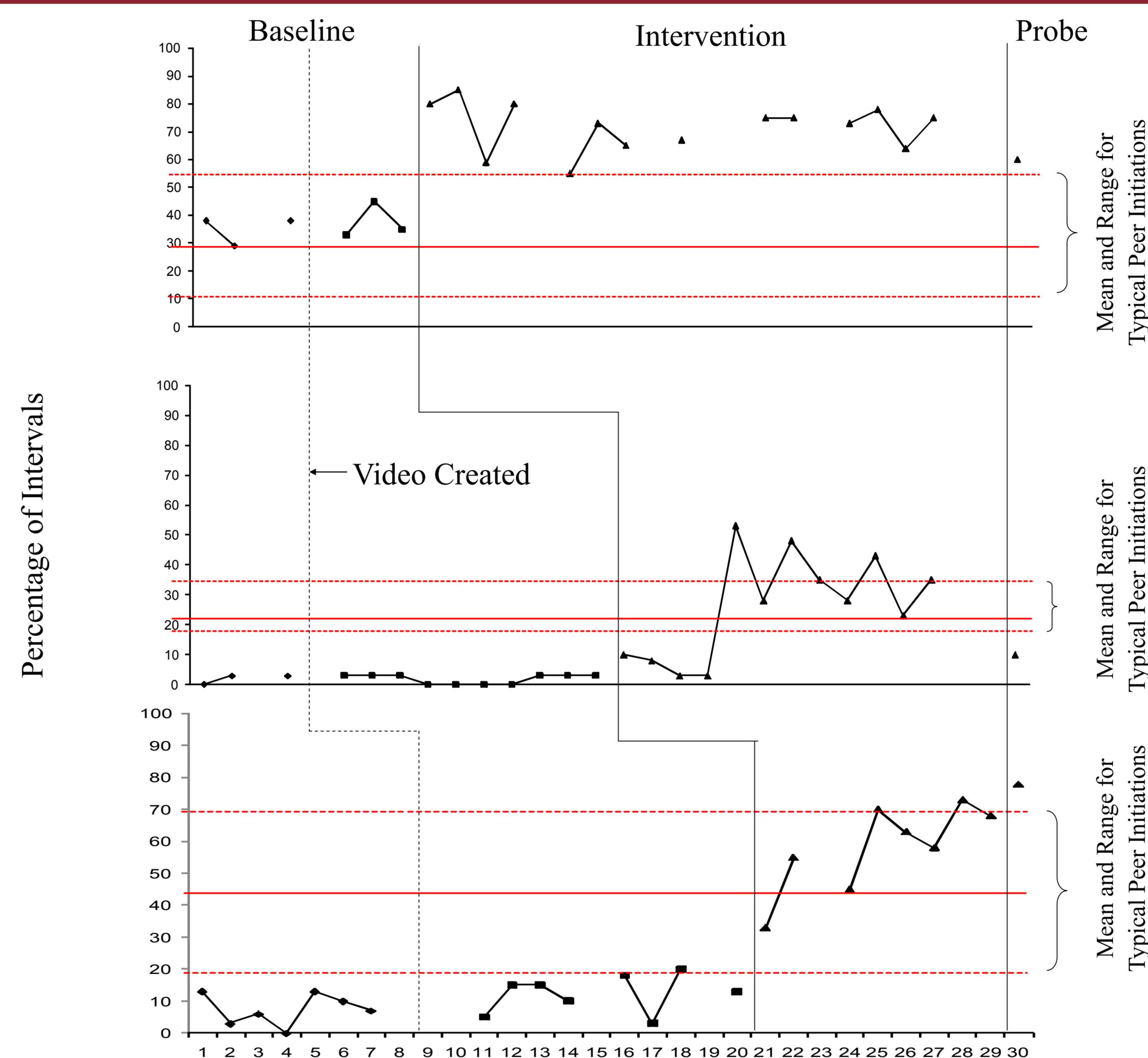
Independent Variable

The independent variable included having participants watch videos of themselves engaging in typical social initiations.

Response Definition

Social initiations were defined as: verbal statements by the participant, directed toward peers in the playroom with the participants head facing a peer or verbal statements which were accompanied by the manipulation of a stimulus, without any prompting prior to the statements.

Results



Procedure

Social initiations were assessed for frequency of initiations using a partial interval recording system. Each 10 min recording session was divided into forty 15 s intervals. Baseline observation sessions were conducted during 10 min of the child's school indoor playtime. The three participants received the training intervention at different times and at different points during baseline

After stability in the baseline levels of social initiation responses was noted, the intervention and subsequent assessment sessions began. The intervention and assessment sessions were delivered on the same day. Delivery of the intervention was given to the children based on the school's playroom schedule and the participant's schedule.

Just prior to playtime in the playroom, participants were prompted to watch their social initiation video. This was conducted in a separate room where the child was able to watch with minimal distractions. Assessment sessions were conducted during the first 10 min of the child's indoor playtime. Sessions were taped and observers recorded the frequency of social initiations using a prescribed data sheet.

Inter-observer Agreement

During 31% of the assessment sessions, two observers independently watched the session videos and recorded data on response initiations to assess IOA. Each observer was trained on the response definitions and met a 90% agreement criterion prior to observation sessions. IOA for participant 1 ranged from 70-98% with a mean of 80%. IOA for participant 2 ranged from 90-100% with a mean of 96%. IOA for participant 3 ranged from 83-100% with a mean of 90%. Overall the participants IOA ranged from 70-100% with a mean of 90%.

Results

Participant 1

Baseline data of initiations were at a mean level of 36% (29-45%) of intervals. The data were stable with a slight increasing trend. After the introduction of the intervention, initiations rose to a mean of 72% (59-85%) of assessed intervals. The intervention data remained stable during baseline with a small decreasing trend. The maintenance probe showed initiations for a mean of 60% of intervals which was below the mean of the intervention sessions but the mean was still 24% higher than baseline.

Participant 2

Baseline data of initiations were at a mean of 2% (0-3%) of intervals. Data were stable with no notable trend. During intervention, initiations rose to a mean of 26% (3-53%) of intervals. During the first four sessions of intervention, initiations remained at baseline levels. The fifth session showed an increase in initiation from 3% during the previous assessment to 53%. There was however a decreasing trend in the data from the fifth intervention session to the final intervention session. The maintenance probe showed a decrease in initiations to 10% of intervals which was well below the intervention mean but still five times greater than baseline levels.

Participant 3

Baseline data of initiations were at a mean level of 10% (range: 0-20%) of intervals. The data were stable around the mean with no trend. During the intervention, initiations rose from a mean of 58% (3-78%) of intervals. The intervention data showed an increasing trend with the highest percentage of initiations, 78% of intervals, occurring during the maintenance probe.

Discussion

A marked increase in the frequency of initiations was observed for all of the participants of the current investigation, providing further support of the effectiveness of VSM. The creation of the videos was relatively simple with readily available technology. The effects on behavior were seen immediately with two participants and observed in the third participant within one week.

Peer Comparison

Behavioral data on peer initiations were taken during all assessment sessions. Participant one's level of initiation increased to levels above the highest levels of peer initiation during intervention. Participant two's level of initiation increased to levels observed in a typically developing peer. Participant three's level of initiation increased to the high range of peer initiation with the maintenance probe maintaining above the highest range of the peer. This increase to peers levels indicates the power of the VSM.

Limitations and Future Directions

The length of video clips varied for each participant. This variation may have affected the attenuation to the videos and ultimately related to the varying effectiveness of the VSM treatment. While initiations increased rapidly they did not maintain at levels equal to typically developing peers within the triad. The limited maintenance of the effects warrant further investigation.

Conclusions

Effective, data-driven social skills training to target specific deficits, such as initiations, is a missing component of many programs for children diagnosed with ASD. Initiations may lead to social interactions with peers and subsequently decrease social isolation of many children with ASD.

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