

Introduction and Abstract

Individuals with Autism Spectrum Disorder (ASD) show deficits in communication, socialization, and repetitive behaviors (DSM IV-TR, 2000). Deficits in communication often include difficulties sustaining a conversation due to: (1) Lack of reciprocity including minimal back and forth question asking between conversational partners and (2) Providing responses with inappropriate detail, such as responding with too little or excessive information (Garnett, Kelly, & Attwood, 2009; Rao, Beidel, & Murray, 2008; VanMeter, Fein, Morris, Waterhouse, & Allen, 1997).

Through a multiple-baseline across participants design, this study examined the effectiveness of using a visual framework intervention to improve social conversation in adults with ASD. Intervention included a visual cue and self-management program to assist participants in responding, providing appropriate detail, and asking a question during social conversation. Preliminary results suggest that both participants showed deficits in question-asking and responding with appropriate detail during the baseline phase. Following intervention, all participants showed improvements in percentage of questions asked and number of responses with appropriate detail. Further, quality of life and satisfaction questionnaires all reported a higher satisfaction with their college experience and confidence in peer interactions following intervention. Results are discussed in regards to using a visual cue and self-management program to improve social conversation and communication for adults with autism spectrum disorder.

Methods

Design

A multiple baseline design across participants was used in order to assess the effectiveness of a visual framework intervention. All intervention sessions were implemented on a university campus for one hour per week.

Participants

Two adults diagnosed with ASD by an outside agency participated in this study. At intake, both participants exhibited symptoms consistent with the DSM IV-TR (2000). Our center confirmed that they displayed difficulties with reciprocal communication through (1) Direct observations; (2) Peer-reports on social conversation; and (3) Baseline videotaped interactions.

Participant	Gender	Age	Diagnosis	Education Level
Participant 1	Male	40	Autism	Bachelor's Degree
Participant 2	Male	20	Asperger's	Community College

Procedure

Baseline. Baseline sessions were systematically staggered for three and six weeks for each participant. Prior to intervention, participants were recorded having a 10-minute conversation with a peer of similar age. During baseline no instructions were provided concerning conversation.

Intervention. Following baseline, participants received the visual framework intervention for one hour per week (see Figure 1). Intervention consisted of a visual cue that provided a template for social conversation and consisted of teaching the participant to: (1) respond to a question; (2) provide 1-3 details of information; and (3) ask a question to the peer. In addition, participants were instructed to use self-management with the visual cue. Self-management is a procedure in which the individuals discriminated their own target behavior and recorded each time they successfully followed the visual cue in conversation.

Visual Framework Intervention

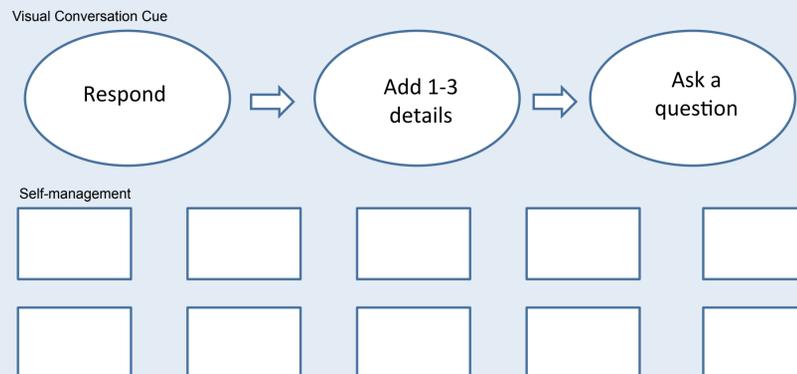


Figure 1. Visual Framework Used During Intervention.

Improving Social Conversation Skills for Adults with Autism Spectrum Disorder through Visual Framework



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Dependent Measures

Question-Asking

The percentage of questions asked by the participant during the 10 minute conversation probe. Questions were defined as a verbal query that demands a response from the conversational partner to further the conversation.

Responses with Appropriate Detail

The percentage of responses by the participant that included appropriate detail during the 10 minute conversation probe. Responses with appropriate detail were defined as being on-topic, focused, and providing 1-3 supplemental pieces of information.

Overall Measure of Reciprocal Conversation

An overall subjective measure to assess the level of reciprocity in the 10 minute conversation probe. A Likert scale from 0-5 (0-1: Unreciprocal, 2-3: Neutral, 4-5: Reciprocal) was used for researchers to provide a subjective measure of the overall level of reciprocity.

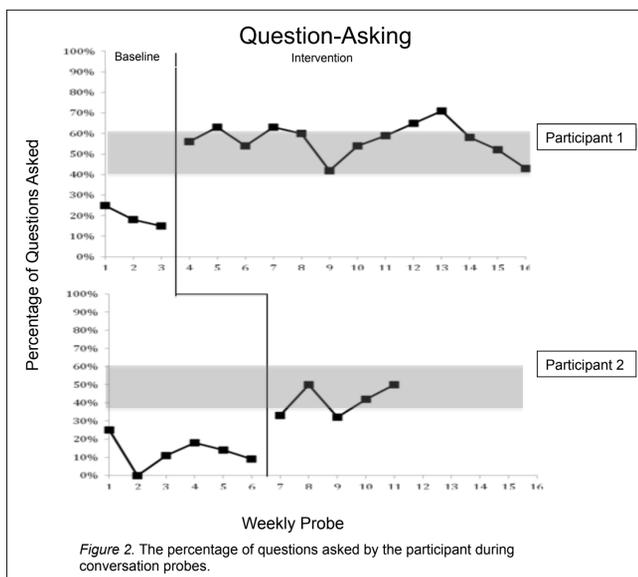


Figure 2. The percentage of questions asked by the participant during conversation probes.

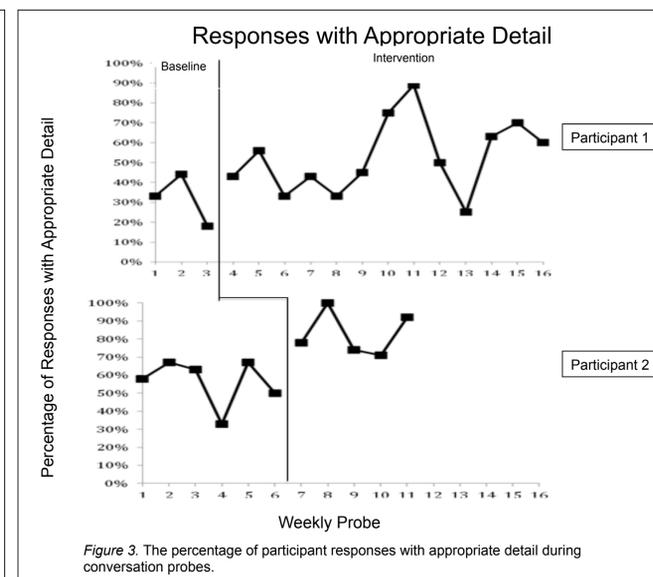


Figure 3. The percentage of participant responses with appropriate detail during conversation probes.

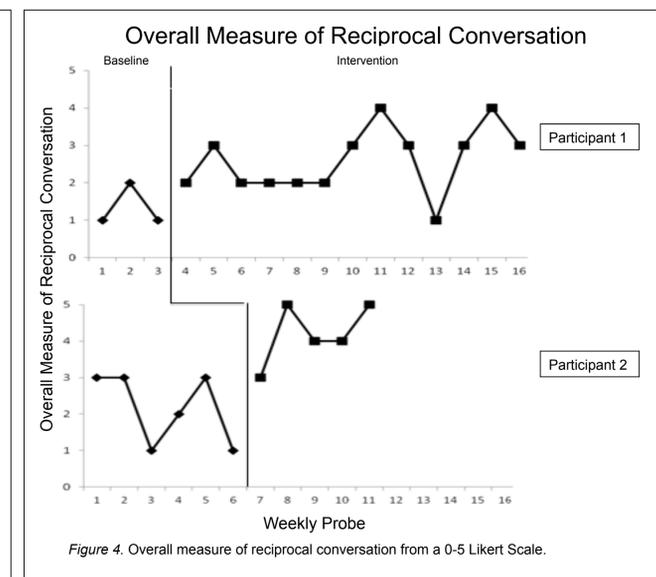


Figure 4. Overall measure of reciprocal conversation from a 0-5 Likert Scale.

Results

Question-Asking

Baseline data indicate that both participants had deficits in question asking. Participant 1 asked an average of 19% (range: 15-25%) of questions and Participant 2 asked an average of 13% (range: 0-25%) of questions during the baseline phase. The goal of intervention was to increase the percentage of question-asking to 40-60%, which is considered the appropriate range. As seen in Figure 2, Participant 1 improved his question-asking to an average of 57% (range: 42-71%) and Participant 2 increased to an average of 41% (range: 32-50%).

Responses with Appropriate Detail

Results indicate that both participants increased their ability to respond with appropriate detail in conversation. Participant 1 improved his percentage of responses with appropriate detail from an average of 32% (range 18 - 44%) during baseline to an average of 53% (range 25 - 89%) during intervention. Participant 2 also improved his percentage of responses with appropriate detail from an average of 56% (range 33 - 67%) at baseline to an average of 83% (range 71 - 100%) during intervention.

Overall Measure of Reciprocal Conversation

Results indicate that both participants improved on the overall measure of reciprocal conversation. Participant 1 increased from an average baseline rating of 1.3 (range: 1-2) to 2.6 (range:1-4) during intervention. Participant 2 also improved his overall measure of reciprocal conversation from a baseline rating of 2.2 (range:1-3) to an average rating of 4.2 (range:3-5) during intervention.

Discussion

Results indicate that the visual framework intervention was effective in improving reciprocal conversation skills. Specifically, both participants displayed an increase in percentage of questions asked, percentage of responses with an appropriate amount of detail, and an improved rating in overall reciprocal conversation. Data indicate that the a visual cue and self-management intervention is useful in facilitating question asking and responding with appropriate detail for individuals with Autism Spectrum Disorders. These results have both theoretical and applied implications. As this study has just completed the intervention stage, it would be interesting to conduct a follow up with participants to assess if treatment gains are maintained and generalized to other individuals and settings. Future research is also warranted on the effectiveness of the visual framework intervention for adults with ASD and co-morbid disorders.



References

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