



PsycInfo:

- Keywords = assessment AND treatment, peer-reviewed journals, English, human, children up to age 12
- RESULTS: 4074 records
- Add Autism: narrows to 254 records
- Excluded: drug trials, preference assessments, assessment tool with no *actual* treatment
- Further narrows to 57 records

Search Parameters

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Acknowledgement

- Director of Autism Services and Training
- PhD in Behavior Analysis (Western Michigan)
- Board Certified Behavior Analyst (2004)
- Licensed Psychologist (MI 2007; FL 2011)
- 17 years of experience
- Pre-doctoral training: ABA and Psychology
- Post-doctoral training: Intensive Outpatient
- Current: MBA in Healthcare Management

Background

Our Mission

- Diagnostic and Evaluation Team
- Early Intensive Behavioral Intervention
- Treatment of Severe Behavior Disorders
- Treatment of Pediatric Feeding Disorders

What We Do

- Using best available evidence, combined with clinical expertise and consumer preferences, to guide practice
- Originated in medicine; now being called for in several other professions
- Practice of behavior analysis has always purported to be evidence-based
- BACB Guidelines for Responsible Conduct state that behavior analysts must use and recommend interventions proved most effective in scientific studies



Evidence-Based Practice

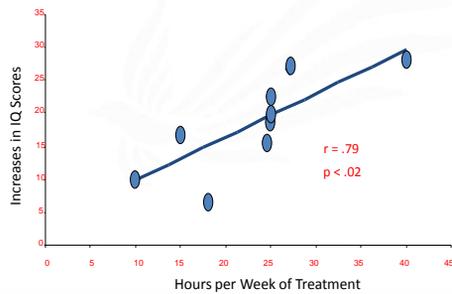
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About 50% of Children with Autism and Mild Mental Retardation who Received Early Intervention with ABA Attain Normal IQs and are Educated in Regular Classrooms with Minimal Assistance
[Lovaas, 1987]



Effectiveness

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Outcomes

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- New York State Dept. of Health
- U.S. Surgeon General
- National Research Council
- Association for Science in Autism Treatment



Recommendations

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When a child is naughty....



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- Assessment and treatment of problem behavior
- Identifies context in which behavior occurs
- Identifies environmental variables that evoke problem behavior
- Incorporates function-based treatments



Behavior Excesses

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- Best to identify and treat problem behaviors as early as possible
- Less severe or intense behaviors
- Less history
- More likely for success
- Identifying less intense “precursor” behaviors may be an effective strategy



Early is Better

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- Average Lifetime Cost for a Person with Autism is over \$4 million
- Average cost of 3 years of Early Intensive ABA is above \$150,000
- Average Lifetime Savings from ABA Treatment is Between \$1.6 and \$2.7 million



Why Treat Autism?

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A few words on child development...



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Part 1: Diagnostic Evaluations



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- Birth History
- Family History
 - PDD, Genetics, Learning disorders, EBD
- Medical History
 - Conditions, Hospitalizations, other Diagnosis
- Developmental Milestones
 - Language, social, motor, regression, interventions



Clinical History

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- Why a diagnosis?
 - Nomenclature, consensus, communication, organization, research, treatment
- Objectivity and measurability
- Validity (measures what its purported to) and reliability (repeatability)



Importance

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A diagnosis is important to ensure good communication amongst providers, to ensure a validated treatment is selected, and for baseline measures.

- A. TRUE
- B. FALSE



Active Responding

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- Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision
- Published by the American Psychiatric Association
- Primarily used in the United States
- Classifies mental illnesses into different types of disorders (Mood disorders, disorders developed in early childhood, psychotic disorders, eating disorders, etc.)



Example: DSM IV - TR

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Diagnostic criteria:

- Associated features (e.g., symptoms that may be present, not necessary for diagnosis)
- Age of onset, typical course of illness
- Prevalence rates specific to age, gender, and ethnicity

Does not contain:

- Information about etiology
- Information about treatment
- Cultural implications



Information Provided

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The DSM-IV has good validity across cultures and has been empirically validated.

- A. TRUE
- B. FALSE



Active Responding

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- 
- *Qualitative* impairments in social interaction
 - *Qualitative* impairments in communication
 - Restricted, *repetitive* and *stereotyped* patterns of behavior, interests and activities



DSM IV (TR): ASD

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1. Nonverbal behaviors (eye contact, expressions)
2. Failure to develop relationships
3. Lack of spontaneous "seeking" to share enjoyment, interests
4. Lack of social or emotional reciprocity



Social Interaction

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1. Delay or total lack of spoken language
2. Marked impairment in ability to initiate or sustain a conversation in others
3. Stereotyped, repetitive, or idiosyncratic
4. Lack of varied, spontaneous make believe play or social imitative play appropriate to developmental level



Communication

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1. Preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
2. Inflexible adherence to specific, nonfunctional routines or rituals
3. Stereotyped and repetitive motor mannerisms
4. Persistent preoccupation with parts of objects



Restricted Patter of Behavior

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- Lord, Rutter, DiLavore, & Risi (2001)
- Semi-structured, standardized observational assessment tool
- 4 modules that cover a broad age & developmental range
- Modules consist of a variety of activities
- Provide examiner opportunity to observe social, communication skills
- Modules selected on vocal verbal skills & age



ADOS & ADI-R

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- Any one tool (e.g., ADOS) should not be used independently for diagnosis
- Include comprehensive evaluation, such as:
 - Clinical Interview & Record Review
 - Behavioral Observation
 - Multiple Assessment Measures



Comprehensive Evaluation

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A few thoughts on diagnosis....



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The U.S. Department of Education requires the Office of Special Education Programs (OSEP) to monitor the lead agency's system for Part C and the State system for Part B to ensure that programs and activities are in compliance with the Individuals with Disabilities Education Act (IDEA) Parts B and C



OSEP

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- Objective and *standardized measure* of a sample of behavior
- Implies *uniformity of procedure*
- Intended to measure skill set at a *specific point* in time
- Establishment of norms
- Not intended to measure *all skills under any conditions*



Standardized Assessment

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1. Structured: Evoke responding in controlled situations
2. Observation: 'Everyday' activities
3. Interview: Questions for obtaining information about the child



Types of Administration

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- Schopler, Reichler, & Renner (1988)
- Purpose to identify presence of "autistic" characteristics
- Domains are scored on a Likert scale
- Total Score (15 domains), provides a rating in one of three categories:
 1. nonautistic
 2. mild to moderately autistic
 3. severely autistic



CARS

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- Sparrow, Balla, & Cicchetti (1984)
- Purpose to measure overall "adaptive ability"
- Five domains:
 1. Communication
 2. Adaptive Daily Living Skills
 3. Socialization
 4. Motor Skills
 5. Maladaptive Behaviors



Vineland

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- Constantino & Gruber (2005)
- 65-item questionnaire
- To assist in screening & diagnosis of autism
- Questionnaire can be completed by those who are familiar with the student
- Questions are rated on a Likert scale
- Provides an overall score & five treatment subscales



SRS

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- Select a treatment modality
- Referral made by primary care physician, psychiatrist, psychologist or self
- Intensity of treatment should 'match' or be correlated with medical necessity
- Insurance vs. education system (IEP) vs. self-pay
 - Steven Gellar Autism Act (FL, USA)
 - 30 states have a version of Autism Reform



Medical Necessity

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A few thoughts on testing....



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Part 2: Linking Assessment to Treatment



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Objective:

- Determine whether a child has *learned* a skill
- Identifies all the skills in a child's repertoire
- Identifies strengths and deficits
- Allows for individualization



Importance

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- Intended to measure how well a person has learned a specific body of knowledge and skills
- Interested in everything the person knows, including "won't" do vs. "can't" do
- Measures skill repertoire NOW
- Example: Multiple-choice tests (e.g., BACB exam)
- Earn a passing score or 100% if you 'learn' all the objectives for the test



Criterion Assessment

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1. Review results for each domain/ test with the family
2. Discuss implications with the family
3. Review or develop goals (outcomes) based on discussion
4. Make recommendations



Wrap it up!

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A few thoughts on criterion assessment....



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Parent concerns (referral problem):

- Does not speak
- Difficult transitions
- High rate of motor and vocal stereotypy

Teacher/ therapist concerns:

- Difficult transitions
- Melt downs

Case 1: 30 month old

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- No functional communication
- Habitual or repetitive pattern of behavior

- Child is demonstrating characteristics from the three core areas of Autism

Assessment of the Problem

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VB-MAPP
Verbal Behavior Milestones Assessment and Placement Program
Mark L. Sundberg, Ph.D.

AAPS
Assessment, Evaluation, and Programming System
for Infants and Children
2006 edition
VOLUME 1
Administration Guide
DIANE BRICKER

INDIVIDUALIZED GOAL SELECTION CURRICULUM
C R I P

Examples

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Child's Name: [Blank]
Assessor: [Blank]

LEVEL 3

Item	Mean	Target	Current	APPROX	Pass	Score	Mastered	Attempt	Score	Mastered	Attempt	Score
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

LEVEL 2

Item	Mean	Target	Current	APPROX	Pass	Score	Mastered	Attempt	Score	Mastered	Attempt	Score
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

LEVEL 1

Item	Mean	Target	Current	APPROX	Pass	Score	Mastered	Attempt	Score	Mastered	Attempt	Score
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

Score: 5, 4, 3, 2, 1

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All assessments indicate that the child is an **"Early Learner"**

What does this mean?

Outcome

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Effective Instruction for Children with Autism

The ABA Program Companion

A WORK IN PROGRESS

Teaching Language

Dr. Glenn I. Lathara

Examples

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Curriculum Area	Task	Date						
Separation and Approach Flexibility (A)	Approaches/ Come here (5)							
	Waits without touching stimuli (8)							
Skill Performance (B)	Matching (3 & 5)							
	Puzzles (10 - 15)							
Receptive Language (C)	Responds to name (1)							
	Follows Instructions (7)							
Motor Station (D)	Gross motor actions (3 - 5)							
Requesting (F)	PECS: With vocalization							
	Rebate all mastered exemplars							
Generalization	Transitions Appropriately							
	3-STEP COMPLIANCE							

Sample Program

S

- Specific
- What, why, who, where

M

- Measurable
- How much, products to be measured

A

- Attainable
- How can the goal be accomplished

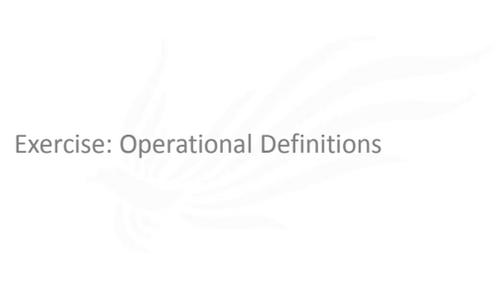
R

- Realistic, Relevant
- Worthwhile relative to resources, needs

T

- Timely
- Clear deadline identified

Objectives



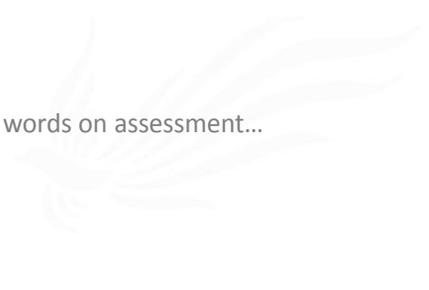
Exercise: Operational Definitions

- Goals are statements that clearly describe what the 'learner' will be able to do as a result of received the program or treatment
- Use an active voice; more direct than a passive voice
- Put statements in positive form
- Omit needless words (but not too many!)

Writing Goals

- Curriculum Area: Learning readiness
1. David will look at an adult when his name is called from up to 5 feet away on the first trial, at least 8 out of 10 opportunities
 2. David will walk within 3 feet (arm's reach) of an adult during transitions from the classroom to gym
 3. David will sit in a chair with at least 50% of his body weight during structured table-top activities for 90% of intervals (up to 5-min)

Example Goal



Final words on assessment...

Part 3: Instructional Design



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1. Content analysis
2. Clear communication
3. Instructional formats
4. Sequencing of skills
5. Track organization



Program Design

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- Goal to teach “cusps”
- Systematically “program” for generalization
- E.g., Teach letter-sound relations (phonetic awareness), rather than sight word



Content Analysis

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Use the same words on all items – this focuses attention on the relevant details by reducing distraction



Wording Principle

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Examples and non-examples selected to teach a ‘concept’ share the greatest possible *irrelevant* features



Setup Principle

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Illustrate ‘boundaries’ of a concept; show examples and non-examples



Difference Principle

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Demonstrate variation of a concept; juxtapose examples of a concept that differ from each other as much as possible, yet still illustrate the concept



Sameness Principle

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Test for acquisition; intersperse untaught examples and non-examples



Testing Principle

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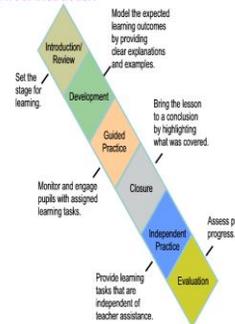
1. Simplified contexts to complex contexts
2. Interspersed (vs. massed trial)
3. Prompted to unprompted formats
4. Structured to unstructured
5. Massed practice to distributed practice
6. Immediate feedback to delayed feedback
7. A note on discrete trial



Instructional Formats

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Direct Instruction



- Learning can be made more or less difficult depending on how skills are sequenced
- Fluency must be met at each step



Sequencing of Skills

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1. Attending skills
2. Pre-requisite skills
3. Easy skills should be taught before more difficult skills
4. Strategies and information that are likely to be confused should be separated (e.g., b and d; topographical response class vs. functional response class)



Foundation Skills

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- Brisk pace = more trials
- Students stay on-task
- Reduces problem behavior
- Pace should be relatively quick, but need to account for individual differences and ability



Pacing

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1. Students should be at least 80% correct on acquisition tasks
2. Students should be at least 90% correct on skills taught earlier in the program



Mastery

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- Procedure depends on child's learning history
- EVERY error must be addressed immediately and directly
- Following, additional practice opportunities are presented
- Test; Re-Test



Correction Procedures

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- Contacting "success" is important (high-probability sequences)
- Placement is critical
- Learning has natural rewards (behavioral cusps)
- Build rapport (reinforcer pairing)
- Avoid admonishment & reprimands
- Descriptive praise



Motivation

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How often should assessment be conducted with a child receiving intensive treatment?

- a. About once per year
- b. At baseline and at least once per year after
- c. As often as possible
- d. Testing is not necessary as long as the child is learning



Active Responding

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- ASDs are not rare: More prevalent in children "than cancer, diabetes, spina bifida, and Down syndrome" (Filipek et al., 1999, p. 440)
- A growing body of research suggests that autism can be accurately diagnosed by age 2 (Bishop et al., 2008; Charman & Baird, 2002)
- Diagnosis of autism at age 2 is accurate and stable over time (Charman et al., 2005; Eaves & Ho, 2004; Lord et al., 2006; Turner et al., 2006)



Final Thoughts

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www.fit.edu/psych/aba



THANK-YOU

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