

Using Evidence-based Practices with Students with Autism Spectrum Disorders

First Annual Richard L. Simpson
Conference on Autism

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Learning Outcomes

Attendees will be able to:

1. summarize the critical EBP components
2. identify at least 5 guiding questions that should be asked when using EBP
3. describe a process for choosing, using and evaluating EBP
4. locate and use 3 free EBP web resources

Agenda

- Opening Activities
- Background Rationale and History
- Terminology/EBP components
- Legal mandates
- EBP reviews and process
- User friendly web resources

Opening Activities

- Real or Fake?
- Make a list of 3 practices that you have used with an individual with autism or that you know are used
- Why do you use these practices?
- We will discuss and rate them as a group

Rationale

- Ethical and moral imperatives
- Legacy of ineffective, overvalued and non-validated methods
- Limited opportunities to make a difference (need for timely use of maximally effective strategies)
- How much time is lost?

Simpson, 2016

Rationale

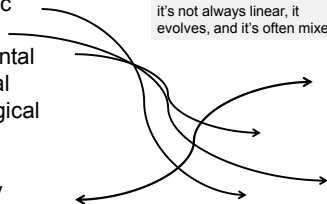
- The R – P gap
- Evidence-based practice in other fields
- Search for the cure/treatment
- Multiple understandings of evidence
- Individualized education programs (IEP)

History of ASD Practices

Over time, practices were associated with how autism was conceptualized...

- Psychogenic
- Behavioral
- Developmental
- Neurological
- Neurobiological
- Immune
- Spectrum
- Whole body
- Condition/difference
- Other

it's not always linear, it evolves, and it's often mixed

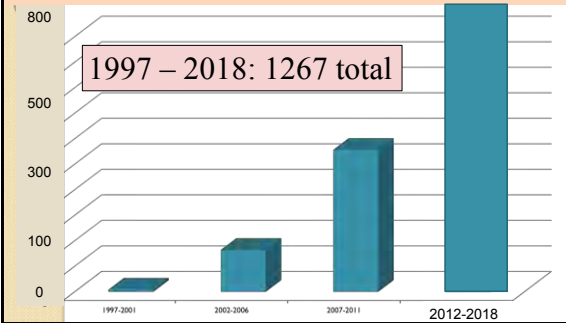


History of ASD Practices

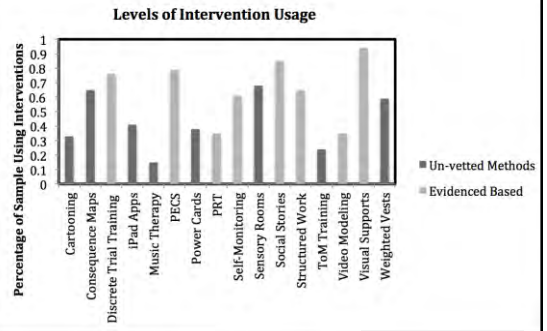
- Educators' decision making strategies, policy formation and judgments of effectiveness of educational techniques:
 - Personal experience and personal beliefs
 - Common sense
 - Expert testimony
 - Political, spiritual and administrative influence
 - Science
 - other

✓Simpson, 2016

PsychINFO Database Search Key words – “evidence-based practice” and “autism”



State of Kansas Pilot Data



Simpson, 2016

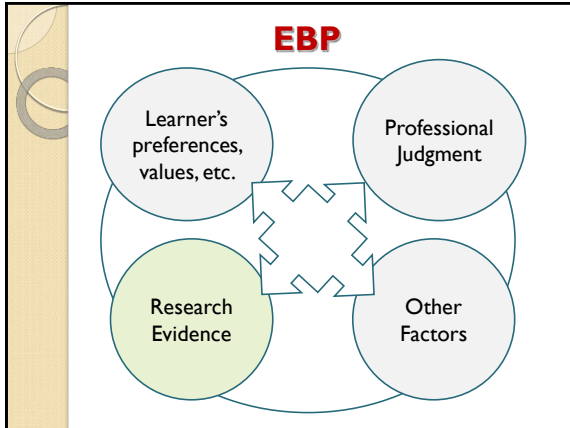
Terminology

- | | |
|------------------------|---------------------|
| • Evidence-based | • Teaching |
| • Peer reviewed | • Practice |
| • Scientifically based | • Intervention |
| • Research based | • Treatment |
| • Effective | • Model |
| • Validated | • Package |
| • Established | • Training |
| • Promising | • Special Education |
| • Emerging | • And others... |
| • And others... | |

EBP is typically seen in two ways

1. Programs, interventions, methods, etc. that have been proven to be effective by **rigorous research** and review standards (Cook and Odom, 2013)
2. **Process** of integration of best research evidence with other factors, such as clinical expertise, patient values, etc. (Institute of Medicine, 2001)

Prizant called these narrow and appropriate approaches to EBP (2011)



Laws Regarding Practice

- Individuals with Disabilities Education Act (est. 1975, last reauthorized 2004)
 - For any child with an IEP
 - Aligned with NCLB
 - Reauthorization
 - Scientifically based research & practice

Every Student Succeeds Act (ESSA) 2015

- Reauthorization of NCLB
- The term “evidence-based” is used 62 times...
 - Evidence-based interventions, strategies, activities, professional development, programs, etc.
- Use of EB interventions, etc. is required for federal grants
- 4 categories of evidence
 - Strong, moderate, promising, “strong theory”
 - Pros and cons

Other

- Combating Autism Act 2006 →
- Autism Collaboration, Accountability, Research, Education, and Support Act (CARES Act 2014)
- State level legislation
- Insurance
- <https://www.autismspeaks.org/state-initiatives>

Types of EBP Reviews

- Literature reviews or meta-analyses of one particular intervention or method
- Reviews of a single area/domain
- Broad reviews of a range of ASD practices. These include evaluations of comprehensive programs or focused interventions or both.

Committee on Educational Interventions for Children with Autism – National Research Council 2001

- birth to 8
- diagnosis & assessment
- role of families
- educational goals
- effective interventions
- public policy
- personnel preparation
- research

Components of an effective program include...

- Early intervention
- Active engagement in intensive programming
- Full day or equivalent, 5 days week, year round
- 15-20 minutes intervals of planned activities
- 1:1 or small group to meet individual needs

(National Research Council, 2001, p.6)

Focus of interventions include...

- Functional, spontaneous communication
- Social instruction
- Cognitive development
- Play skills
- Proactive approaches to problem behaviors

(National Research Council, 2001, p.6)

Examples of EBP Reviews

- Simpson et al. (2005). ASD: Interventions and Treatment for Children and Youth.
- National Autism Center (NAC). (2009). Evidence-Based Practice and Autism in the Schools.
- Reichow et al. (2011). Evidence-Based Practices and Treatment for Children with Autism.
- Young et al., Centers for Medicaid and Medicare Services (CMS). (2010). ASD Services: Final report on Environmental Scan.

Examples of EBP Reviews

- Wong et al., National Professional Development Center (NPDC). (2010). Evidence-Based Practices for Children, Youth and Young Adults with ASD.
- Weitlauf et al., Agency for Healthcare Research and Quality (AHRQ). (2014). Therapies for Children with ASD: Behavioral Interventions Update.
- Volkmar et al., American Academy of Child and Adolescent Psychiatry (AACAP). (2014). Practice Parameter for the Assessment and Treatment of Children and Adolescents with ASD.

Review Considerations

- Review differences
- Gender
- Race/ethnicity
- Age
- Other

Let's look at one review...



Corinne Wong, Samuel L. Odom,
Kara Hume, Ann W. Cox, Angel Fertig,
Susanne Ruzancic, Matthew E. Brook,
Joshua B. Plevnick, Veronica R. Ewing, and Ta R. Schultz

Autism Evidence-Based Practice Review Group



THE NATIONAL PROFESSIONAL DEVELOPMENT CENTER ON
AUTISM SPECTRUM DISORDERS

Wong et al., 2015

- In 2007, the NPDC had identified 24 EBP
- 2015 update - reviewed focused behavioral, educational or developmental interventions for children and youth ages birth to 21
- Reviewed literature (1990– 2011) with strict criteria and rated each method as: EBP or other interventions with some support

Wong et al. Findings

- Included information on definitions, outcomes, and participants for:
- 27 **EBP** including reinforcement, prompting, DTT, time delay, modeling, PECS, etc.
- 24 **other interventions with some support** including music therapy, sensory diet, touch therapy, AIT, direct instruction, etc.

Methodology Choices and Students with ASD

1. Programs based on effective methods
2. Provision of appropriate intensity
3. Emphasis on meaningful outcomes
4. Creation of an individualized program
5. Documentation of student progress

Simpson, 2016

What are the anticipated outcomes of the option?

1. Do outcomes promoted by an option match a student's identified needs?
2. Does the option promote significant educational gain or merely address symptoms?
3. How similar is the student to others who have benefited from the approach?

Simpson, 2016

What are the potential risks?

1. Are there health or behavioral risks for the student?
2. Are there risks for parents/families and/or school personnel?
3. What impact will the treatment have on the quality of life for the student and his family?
4. If the treatment/intervention fails, what are the implications?

Simpson, 2016

How will the method be evaluated?

1. How will progress be demonstrated?
2. How frequently will the intervention be evaluated?
3. Who will conduct evaluations?
4. What criteria will be used to determine if a treatment should be continued or discontinued?"

Simpson, 2016

What proof exists to support the efficacy of the method?

1. Is the treatment published in peer-reviewed journals?
2. Does efficacy information come from a variety of sources?
3. Are the studies validating effectiveness of high quality?
4. Is empirical validation available, or does support come primarily from personal testimonials?
5. Do proponents claim the option has universal utility?

Simpson, 2016

What options would be excluded if a particular method was adopted?

1. How does the treatment rate in terms of restrictiveness and intensity?
2. Are there less restrictive/intensive alternatives that may be equally effective?
3. Are there other options that are better researched than this one?
4. Does the treatment option consider the functional communication and socialization needs of the student?

Simpson, 2016

Keeping the Door Open for Innovation and Advancement

Balance Current Push for EBP Use and Innovation/Pioneering

Search for New Effective Interventions

Examples:

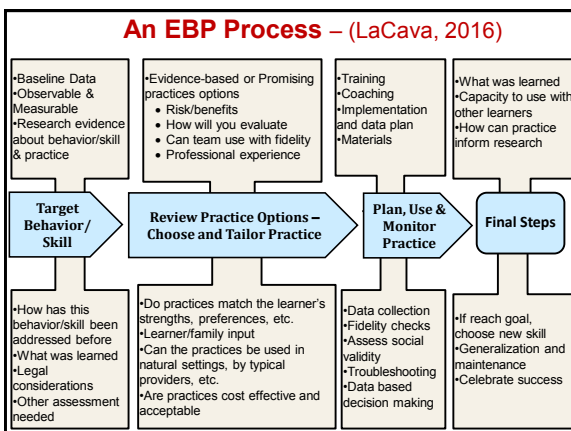
- ✓ Power Cards
- ✓ Consequence Maps
- ✓ Incredible 5-Point Scale

Simpson, 2016

An EBP Process

- Integrates all of the EBP elements, critical questions to ask, etc. into a process
- Based on the work of: LaCava & Shogren, 2012, LaCava & Simpson, 2016; NAC, 2015; NPDC, 2015; Prizant, 2011; Reichow et al., 2010, Simpson et al., 2005

An EBP Process – (LaCava, 2016)



The CUEing Process Worksheet

Choosing, Using, and Evaluating Evidence-based Practices (EBP) for Students with Autism Spectrum Disorders (ASD)

Teacher ID # _____ Date _____
 Target behavior/skill _____ Related to IEP Goal _____ EBP _____
 Observable and measurable definition of target behavior/skill _____

A. Background Information – answer each question and check all that apply in the space provided

1. Have you taken baseline data on the target behavior/skill? YES / NO
2. Have you established how this target behavior/skill been addressed in the past (previous goals, needs, etc.)? YES / NO
3. Have you considered any relevant legal issues? YES / NO
4. Is a functional behavior assessment, task analysis or other assessment needed? YES / NO

B. Choosing EBP

1. Have you reviewed the research evidence for this target behavior/skill? YES / NO
2. Which sources have you used:
 - Evidence-based Practices for Children, Youth and Young Adults with ASD (National Professional Development Center on ASD, 2014) / Wang et al., 2013 _____
 - National Autism Center's National Standards Report Phase 3, 2015 _____
 - ASD Interventions and Treatments for Children and Youth, Simpson et al., 2005 _____
 - Evidence-based Practices and Treatments for Children with ASD, Reichow et al., 2010 _____
 - Educating Children with Autism, National Research Council, 2001 _____
 - Other _____

3. What EBP have been identified as possible options (considering child/adolescent, age, ASD severity, etc.)?

Have You Considered the Following?

EBP Options	Interv. Issues (single, limited, none, value, etc.)	Learn. & Feas. Issues	Professional Experience & Judgment	Capacity (cost, setting, personnel, etc.)	Benefits & Risks
1.					
2.					
3.					
4.					
5.					

4. If no EBP are available to address, what promising practice do you consider?

Have You Considered the Following?

Promising Practice Options	Interv. Issues (single, limited, none, value, etc.)	Learn. & Feas. Issues	Professional Experience & Judgment	Capacity (cost, setting, personnel, etc.)	Benefits & Risks
1.					
2.					
3.					
4.					
5.					

5. Which EBP or promising practice will you use? _____
(explain rationale for your choice)

6. Explain how you will evaluate the chosen practice (who will take data, method type, how often, how will you know when to change tactics, etc.)

7. What training, coaching, resources, other supports are needed?

C. Using EBP

1. Implement chosen practice
2. Continue to collect, summarize and present data as planned
3. Troubleshoot as needed
4. Monitor treatment fidelity
5. Adjust practice as needed based on data and other factors
6. Assess social validity – was progress socially meaningful and important, was the method cost effective, did the learner, and team members accept it, was it easily implemented in natural settings, etc.)
7. Continue generalization and maintenance phases as needed

D. Final Steps

1. Celebrate success!
2. What was learned by the team?
3. Is there capacity to use this practice with other learners?
4. How can this practice and results inform research and practice?
5. Choose new target behavior/skill

A Few Resources

- Ohio Center for Autism and Low Incidence (OCALI)
 - [Autism Internet Modules](#)
 - [ASD Strategies in Action](#)

A Few Resources

- [National Professional Development Center \(NPDC\) on ASD](#)
- [Autism Focused Intervention Resources and Modules](#)
 - <https://afirm.fpg.unc.edu>
- National Clearinghouse on Autism Evidence and Practice (NCAEP)
 - <http://ncaep.fpg.unc.edu/>

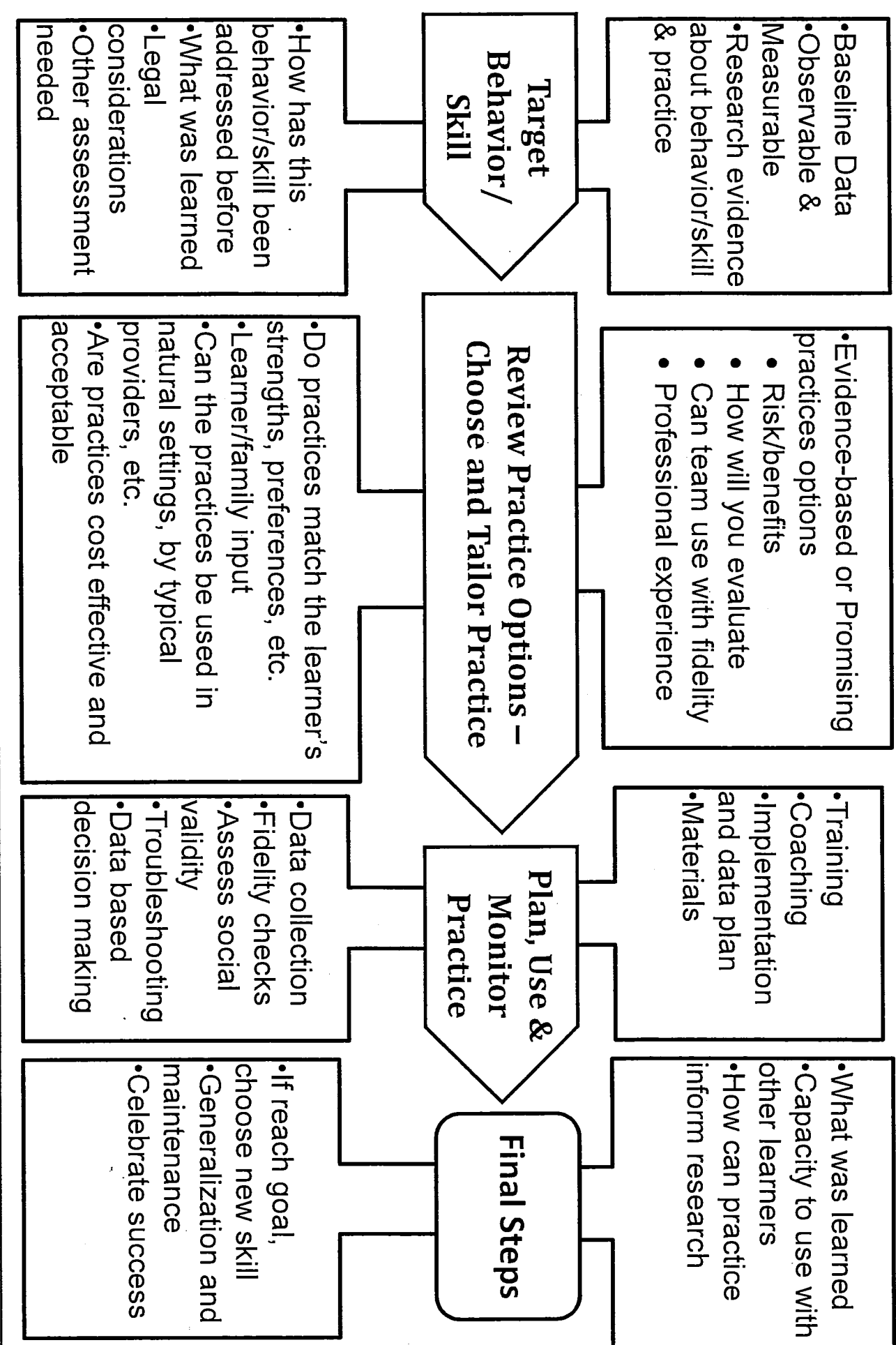
A Few Resources

- [National Autism Center](#)
- [IRIS Center](#)

Thank you!

placava@ric.edu

An EBP Process – (LaCava, 2016)



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Teacher ID # _____ Date: _____

Target behavior/skill: _____ Related to IEP Goal _____ BIP _____

Observable and measurable definition of target behavior/skill: _____

A. Background Information – answer each question and then add details as needed in the space provided

1. Have you taken baseline data on the target behavior/skill? YES / NO
2. Have you considered how this target behavior/skill been addressed in the past (practices used, results, etc.)? YES / NO
3. Have you considered any relevant legal factors? YES / NO
4. Is a functional behavior assessment, task analysis or other assessment needed? YES / NO

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1. Have you reviewed the research evidence for this target behavior/skill? YES / NO
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 - National Autism Center's National Standards Project Phase 2, 2015 _____
 - ASD Interventions and Treatments for Children and Youth, Simpson et al., 2005 _____
 - Evidence-based Practices and Treatments for Children with ASD, Reichow et al., 2010 _____
 - Educating Children with Autism, National Research Council, 2001 _____
 - Other _____

3. What EBP have been identified as possible options (considering skill/behavior, age, ASD severity, etc.)?

Have You Considered the Following?

EBP Options	Unique learner strengths, interests, needs, values, etc.	Learner & family input	Professional experience & judgment	Capacity (cost, setting, personnel, fidelity, etc.)	Benefits & Risks
a.					
b.					
c.					
d.					
e.					

4. If no EBP are available or chosen, what promising practices can you consider?

Have You Considered the Following?

Promising Practices Options	Unique learner strengths, interests, needs, values, etc.	Learner & family input	Professional experience & judgment	Capacity (cost, setting, personnel, fidelity, etc.)	Benefits & Risks
a.					
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