


**Decreasing Barriers to Education and  
Employment for Adults with Autism Spectrum  
Disorder**

---

Lynn Kern Koegel, PHD  
Robert L. Koegel, PHD  
Kristen Ashbaugh, PHD

 **STANFORD**  
SCHOOL OF MEDICINE  
*Stanford University Medical Center*

---

---

---

---


---

---

---

---

**Autism on  
the Rise**



- Autism is a continuum/spectrum disorder
- Increase in prevalence and incidence (1 in 68)
- Males affected more than females 4:1
- Etiology/epidemiology unknown

---

---

---

---

---

---

---

---

**Higher  
Education**

Cognitive abilities  
typical  
gifted

Communicative abilities  
Rigidity, preference for  
sameness, attention to  
detail

**Adolescents and Adults with ASD**

- Loneliness
- Shorter Duration of Friendships
- Lack of Social Skills and Social Understanding
- Inflexibility
- Independent Living
- Time Management
- Comorbid disorders

---

---

---

---


---

---

---

---

**Why is support for employment important?**



- Individuals with autism tend to work fewer hours and earned lower wages per week than nearly all other groups (Cimera & Cowan, 2009)
- Currently, few support systems exist to assist individuals with ASD in finding employment
- Employment leads to increases in cognition  
unemployment leads to decreases
- Employment leads to improvements in Mental Health and Socialization

---

---

---

---

---

---

---

---

## Pre-Employment Targets and Interventions

---

---

---

---


---

---


---

---

**Communication Skills**



- **Conversation Skills**
  - Question-asking
  - Greetings/Goodbyes
  - Appropriate detail
  - Topics of mutual interest
  - Empathy
- **Nonverbal communication**
  - Eye contact
  - Posture
  - Facial expression




---

---

---

---

---


---

---

---

Techniques for improving communication

- Video based interventions
- Visual framework
- Self management
- Clinician modeling



---

---

---

---

---

---

---

---

Video Feedback Intervention

- Video Feedback: view and evaluate previous performance  
(Mechling, 2005; Maione & Mirenda, 2006; Rayner, Denholm, & Sigafos, 2009)
  - Good Examples
  - "Needs Improvement" Examples
- Combination of one or more of these models with other interventions, i.e. self-management

---

---

---

---

---


---

---

---

Visual framework for appropriate detail

- **Possible strength in visual perception** (Grandin, 1995; Boucher & Lewis, 1989; Quill, 1995).
- Visual method of thinking
- **Visual components combined with other interventions, i.e. self-management**



---

---

---

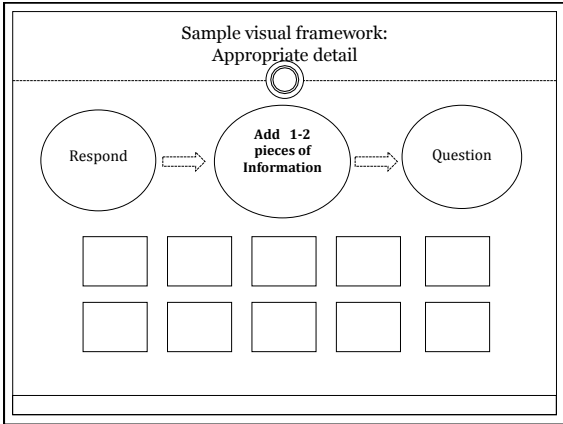
---

---

---

---

---




---

---

---

---

---

---

---

---

**Positive Reframing**

- Intervention
  - Video Feedback
  - Self-Management

Example: "I had a terrible weekend, I didn't do anything."  
Reframed: "I didn't do much over the weekend, but got to relax."

Example: "I hate it when my brother leaves after the holidays and I can't see him anymore."  
Reframed: "I love seeing my brother and look forward to the holidays when we get to spend time together."

---

---

---

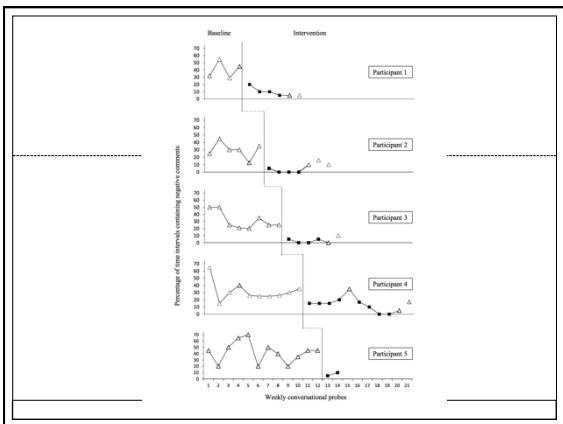
---

---

---

---

---




---

---

---

---

---

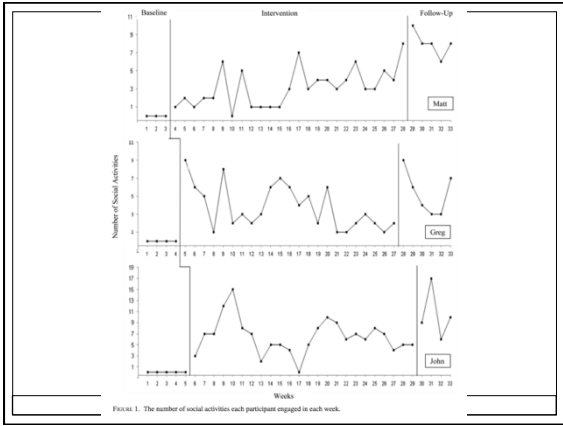
---

---

---








---

---

---

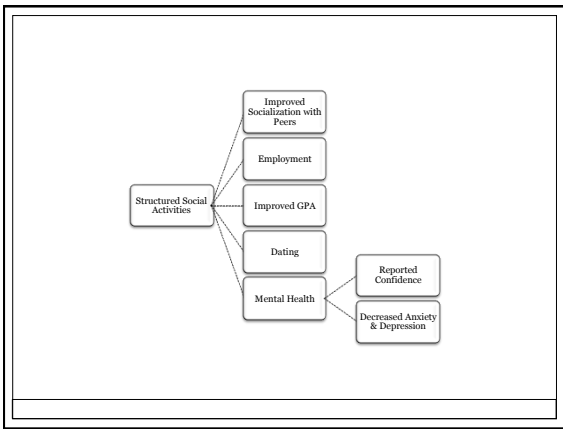
---

---

---

---

---




---

---

---

---

---

---

---

---

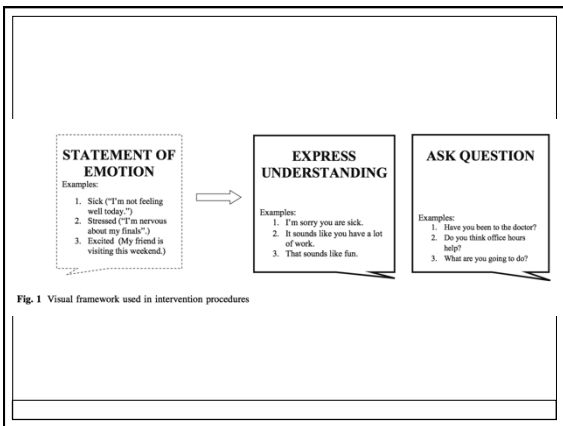


Fig. 1 Visual framework used in intervention procedures

---

---

---

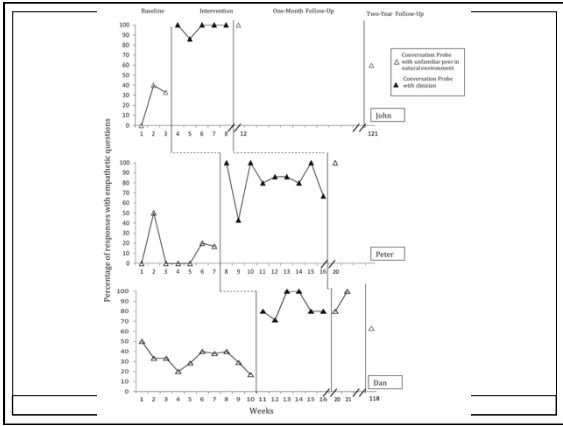
---

---

---

---

---




---

---

---

---

---

---

---

---

**Table 4** Satisfaction in socialization

	Baseline			Post-intervention			
	Confidence in peer conversations	Confidence in expressing empathy	Confidence in asking questions to peers	Confidence in peer conversations	Confidence in expressing empathy	Confidence in asking questions to peers	Importance of expressing empathy
John	2 Insecure	1 Very insecure	2 Insecure	3 Somewhat unimportant	3 Somewhat insecure	4 Neutral	4 Neutral
Peter	5 Somewhat confident	4 Neutral	5 Somewhat confident	4 Neutral	6 Confident	5 Somewhat confident	6 Important
Dan	4 Neutral	5 Somewhat confident	5 Somewhat confident	7 Very important	4 Neutral	5 Somewhat confident	4 Neutral

---

---

---

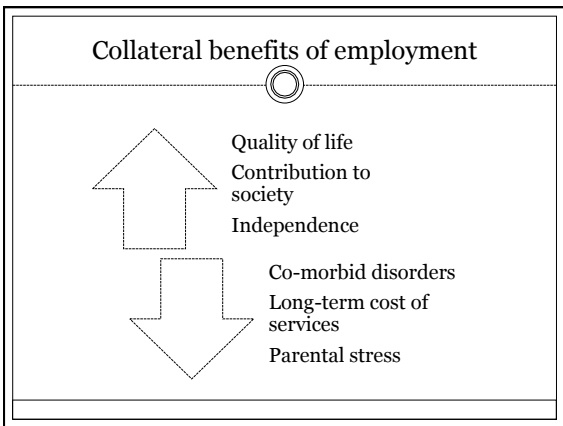
---

---

---

---

---




---

---

---

---

---

---

---

---



### Summary



- Multi-Component interventions for improving Socialization and success at work or college
- Interventions such as Self-Management, Video-Modeling, and Feedback are effective
- Positive Collateral Gains when targeting social

---

---

---

---

---

---

---

### Thank you!



- Department of Rehabilitation
- Eli and Edythe L. Broad Foundation
- Graduate Students
- Undergraduate Research Assistants
- Families who participate in our research

[Lynnk@Stanford.edu](mailto:Lynnk@Stanford.edu)

---

---

---

---

---

---

---