

An Introduction to the National Autism Conference and Applied Behavior Analysis

Monday August 4, 2014

National Autism Conference

Pennsylvania State University

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(Technical Assistance by Mike Miklos)



PaTTAN's Mission

The mission of the Pennsylvania Training and Technical Assistance Network (PaTTAN) is to support the efforts and initiatives of the Bureau of Special Education, and to build the capacity of local educational agencies to serve students who receive special education services.

Session Objectives

- Provide an overview of the conference
- Provide review of sessions by level and topics
- Provide background information on the field of Applied Behavior Analysis and its relation to autism interventions and the conference sessions
 - Review terms and concepts that may be part of many NAC sessions...*a helpful review!*

What Are Autism Spectrum Disorders? (DSM V Summary)

- Social-Communication deficits and Repetitive Behaviors, such as:
 - responding inappropriately in conversations
 - misreading nonverbal interactions
 - having difficulty building friendships appropriate to their age
 - In addition, people with ASD may be overly dependent on routines, highly sensitive to changes in their environment, or intensely focused on inappropriate items
- The symptoms of people with ASD will fall on a continuum (range of symptoms from mild to severe)
- Spectrum concept allows clinicians to account for the variations in symptoms and behaviors from person to person
- Individuals with ASD must show symptoms from early childhood, even if those symptoms are not recognized until later
- Adapted from: <http://www.dsm5.org/Documents/Autism%20Spectrum%20Disorder%20Fact%20Sheet.pdf>

What are Autism Spectrum Disorders?

- Developmental Disability
- Diagnosis derived from behavior
 - No brain scan or blood test
 - Assumed biological disorder most likely of genetic origin characterized by qualitative differences in:
 - Social communication
 - Repetitive and stereotyped behaviors

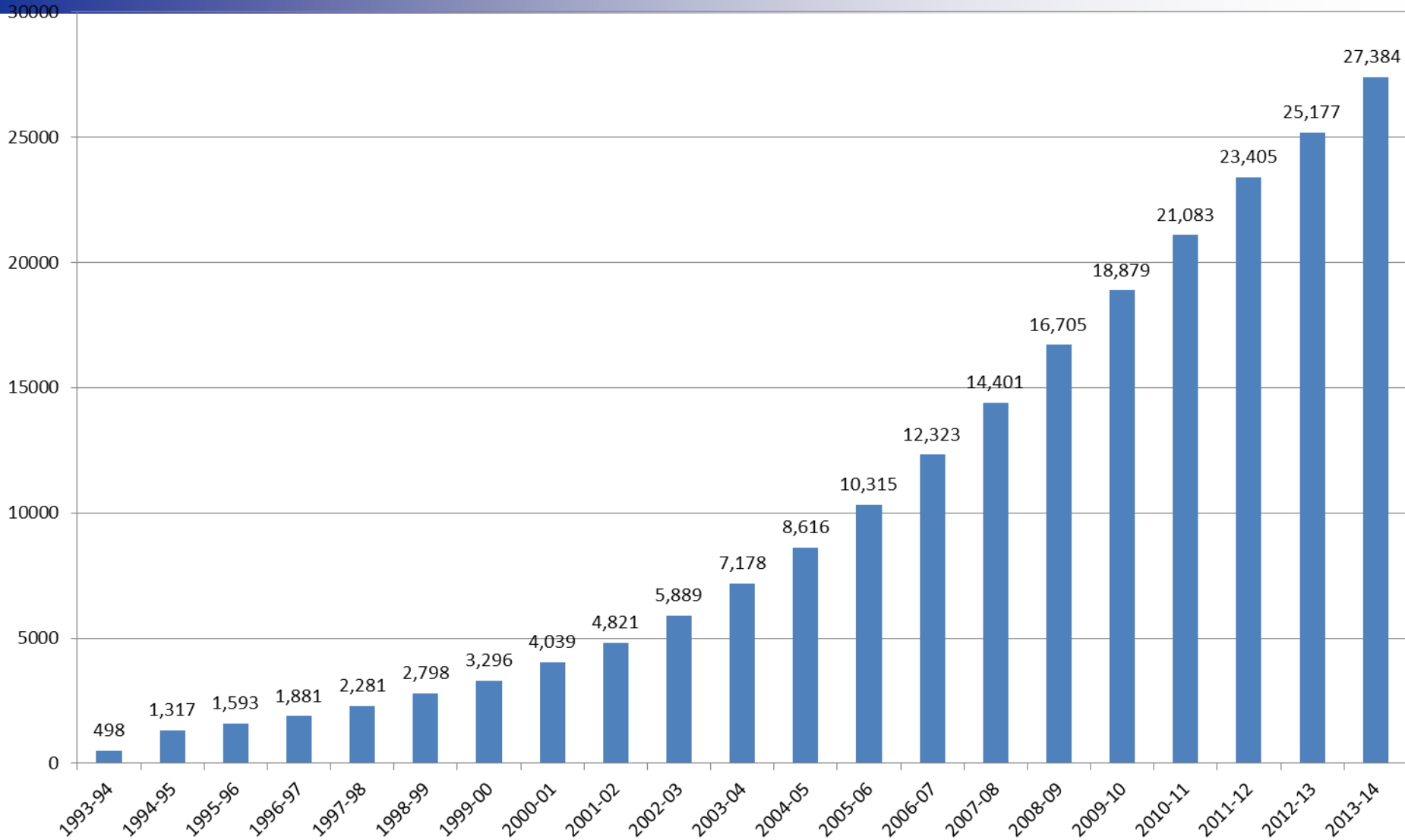
IDEA/Chapter 14 Autism Definition

“Autism means a developmental disability significantly affecting verbal and nonverbal communication and social interaction generally evident before 3 years of age, that adversely affects a child’s educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change in daily routines, and unusual responses to sensory experiences. The term does not apply if a child’s educational performance is adversely affected primarily because the child has an emotional disturbance, as defined in paragraph (b) (4) of this section. A child who manifests the characteristics of “autism” after age 3 could be diagnosed as having “autism” if the criteria in paragraph (c) (1) (i) of this section are satisfied.”

- No subtypes

- Autism and educational performance adversely affected

Growth in Autism by Year as Reported on the PDE December I Annual Child Count Ages 3-21



The Evidence for ABA and Autism Treatments

- National Autism Center Standards Report
- Maine Administrators Report
- Missouri Autism Guidelines
- Numerous research articles published in a wide range of behavioral, educational and disability focused peer reviewed journals
- Student level data: probably the strongest argument for ABA

The National Standards Project

(National Autism Center)

- Identified a need for a transparent process to evaluate most recent research (up to the year 2007) and provide information about the strength and evidence supporting treatment options for both children and adolescents with autism.
- The National Autism Center's Standards Report:
 - Initially reviewed 7,038 abstracts of research
 - Rigorous review process led to a total of 775 studies being retained for final analysis

Standards Report Identified || Effective Treatments

- Antecedent Package - 99 studies
- Behavioral Package - 231 studies
- Comprehensive Behavioral Treatment for Young Children - 21 studies
- Joint Attention Intervention - 6 studies
- Modeling - 50 studies
- Naturalistic Teaching Strategies - 32 studies
- Peer Training Package - 33 studies
- Pivotal Response Treatment - 14 studies
- Schedules - 12 studies
- Self-management - 21 studies
- Story-based Intervention Package - 21 studies

NAC Standards Report Conclusions:

- Approximately two-thirds of the Established Treatments were developed **exclusively** from the behavioral literature (e.g., applied behavior analysis).
- Of the remaining one-third of the Established treatments studies are derived **predominantly** from the behavioral literature.
- This pattern of findings suggests that treatments from the behavioral literature have the strongest research support at this time
- PATTAN Autism Initiative focuses primarily on interventions derived from or relying principles of ABA

ABA and Autism Education

The findings of the NAC's Standards Report are largely consistent with other meta-analysis:

- Maine Report
- Missouri Report
- NY State Report
- Continued publications
- ABA practices are also consistent with general effective instruction

An Overview of this Conference

- Sessions planned to address wide range of interests and content levels
- Evidence base a central concern
- Education focused
- Many sessions focus on the process of ABA

Sessions on the Basics

Tuesday AM:

- Session 13: Zamrin & Yakaitis: Providing Effective Quality Programs for Young Children with Autism Within a Public Education Model
- Session 14: Katie Arentz: Autism Basics: Setting up a Classroom
- Session 17: Dennis Debbaudt: People with Autism Spectrum Disorder: Contact with Police and Public Safety Professionals
- Session 18: Mark Sundberg: The VB-MAPP: Conducting the Assessment and Identifying Intervention Priorities
- Session 20: Tamara Kasper: Friends and Fitness: Research-Based Interventions to Enhance Communication and Motor Skills
- Session 21: Jennifer Shade: Toilet Training in the School Setting
- Session 23: Erik Carter: Equipping Adolescents with Disabilities for the World of Work

Sessions on the Basics

Tuesday PM:

- Session 25: Kittenbrink & Sheehan-Westrick: Autism Basics: Teaching Your Child with Autism to Comply
- Session 26: Katie Arentz: Autism Basics: Setting up a Classroom (R)
- Session 29: Dennis Debbaudt: People with Autism Spectrum Disorder: Contact with Police and Public Safety Professionals (R)
- Session 30: Mark Sundberg: The VB-MAPP: Conducting the Assessment and Identifying Intervention Priorities (R)
- Session 32: Tamara Kasper: Evidence-Based Speech Production Training for Children with Autism
- Session 33: Eb Blakely: Behavioral Pharmacology: Making Sense Out of Meds
- Session 35: Erik Carter: Promoting Relationships and Learning Through Peer-Mediated Interventions: Practical Strategies with Strong Evidence
- Session 36: Gregory Hanley: Assessing and Treating Sleep Problems

Sessions on the Basics

Wednesday AM

Session 37: Ampuero & Hozella: The Basics of Mand Training

Session 38: Finarelli & Maher: Instruction Basics for Children with Autism

Session 39: Smith & McDougall: Creating Agreement in Special Education

Session 40: Vincent Carbone: An Introduction to the Analysis of Verbal Behavior and Autism Interventions

Session 42: Brian Iwata: Functional Analysis of Problem Behavior: Basic Methods

Session 43: Wall, Shea & Scholl: Bureau of Autism Services Update

Sessions on the Basics

Wednesday PM

Session 50: Mike Miklos: Behavior Basics for Children with Autism

Session 52: Amy Foor: Speech Basics for Children with Autism

Session 53: Vincent Carbone: An Introduction to the Analysis of Verbal Behavior and Autism Interventions (R)

Session 54: Sharon Leonard: Accessing PA Core Standards for Students with Significant Disabilities

Session 55: Brian Iwata: Functional Analysis of Problem Behavior: Basic Methods (R)

Session 56: Isabelle Henault: Understanding Relationships, Dating and Sexuality in Adolescents and Young Adults with Autism

Session 58: Amy McGinnis: Strategies and Sequences of Motor Skills to Teach Functional Sign Language

Session 59: Wayne Fisher: An Individualized and Empirical Approach to the Assessment and Treatment of Elopement

Sessions on the Basics

Thursday AM

Session 65: Laura Yates: Introduction to Sign Language for Students with Autism

Session 68: Funstein & Alvino: IEPs and Teamwork for Parents

Session 69: Jennifer Leese: SOS-Supervision for Positive Outcomes and Student Success

Session 70: Isabelle Henault: Understanding Relationships, Dating and Sexuality in Adolescents and Young Adults with Autism (R)

Session 71: Wayne Fisher: An Individualized and Empirical Approach to the Assessment and Treatment of Elopement (R)

Session 73: Poggi & Russell: Transition Considerations for Students with ASD

Sessions on the Basics

Thursday PM: Promising Practices (all sessions are basic!)

- Creating Meaningful Inclusion Opportunities
- Cultivating Motivation during Natural Environment Teaching and Group Instruction for Diverse Learners
- Identifying Autism Spectrum Disorder in Very Young Children
- Peers Supporting Each Other: A Peer Mediated Instruction and Intervention Approach to Supporting Students with Autism
- A Collaborative Process Supporting Teachers and School Staff in the Implementation of Evidence-Based Practices
- Training Classroom Staff to Implement Research Validated Instructional Strategies Through the Use of Behavior Analytic Principles
- The Aspire Program
- Introducing and Expanding Small Group Instruction for Children Diagnosed with Autism and Related Disabilities
- Programming for Children Using Ipad Technology
- Panel on Teaching Social Skills Using Peer-to-Peer Manding
- Quality That Counts: Making a Difference for Children with Autism in the General Education Setting

So What is ABA?

- It is the application of science of learning to socially significant human behavior
 - Applied: socially significant
 - Behavior: relation between environmental events and what people do (ABC analysis)
 - Analysis: uses scientific methods to establish and evaluate applications
 - It is a process, not necessarily a procedure
- Any intervention/method can use ABA; however, not all interventions do!

Board Certification

- What is a BCBA?
- What is a BCaBA?
- Why are they helpful?

Session 12: Jim Carr - Recent Developments at the Behavior Analysis Certification Board
(right after this session)

ABC analysis

- A is for Antecedent (before behavior)
- B is for Behavior (what a person does: observable and measureable)
- C is for consequence (after behavior)

- Video ABC analysis

Why an ABC analysis is helpful

- It avoids having to guess about un-observable events (what is going on “inside the person”)
 - Thoughts and feelings are important!
 - It’s just we can’t tell what a person is thinking or feeling
 - ABC analysis links the child to the environment
- It is optimistic because people responsible for helping others can change antecedents and consequences
- It allows for ways of checking to see that interventions really work
 - Measures the intervention (what teacher does) as well as behavior change
 - Measures how teaching effects learning

Some Applications of ABA (videos)

- Mand Training
- Discrete Trial Training
 - Errorless Teaching
 - Error correction
- Direct Instruction
- Social skill building
- Altering a school culture

Video 1 and discussion

- Mand Training
“Video Sharae and Mike”

Sessions on Mand Training

Session 37: Ampuero & Hozella: The Basics of Mand Training

Session 84: Panel on Teaching Social Skills Using Peer-to-Peer Manding

Video 2 and discussion

- Discrete Trial Instruction
 - Errorless teaching
 - Error correction
 - Candace and Natalie

Sessions on Instruction

- Session 7: Jared Campbell, Allen Muir & Willow Hozella: From Concrete to Representational to Abstract: Math Instruction for Students with Autism
- Session 10: T.V. Joe Layng & Joanne Robbins: Teaching Reasoning and Problem Solving to Higher Functioning Children (WC/A)
- Session 38: Debra Finarelli & Elizabeth Maher: Instruction Basics for Children with Autism
- Session 47 & 60: Chris Skinner: Enhancing Academic Skills: Between Can't Do and Won't Do is Fluency, Choice, & Context (I)

Video 3 and Discussion

- Direct Instruction videos
 - Guide
 - Group

Sessions on Direct Instruction/Group Instruction

Session 67: Leigh O'Brien: The Use of SRA Direct Instruction within Autism Support Classrooms (I)

Session 82: Furnia & Pastorella: Introducing and Expanding Small Group Instruction for Children Diagnosed with Autism and Related Disabilities

Session 85: Smeltzer, Decker & Stiffler: Quality that Counts: Making a Difference in the General Education Setting

Video 4 and Discussion

- Social Skill Training
 - Peer to Peer manding
 - Other

Sessions on Social Skills

All sessions language/verbal behavior (especially mand)!!

Session 19 & 31: Judah Axe: Improving Social Behavior Using Pairing, Video Modeling, and Tactile Prompting (A)

Session 20: Tamara Kasper: Friends and Fitness: Research-based Intervention to Enhance Social Communication and Motor skills

Session 35: Erik Carter: Promoting Relationships and Learning Through Peer-Mediated Interventions: Practical Strategies with Strong Evidence

Session 41: Huot, Ruby & Ulrich: Teaching Social Skills Using Skillstreaming (I)

Session 56 & 70: Isabelle Henault: Understanding Relationships, Dating and Sexuality in Adolescents and Young Adults with Autism

Session 78: Fichter, March & Frisco: Peers Supporting Each Other: A Peer Mediated Instruction and Intervention Approach to Supporting Students with Autism

Session 84: Panel on Teaching Social Skills Using Peer-to-Peer Manding

Video 5 and Discussion

- Altering a school culture
 - Elanco and Joey
 - Harrisburg Case Studies
 - CYSD

Schools and Autism Interventions

Session 13: Zamrin & Yakaitis: Providing Effective, Quality Programs for Young Children with Autism Within a Public Education Model

Session 54: Sharon Leonard: Accessing PA Core Standards for Students with Significant Disabilities

Session 75: Dickmyer & Stokes: Creating Meaningful Inclusion Opportunities

Session 85: Smeltzer, Decker, & Stiffler: Quality that Counts: Making a Difference in the General Education Setting

Behavior Analysis Key Terms

- Antecedent
 - Motivating Operation
 - Unlearned
 - Transitive
 - Reflexive
 - Discriminative stimulus
 - Stimulus control
 - Instructional control
 - Prompt

Behavior Analysis Key Terms

- Consequence
 - Reinforcement
 - Positive Reinforcement
 - Negative Reinforcement
 - Punishment
 - Extinction
 - Schedules of Reinforcement (for instance, continuous, variable ratio, interval)

Behavior Analysis and Language Programming

- Analysis of Verbal Behavior
 - Key environment-behavior interactions
 - Mand
 - Tact
 - Intraverbal
 - Echoic
 - Listener Responding
 - Imitation
 - Match to Sample
- Video on Verbal Operants

Sessions on Language and Verbal Behavior

Session 16 & 28: Hank Schlinger: The Listener as a Speaker: Implications for Teaching Listening (A)

Session 18 & 30: Mark Sundberg: The VB-MAPP: Conducting the Assessment and Identifying Intervention Priorities

Session 37: Ampuero & Hozella: The Basics of Mand Training

Session 40 & 53: Vincent Carbone: An Introduction to the Analysis of Verbal Behavior and Autism Interventions

Session 44 & 57: Francesca Espinosa: Teaching Generalized Multiple-Controlled Verbal Behavior to Children with Autism (A)

Session 64: Dave Palmer: A Behavioral Analysis of Conversation (A)

Sessions on Language and Verbal Behavior

Focus on Vocal Training/Establishing Response Form

Session 9: Barbara Esch: Vocal Training Procedures: What Does the Behavioral Research Say? (I)

Session 32: Tamara Kasper: Evidence-Based Speech Production Training for Children with Autism

Session 52: Amy Foor: Speech Basics

Session 58: Amy McGinnis: Strategies and Sequences of Motor Skills to Teach Functional Sign Language

Session 65: Introduction to Sign Language for Students with Autism

Session 83: Programming for Children Using iPad Technology

ABA is Effective Process for Reducing Problem Behavior

- Functional Behavior Assessment
- Functional Analysis
- Looks at how behaviors function to change the environment

- Instructional Control video

Sessions on Preventing or Reducing Problem Behavior

- Session 24: Gregory Hanley: Practical Assessment and Treatment of Severe Problem Behavior (I)
- Session 25: Kittenbrink & Sheehan-Westrick: Autism Basics: Teaching Your Child with Autism to Comply
- Session 36: Gregory Hanley: Assessing and Treating Sleep Problems
- Session 42 & 55: Brian Iwata: Functional Analysis of Problem Behavior: Basic Methods
- Session 46: William Ahearn: Feeding Problems in Children with Autism and Developmental Disabilities (I)
- Session 50: Mike Miklos: Behavior Basics for Children with Autism
- Session 59 & 71: Wayne Fisher: An individualized and empirical approach to the assessment and treatment of elopement
- Session 72: Patrick Friman: Anxiety in Persons on the Spectrum: The Psychological Equivalent of Fever (I)

Some Words About Data

- Key aspect of ABA: understanding some of this may help you at this conference!
- Human memory is quite fallible
- Data helps us remember what happened
- Data helps us see patterns of performance and behavior change
- One might not need data on every behavior, but without data people often end up guessing
- Data systems should not interfere with instruction, rather they should support teaching and learning

Types of Data

- Counts
- Timings
- Continuous
- Sampled
- Skill Probes
- Cumulative responses or skills acquired

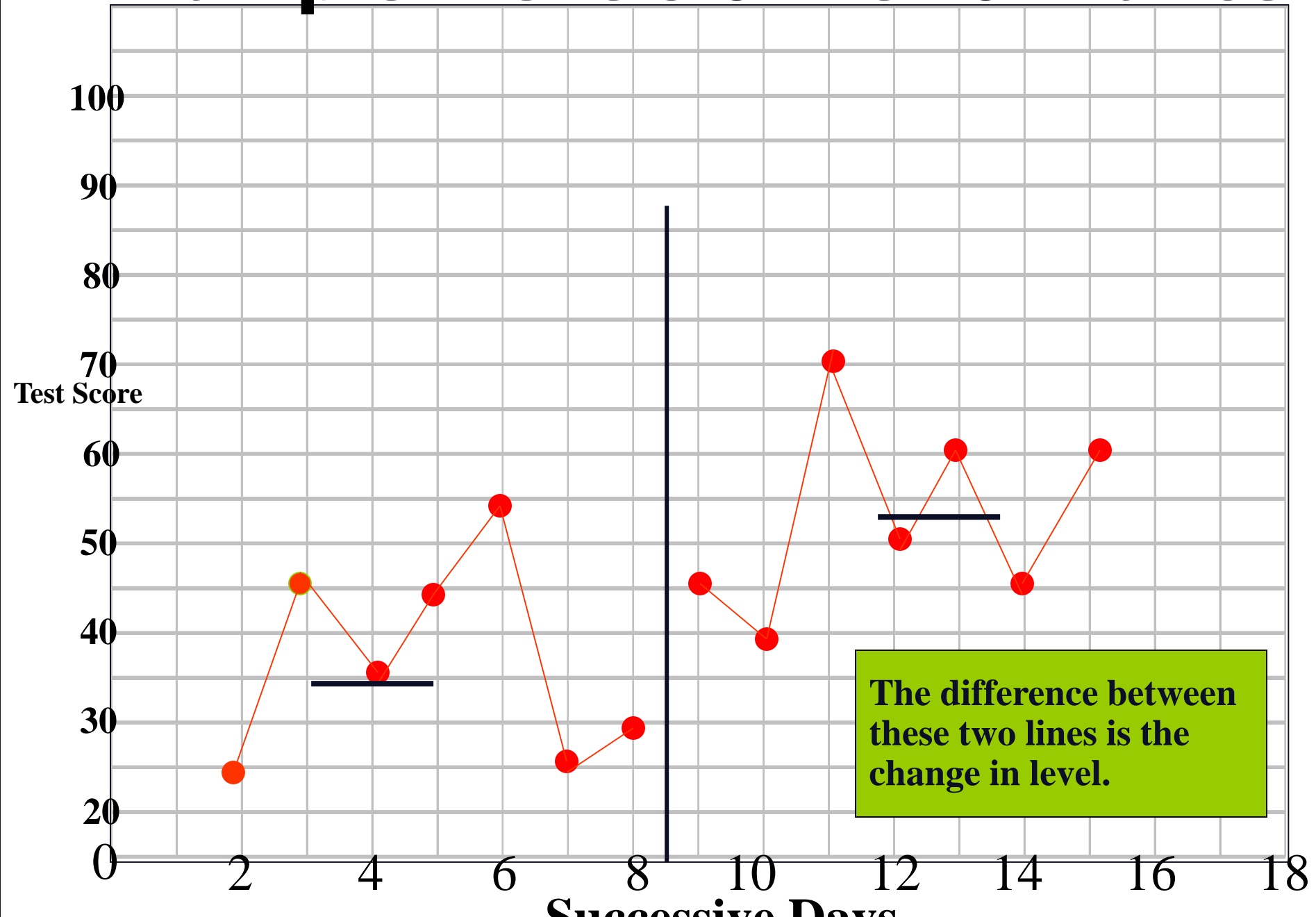
The Analysis: Functional Relations

- Graphs are very valuable
 - They allow a quick check of how a program or intervention is working
- Tests to determine if things are working:
 - If I change a way I teach, does it consistently change what the student does?
 - Does the intervention function to change behavior? (turn it off and on)

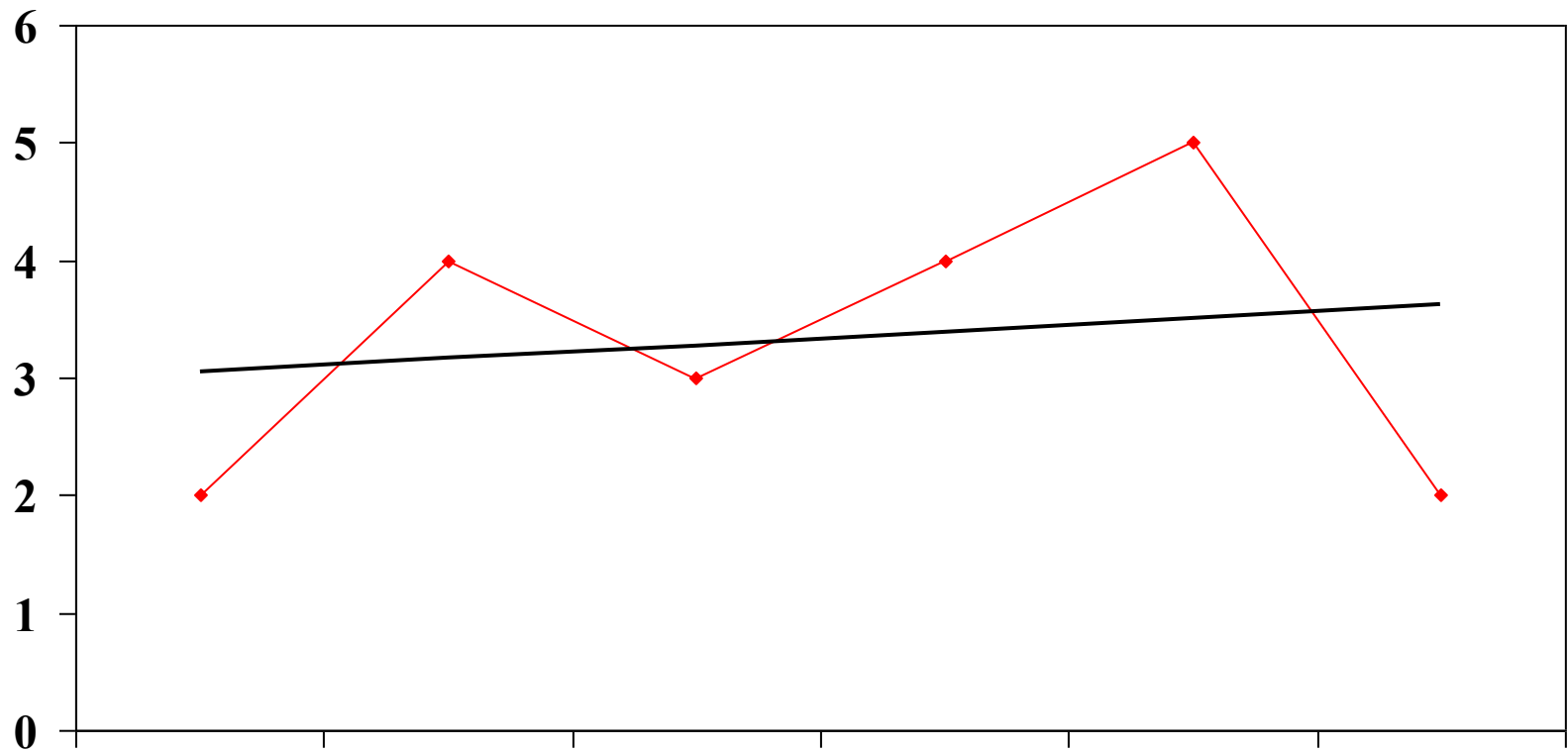
A little discussion on study designs

- Group:
 - Statistical, average changes between groups
- Single study
 - How does the intervention alter how one person is doing?

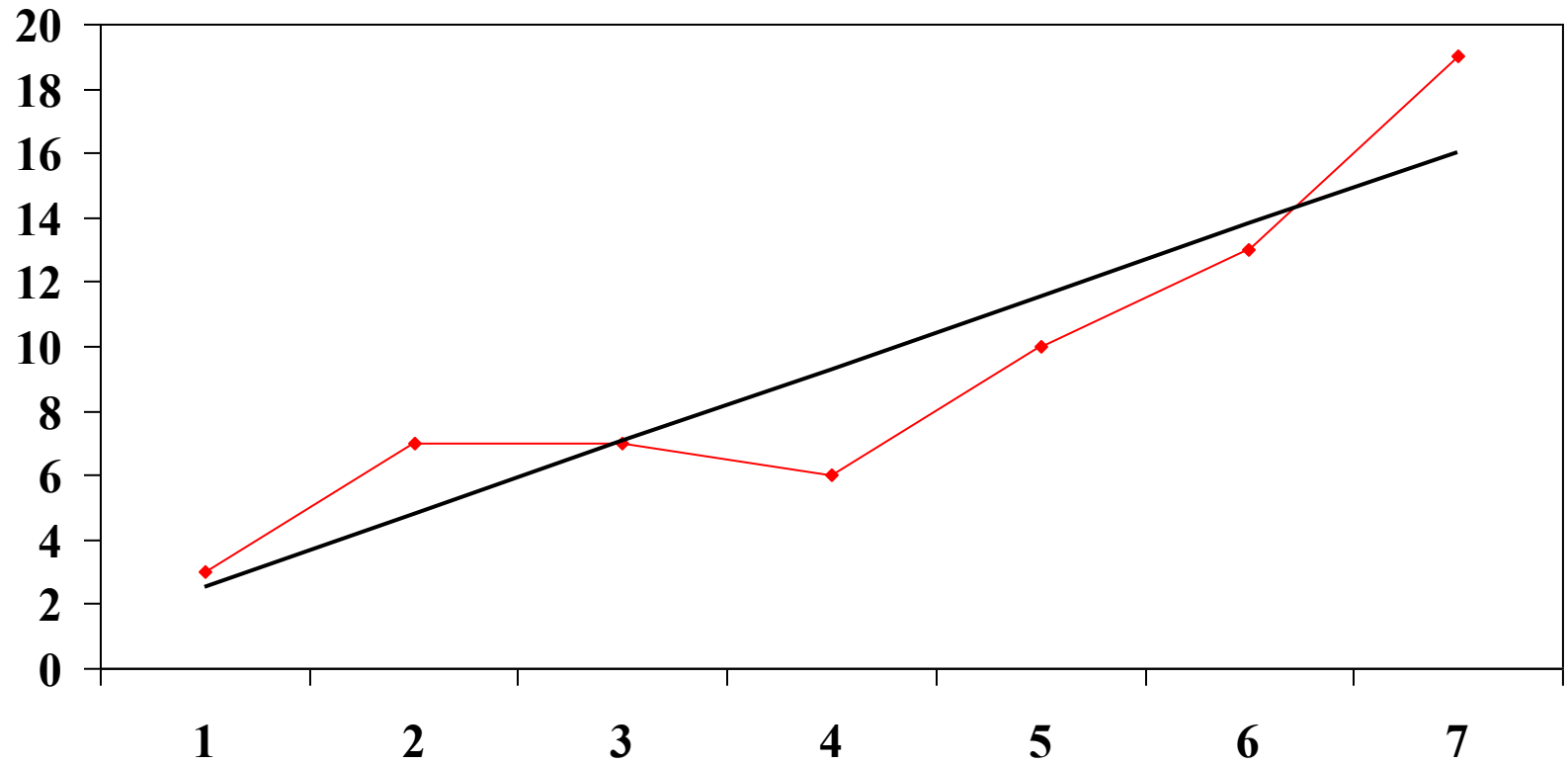
Example: Levels of Performance



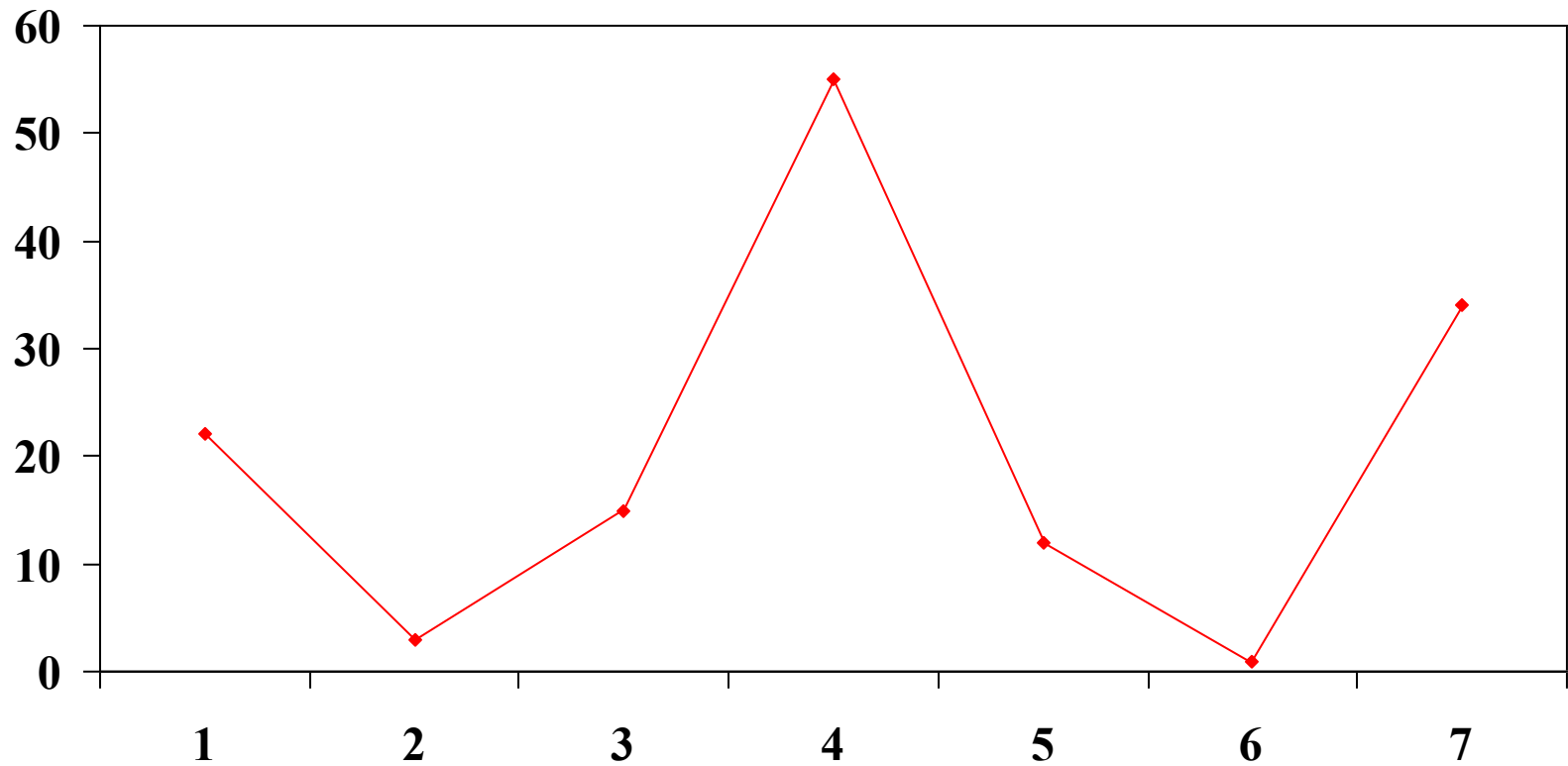
Trend



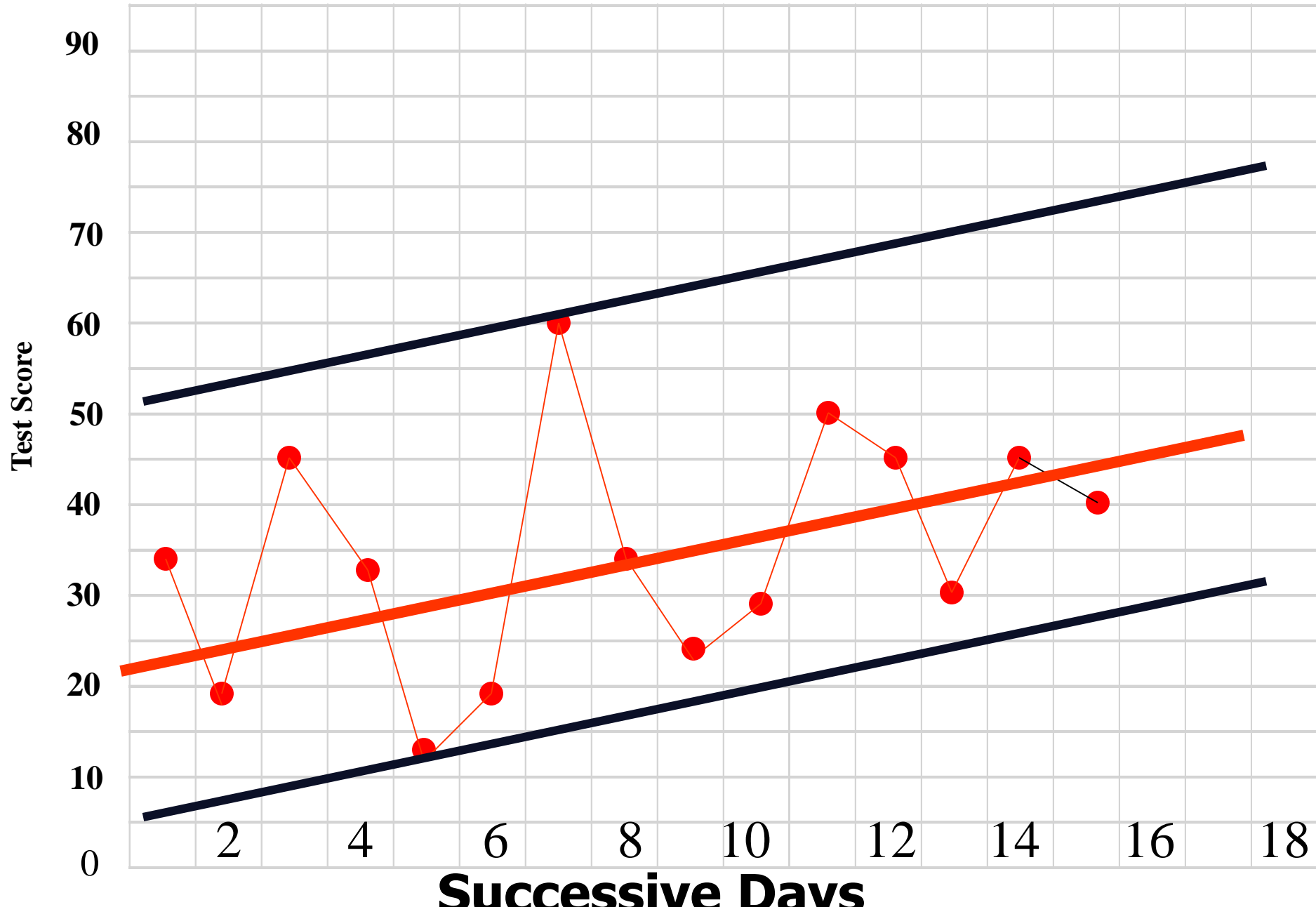
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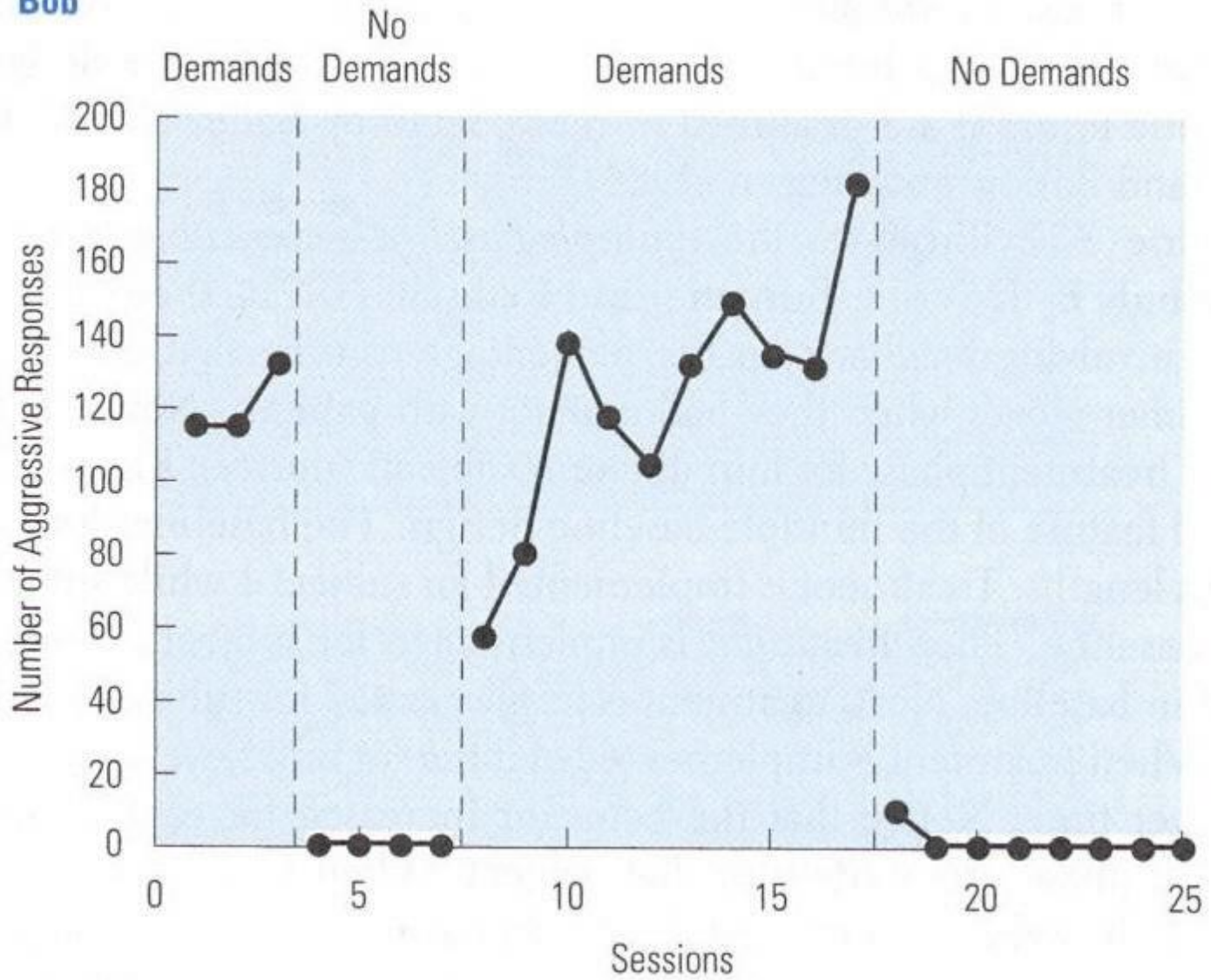
Stability/Bounce

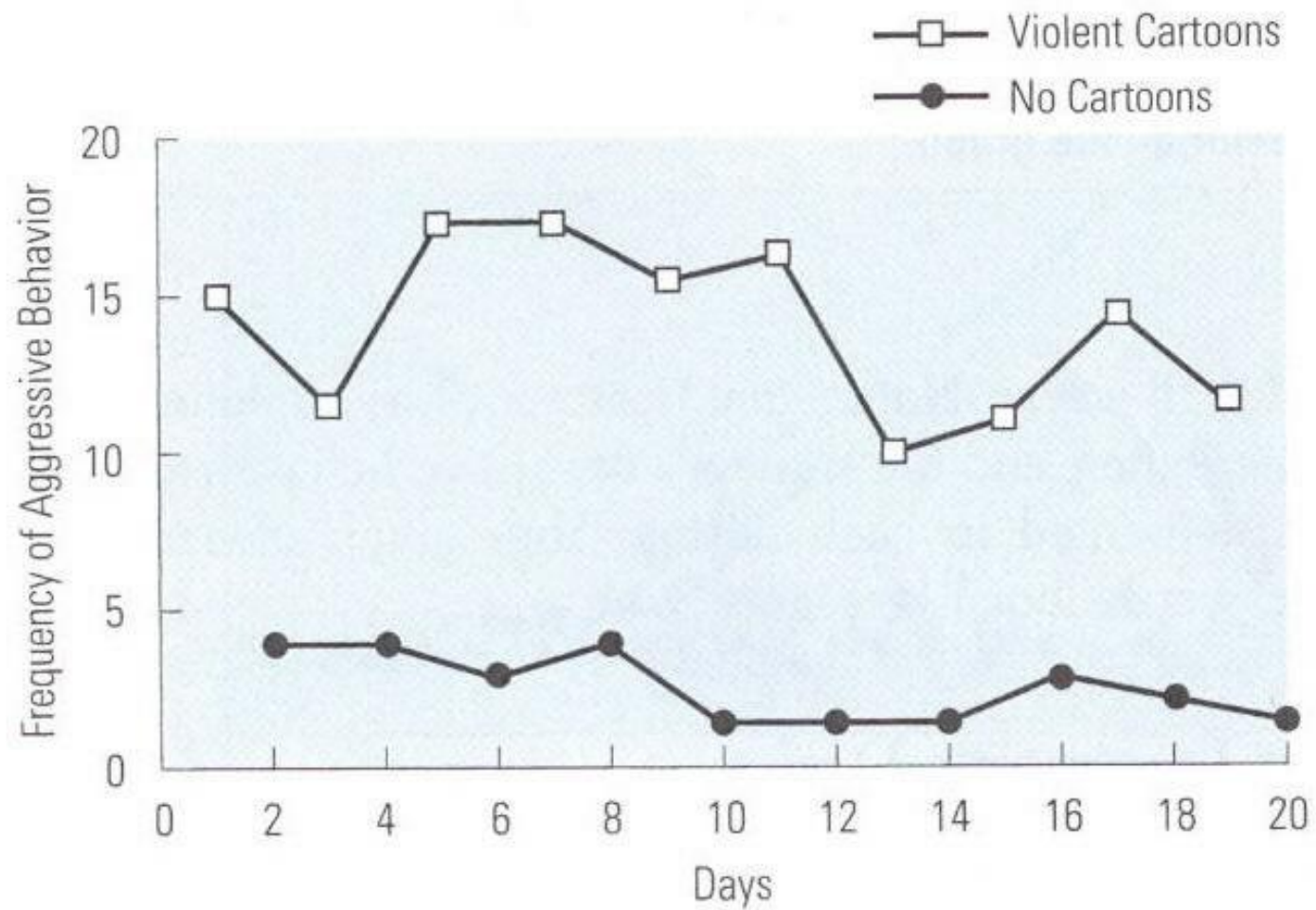


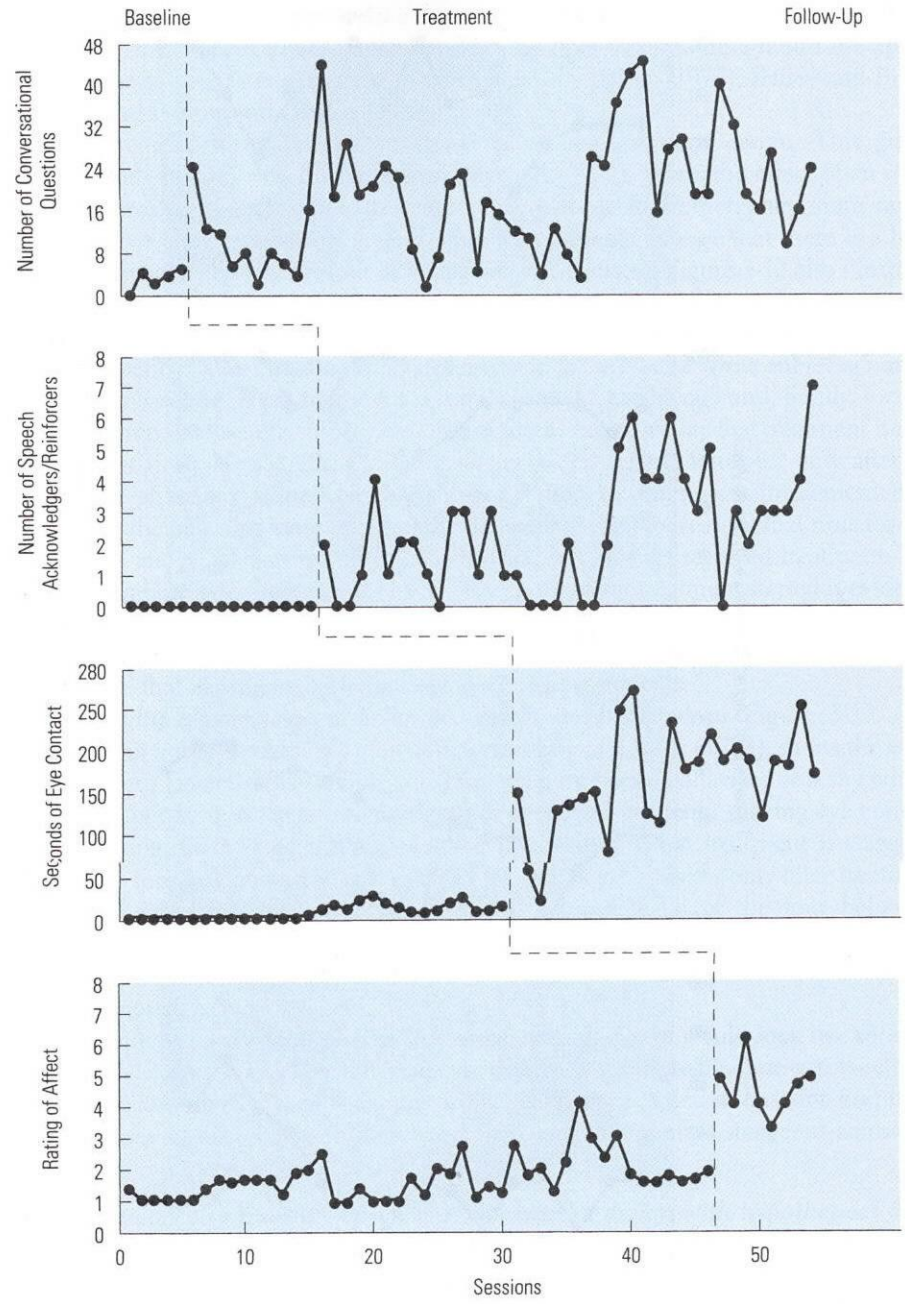
Example: Variability

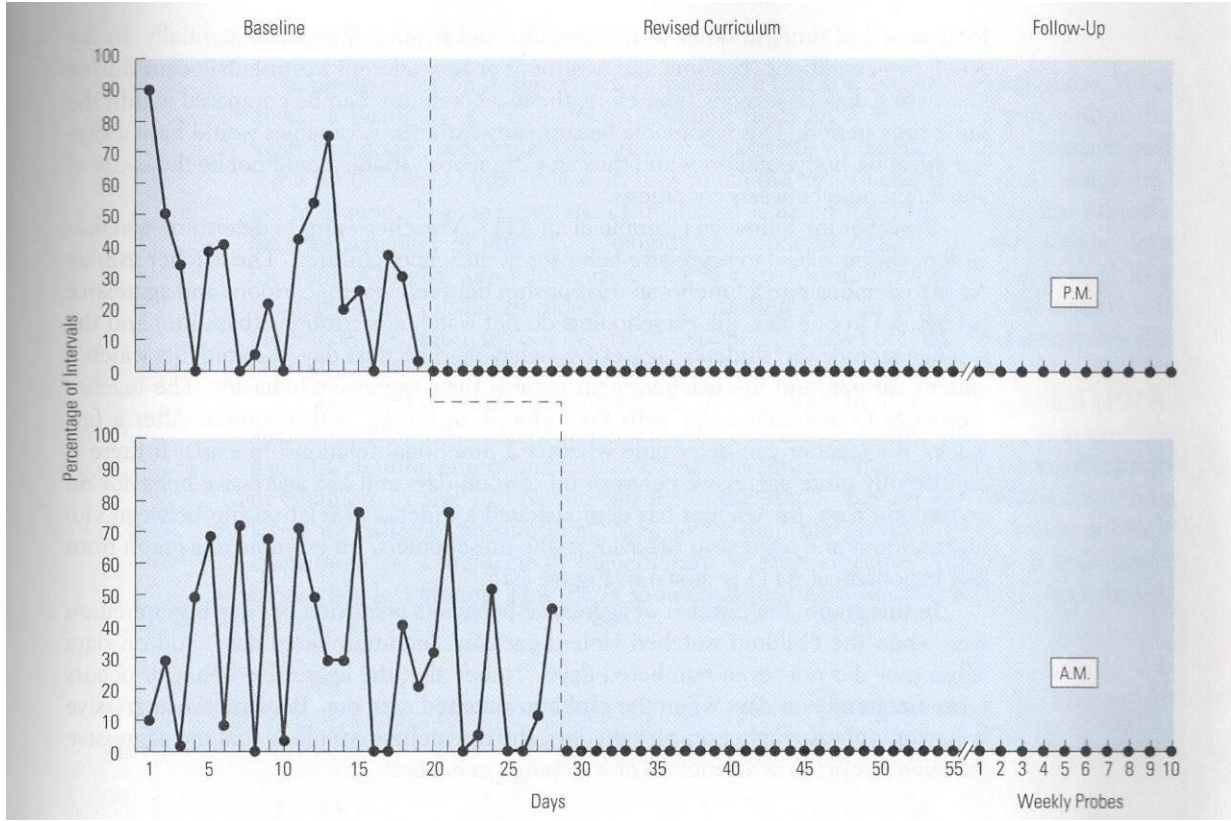


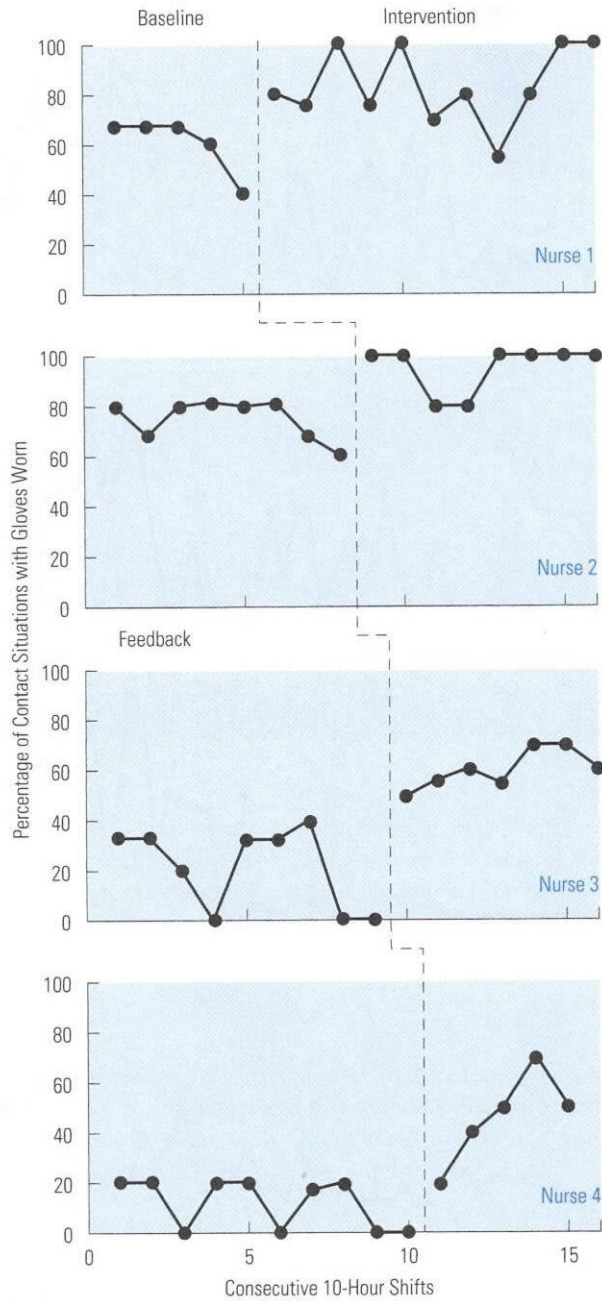
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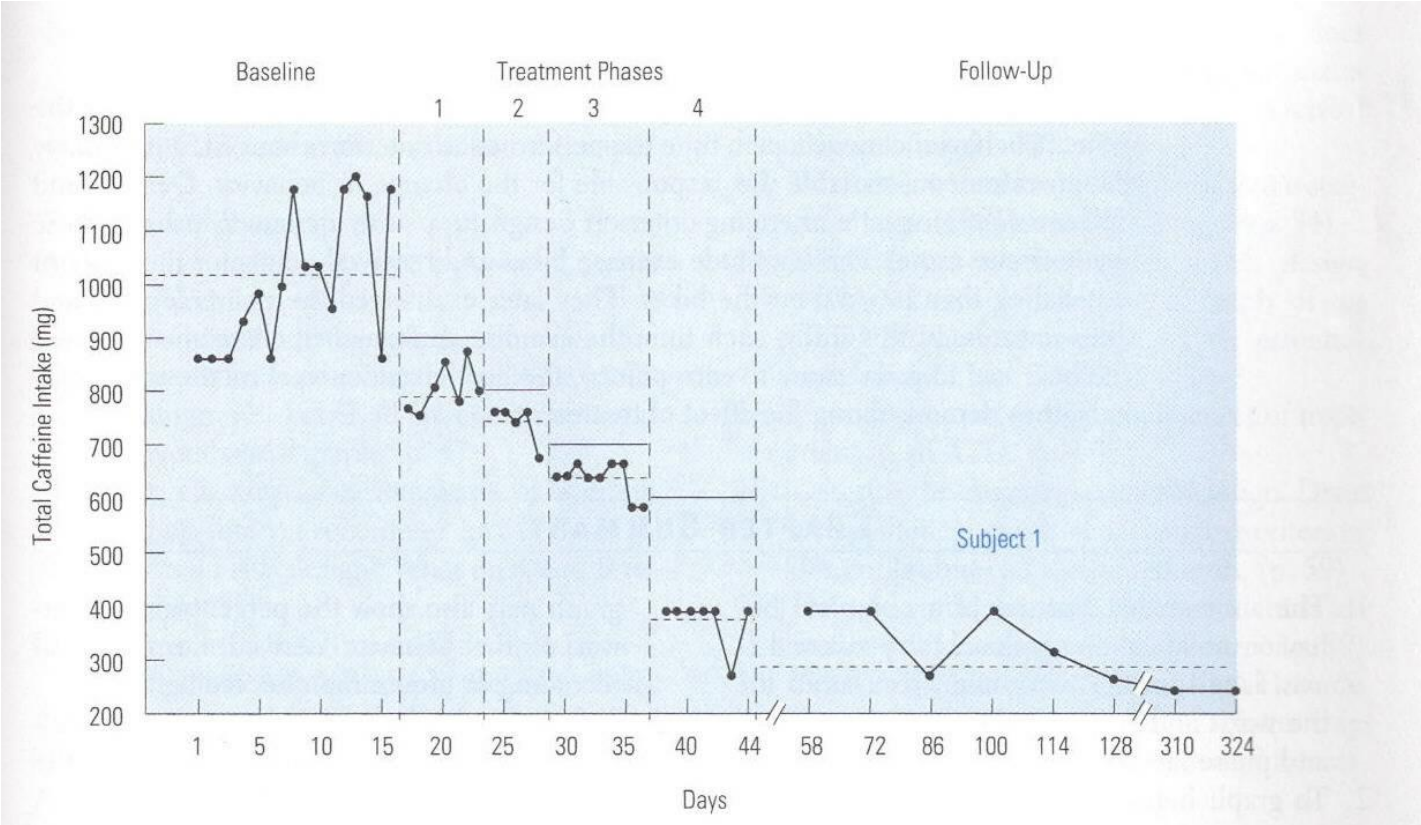












Video

- Data systems
- Mand training and data collection: Watch Wyatt Go!

Treatment Fidelity and Staff Training

- Instruction and data will only result in good outcomes if interventions are implemented with fidelity
- Fidelity of implementation is accomplished through:
 - Competency-based training
 - On site guided practice/feedback
 - Verification of treatment fidelity

Sessions on Training, Fidelity and Classroom Management

- Session 6: Using Single-Subject Designs to Evaluate Educational Outcomes for Students with Autism (I)
- Session 14 & 26: Katie Arentz: Autism Basics: Setting up a Classroom
- Session 15 & 27: John Esch: Treatment Integrity, Reliability, and other Evidence-Based Challenges in Implementing Ethical ABA Programs (I)
- Session 22 & 34: Tiffany Kodak: Using Instructive Feedback to Enhance the Efficiency of Instruction (I)
- Session 51 & 74: Jose Martinez-Diaz: Using Behavior Analytic Instructional Methods and Organizational Behavior Management to Train Staff (I)
- Session 66: Lori Chamberlain: Managing a Classroom (I)
- Session 69: Jennifer Leese: SOS: Supervision for Positive Outcomes and Student Success
- Session 79: Reisinger, Piotrowski & Anderson: A Collaborative Process Supporting Teachers and School Staff in the Implementation of Evidence-Based Practices
- Session 80: Archer, Miller & Dilatush: Training Classroom Staff to Implement Research Validated Instructional Strategies Through the Use of Behavior Analytic Principles

Behavior Analysis and Effective Instruction

- Should be considered for students of all ages
- No matter what we teach, we should do so using interventions that have evidence of working!

Sessions on Evidence-Based Interventions

- Session 5: Karen Mahone: Evidence-Based Approaches for Educational Use of Mobile Apps with Students with Autism
- Session 8: Tracee Parker: The A-B-Cs of ADLs (WC)
- Session 21: Jennifer Shade: Toilet Training in the School Setting

Sessions on Transition and Employment

Session 23: Erik Carter: Equipping Adolescents with Disabilities for the World of Work: Engaging Youth and Communities to Improve Transition Outcomes

Session 48 & 61: Peter Gerhardt: Transitioning to Employment and Life in the Community: Targeting Necessary Skills and Competencies (I)

Session 63 B: Join in the Dialogue

Session 73: Poggi & Russell: Transition Considerations for Students with Autism Spectrum Disorders

Session 81: Brenda Eaton: The Aspire Program

With effective interventions,
together we can make a
difference!

Sessions on Collaboration and Other Fields:

- Session 11: Ami Klin: Bringing Science to the Community: A New System of Healthcare Delivery for Infants and Toddlers with Autism Spectrum Disorders (I)
- Session 17 & 29: Dennis Debbaudt: People with Autism Spectrum Disorder: Contact with Police and Public Safety Professionals
- Session 33: Eb Blakely: Behavioral Pharmacology: Making Sense Out of Meds
- Session 39: Smith & McDougall: Creating Agreement in Special Education
- Session 43: Bureau of Autism Services Update
- Session 45: Amy McGinnis: The Role of Occupational Therapists in Autism Support Programs
- Session 49 & 62: Mary Jane Weiss: Navigating Ethical Challenges in Behavior Analysis: Translating Code into Conduct (I)
- Session 68: Funstein & Alvino: IEPs and Teamwork for Parents

Remember: PATTAN staff are here to help!

Please ask

- Thank you for attending this session and hope you have a productive and enjoyable conference experience!

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