Evidence-Based Approaches to Assessment and Intervention with Disruptive Behavior Problems
Morning Session

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Professional Background and Interests

- Ph.D. in Psychology with Specialization in in School Psychology University of South Carolina
- Professor of Psychology Louisiana State University: 2005-Present
- Distinguished Professor Graduate School of Education University of California-Riverside: 1991-2005
- Professor & Director Clinical/School Psychology Program Hofstra University 1989-1991
- Professor of Psychology Louisiana State University 1981-1989
- Assistant Professor of Psychology Iowa State University: 1979-1981
- Licensed Psychologist: Louisiana (Active), California (Inactive), and Iowa (Inactive)
- Professional Interests
  - Disruptive Behavior Disorders in Children and Adolescents
  - Response to Intervention
  - Social Emotional Learning Assessment and Intervention
  - Assessment and Intervention
  - Treatment Integrity of School-Based Interventions
  - Group Contingency-Based Interventions in Schools
  - Mild Intellectual Disability & Atkins Cases
- Memberships
  - Fellow Division 16 of APA (School Psychology)
  - Fellow Division 5 of APA (Quantitative & Qualitative Methods)
  - Fellow Division 53 of APA (Clinical Child and Adolescent Psychology)
  - Fellow American Association for Advancement of Science
- Leisure Interests
  - Golf
  - College Football (Clemson & LSU—I guess I just like Tigers)

Some Thought Questions About Disruptive Behavior Problems

- What are the 2 types of antisocial behavior pattern?
- What is the prevalence rate of disruptive behavior problems?
- What are the 3 developmental pathways to disruptive behavior problems?
- What are the 3 main causal pathways of disruptive behavior problems?
- What is the main *learning* cause of disruptive behavior problems?

Some Infamous People Who Likely Had Early Onset Conduct Disorder

- Ted Bundy (probably killed over 50 women)
- Jeffrey Dahmer (murderer/cannibalism)
- John Wayne Gacy (killed over 30 young men)
- Ted Kaczynski (Unibomber)
- Timothy McVeigh (Oklahoma City Bomber)

Introduction to the Topic

- Disruptive behavior problems (DBPs) account for about 10% of any given school population
- In a school of 500 students, about 50 children will exhibit this pattern of behavior
- These problems range from Mild-Moderate-Severe
- School often deal with these problems via suspensions, expulsions, and/or other *reactive* and *ineffective* means
- DBPs can be characterized by problems in self-control of emotions and behaviors that create adjustment difficulties in personal & interpersonal domains
- DBPs consist of 2 fundamental types:
  - Antisocial behavior pattern that involves repeated violation of social norms across home, school, & community contexts (in DSM-5 parlance: Conduct Disorder)
  - Defiance/disrespectful behavior pattern that involves negative & resistant social interactions, especially with adults (teachers & parents) and it is primarily a problem in *noncompliance* In DSM-5 parlance: Oppositional Defiant Disorder)
- DBPs rank as the most frequently cited reason for referral of young people to mental health services *accounting for nearly half of such referrals*

DBPs: Some More Detail

- Antisocial behavior pattern entails hostility and aggression toward others, a willingness to break rules, and defiance of adult authority
- Antisocial behavior is persistent & highly resistant to change
- Long-term prognosis for this behavior pattern is extremely bleak
- Key is early intervention (by 3rd grade)
- Defiance/disrespect behavior pattern is primarily a problem in *noncompliance*
- Noncompliance can take different forms:
  - No response is forthcoming
  - No response is produced or initiated within a prescribed period of time (e.g., 10 seconds)
  - Some alternative, non-requested behavior is performed instead
- Noncompliance can assume 4 basic forms:
  - Simple refusal ("No!")
  - Direct defiance ("Hell no!")
  - Passive noncompliance ("Huh?")
  - Attempts to renegotiate the terms of the directive ("How about I do this instead?")

Examples of Antisocial Behavior Pattern

- Bullies others
- Fights with others
- Uses weapons to harm others
- Is cruel to others
- Steals from others
- Sets fires
- Burglarizes homes
- Shoplifts
- Is truant
- Cheats in games or activities
- Lies
- Intimidates others
- Forces others to act against their will

Childhood Onset Type *(prior to 10 years of age-poor prognosis)*
Adolescent Onset Type (no behavioral characteristics prior to 10 years of age-good prognosis)

Prevalence: 5%

Mild: Minor conduct problems
Moderate: Mild to Severe
Severe: Many severe conduct problems

Examples of Defiant/Disrespect Behavior Pattern

- Frequently loses temper

- Is resentful

- Argues excessively with parents, teachers, and peers

- Is noncompliant

- Provokes others

- Accuses others of own mistakes

- Defies parents and teachers

- Yells or talks out

- Complains

- Vindictive

Prevalence: 4-5%

This behavior pattern is highly comorbid
with ADHD and often leads to Conduct Disorder

Causes of Disruptive Behavior Problems
No clear-cut cause of this behavior pattern

- Biological Factors*
  - Parental history of ADHD, ODD or CD
  - Mood disorder (bipolar or depression)
  - Drinking and/or substance abuse
  - Mother who smoked during pregnancy
  - Executive function deficits (frontal lobes—reasoning, judgment, & impulse control)
- Temperament*
  - Kids born with difficult temperament (fussy, colicky, difficult)
  - Kids just "wired" that way
  - Irritable, strong-willed, difficult to sooth
- Psychological Factors
  - Poor relationship with parent
  - Neglectful or absent parent
  - Difficulty in forming social relationships or in processing social cues
- Social Factors
  - Poverty
  - Abuse
  - Neglect
  - Lack of supervision
  - Inconsistent discipline

*Can't do anything about this

DBPs & Emotional Disturbance

- Some have argued that children with DBPs are *socially maladjusted*
- If they are *socially maladjusted*, they cannot be Emotionally Disturbed under IDEIA
- UNLESS, it is determined they have an emotional disturbance (??????)
- Emotional Disturbance
    - Inability to learn that cannot be explained by intellectual, sensory, or health factors
    - *Inability to build or maintain satisfactory interpersonal relationships with peers or teachers*
    - *Inappropriate types of behavior or feelings under normal circumstances*
    - General or pervasive mood of unhappiness or depression
    - Tendency to develop physical symptoms or fears associated with personal or school problems
- All of the above exist over a long period of time and to a marked degree
- At the very least, children with DBPs have major difficulties in building satisfactory interpersonal relationships with peer and/or teachers
- At the very least, children with DBPs exhibit inappropriate types of behavior or feelings under normal circumstances
- At the very least, these problems have existed over a long period of time & to a marked degree
- Social Maladjustment Never Defined in any version of IDEA
- Emotional Disturbance nationally since 1975 has had prevalence rate of <1%

Some Traditional Views of Social Maladjustment

- Student meets DSM-5 criteria for Conduct Disorder or Oppositional Defiant Disorder
- Student engages in antisocial and deviant behavior within context of peer group
- Problem behavior is "willful", individual is making a "choice" to do it & could stop the problem behavior if they desired
- These are just "bad" kids who are not mentally ill
- Problem behavior is goal-oriented, purposive, or instrumental (student engages in it to "get something" they want
- Students with Social Maladjustment do not have internalizing problems or mental health problems
- Students with Social Maladjustment believe that behavioral rules should not apply to them or that they should be able to self-select their own rules of conduct
- Students with Social Maladjustment are shrewd, callous, & lack remorse ("sociopaths")

WHAT'S WRONG IN THIS PICTURE?

Let's talk about this for a while

Developmental Pathways to DBPs

- Covert Pathway (Conduct Disorder)
  - Stealing
  - Lying
  - Burglary
  - Drug & alcohol involvement
  - Vandalism
  - Relational aggression

- Overt Pathway (Conduct Disorder)
  - Aggression
  - Coercion
  - Manipulation of others

- Defiance/Disrespect Pathway (Opposition Defiant Disorder)
  - Noncompliance
  - Oppositional defiant behavior
  - Resistance to adult influence
  - Deliberate annoyance of others

Developmental Models of DBPs

- Risk Factor Model
    - Symptoms of ADHD (hyperactivity-inattention-impulsivity) operate as risk factors for the development of either antisocial behavior pattern of defiance/disrespectful behavior pattern
    - Risk factor model suggests several intervention strategies:
        - Parent management training
        - Teaching social problem solving strategies
        - Academic interventions, particularly in reading
        - Teaching appropriate peer group entry strategies
    - Stepping Stone Model
        - ADHD behaviors lead to development of oppositional defiant behavior pattern
        - Oppositional defiant behavior patterns eventually morphs into antisocial behavior pattern
        - Early intervention of ADHD behaviors may prevent onset of oppositional defiant behavior and antisocial behavior
        - Early treatments might involve stimulant medication & parent training
    - Subtype Model
        - Individuals showing signs of ADHD & antisocial behavior constitute a unique subtype of antisocial behavior
        - These individuals are low in *constraint* (impulsive, adventurous, rejection of societal norms)
        - Low constraint create difficulties in incorporating information & feedback from the environment to control behavior
        - Do not respond to discipline due to inattentiveness and demand immediate gratification due to impulsivity
        - Early intervention efforts should focus on behavior parent training, social problem solving skills, early literacy interventions, & stimulant medication

Coercive Family Process & Development of DBDs

- Typical behavior management procedures that work with normally developing students do not work well with students displaying DBDs

- Do DBD students learn "differently" than typical students?

- Do they require different interventions based on a different set of learning principles?

- NO!

- Contingencies & learning principles in DBD behavior pattern is quite lawful & predictable

Acquisition of DBD Behavior Pattern

- DBP behavior pattern is learned primarily via behavioral *coercion*
- DBP individuals learn to control their environment through skillful use of *coercive behavioral tactics*
- Typically developing children learn primarily through the process of positive reinforcement, modeling, and encouragement
- DBP children learn primarily through the process of *negative reinforcement*
- DBP children learn that they can *avoid, escape, delay, or reduce* aversive demands placed on them by others
- Remember, a negative reinforcement contingency is one in which a behavior produces the removal, termination, reduction, or postponement of an aversive stimulus which leads to an *increase in future probability of behavior*
- Examples: Engaging in disruptive behavior to escape academic task demands, having a temper tantrum in response to parental demands to complete homework, or defying a teacher in order to escape the classroom & be sent to the office

Coercive Family Process:

5-Step "Dance"

- Child applies coercive tactics in order to achieve a social goal (e.g., control, dominance) or responds aversively to a parental directive (clean your room)

- Parent reacts negatively to child's behavior

- Child escalates the aversiveness and/or intensity of coercive tactics ("turns up the volume")

- Parent "gives in" & allows child to have his way to reduce the aversiveness & eliminate the coercion

- Child in turn reduces level of aversiveness & terminates the coercion

- In this interaction, both parent & child are powerfully reinforced but via different variations of the same reinforcement principles

- Parent succeeds in reducing child's aversiveness & use of coercive tactics by giving in & withdrawing or changing the directive (negative reinforcement)

- Child is positively reinforced by getting his way (i.e., to have the parent give in)

Implications of Coercive Family Process

- Sequence is repeated literally thousands of times over course of DBP child's development
- Frequently observed in public spaces such as grocery stores
- Mother has long grocery lists and child repeatedly issues "I want" requests
- Mother says no to most of these requests but the "I want" requests increase in frequency and intensity
- Mother grants the most intense request thereby terminating the aversiveness
- By the time the child enters school, the child has learned to be a Master Coercive Manipulator to achieve social goals
- Teachers often are at a loss of how to deal with the coercive behavior pattern
- Lacking tools for dealing with this behavior, an office discipline referral is often the choice of intervention
- DBD children will often have 15 or more ODRs in a single year suggesting that this is an *NOT* effective intervention

Matching Law and Coercive Behavior
(Herrnstein, 1961)

- Rate or frequency of any behavior will *match* the rate or frequency of reinforcement for that behavior
- Response rate will *match* the reinforcement rate
- Matching is studied in what is known as concurrent schedules of reinforcement
- Concurrent schedule of reinforcement refers to reinforcement of 2 or more behaviors according to 2 or more schedules of reinforcement delivered at the same time (concurrently)
- Example: Aggressive behavior is reinforced every 3 times it occurs & prosocial behavior is reinforced every 15 times it occurs. *Aggressive behavior will occur 5 times more frequently than prosocial behavior (15/3=5).*
- Matching is all about "*choice*" of what behavior to engage in at any given time
- If defiant & aggressive behavior results in escape from task demands 8 out of 10 times, then defiant/aggressive behavior has a *utility index of 80%* & completion of task demands has a utility index of only 20%
- Based on Matching Law, defiant/aggressive behavior will be 4 times more frequent

"The Dance"

- Make It Worse
  - Lose your temper (yelling and sarcasm)
  - Talk for a long time or use long lectures
  - Engage in interaction in front of other students
  - Try to persuade the student
  - Threaten the student
  - Try to embarrass the student
  - Let the "dance" go on too long
  - Crowd the student
- Make It Better
  - Use calm, neutral voice
  - Give clear directions & use short explanations
  - Discuss things briefly and privately
  - Make eye contact, control facial expressions, watch body language
  - Talk about what is happening right now
  - Focus on solutions, not problems
  - Remove yourself from the "dance" if you are about to lose it
  - Analyze the "dance"

Summary Points

- DBDs consist of 2 fundamental types: antisocial behavior pattern & defiant/disrespectful behavior pattern (In DSM-5 parlance: conduct disorder & oppositional defiant disorder)
- Antisocial behavior primarily a problem in *aggressive behavior*
- Defiant/disrespectful behavior primarily a problem in *noncompliance*
- Childhood onset antisocial behavior versus adolescent onset antisocial behavior
- Median prevalence rate for antisocial behavior is about 5% & median prevalence rate for defiant/disrespectful behavior pattern is around 5%
- Comorbidity is quite common in children having DBDs (ADHD, learning disability, depression)
- 3 models of development of DBDs: risk factor, stepping stone, & subtype models
- DBDs can be changed effectively without knowing the specific, original causes of these problems
- Children develop DBDs via coercive family process (negative reinforcement)
- Matching Law explains maintenance of coercive behaviors via negative reinforcement & low frequency of prosocial behavior maintained by positive reinforcement

Small Group Activity:

Get Into Groups of 3-4 People

Generate 1 or 2 questions about the material presented so far. Elect a spokesperson to ask the question(s)

Evaluating, Selecting, & Implementing Evidence-Based Practices in Schools

- Defining what constitutes *evidence* & basing our actions on this definition can be a challenging task
- Some professionals accept what they consider evidence only if it fits their preexisting belief systems
- They will reject any evidence that does not conform to these beliefs
- A well-established phenomenon in social psychology called *cognitive dissonance* captures this nicely
- Cognitive dissonance describes the tendency of individuals to strive for consistency among their beliefs, attitudes, & behaviors
- Any inconsistency among them is rejected even in the face of overwhelming disconfirming evidence
- An excellent example of this is *facilitated communication*
- Controlled studies of this technique have unequivocally shown that facilitators were unintentionally cuing the target participant (Myles & Simpson, 1996)
- Despite this, many professionals "believe" in facilitated communication
- Facilitated communication continues to be used in some places despite these findings

A Quote from James Kauffman
University of Virginia

Science is a cruel mistress. It demands doubt and brooks no choice to believe an alternative explanation when the evidence served up by fidelity to its method undermines the faith in that alternative. This is a bitter pill for many to swallow, so it is not at all surprising that many politicians and educators, even many special educators, including those who study emotional and behavioral disorders, find science unpalatable. (p. 1)

Walker, H.M., & Gresham, F.M. (Eds.) (2014). *Handbook of evidence-based practices for emotional and behavioral disorders.* New York: Guilford Press

What is Evidence?

- Different fields have varying standards used to judge evidence
  - Physics: Scientists provide evidence about laws of nature from either quantum theory or theory of relativity
  - Law: Relies on several types of evidence direct evidence (physical evidence, eyewitness testimony, confession) and circumstantial evidence (past behavior, character testimony expert witness)
  - Paleontology: Fossil evidence, genetic evidence (DNA), or distributional evidence (species are not randomly distributed across different geographic regions)
- Some individuals & organizations falsely dichotomize interventions & practices into evidence-based & non-evidence-based categories
- Research evidence is best thought of as existing on a continuum anchored by evidence-based and non-evidence-based poles
- Hierarchical method of evaluating evidence considers a broad range of evidence gathered from different research methods
- Evidence-based treatments are interventions shown to be efficacious via rigorous research methods (e.g., randomized controlled trials or RCTs)
- Evidence-based practices are intervention approaches rather than a specific intervention (e.g., RTI)

Types of Research Evidence

- Observation of behavior within target settings including case studies to generate hypotheses concerning behavior challenges of children and youth
- Qualitative research used to describe subjective, "real-world" experiences on individuals undergoing an intervention
- Single case experimental designs that are useful in drawing causal inference about effectiveness of interventions for individuals
- Epidemiological research used to track the availability, utilization, & acceptance of various intervention procedures
- Moderator/mediator studies used to identify correlates of intervention outcomes & to establish the mechanisms of change
- Randomized controlled trials (RCTs) or efficacy studies provide the strongest types of research evidence that protects against most threats to internal validity
- Effectiveness studies used to assess outcomes of interventions in less controlled, real-world settings to determine whether causal relationships exist across participants, settings, treatment agents, etc. (external validity)
- Meta-analyses to provide a quantitative metric or index concerning the effects of multiple studies on various target populations, age groups, genders, and/or settings

Standards for Establishing Evidence-Based Treatments

Divisions 12, 16, 17, 53, & 54 of American Psychological Association

- *Criterion 1: Well-Established Treatment*
  - 2 good group designs conducted in 2 independent research settings by 2 independent research teams
  - Statistically superior to placebo or another treatment
  - Adequate power to detect moderate treatment effects
  - Manualized treatments
  - Use of reliable and valid measures
  - Appropriate data analyses

- *Criterion 2: Probably Efficacious Treatment*
  - 2 good experiments showing treatment superior to wait-list controls
  - May be conducted by same research team

- *Criterion 3: Possibly Efficacious Treatment*
  - At least 1 good study showing effectiveness

- *Criterion 4: Experimental Treatment*
  - Treatment not yet tested in trials meeting established criteria for methodology

Single Case Experimental Designs

- Previous criteria based on *group experimental designs*
- Single case experimental designs (SCDs) are interrupted time series designs that provide rigorous experimental evaluation of intervention effects for individuals
- SCDs always involve repeated, systematic measurement of a dependent variable before, during, & after a treatment
- Provide strong basis for causal inferences & are widely used in clinical psychology, school psychology, special education, & applied behavior analysis
- Experimental control in SCDs established by:
  - Introduction, withdrawal, or reversal of the independent variable (ABAB designs)
  - Interative manipulation of the independent variable across different observation phases (multielement/alternating treatment designs)
  - Staggered introduction of the independent variable across different points in time or in different settings or for different behaviors (multiple baseline designs)
  - Extent to which behavior tracks changes in criteria for reinforcement (changing criterion designs)

Criteria Used in SCDs to Establish Experimental Effect

- Documentation of 3 demonstrations of the effect at 3 different points in time
- 3 major criteria used to document experimental effect:
  - Level (mean score for data within a phase)
  - Trend (slope of best-fitting straight line fro the data within a phase)
  - Variability (fluctuation of data around the mean (range or standard deviation)
- 4 other criteria:
  - Immediacy of effect (how long for behavior change to occur)
  - Proportion of overlap in the data (overlap of data points)
  - Consistency of data across phases
  - Comparing observed & projected patterns of the outcome variable
- Additional criteria
  - Independent variable must be systematically manipulated by experimenter
  - Each outcome must be measured systematically over time by more than 1 observer & interobserver agreement (IOA) data collected in each phase
  - IOA should be 80% or higher or a *kappa* of .60 or higher

Some Effect Size Estimates for SCDs

- Percentage Decrease from Baseline (PDB)

- Percentage of Nonoverlapping Data (PND): % of data points in treatment phase that exceeds lowest baseline data point (if goal is to decrease behavior)

- Percentage of All Nonoverlapping Data (PAND): Finds smallest number of data points from either baseline or treatment phase whose elimination would result in completely nonoverlapping data among phases

- Effect Size: Mean baseline phase-Mean treatment phase/Standard Deviation

Summary Points

- Evidence is best thought of as existing on a continuum anchored by evidence-based and non-evidence-based poles
- Evidence-based treatments are those that have been shown to be efficacious via rigorous research methods that have good internal validity
- Evidence-based practices are approaches to intervention rather than specific interventions (e.g., RTI)
- Multiple types of research evidence are used to support evidence-based practices including efficacy studies, effectiveness studies, cost-benefit studies, and epidemiological studies.
- Various research methodologies are used to establish evidence, including: observation, qualitative research, single case research, epidemiological research, moderator/mediator studies, randomized controlled trials, effectiveness studies, and meta-analyses
- Empirical evidence for various treatments include: well-established treatments, probably efficacious treatments, possibly efficacious treatments, and experimental treatments
- Single case experimental designs use replication as the key mechanism for controlling threats to internal validity
- Single case experimental designs include: reversal designs, alternating treatment designs, multiple baseline designs, and changing criterion designs
- Single case experimental designs primarily use visual inspection of graphed data to analyze data

Evidence-Based Assessment Strategies:
Screening, Identification, Progress Monitoring, & Outcomes

- Main purpose of any assessment process is to collect information that will lead to *correct decisions* about individuals

- 5 Types of Decisions
  - Screening decisions (Who's at-risk?)
  - Identification & classification decisions (Who are they & What are they?)
  - Intervention decisions (What are we going to do?)
  - Progress monitoring decisions (How are we doing?)
  - Documentation of intervention outcomes (How did we do?)

- Types of "Tests"
  - Screening tests: Tests in search for a disease (PAP smears, PSA tests, hearing screening)
  - Diagnostic tests: Tests that look for and identify a disease (Biopsies, blood samples, IQ tests)
  - Treatment decision tests (cholesterol panel, functional behavioral assessment)
  - Monitoring tests: Tracks progress of a disease (blood pressure monitoring, CBM oral reading fluency)

Assessment Within a Problem Solving Model

- What is a problem?
  - A problem is a discrepancy between current and desired levels of performance
  - Larger the discrepancy, the larger the problem
  - Strategies are developed to eliminate or reduce this discrepancy

- Problem Solving Process
  - Problem Identification (What is the problem?)
  - Problem Analysis (Why is it occurring?)
  - Plan Implementation (What are we going to do about it?)
  - Plan Evaluation (How will we know it was effective?)

- Assessment Procedures
  - School records
  - Interviews
  - Office discipline referrals
  - Behavior rating scales
  - Systematic behavioral observations
  - Functional behavioral assessment
  - Direct behavior ratings
  - Change sensitive behavior ratings

Risk & Protective Factors in DBPs

RISK FACTORS

- Lack of bonding to school: .86
- Delinquent peers: .49
- Internalizing comorbidity: .47
- Prior antisocial behavior: .41
- Low academic achievement: .41
- Non-supportive home environment: .41
- Corporal punishment by parents: .41
- Controversial sociometric status: .41

PROTECTIVE FACTORS

- Age at first juvenile justice commitment: .34
- Adequate academic achievement: .33
- Play activities: .26
- Intact family structure: .24
- Popular sociometric status: .18
- High IQ: .14

Effect sizes expressed as Pearson *r*

Crews et al. (2007). Risk and protective factors of emotional and/or behavioral disorders in children and adolescents: A mega-analytic synthesis. *Behavioral Disorders, 32,* 64-77.

Accuracy in Early Identification & Screening

A **SENSITIVITY** **(Accurate Prediction)**	B **FALSE POSITIVE** **(False Alarm)**
C **FALSE NEGATIVE** **(Broken Alarm)**	D **SPECIFICITY** **(Accurate Prediction)**

Sensitivity: A/A+C (Who they are-True Positive)
Specificity: D/B+D (Who they aren't-True Negative)
False Positive: B/A+B
False Negative: C/C+D
Overall Accuracy: A+D/A+B+C+D
Base Rate Prevalence: A+C/A+B+C+D

Accuracy in Early Identification & Screening

Some Numbers
N=200

At-Risk for DBP

Not At-Risk for DBP

	At-Risk for DBP	Not At-Risk for DBP
Screen Positive	**SENSITIVITY** **75/75+15** **83%**	**FALSE POSITIVE** **10/85** **12%**
Screen Negative	**FALSE NEGATIVE** **15/115** **13%**	**SPECIFICITY** **105/120** **88%**

Overall Accuracy: 75+105/200=90%

Sensitivity: A/A+C: 75/90=83%
Specificity: D/B+D: 105/120=88%

Screening Tools for DBPs

- Systematic Screening for Behavior Disorders (SSBD)
- Early Screening Project (ESP)
- Student Risk Screening Scale (SRSS)
- Behavioral and Emotional Screening System (BESS)
- Performance Screening Guide (PSG)
- Office Discipline Referrals*
- Student Internalizing Behavior Screener (SIBS)
- Student Externalizing Behavior Screener (SEBS)

Systematic Screening for Behavior Disorders
Early Screening Project
(SSBD-2)
Walker & Severson

- SSBD-2 is a multiple gating screening tool for students Grades 1-8

- Screens students on externalizing & internalizing dimensions

- Gates
  - Gate 1: Teacher rank orders class on externalizing & internalizing dimension (Most to Least) & selects top 3 externalizers & top 3 internalizers
  - Gate 2: Teacher rates these 6 students on adaptive & maladaptive behavior & completes the Critical Events Index (checklist of high intensity/low frequency behaviors: "Behavioral Earthquakes"
  - Students exceeding normative cutoffs are identified as at-risk

- Externalizing: Behavioral excesses that include defying the teacher, arguing, aggression toward others, noncompliance with teacher directives

- Internalizing: Overcontrolled behavior pattern that includes social withdrawal, anxiety, shyness, and/or depression

- Nationally standardized on 4,500 cases in 18 school districts in 8 states with an additional 7,000 cases added to original normative database

- SSBD-2 has extensive empirical evidence for reliability & validity

Student Risk Screening Scale
(SRSS)
Drummond (1993)

- Identifies a number of behavioral indicators that predict conduct disorders & delinquency
- Reliable and valid at the elementary, middle school, and high school levels
- 7-item scale that uses 5 criteria to guide its development & use:
    - Brief (No more than 10 items)
    - Research Based (Items that most powerfully discriminate & predict antisocial behavior pattern)
    - Easily Understood (Format, scoring, & administration instructions clear & self-explanatory)
    - Valid (Accurate & valid for screening & identification of at-risk students
    - Powerful (Efficient in identifying students truly at risk & who could benefit from intervention)
- Items on the SRSS: Rated on 0-3 scale (Never, Occasionally, Sometimes, Frequently)
    - Stealing
    - Lying, cheating, sneaking
    - Behavior problems
    - Peer rejection
    - Low academic achievement
    - Negative attitude
    - Aggressive behavior

Student Risk Screening Scale

Example

Name	Steals	Lies, cheats, sneaks	Behavior problem	Rejected	Low Ach.	Neg. Att.	Agg. Beh.	Total
Jeff	*0*	*1*	*3*	*1*	*1*	*1*	*1*	*8*
Frank	**2**	**2**	**3**	**0**	**3**	**3**	**3**	**16**
Jill	1	0	1	0	1	0	0	3
Julie	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Clay	*1*	*2*	*3*	*3*	*3*	*3*	*3*	*18*
Seth	*0*	*0*	*3*	*1*	*1*	*1*	*0*	*6*
Laura	0	0	0	1	1	1	0	3
Aaron	0	0	1	0	0	1	0	2

9-21: High Risk
4-8: Moderate Risk
0-3 Low Risk

High Risk Students: Frank & Clay
On- the -Radar Students: Jeff & Seth

BASC-2
Behavioral and Emotional Screening System
BESS

- Screening tool to assess behavioral strengths & concerns (preschool-high school)
- Targets externalizing & internalizing risks, school problems, & adaptive skills
- Multirater screening tool that uses teacher, parent, & student raters
- Only students in Grades 3-12 complete the self-report scale
- Provides T scores & percentile ranks
- Cutoff scores:
  - Normal
  - Elevated
  - Extremely elevated
- Contains 25-30 items (remember screening tools should not exceed 10 items)
- BESS Manual states that it will take a teacher 4-6 minutes to rate each student
- In a classroom of 25 students, it would take 100-150 minutes (1.67 to 2.5 hours to rate each student in the classroom)
- *BESS is more of a behavior rating scale than an efficient screening tool*

Student Internalizing Behavior Screener
Student Externalizing Behavior Screener

1. Defiant or oppositional to adults
2. Fights or argues with peers
3. Bullies others
4. Gets angry easily
5. Lies to get out of trouble
6. Disrupts class activities
7. Has difficulty sitting still
8. Nervous, worried, or fearful
9. Bullied by peers
10. Spends time alone
11. Clings to adults
12. Withdrawn
13. Seems sad or unhappy
14. Complains about being sick or hurt

0-Never
1-Rarely
2-Occasionally
3-Frequently

Some Findings

- Internal consistency reliability estimates ranged from .70 to .93

- Test-retest reliability estimates were .79 to .85

- SIBS/SEBS correlates .83 with BESS, -.60 with SSIS PSG Motivation, & -.71 with SSIS Prosocial Behavior

- SIBS/SEBS correlates .270 with ODRs, -.53 with school grades, & -.22 with attendance

- SIBS/SEBS identifies 16.9% students at-risk (15% would be predicted from MTSS model)

- SIBS/SEBS has sensitivity index of .682 (at-risk) and specificity index of .917 (not at-risk)

- Overall, SIBS/SEBS compares favorably with BESS and SSIS-PSG screeners

Hartman, K., & Gresham, F.M. (in press). Student internalizing and externalizing behavior screeners: Evidence for reliability, validity, and usability. *School Psychology Quarterly.*

Office Discipline Referrals
ODRs

- ODRs can be used as a screening tool to document which students are being referred to the office & the behavioral reasons for referral
- ODRs almost always initiated by classroom teachers (defiance, noncompliance, aggression, property destruction)
- Teacher make referrals either because they cannot deal with the behavior or the severity of the behavior warrants administrative intervention
- Less than 10% of school population account for most ODRs ("return customers")
- Parallels juvenile crime showing that 65% of juvenile crime is accounted for by 6-8% of the juvenile population
- Prevalence of ODRs:
  - Elementary school: Average between 0-1 ODR each school year
  - Middle school: Average approximately 3.5 ODRs per student per school year
- Study involving 2500 elementary schools involving over 990,000 students showed mean ODR=0.59 (SD=2.24) {see McIntosh et al. *School Psychology Review,* 2010}
- Typical student with DBP will have 10 or more ODRs per year
- Students with 10 or more ODRs should be considered a *chronic discipline problem*

Behavior Rating Scales

- Achenbach System of Empirically Based Assessment (TRT, CBCL, YSR)
  - Aggressive behavior
  - Attention problems
  - Conduct problems
  - Defiance problems
  - Opposition problems
  - Rule-breaking behavior

- Behavioral Assessment System for Children-3
  - Aggression
  - Attention problems
  - Covert conduct problems
  - Learning problems
  - Oppositional behavior

- Conners Rating Scales
  - Attention problems
  - Hyperactivity
  - Oppositional behavior

Problems in Using Multiple Informants

- Use of multiple informants reports is recommended as "best practice"
- Multiple informants reports of behavior often disagree
- Practitioners & researchers often interpret disagreements as *measurement error*
- Informant discrepancies occur even when informants complete *identical measures*
- Informant discrepancies profoundly impact how practitioners interpret outcomes
- Informant discrepancies arise when:
  - Screening decisions are made (Does the child evidence clinically relevant behaviors?)
  - Classification/Diagnostic decisions (Does the child meet diagnostic criteria for CD/ODD/ADHD?)
  - Treatment response (Did the treatment effectively reduce the child's problem behaviors?)
- 2 ways of interpreting informant discrepancies:
  - Variations among multiple informants can be seen as "error" around a true mean score
  - Informant discrepancies contain value & reflect true expressions of behavior across different contexts

Ways of Handling Informant Discrepancies

- Applying combinational algorithm to ratings
  - "AND" rule (2 or more informants rate behavior the same: Parent & teacher endorse "Fidgets"-most stringent)
  - "OR" rule: (1 informant, parent OR teacher endorse "Fidgets")
- Use statistical techniques to combine ratings
  - Structural equation modeling
  - Examines shared variance among informant ratings
- Select a single outcome measure
  - Primary outcome measure
  - Single informant (parent)
- Assumption: Convergence equals "truth"
- Divergence may reflect degree to which behavior varies across contexts (home versus school)
- Parent-teacher discrepancies in rating of aggressive behavior related to:
  - Environmental cues eliciting behavior (negative peer interactions)
  - Demands placed on child by adult authority figures (parents-teachers)

Summary Points on Informant Discrepancies

- Assessments often use multiple informants to collect information
- Assumption is that each informant produces unique & valid information
- Many individuals assume discrepancies reflect measurement error
- Recent research indicates that discrepancies do *not* reflect measurement error
- Difficulties with interpreting informant discrepancies stem from lack of options for interpreting these discrepancies
- Best practice would be:
  - Analyzing degree to which multi-informant assessments *converge*
  - Analyzing degree to which multi-informant assessments *diverge*
  - Analyzing similarities & differences between contexts in which behavior is rated

Systematic Direct Observations
SDOs

- Considered by many to be the gold standard assessment of DBPs
- Provide a *direct measure* of behavior in natural environment
- Can be used to measure different dimensions of behavior
  - Frequency
  - Temporality (duration, latency, interresponse times)
  - Intensity
  - Permanent Products
- Core Assumptions
  - SDOs considered a sample of behavior in a specific situation (actual behavior-not typical behavior)
  - Involved the repeated measurement of behavior over time
  - Provide idiographic data about an individual
- Disadvantages
  - Extremely expensive, labor intensive form of assessment
  - Requires use of highly trained observers
  - Little data to guide practitioners about the number & length of observation sessions to obtain a representative sample of behavior
  - Reactivity of children who know they are being observed
  - Not accurate in measuring low frequency, high intensity behaviors

Assessment Methods of SDOs

- Event Recording (frequency counts)
- Rate (Frequency/Time observed)
- Duration Recording (how long a behavior lasts)
- Latency Recording (elapsed time between environmental event & initiation of behavior)
- Interresponse Time (elapsed time between occurrences of same behavior)
- Permanent Product Recording (behavioral by-products)
- Interval Recording
  – Whole interval
  – Partial interval
  – Point time sampling
- Antecedent Events
  – Stimulus Events (immediate antecedent event signaling a behavior will be reinforced or S^D
  – Setting Event (temporally remote antecedent event from behavior that has an impact on the occurrence of behavior
  – Establishing (Motivating) Operation (an event that temporarily alters the effectiveness of a reinforcer for behavior)

Examples of Antecedent Events

- Stimulus Events
  - Teacher tells class to get out math books and turn to page 95
  - A student pushes another student in the lunch line
  - Light turns green at an intersection
- Setting Event
  - A student gets into a fight on the bus on the way to school
  - Bus is late in picking child up to go to school
  - A child has an argument with his mom before coming to school
- Establishing Operation
  - Jogging in Baton Rouge in August increases reinforcing effectiveness of water
  - Eating Halloween candy on October 31st alters reinforcing effectiveness of candy on November 1st
  - Coming to school without eating breakfast leads to inattentiveness in class

Direct Behavior Ratings
(DBRs)

- Origins traced to late 1960s
- Has gone by different names:
  - Daily Report Card
  - Good Behavior Letter
  - Brag Sheet
  - School-Home Notes
- DBRs are a hybrid tool combining rating scale & direct observation
- Teacher might rate degree to which a student was academically engaged in a 60-minute time period (0-not at all engaged to 10-completely engaged)
- Ratings take place in *close proximity* to the target behavior (like direct observations)
- Advantages:
  - More direct than behavior rating scales
  - Sensitive to change
  - Much less expensive & time consuming than direct observations
  - Extensive empirical data on reliability & validity
  - Flexibility
  - Repeatable
  - Efficient

# DBR Blueprint for Selecting Target Behaviors

- Determine appropriate level of assessment or intervention
  - Global indicators most appropriate for universal (Tier 1) & specific indicators for intensive (Tier 3)

- Determine appropriate level of behavioral molarity
  - Target global constructs (disruptive behavior, social competence) or specific indicators (calling out, expressing frustration appropriately)

- Ensure behavior is reliably measured
  - Best used to target behaviors that can be *directly observed* & do not require a high level of inference

- Ensure the behavior is socially valid
  - Target behaviors should be considered important to stakeholders within a particular context & relevant to both instruction & intervention planning

- Consider inclusion of positive behavior targets
  - If goal of intervention is to both reduce negative behaviors & to increase positive behaviors, it is important to ensure that the DBR includes these replacement behaviors

Example of DBRs

- ***Academically Engaged:*** Actively or passively participating in classroom activity (writing, raising hand, answering questions, listening to teacher, reading silently)
- ***Respectful:*** Compliant & polite behavior in response to adult direction and/or interactions with peers & adults (follows directions, prosocial interaction with peers, positive response to adult requests)
- ***Disruptive:*** Student action than interrupts regular school or classroom activity (out of seat, fidgeting, playing with objects, acting aggressively, talking/yelling)
  - Rate on a 0 to 10 Scale Reflecting % of Time
- 0%-Never
- 50%-Sometimes
- 100%-Always

Briesch, A., Chafouleas, S., & Riley-Tilman, C. (2016). *Direct behavior rating: Linking assessment, communication, and intervention.* New York: Guilford Press.

DBR Example

Disruptive

0%	50%	100%
Never	Sometimes	Always
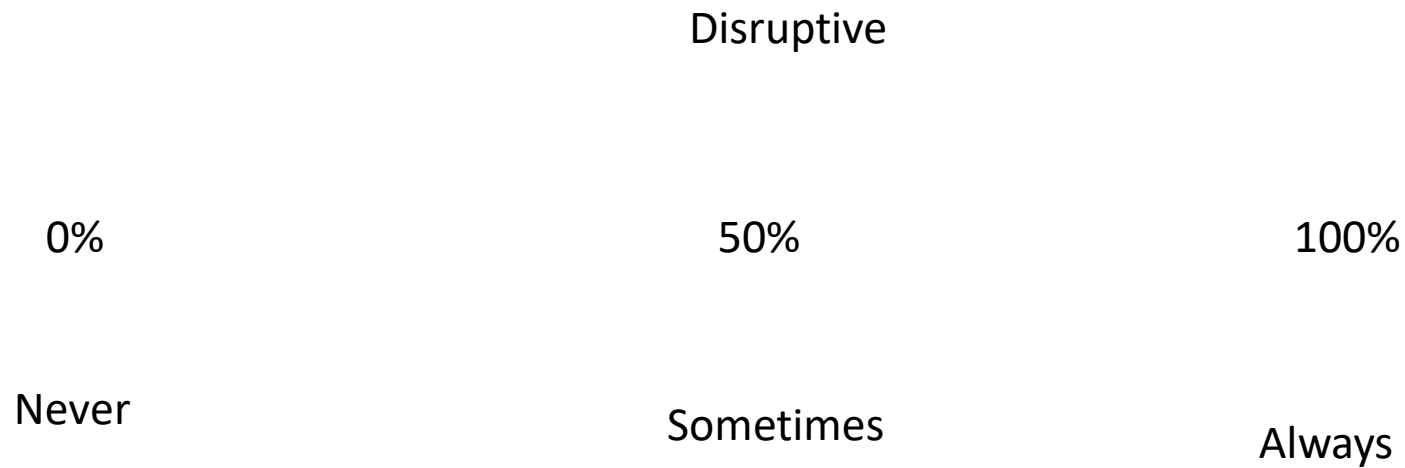
Complete 1 of these after each instructional block

Disruptive is defined as student action that interrupts regular school or classroom activity. For example, out of seat, fidgeting, playing with objects, acting aggressively, talking/yelling about things that are unrelated to classroom Instruction.

Functional Behavioral Assessment & DBPs

- FBA used increasingly to match intervention strategies to behavioral functions
- FBA defined as systematic process for identifying events that reliably predict & maintain behavior
- Uses multiple methods for gathering information about *antecedents* & *consequences* surrounding behavior
- FBA is concerned with the *purpose* that behavior serves for an individual
- Only 2 functions of behavior:
  - *Positive reinforcement:* Involves anything that bring behavior into contact with a positive stimulus
  - *Negative reinforcement:* Behavior or action leads to escape, avoidance, delay, or reduction of an aversive stimulus
- Example: Student engages in disruptive behavior & receives frequent attention for this behavior (maintained by social positive reinforcement).
- Example; Student engages in disruptive behavior while he or she is supposed to be completing math worksheets (maintained by escape from math task demands-negative reinforcement)

Further Division of Behavioral Functions

- Social Attention/Communication (positive social reinforcement)
- Access to Tangible Reinforcement or Preferred Activities (material or activity reinforcement)
- Escape, Avoidance, Delay, or Reduction of Aversive Tasks or Activities (negative reinforcement)
- Escape or Avoidance of Other Individuals (negative social reinforcement)
- Internal Stimulation (automatic or sensory reinforcement)

What Behavioral Functions *Can't* Be Assessed with FBA?

- Lies
- Cheats
- Steals
- Sets fires
- Brings weapons to school
- Abusing animals

Behavioral Hypotheses and FBA

- Behavioral hypotheses are testable statements regarding the functions of behavior
- May be several hypotheses for a given behavior
- Behavioral hypotheses should include:
  - Setting events and/or establishing operations
  - Immediate antecedent events (discriminative stimulus or S^D
  - Problem behavior(s)
  - Maintaining consequence(s)
- Examples:
  - Frank is more likely to engage in disruptive and noncompliant behaviors when he comes to school without breakfast (establishing operation) and is asked to complete difficulty math tasks (immediate antecedent). Hypothesized function is escape from difficult, non-preferred tasks.
  - Frank is more likely to engage in disruptive and noncompliant behaviors during group instruction activities (immediate antecedent) and when he has had an altercation with peers before school (setting event). Hypothesized function is peer social attention for disruptive and noncompliant behaviors.
  - Frank is more likely to engage in disruptive and noncompliant behaviors when he has not had enough sleep the night before (establishing operation) and is asked to complete tasks within a cooperative learning situation (immediate antecedent). Hypothesized function is avoidance of non-preferred activities involving cooperative learning activities.

FBA Summary

- FBAs useful in designing effective interventions for students
- Some behaviors are not amenable to FBA methods
  - Low frequency, high intensity behaviors
  - Physical assaults, fire setting, sexual assault
- Other behaviors are covert in nature& difficult to assess with FBA methods
  - Theft, vandalism, cruelty to animals, depression, anxiety
- Many interventions can be effective without using FBA methods
- You don't necessarily have to know the function of behavior to change it
- Some highly effective interventions *not* based on behavioral function
  - Good Behavior Game
  - Checkin/Checkout
  - Self-Monitoring
  - School/Home Note Systems
  - Cognitive Behavior Therapy
  - And Many More

Oneill, R., Albin, R., Storey, K., Horner, R., & Sprague, J. (2014).
Functional behavioral analysis and program development (3rd ed.)
New York: Centage Learning.

Summary Points

- Assessment of DBPs involve 5 types of decisions
  - Screening decisions
  - Identification & classification decisions
  - Intervention decisions
  - Progress monitoring decisions
  - Documentation of intervention outcome decisions
- 2 types of errors are made in the screening process
  - False positives (false alarm)
  - False negative (broken alarm)
- Correct decision in screening
  - Sensitivity (who they are)
  - Specificity (who they aren't)
- Problem solving assessment is based on determining whether or not there is a significant discrepancy between current and desired levels of performance
- Problem solving assessment occurs in 4 stages
  - Problem Identification
  - Problem Analysis
  - Plan Implementation
  - Plan Evaluation

Summary Points
(continued)

- 3 commonly used screening tools:
  - Systematic Screening for Behavior Disorders-2 (SSBD-2)
  - Early Screening Project (ESP)
  - Student Risk Screening Scale (SRSS)
- Office discipline referrals can be used as a screening tool & is an important metric to assess the number & types of behavior problems
- Broadband behavior rating scales are completed by multiple informants & provide norm-referenced scores to determine which students have DBPs
- Systematic direct observations are used to make progress monitoring decisions & to compare baseline performance to post-intervention performance
- Direct behavior ratings are hybrid assessment tools than are most cost efficient & less expensive than direct observations
- Functional behavioral assessment is used to identify environmental events that predict & maintain behavior
- Behavior function is either positive reinforcement or negative reinforcement
- Highly effective interventions can be used without knowing the function of behavior

Issues & Guidelines in Implementing Interventions

- Many children with DBPs will require interventions that extend beyond the school setting
- Schools are a vital setting & context for intervening with students with DBPs
- About 10% of children have DBPs
- Many will not qualify for special education under category of Emotional Disturbance
- Schools often resort to reactive, punitive practices to deal with these students
- Reactive practices include suspensions, expulsions, reprimands, "talk therapies", & other non-evidence-based strategies
- Example of an At-Risk Population: Early reading literacy (Juel, 1988)
  - If a child is a poor reader in Grade 1, the probability of continuing to be a poor reader in Grade 4 is .88
  - If a child is a good reader in Grade 1, the probability of continuing to be a good reader in Grade 4 is .87
- Antisocial behavior pattern (Kazdin, 1987)
  - If this pattern of behavior is not remediated by end of Grade 3, children are highly likely to continue this pattern of behavior in adolescence and adulthood
  - After Grade 3, this behavior can be "managed", but not "cured" (e.g., diabetes)

Small Group Activity

Get into groups of 3-4 people. Generate 1 or 2 questions about the material presented in this section on assessment. Elect a spokesperson to ask the question(s).

Multi-Tiered Interventions
U.S. Public Health Service

- Primary Prevention: To prevent harm (Universal or Tier 1 Interventions)
- Secondary Prevention: To reverse harm (Selected or Tier 2 Interventions)
- Tertiary Prevention: To reduce harm (Intensive or Tier 3 Interventions)

Factor Related Behavior's Response to Intervention

- SEVERITY
    - Defined using objective dimensions of behavior such as frequency, duration, and/or intensity
    - These behaviors are more *resistant to change* via intervention
    - These behaviors produce higher rates of positive & negative reinforcement
    - Using an analogy to physics, the "force" (strength of intervention) is often insufficient to change the "momentum" (behavioral severity) of the behavior
    - Recall these behaviors are shaped & maintained from a very early age
    - Based on this learning history, interventions must have sufficient "force" (strength) to change this resistant behavior pattern

- CHRONICITY
    - Constant, continuing, & long term
    - Chronic: "Habits that resist all efforts to eradicate them"
    - Chronic: "Deep-seated aversion to change"
    - RTI embraces this meaning of the term chronic (resistance to change)
    - DBPs are patterns of behavior that continue despite efforts to change them
    - Another definition of "chronic" is the recurrence of behaviors once they have been changed
    - Above refers to a problem in *maintenance* of behavior change over time

Factors Related to Behavior's Response to Intervention
(continued)

- GENERALIZABILITY OF BEHAVIOR CHANGE
  - Generalization & maintenance of behavior change directly related to RTI
  - Severe behavior pattern will tend to show less generalization across settings & maintenance over time
  - Many students with DBPs are quick to discriminate intervention from non-intervention conditions
  - Since discrimination is the polar opposite of generalization, behavior often deteriorates to baseline levels
  - Students with DBPs may show excellent initial behavior change, but fail to show generalization & maintenance
  - Replacement behavior training (discussed later) is a better choice for intensive interventions

- TREATMENT STRENGTH
  - Refers to ability of intervention to change behavior in desired direction
  - Strong treatments produce greater amounts of behavior change than weaker treatments
  - Treatment strength is not absolute but situationally, behaviorally, & individually specific
  - Some treatments are strong in some settings but not others (home versus school)
  - Some treatment are strong for changing some behaviors but not others (work completion versus aggression)
  - Some treatments are strong for some individuals but not others
  - Treatment strength for behavioral interventions cannot be specified a priori
  - Treatment strength in RTI is indexed by magnitude of behavior change produced

Factors Related to Behavior's Response to Intervention
(continued)

- TREATMENT INTEGRITY
  - Accuracy with which interventions are delivered as planed, intended, or programmed
  - 3 dimensions of treatment integrity:
    - Treatment adherence (degree to which treatment is delivered as planned or intended)
    - Interventionist competence (skill & experience of person delivering the treatment)
    - Treatment differentiation (degree to which treatments can be differentiated)
  - In RTI, one must demonstrate that measurable changes in behavior can be attributed to measurable changes in the environment (i.e., the intervention)
  - Not a 1 to 1 correspondence between level of treatment integrity & level of outcome produced
  - Some treatments can be implemented with less than perfect integrity & still be effective (strong treatment)
  - Other treatments can be implemented with perfect integrity & still be ineffective (weak or wrong treatment for a problem)
  - If an intervention is implemented with 70% integrity but is not producing adequate outcomes, then efforts to improve integrity should be undertaken
  - If an intervention is implemented with 60% integrity and is producing adequate outcomes, then increasing integrity may not be cost beneficial

Factors Related to Behavior's Response to Intervention
(continued)

- TREATMENT EFFECTIVENESS
  - Visual inspection of graphed data
    - Level
    - Trend
    - Immediacy of effect
    - Percent of data points exceeding median data point

Importance of Social Validity

- Deals with 3 questions:
  - What should we change?
  - How should we change it?
  - How will we know it was effective?
- Social Significance of Goals (What should we change?)
  - Can be established in relation to how consumers value certain behaviors
  - Can be assessed via questionnaires that sample consumer opinions
  - Better may be *habilitative validity* (promotion of behaviors that allow for successful adaptation to school, home, and community settings
  - Some questions to ask regarding social significance of goals:
    - Does this behavior present danger to the student or others?
    - How many opportunities will the student have to exhibit new behaviors?
    - How often does the problem behavior(s) occur?
    - Will changing the behavior produce higher rates for reinforcement for the student?
    - What will be the relative importance of this target behavior to future skill development and adaptive functioning?
    - How amenable is the target behavior to change?
    - What is the cost-benefit ratio of changing this behavior?

Importance of Social Validity
(continued)

- Social Acceptability (How should we change it?)
  - Not all interventions for changing DBPs are acceptable to consumers
  - Treatment acceptability may be defined as a judgment of whether a treatment is fair in relation to a problem, is reasonable and nonintrusive, and is consistent with what a treatment should be
  - Acceptability is the initial issue in treatment selection & use
  - If a treatment is considered acceptable, then it is more likely to be implemented by a consumer
  - Treatment use & effectiveness is moderated by treatment integrity
  - More direct measure of acceptability would be use and integrity
    - If a treatment is not implemented as planned, then some aspect of the treatment is unacceptable
    - If a treatment is not used at all, then it is completely unacceptable to the consumer

- Social Importance of Effects (How will we know it was effective?)
  - Does the quantity and quality of behavior change make a difference in an individual's everyday functioning?
  - Proximal, intermediate, and distal effects
  - Did the intervention move the behavior from a dysfunctional to a functional distribution?
  - 4 methods of establishing social importance of effects:
    - Social Comparisons (comparing target individual's behavior to relevant peers)
    - Subjective Evaluations (have treatment consumers rate qualitative aspects of behavior change)
    - Combined Social Validation Procedures (social comparisons + subjective judgments)
    - Changes on Social Impact Measures (school dropout, attendance, suspensions/expulsions, arrest rates)

Suggested Readings

- Patterson, G. (2002). The early development of coercive family process. In J. Reid, G. Patterson, & J. Synder (Eds.), *Antisocial behavior in children and adolescents: A developmental analysis and model for intervention* (pp. 45-64). Washington, DC: American Psychological Association.

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Some Study Questions

- DBPs account for what percent of the school population?
- What are the 2 types of DBPs and what are their characteristics?
- What are the 2 types of conduct disorder? Which type has the worst prognosis?
- Oppositional defiant disorder is mainly a problem in what?
- What are the 3 pathways of DBPs?
- What are the 3 developmental models of DBPs?
- DBPs are primarily learned via what process? What learning principle is this based upon?
- What type of research provides the strongest evidence?
- What are the 3 criteria used to judge outcomes in single case experimental designs?
- What are the 4 stages of the problem solving process?
- What are sensitivity and specificity in the use of screening tools?
- What are some commonly used screening tools?
- What are 3 ways of handling informant discrepancies?
- What are 3 advantages of direct behavior ratings?
- What are the 2 primary functions of behavior?
- What are 6 factors related to a behavior's responsiveness to intervention?
- What are the 3 aspects of social validity?

Evidence-Based Approaches to Assessment and Intervention with Disruptive Behavior Problems
Afternoon Session

Frank M. Gresham, Ph.D.

Louisiana State University

Evidence-Based School Interventions:
A Multi-Tiered Approach

- Not too long ago, school-based consultants & teachers relied on interventions based on familiarity, training, & relative ease of implementation
- Over past decade, this practice changed dramatically & school personnel increasingly rely on evidence-based practices
- Recall that evidence-based practices are those based on broad range of rigorous research methodologies
  - Observation of behavior to formulate hypotheses
  - Qualitative research
  - Single case experimental designs
  - Efficacy studies (tightly controlled studies high in internal validity)
  - Effectiveness studies (looser controlled studies high in external validity)
  - Meta-analyses (quantitative syntheses of empirical literature)
- Schools are vital settings for intervening with students having DBPs
- Schools are unique because they are the one place where teachers & students spend a significant amount of time together (over 5500 hours per school year)
- This creates virtually unlimited intervention opportunities

Intervention Considerations

- Many school administrators view students' behavior problems as stemming from factors outside the school (low socioeconomic status, single-parent homes, lack of male role models, living in high crime neighborhoods)
- These are important risk factors that are unfortunately uncontrollable by schools
- Some of these administrators often do not view schools as proactive agents in prevention & intervention efforts (that's somebody else's job)
- Schools often use interventions that are either ineffective or, in some cases, downright harmful
  - Inverse relationship between out-of-school suspensions & academic achievement (Noltemeyer et al., 2015)
  - Much lower correlation between in-school suspension & academic achievement
- Developing & implementing behavioral interventions requires knowledge, skill, sensitivity, & tact, particularly for interventions developed via consultation
- Multi-tiered interventions:
  - Universal or Tier 1 (Effective with about 80% of students)
  - Selected or Tier 2 (About 15% of students will require these)
  - Intensive or Tier 3 (About 5% of students will require these)
- Above is simply a heuristic, roadmap, or rule of thumb for thinking about a problem—not an absolute

Multi-Tiered Interventions

- No single tier solves all problems (penicillin won't cure everything)
- A well-designed multi-tiered system will have hierarchical tiers of increasing intensity (physicians triage medical treatments)
- An intervention is increased in intensity only if it is ineffective in changing behavior
- Every child does not have to go through all 3 tiers (some may need to be "fast tracked" to more intense tiers immediately-Send them to the Behavioral ER)*
- Effective interventions at lower-level tiers reduce the need for interventions at subsequent tiers
  - A good Tier 1 will reduce the numbers needing Tiers 2 and 3
  - A good Tier 2 will reduce the numbers needing Tier 3

*We would not put Charles Manson or Ted Bundy in the Good Behavior Game or Checkin/Checkout They would need to be "fast tracked" to Tier infinity

Triage
To Separate
Developed in World War I

- Those likely to die regardless of care they receive

- Those unlikely to die regardless of care they receive

- Those whom immediate care might make a positive difference in outcome

Some Questions

- What are the factors related to a behavior's response to intervention?
- What are some ways you can determine the effectiveness of a treatment for an individual case?
- What are the 3 aspects of social validation?
- What are the 2 basic types of RTI used in schools?
- What are some punishment based intervention approaches?
- What are some non-punishment-based reductive intervention approaches?
- What is the *most effective* Tier 1 intervention approach for reducing disruptive classroom behavior?

Conceptualization of School-Based Behavioral Interventions

- Applied Behavior Analysis
  - 3-term contingency (ABC)
  - Uses FBA to design function-based interventions
  - FBA *not required* in all cases
  - Many interventions effective without conducting a functional behavioral assessment
- Social Learning Theory
  - Vicarious reinforcement
  - Cognitive mediational processes
  - Model-observer similarity, reinforced modeling, narrated modeling
- Neobehavioristic S-R Theory
  - Based on classical (respondent) conditioning
  - CS-UCS pairing eliciting CR-UCR
  - Systematic desensitization & exposure-based treatments (anxiety disorders)
  - Effectiveness based on respondent extinction (CS presentation without UCS)--exposure
- Cognitive Behavioral Theory
  - Goal is to change maladaptive cognitions
  - Self-instruction, self-evaluation, problem-solving

Some cases may draw upon all 4 of the above

Examples of Multi-Tiered Interventions

- Universal or Tier 1 Interventions
  - All students receive identical "dosage" of the intervention
  - Schoolwide discipline plans
  - Positive behavior support
  - Districtwide bully prevention programs
  - Social emotional learning curricula in general education classrooms
- Selected or Tier 2 Interventions
  - Many students will respond to simple, individually-focused behavioral interventions
  - Not based on functional behavioral assessment
  - Behavioral contracts, checkin/checkout interventions, school-home notes, response cost, differential reinforcement (DRO, DRA, DRL)
- Intensive or Tier 3 Interventions
  - Reserved for students who exhibit chronic, resistant behavior problems (1-5% of school population)
  - These students responsible for 50-60% of school building & classroom resources
  - Do not respond to universal or selected interventions
  - Require intense, highly individualized & comprehensive interventions
  - Often require participation of multiple agencies outside school setting
  - Often will require a functional behavioral assessment to determine "causes" of behavior
  - Even with a FBA, many students will need more than that (wraparound services)

RTI as a Basis of Selecting Interventions

- Basis for intensifying, modifying, or changing an intervention
- Based on discrepancy between current & desired levels of performance
- Any intervention not producing discrepancy should be modified or changed
- Example:
  - Student exhibits high rates of disruptive & noncompliant behavior
  - Entire school is based on PBIS program
  - Teacher has established rules & procedures & posted in classroom
  - Teacher consults with school psychologist who conducts behavioral observations
  - Based on this assessment, school psychologist recommends differential reinforcement of incompatible behavior (DRI) delivered on a variable ratio (VR) schedule
  - School psychologists subsequently conducts treatment integrity checks
  - If student does not respond adequately, then a *stronger* Tier 2 or Tier 3 intervention may be required
- Major advantage of RTI is its *treatment validity*
- *Treatment validity* is degree to which assessment procedures informs or contributes to beneficial treatment outcomes

Some Thoughts on Treatment Strength

- Problem with psychological treatments is we cannot really know how strong a treatment is *a priori*

- We can only really know strong a treatment is by how much it changed behavior

- Some *a priori* considerations of treatment strength:
  - Frequency (how often it is delivered)
    - Once a day
    - Twice a day
    - 3 days per week
    - 5 days per week
  - Duration (how long the treatment lasts)
    - 10 minutes per day
    - 30 minutes per day
    - Over 2 weeks
    - Over 5 weeks
  - Intensity (how much treatment is delivered or "dosage")
    - Schedule of reinforcement (CRF versus VR-5)
    - Number of treatment agents (teacher only versus teacher+parent+student)
    - Number of settings treatment is delivered (school only, home only, home+school+community)

CONSIDERATIONS

- A treatment may be strong for some students and not others
    - Good Behavior Game is "strong" for about 85% of students
    - Good Behavior Game is "weak" for severely disruptive students (3-5%)
- FBA-based treatments are "strong" for most, but not all, students
- Treatment strength is related to behavioral severity
    - Many treatments will be strong with mild disruptive behavior problems
    - Few treatments will be strong with severe, chronic disruptive behavior problems
    - Often the case with severe, chronic behavior problems we can only "manage" these behaviors
        - Example: Diabetes cannot be cured but it can be managed with diet, exercise, and insulin
        - Example: Autism cannot be cured but it can be managed with intensive, strong ABA-based programs
        - Example: Conduct Disorder after age 8 can only be "managed"
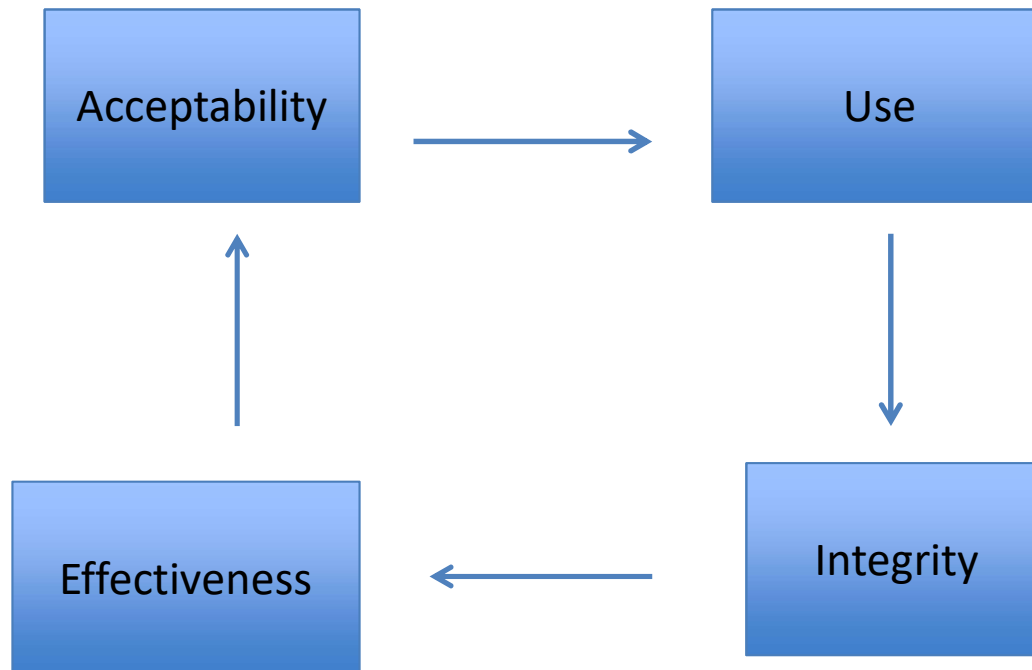
Types of RTI Used in Schools

- Problem Solving RTI
  - Based on behavioral consultation model (Bergan, 1977; Bergan & Kratochwill, 1990)
  - Takes place in 4 phases
    - Problem Identification
    - Problem Analysis
    - Plan Implementation
    - Plan Evaluation
  - Based on discrepancy between current & desired levels of performance
  - Example:
    - Noncompliant behavior is 10 episodes per day
    - Teacher can tolerate 2 episodes per day
    - Discrepancy = 8 episodes per day
    - Goal: 80% reduction in noncompliant behavior
  - Most types of DBPs result from motivational or so-called *performance deficits (Won't Do)*
  - Reason for this based on Matching Law described earlier (response rate matches reinforcement rate)
  - Can also be due to lack of opportunities to perform desired behaviors
  - BIG IDEA: ***DATA-BASED DECISION MAKING***

Types of RTI Used in Schools
(continued)

- Standard Protocol Approaches
  - Manualized treatment protocols that have been validated
  - Can be implemented with integrity by most professionals
  - Characteristics:
    - Clear description of procedures, strategies, & activities
    - Specification of length, duration, & intensity of intervention services
    - Definition of target population
  - Advantages:
    - Reduces variability in treatment implementation
    - Increased treatment integrity
    - Specifies theoretical basis of treatment
    - Describes sequence of intervention components
    - Specifies procedures for dealing with deviations from treatment protocol
    - Built-in flexibility procedures in implementation of treatment
  - Most behavioral interventions used in schools have no standard treatment protocols
  - We lack an adequate library of manualized school-based behavioral interventions
  - See Intervention Central Website for Some Ideas (Jim Wright)

Conceptual Model of Behavior Change

Acceptability

Intervention Rating Profile
Rate on 5-point Likert Scale (Strongly Agree to Strongly Disagree)

- This would be an acceptable intervention for the child's problem behavior.
- Most teachers would find this intervention appropriate for behavior problems.
- The intervention should prove effective in changing child's problem behavior.
- I would suggest the use of this intervention to other teachers.
- The child's behavior is severe enough to warrant use of this intervention.
- Most teachers would find this intervention suitable for the behavior problem described.
- I would be willing to use this intervention in the classroom setting.
- This intervention would not result in negative side effects for the child.
- This intervention would be appropriate for a variety of children.
- The intervention is a fair way to handle the child's problem behavior.
- I like the procedures used in the intervention.
- Overall, this intervention would be beneficial to the child.

Range of Scores: 12 to 60: Acceptable=48 or greater Neutral to Unacceptable = <36

Importance of Treatment Integrity

- Accuracy with which interventions are implemented as planned, intended, or programmed is known as *treatment integrity* (fidelity)
- Treatment integrity is important concept across number of disciplines:
  - Medicine: Treatment adherence
  - Clinical psychology: Treatment fidelity
  - Applied behavior analysis: Procedural reliability
  - Substance abuse treatment: Program implementation
- In RTI, one cannot claim that a change in behavior is due to a given treatment without measuring the degree to which the treatment was implemented as planned
- 4 things can happen in any given treatment:
  - Treatment implemented as planned and behavior shows significant change
  - Treatment implemented as planned and behavior does not show significant change (weak treatment)
  - Treatment not implemented as planned and behavior shows significant change (strong treatment)
  - Treatment not implemented as planned behavior does not show significant change

Graphic of Treatment Integrity

	Behavior Changed	Behavior Did Not Change
High Integrity	Treatment implemented as planned (expected)	Treatment implemented as planned (weak treatment?)
Low Integrity	Treatment not implemented as planned (strong treatment?)	Treatment not implemented as planned (expected)

Dimensions of Treatment Integrity

- Treatment adherence
  - Accuracy & consistency with which a treatment is implemented
  - Treatment component adherence & daily/session adherence

- Interventionist Competence
  - Skill & experience of interventionist in implementing treatment
  - Reflects judgments of how well a treatment is delivered

- Treatment differentiation
  - Theoretical distinctions among 2 or more treatments
  - Reflects how these differences are represented in treatment delivery
  - Example: Cognitive behavior therapy based on how individual thinks about situations & responds
  - Example: Applied behavior analysis based on effects of the 3-term contingency (ABC)

Variables Related to Treatment Integrity

- Variables Related to the Intervention
    - Complexity of intervention
    - Materials/Resources Needed for the Intervention
    - Ease of Implementation
- Variables Related to the Interventionist
    - Motivation to implement the intervention
    - Skill proficiency required to implement the intervention
    - Self-efficacy of interventionist (confidence in implementing intervention correctly)

Measurement of Treatment Integrity
Good Behavior Game

Component	Monday	Tuesday	Wednesday	Thursday	Friday	Sum	Adherence
Divide class Into 2 groups	X	X	X	X	X	5/5	100%
Game rules posted	X	X	X	X	X	5/5	100%
Teacher announces game starting	X	O	X	O	X	3/5	60%
Mark on board for rule violation	X	X	X	X	O	4/5	80%
Announces winner	X	X	X	X	O	4/5	80%
Sum	5/5	4/5	5/5	4/5	3/5	21/25	84%
Adherence	100%	80%	100%	80%	60%	84%	

Treatment Integrity:

Things We Don't Know

- No reliable database to guide us about optimal levels of integrity
- We do know that higher levels of integrity usually produce better outcomes
- Some problems, treatment integrity of 70% may be sufficient
- Other problems, treatment integrity of 90% may be required
- Some treatments could be effective with moderate levels of integrity
- Other treatment may only be effective with high levels of integrity
- We need *treatment integrity effect norms*
  - Quantifying what levels of integrity, measured by what methods, with what interventions, produce what levels of integrity
  - Good Behavior Game: May well be the case that 65% integrity will still be effective
  - We could establish these norms across multiple tiers of intervention
- School districts could gather & catalog this information for future reference

Ineffective Psychological Treatments for Antisocial Behavior

- Juvenile Transfer Laws
  - Serious juvenile offending can be transferred to adult courts
  - Review of research shows that these transfers actually *increase* recidivism rates
  - Explanation: Lack of focus on rehabilitation & negative effects of being labeled convicted felon

- Scared Straight Programs
  - Visits of delinquents to prisons & interaction with incarcerated inmates
  - Meta-analysis showed that youth attending this program did *worse* that those who received nothing
  - Scared Straight attendees much more likely to be *rearrested* than those who did not attend

- Boot Camps
  - Involves rigorous physical conditioning & military-type discipline
  - Activities designed to increase self-esteem, confidence, & leadership capabilities
  - Review of research found no differences between treatment & control groups
  - Military component of these camps is ineffective in reducing recidivism

- Drug Abuse Resistance Education (DARE Program)
  - Meta-analyses show that this program has *no effect* on future drug use/abuse
  - Some research suggests that DARE recipients *increase* drug use after the program

Evidence-Based School Interventions

- Good Behavior Game (GBG)

- Behavior Education Program (BEP)

- First Steps to Success (FSS)

- Interventions Based on Functional Behavioral Assessment
  - Punishment-Based Procedures
    - Verbal reprimands
    - Response cost
    - Overcorrection
    - Timeout
  - Non-Punishment-Based Procedures
    - Extinction
    - Differential reinforcement (DRO, DRA, DRL)

Good Behavior Game (GBG)

The "Go To" Universal Intervention for Disruptive Classroom Behavior

- Divide class into 2 teams

- Game rules described by teacher

- Put GBG into effect for a designed class period

- Any time student breaks a rule his/her team gets a mark on the board

- Teacher totals number of marks for each team

- Teacher announces a winner of the GBG

- Winning team picks rewards

Based on an interdependent group contingency

GBG
What the Research Says

- Since it first appeared in 1969, it has undergone numerous independent replications
- It has accrued a great deal of empirical support & demonstrates effects across different classrooms (preschool, elementary, middle school, high school)
- Across different disability types & different behaviors
- GBG requires following best practices in classroom management:
    - Establish & maintain rules & expectations
    - Consistently track student behavior
    - Provide corrective feedback for behavior
    - Reinforce appropriate behaviors
- GBG considered to be a highly effective "behavioral vaccine" (it "inoculates" kids against long-term negative consequences)
- Some Outcomes (based on Baltimore study)
    - 5% reduction in special education placements (could save $2-$4 million per year)
    - 2% reduction in involvement in corrections (could save $3-$10 million per year)
    - 4% reduction in lifetime prevalence of tobacco use (could save millions in medical costs)

GBG:
Some Research Studies

- Gresham, F.M., & Gresham, G.N. (1982). Independent, dependent, and independent group contingencies for controlling disruptive behavior. *The Journal of Special Education, 16,* 101-110.

- Gresham, F.M. (1983). Use of a home-based dependent group contingency system in controlling destructive behavior. *School Psychology Review, 12,* 195-199.

- Crouch, P., Gresham, F.M., & Wright, W. (1985). Interdependent and independent group contingencies with immediate and delayed reinforcement for controlling classroom behavior. *Journal of School Psychology, 23,* 177-187.

- Robichaux, N.M., & Gresham, F.M. (2014). Differential effects of the Mystery Motivator using chosen and unknown reinforcers. *School Psychology Review, 43,* 286-298.

- Hartman, K., & Gresham, F.M. (2015). Differential effectiveness of interdependent and group contingencies for controlling disruptive classroom behavior. *Journal of Applied School Psychology, 31,* 1-25.

- Smith, N.R., & Gresham, F.M. (2016). Effects of various seating arrangements and the Good Behavior Game on reducing disruptive classroom behavior. *Manuscript submitted for publication.*

Behavior Education Program

(Crone, Horner, & Horner, 2004)

- BEP is a school-based program targeting students at-risk for developing serious or chronic behavior problems
- Students failing to respond to Tier 1 interventions & who receive many office discipline referrals (ODRs) may benefit from the BEP
- Based on Checkin/Checkout system
- Provides immediate feedback on behavior via Daily Progress Report (DPR)
- Uses contingent adult attention for appropriate behavior
- School-home communication facilitated via DPR
- Points indicated on DPR are recorded and graphed (reviewed every 2 weeks)

Core Features of BEP

- Clearly defined behavioral expectations
- Instruction of teaching appropriate social skills
- Increased positive reinforcement for following behavioral expectations
- Contingent consequences for problem behaviors
- Increased positive contact with an adult in the school
- Improved opportunities for self-management
- Increased home-school collaboration

Features of the BEP

- Continuously available
- Can be implemented within 3-5 days of identifying a problem
- Requires no more than 5-10 minutes per teacher per day
- All teachers & staff at a school can implement the BEP
- Tier 2 intervention *not requiring a FBA*
- Estimated that about 15-20% of students will need Tier 2 interventions
- In a school of 600 students, 90-120 students will need a Tier 2 intervention
- Built-in progress monitoring system (DPR)
- Easily generalizable to other students in school
- Has research suggesting that peers rather than adults can run the program

Daily Cycle of BEP

- Student arrives at school & checks in with an adult
- After checkin, the student receives the DPR
- Student carries DPR throughout school day & hands it to the teacher at start of school day or class period (middle school and high school)
- Student receives DPR after each class period & receives feedback from teacher related to expected behaviors
- At end of day, student returns DPR to the adult to determine if point goals were met
- Student carries copy of DPR home
- Family members receive DPR, deliver recognition for success, & sign form
- Student returns signed DPR the next day

Appropriate & Inappropriate Students for BEP

- Engage in problem behavior throughout school day in multiple settings
- Engage in mild, acting-out behaviors such as talking out, off-task, out-of-seat, poor or inconsistent work completion
- Problem behaviors not related to trying to escape or avoid difficult academic tasks
- Problem behaviors are maintained by adult attention and/or the student finds adult attention reinforcing
- PROBLEM BEHAVIORS MAINTAINED BY POSITIVE REINFORCEMENT

- Engage in problem behaviors in one class only in unstructured settings (lunchroom, playground, bus area)
- Engage in serious or violent behaviors such as extreme noncompliance, aggression, injury to others
- Problem behaviors typically occur when the student is trying to escape or avoid a difficult task or academic subject
- Problem behaviors are maintained by escape or avoidance of academic tasks and/or student does not find adult attention reinforcing
- PROBLEM BEHAVIORS MAINTAINED BY NEGATIVE REINFORCEMENT

First Steps to Success (FSS)

- Coordinated school & home intervention for prevention of antisocial behavior
- Designed for students in Kg=3rd grade
- Consists of 3 interrelated modules:
    - Universal screening & early detection of at-risk students in Kg-2nd grade
    - Implementation of school intervention component that teaches adaptive pattern of behavior
    - Parent instruction in how to teach & reward school success at home
    - Program designed to detect at-risk children & work with them over 3 months
    - Behavioral coach can be early interventionist, school psychologist, school counselor, or behavior specialist

Universal Screening & Early Detection

- Uses multiple gating approach to screen young children (Kg-primary grades)
- Systematic Screening of Behavior Disorders (SSBD)
  - Teacher nomination of externalizing behavior problems
  - Teacher rank ordering of every student in class (Most to Least)
  - Teacher ratings of adaptive & maladaptive behavior (norm-referenced)
  - Teacher ratings of critical behavioral events
- Total cost of FSS, including coach's time, 7 required materials $400 per case
- Coach invests about 40-50 hours over 3 months of the program

FSS School Intervention

- Contingencies for Learning Academic & Social Skills (CLASS)
- 2 major phases:
  - Consultant phase lasting 5 program days
  - Teacher phase from Day 6 to Day 30 (reward & maintenance phases)
- Consultant Phase
  - Proximal & intense monitoring of target behavior
  - Red & green signaling cards used (signaling inappropriate & appropriate behavior)
  - Red card: Response cost (student loses a point)
  - Green card: Reinforcement (student earns a point)
  - Student must earn at least 80 of available points to access group reward activity
- Teacher Phase
  - Reward phase: Days 6-20 (home & school rewards)
  - Maintenance phase: Days 21-30 (only uses teacher & parent praise to maintain behavior)
  - On Day 6, teacher assumes primary control of the CLASS program's procedures
  - Red & green cards completely faded out by Day 15 of the program

Family Support & Parent Training

- Homebase program
- Parent skill building in behavioral interventions
- Program consists of 6 sessions in home with midweek telephone call
- Implemented over 6 consecutive weeks to maximize mastery of material
- In-home meetings:
    - Coach presents skill & provides rationale for its importance
    - Parent & coach complete current skill-level assessment
    - Some lessons enhanced by videotape
    - Daily time chosen for practicing skill
    - Barriers to practicing skills are discussed

Outcomes of FSS Program

- 21 studies have been conducted on effectiveness of FSS
- 2 of these studies were randomized controlled trials that meet What Works Clearinghouse standards for evidence *Without Reservation*
- Walker et al. (1998)
  - Increased academic engaged time (d=0.97)
  - Increased adaptive behaviors (d=1.17)
  - Decreased maladaptive behaviors (d=0.93)
  - Overall effect size (d=1.02)
- Walker et al. (1999)
  - Large increases in teacher rated social skills (d=0.78)
  - Large increases in teacher-rated adaptive behavior (d=0.72)
  - Moderate decreases in parent rated maladaptive behavior (d=0.50)
  - Moderate decreases in teacher rated maladaptive behavior (d=0.50)

Intensive School-Based Interventions
Tier 3 Interventions

- Targets about 3-5% of any given school population

- Characterized by individualized, intense, and assessment-based

- Key feature of most Tier 3 interventions is they are based on *functional behavioral assessment* (FBA)

- Functional Behavioral Assessment
  - Based on 3-term contingency (ABC)
  - Topography of behavior (What it does it look like?)
  - Function of behavior (Why is it occurring?)
  - DSM-5 uses a topographical description of behavior
  - Example: Conduct Disorder
    - Bullying others
    - Lying
    - Stealing
    - Truancy
    - Physically cruel to animals
    - Fire setting
  - All of the above may have different functions

Types of FBAs

- Descriptive FBA
    - Uses systematic behavioral observation of ABCs in natural environment
    - Uses an ABC recording chart
    - Descriptive FBA is *correlational* (not causal) in nature
- Experimental FBA
    - Based on rigorous experimental methodology
    - Pioneered in studying self-injurious behavior (Iwata et al., 1982)
    - Studies using either reversal or multielement designs
    - Conducted in analogue settings
    - Used to make *causal statements* about behavioral function
    - Example of experimental conditions:
        - Escape
        - Attention
        - Alone (automatic or sensory reinforcement)
        - Play (control condition)

Example of ABC Recording Form

Time	Antecedent	Behavior	Consequence
9:30	T tells students to work quietly	S walks around the room	T says "Everyone is working but you"
11:00	Independent math worksheet activity	S pounds on his desk with hands	T asks him to stop the behavior
1:00	Reading group activity	S talks to others in group	T tells him to stop talking
2:00	Lining up for recess	S pushes others in line	Other student push S back
3:00	Lining up for bus	S yells at other students	T tells him to stop

When Do I Need a FBA?

- FBA in *not needed when:*
  - Assessment costs exceed treatment costs
  - Consequences for delaying treatment are minimal
  - There is no link between behavioral function & treatment selection
- Not all behaviors exhibited by students are amenable to a FBA
  - Fire setting
  - Cruelty to animals
  - Stealing
  - Bringing a weapon to school
- 2 models or approaches to assessment of DBPs
  - Functional behavioral assessment (understand why behavior occurs in a specific setting)
  - Risk factor assessment (understand variables that account for risk across multiple settings)
- Are FBA-based interventions more effective (Gage et al., 2012)
  - PND from baseline to intervention was 73.25%
  - HLM showed mean shift of 32.46%
  - FBA-based interventions effective by meta-analysis did not study non-FBA-based interventions
  - We don't know from this if FBA lead to *more effective* interventions

Some Effective Tier 3 Interventions

- Reductive Techniques
  - Based on operant principle of punishment
  - Punishment is stimulus that follows behavior that *decreases* future probability of behavior
  - Punishment and reinforcement mirror images of one another
  - 2 types of punishment
    - Positive punishment: Presentation of a stimulus that decreases behavior (touching a hot stove)
    - Negative punishment: Removal of a stimulus that decreases behavior (parking ticket)
  - Factors influencing effectiveness of punishment:
    - More effective if it is delivered immediately after a behavior
    - More effective if it is high frequency & intensity
    - More effective if delivered continuously rather than on an intermittent schedule

Examples of Punishment Procedures

- Verbal Reprimands
  - Most commonly attempted punishment procedure
  - Teachers using high frequency of verbal reprimands probably will not see huge reductions in behavior
  - Teachers would be better off delivering one strong verbal reprimand: BE QUIET!
  - Reprimands issued repeatedly are easily habituated by students
  - Verbal reprimands can function as a positive reinforcer is function of behavior is *social attention*

- Timeout
  - Loss of opportunity to earn positive reinforcement
  - 3 important considerations in using timeout
    - Difference between time-in and timeout environments
    - Contingent loss of access to positive reinforcement for period of time
    - Decrease in future frequency of behavior subsequent to timeout
  - If student's behavior is maintained by escape/avoidance, the timeout will function as a positive reinforcer (timeout environment preferred to time-in environment)
  - 2 types of timeout
    - Exclusion timeout
    - Non-exclusion timeout (planned ignoring, contingent observation, & timeout ribbon)

Non-Punishment-Based Reductive Procedures

- Extinction
  - Positive reinforcement is withheld
  - Behavior gradually decreases (extinction curve)
  - Highly dependent on schedule of reinforcement
    - Reinforcement withheld 9 times it occurs
    - 10th behavior is reinforced
    - Behavior will not extinguish because it is maintained by thin, intermittent schedule of reinforcement
  - Classic example: Child asks mom for candy at the grocery store checkout
- Extinction can also occur when it is maintained by negative reinforcement
  - Behavior does not produce removal of aversive stimulus
  - Known as *escape extinction* (Example: Disruptive behavior maintained by escape from aversive math tasks. Escape extinction would not allow the student to escape the math task)
- 3 concepts in using extinction
  - Extinction burst (temporary)
  - Spontaneous recovery (temporary)
  - Schedule of reinforcement (behavior maintained on continuous schedule will extinguish more rapidly than behavior maintained on an intermittent schedule of reinforcement

Non-Punishment-Based Reductive Procedures
(continued)

- Differential Reinforcement
  - Reinforcement of one response class & withholding reinforcement for another response class
  - Differential reinforcement has 2 components:
    - Delivering reinforcement contingent on behavior other than the problem behavior (positive reinforcement)
    - Withholding reinforcement for the problem behavior (extinction)
  - 4 basic forms of differential reinforcement:
    - Differential reinforcement of incompatible behavior (DRI)
    - Differential reinforcement of alternative behavior (DRA)
    - Differential reinforcement of other behavior (DRO)
    - Differential reinforcement of low rates of behavior (DRL)
  - DRI
    - Behavior that is incompatible with the target behavior is reinforced
    - In-seat behavior is incompatible with out-of-seat behavior
    - Talking nicely to others in incompatible with talking rudely to others
    - Compliance with teacher instructions is incompatible with non-compliance with teacher instructions
  - DRA
    - Identical to DRI, *except* target behavior is not incompatible with the problem behavior
    - Alternative behavior can be virtually any behavior

Non-Punishment-Based Reductive Procedures
(continued)

- DRO
  - Delivery of a reinforcer for any behavior other than the target behavior
  - DRO refers to the reinforcement of *not responding* or engaging in behavior
  - Essentially, it is the reinforcement of "waiting behavior"
  - Example: DRO-2 minute schedule of reinforcement would provide reinforcement for the first occurrence of behavior *after 2 minutes has elapsed* (fixed interval DRO schedule of reinforcement)
  - Higher the frequency of behavior, the *shorter* DRO schedule should be (DRO-2 minute vs. DRO-30 sec.)

- DRL
  - Reinforcement in which behavior is reinforced if it is separated from previous behavior by a minimal interresponse time (time elapsing between occurrences of same behavior) or if number of behaviors does not exceed a predetermined criterion
  - DRL is designed to reduce but not eliminate behavior
  - 2 types DRL
    - Full session DRL (Frequency of behavior does not exceed predetermined criterion)
    - Spaced responding DRL (Reinforcement is delivered if occurrence behavior is separated by minimum amount of time (e.g., 2 minutes or 5 minutes)

Evidence-Based Home Interventions

- From birth, infants shape behavior of their parents via their behavior
- Having no language skills, infants can control their social environment via their behavior
- Infant's behavior reliably produces caregiver reactions & establish a *contingency*
- Contingency expresses relationship between behavior & proximal or distal environmental events
- Infants learns that crying reliably produces caregiver actions
- Crying will not stop until caregiver displays the *"correct action"*
- Cycle occurs literally thousands of times in course of infant development
- Once language develops, child can communicate needs & desires verbally
- Children with DBPs learn to control their social environment is quite a different way

Understanding DBPs Developmental Mechanisms

- *COERCION* is key mechanism in development of DBPs
- Children live in highly contentious & hostile home environments
- Pain and coercion are fundamental strategies for controlling behavior of others
- Coercion produces effective short-term consequences but negative long-term consequences (peer rejection, school failure, school dropout)
- Children with DBPs learning *primarily via negative reinforcement*
- Coercion becomes part of child's typical interactions with others that produces a high rate of reinforcement
- Developed early in life, the child will bring this coercive behavioral style to school
- Child must be taught that social goals can be met without coercion
- DOING SO, HOWEVER, IS NOT EASY TASK

Helping the Noncompliant Child
(McMahon & Forehand, 2003)

- Designed for children 3-8 years of age
- Takes place in individual parent training sessions weekly for 10 weeks (60-90 minutes per session)
- Includes use of positive feedback for appropriate child behaviors, ignoring minor negative behaviors, giving children clear directions providing praise for appropriate behaviors, and timeout for rule violations
- Uses modeling, coaching, role playing, and in vivo training in the clinic or home
- Key aspect of program is *clear commands* (alpha commands)
- Alpha command is a clear instruction that specifies exactly what the parent wants the child to do ("Make up your bed" "Pick up your toys" "Take the trash outside")
- Child has 5 seconds to comply with an alpha command
- Beta command are unclear directives that take a range of forms (Chain command: "Turn off the TV" "Put your plate in the sink" "Do your homework"
- Vague beta commands do not specify behavior ("Be careful" "Act your age" "Be a good boy")
- Let's commands imply the parent and child will perform a task together ("Let's go clear up your room"

Parent Management Training-Oregon Model

Oregon Social Learning Center

- Focuses on teaching parents basic behavioral principles for managing & changing child behavior

- Encourages parents to monitor their child's behavior

- Therapists meet individually with parents of children 3-12 years of age

- Program typically involves 10, 1 hour treatment sessions plus twice weekly telephone contacts

- Base on 5 core principles:
  - Discipline
  - Monitoring
  - Parent involvement
  - Positive family management techniques
  - Crisis intervention

- Well-established treatment for disruptive behavior problems

Anger Coping & Coping Powers Programs

- Based on contextual social-cognition model
  - Changes maladaptive parenting practices
  - Changes children's social information processing problems concerning aggressive behavior
- Issues addressed:
  - Anger management
  - Perspective taking
  - Social problem solving
  - Emotional awareness
  - Relaxation training
  - Social skills training
  - Positive social & personal goals
  - Dealing with peer pressure
- Coping Power Program adds parent component

Anger Coping Program

(Lochman et al., 2002)

- Addresses anger arousal & social-cognitive processes

- Designed for 5-7 children in group format

- Sessions have been successfully implemented on individual basis

- 18 sessions for 60-90 minutes per session (18-27 hours of treatment)

- Sessions for the Anger Coping Program:

    - Introduction & group rules
    - Understanding & writing goals
    - Anger management: Puppet self-control task
    - Using self-instruction
    - Perspective taking
    - Looking at anger
    - What does anger feel like?
    - Choices & consequences
    - Steps for problem solving
    - Problem solving in action
    - Video productions I-VIII & Review

Coping Power Program
(Lochman et al., 2002)

- Extends Anger Coping Program by including 33 child sessions & 16 parent sessions

- Delivered over a 15-month period

- Additional 15 child sessions allow for coverage of other problem areas

- Additional child sessions also focus on improving social skills (entering peer groups, negotiating, social problem solving)

- Parent group sessions focus on identifying prosocial & disruptive behaviors, rewarding & attending to appropriate child behaviors, issuing effective instructions, establishing age-appropriate consequences for problem behaviors

- Enhanced version of Coping Power Program includes a 3rd teacher component (5, 2-hour teacher inservice meetings & ongoing teacher consultation

- Coping Power Program moved children into normative ranges for substance abuse, delinquency, & school behavior compared to controls

- Effect sizes in moderate ranges (around .50 meaning that 75% of children improve compared to only 25% of controls)

Fast Track

(Conduct Problems Prevention Group, 1992)

- Comprehensive prevention & remediation program for chronic & severe conduct problems
- Designed for children & adolescent from Kg to 10th grade
- Assumes conduct problems stem from child, family, & community risk factors
- Interventions focus on building behavioral & cognitive skills in school & family environments
- 5 integrated component activities:
  - Parent training for 22 sessions
  - Home visiting & phone calls twice weekly to practice skills learned in parenting groups
  - Social skills training to improve peer relations & decrease aggressive behavior
  - Academic tutoring related primarily to reading
  - Classroom intervention to improve classroom behavior (also trained in a social emotional learning curriculum—PATHS curriculum)
- 445 treatment and 446 controls in 54 elementary schools
- Moderate effect sizes across measures

Problem-Solving Skills Training
(Yale Child Conduct Clinic)

- Based on notion that cognitive processes underlie how child perceives, codes, & experiences the world
- Children with DBPs exhibit aggressive behavior, distortions, & deficiencies in a number of these cognitive processes
- Attributional style (attribute hostile intent to others)
- Consists of weekly therapy sessions with child lasting 30-50 minutes
- Basic treatment program involves 12-20 sessions
- Basic treatment approach is teaching problem solving steps
  - "What am I supposed to do?" (Identify and define the problem)
  - "I have to look at all of the possibilities." (Delineate or specify alternative solutions to the problem)
  - "I'd better concentrate and focus in." (Concentrate and evaluate solutions generated)
  - "I need to make a choice." (Choose the answer you think is correct)
  - "I did a good job or I made a mistake." (Verify whether the solution as best among alternatives, whether problem solving was correctly followed, or whether a mistake or less desirable solution was selected)
- Program produces moderate effect sizes in controlled studies

Replacement Behavior Training

- Important consideration in conceptualizing interventions is role of *competing problem behaviors*

- Children with DBPs display high rates of competing problem behaviors & low rates of prosocial behaviors

- These children may never learn prosocial behavior alternatives such as sharing, cooperation, & self-control because of the lack of opportunities to learn these behaviors

- This leads to poor peer acceptance or rejection by peers
  - When elementary school students are asked to nominate 3 best friends, 10% of children are not nominated by anyone
  - Using reciprocal peer nominations, this percentage is even higher
  - Children with DBPs have highest rates of poor peer acceptance/rejection

- Potentially effective way of dealing with this is to teach positive replacement behaviors

Matching Law Revisited

- Recall that the Matching Law states that rate of behavior will match rate of reinforcement for that behavior

- Individuals "choose" the behavior that produces greatest amount of reinforcement

- Aggressive behavior reinforced every 3 times it occurs & prosocial behavior reinforced every 15 times it occurs, aggressive behavior will be 5 times more frequent than prosocial behavior (15/3=5)

- This strongly suggests that we need to flip these schedules of reinforcement around so the correct "choice" of behavior can be made

- Research strongly suggests that behavior follows the Matching Law very closely

Types of Social Skills Deficits

- Acquisition Deficits: "Can't do" problems
  - Lack of knowledge about how to perform a social skill
  - Difficulty in knowing what social skills are appropriate in what social situation
  - Difficulty in integrating fluent sequences of social behavior
  - Remediation requires direct instruction of social skills (modeling, coaching, behavioral rehearsal, performance feedback)

- Performance Deficits: "Won't do" problems
  - Best thought of as *motivational deficits*
  - Remediation requires application of the Matching Law
  - Majority of children with DBPs have social skill performance deficits

- 9 Meta-Analyses Conducted
  - Average effect size is .60
  - Suggests that about 65% of children receiving social skills training will improve compared to 35% of controls
  - Better controlled studies produce even higher effect sizes

Social Skills Training Strategies

- Acquisition Deficits
  - Modeling (Tell)
  - Coaching (Show)
  - Behavioral Rehearsal (Do)
  - Progress Monitoring/Feedback
  - Generalization

- Performance Deficits
  - Differential Reinforcement (DRI, DRA, DRO)
  - Based on Matching Law
  - Reductive Strategies
    - Response cost
    - Extinction
    - Timeout

Suggested Readings

- Crone, D., Horner, R., & Hawken, L. (2004). *Responding to problem behavior in schools: The Behavior Education Program* (2nd ed.). New York: Guilford Press.

- Barrish, H., Saunders, M., & Wolf, M.M. (1969). Good Behavior Game: Effects of individual contingencies for group consequences on disruptive behavior in a classroom. *Journal of Applied Behavior Analysis, 2,* 119-124.

- Conduct Disorders Prevention Group (1992). Initial impact of the Fast Track prevention trial for conduct problems: I. The high risk sample. *Journal of Consulting and Clinical Psychology, 67,* 648-657.

- Henggeler, S., Melton, G., & Smith, L. (1992). Family preservation using multisystemic therapy: An effective alternative to incarcerating serious juvenile offenders. *Journal of Consulting and Clinical Psychology, 60,* 953-961.

- Kazdin, A. (2003). Problem-solving skills training and parent management training for conduct disorder. In A. Kazdin & J. Weisz (Eds.), *Evidence-based psychotherapies for children and adolescents* (pp. 241-262). New York: Guilford Press.

- Lochman, J., Barry, T., & Pardini, D. (2002). Anger control training for aggressive youth: In A. Kazdin & J. Weisz (Eds.), *Evidence-based psychotherapies for children and adolescents* (pp. 263-281). New York: Guildford Press.

Some Study Questions

- What percentage of children will respond to universal interventions? What percentage will need Tier 2 (selected) interventions? What percentage will need Tier 3 (intensive) interventions?
- What are 4 learning theories used in behavioral interventions? How do they differ?
- What are the characteristics of Multitiered System of Supports?
- In a problem solving model, how is a problem defined?
- What are some a priori considerations in defining treatment strength?
- What are the 2 types of RTI?
- What is the conceptual model of behavior change?
- What are the dimensions of treatment integrity?
- What are some variables related to treatment integrity?
- What are the stages of behavioral escalation?
- What are the Good Behavior Game? Behavioral Education Program, and First Steps to Success?
- Who are appropriate and inappropriate students for the Behavior Education Program?
- What are the 2 types of functional behavioral assessment?
- When is a functional behavioral assessment not needed?
- What are the types of punishment based procedures? What are some non-punishment-based procedures?
- What are some effective parent training programs?
- What are the features of replacement behavior training?