



WEBINAR MATERIALS

"Evidence-based Practice in Special Education: *How Advocates Can Make it Happen*"

October 13, 2010

Presenter:

Dr. Ronnie Detrich

ABOUT THE PRESENTER:



Ronnie Detrich is currently a senior fellow at the Wing Institute (www.WingInstitute.org), a relatively new non-profit organization in Oakland, Ca with the mission of promoting evidence-based practices in education. Prior to coming to the Wing Institute, Ronnie spent over 30 years delivering evidence-based interventions in educational settings. Most recently, he served as Clinical Director of a large non-profit, private special education school for children with serious educational and behavioral challenges and co-directed a large public school consultation project. He has also served as director for a residential/educational program for children with autism and director of a program for adolescent status offenders. Ronnie's current interest in evidence-based is in the large-scale implementation of effective interventions in typical service settings. He is also interested in issues of effective staff training and practical methods for assessing and assuring high levels of treatment integrity. He has authored several papers on issues related to evidence-based practice in school settings.

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www.AdvocacyInstitute.org

Evidence-based Practice in Special Education:
How Advocates Can Make it Happen

Ronnie Detrich
Wing Institute

Goals for Today

- Discuss the legal, professional, and ethical basis for evidence-based education.
- Describe characteristics of evidence-based education.
- Identify ways to involve parents/advocates in evidence-based education.

The Legal Basis for Evidence-based Education

- Federal education policy emphasizes scientifically based instruction.
 - No Child Left Behind
 - ◊ Over 100 references to scientifically based instruction.
 - Individuals with Disabilities Education Improvement Act
 - ◊ Pre-service and professional development should prepare educators to implement scientifically based instructional practices.

The Professions Influence on Evidence-based Education

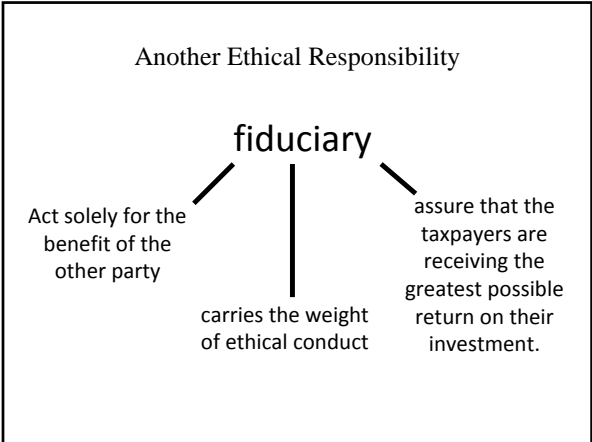
- Professional organizations began validating interventions as evidence-based:
 - Mid 1990's
 - ✧ Society for the Study of School Psychology
 - ✧ American Psychological Association
 - More recently
 - ✧ What Works Clearinghouse (Institute for Education Science)
 - ✧ Campbell Collaboration
 - ✧ Coalition for Evidence-based Policy
 - ✧ National Autism Center

The Ethical Basis for Evidence-based Education

- Most professional organizations have ethical guidelines emphasizing services are based on scientific knowledge.
 - American Psychological Association
 - ✧ *Psychologists' work is based on the established scientific and professional knowledge of the discipline.*
 - National Association of School Psychologists
 - ✧ *... direct and indirect service methods that the profession considers to be responsible, research-based practice.*
 - The Behavior Analyst Certification Board
 - ✧ *The behavior analyst always has the responsibility to recommend scientifically supported, most effective treatment procedures.*

Another Ethical Responsibility

- Special education services are largely funded through public dollars (taxpayers' dollars).
- There is an implicit assumption that the money will be spent for the public good.
- A fiduciary responsibility exists when one person or organization is charged with managing another person's money.



How Do We Meet Our Fiduciary Responsibility?

- Interventions that have an evidence base are more likely to produce positive effects for students.
- Ethical responsibility requires that we use the intervention that has a higher probability of success, i.e. evidence-based intervention.

How Do We Meet our Fiduciary Responsibility?

- Impact of non-evidence-based interventions is unknown.
 - Using a non-evidence-based intervention when there are evidence-based interventions available constitutes unethical practice.
 - Use a non-evidence based intervention should be considered research
 - ✦ all of the safe-guards afforded research participants and their families should be in place.
 - Conducting research with tax-dollars provided for education services may constitute a violation of our fiduciary responsibility.

What is Evidence-based Practice?

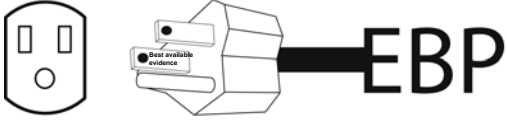
- At its core the EBP movement is a consumer protection movement.
 - It is not about science per se.
 - It is a policy to use science for the benefit of consumers.

“The ultimate goal of the ‘evidence-based movement’ is to make better use of research findings in typical service settings, to benefit consumers and society....”
(Fixsen, 2008)

What is Evidence-based Practice?

- Evidence-based practice has its roots in medicine.
 - Movement has spread across major disciplines in human services:
 - ✦ Psychology
 - ✦ School Psychology
 - ✦ Social Work
 - ✦ Speech Pathology
 - ✦ Occupational Therapy

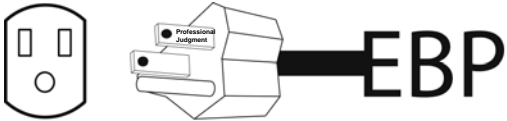
What Is Evidence-based Practice?



Sackett et al (2000)

Best Available Evidence

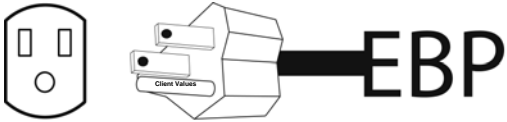
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Sackett et al (2000)

Professional Judgment

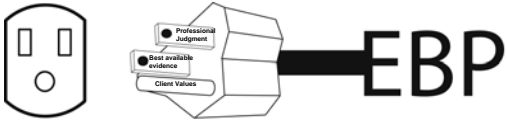
What Is Evidence-based Practice?



Sackett et al (2000)

Client Values

What Is Evidence-based Practice?



Sackett et al (2000)

- EBP is a decision-making approach that places emphasis on evidence to:
 - guide decisions about which interventions to use;
 - evaluate the effects of an intervention.
 - ◊ Practice-based evidence about evidence-based practices.

Finding the Best Available Evidence

- The term “evidence-based” has become ubiquitous in last decade.
 - There is no consensus about what it means.
 - ✦ At issue is what counts as evidence.
 - Federal definition emphasizes experimental methods.
 - ✦ Preference for randomized trials.
- In EBP the goal is to identify causal relations between interventions and outcomes.
 - Experimental methods do this best.

Finding the Best Available Evidence

- Even if we accept causal demonstrations to be evidence, we have no consensus.
 - Randomized Clinical Trials (RCT) have become the “gold standard.”
 - There is controversy about the status of single subject designs.
 - ✦ Most common design used in special education.
 - ✦ Most frequently criticized on the basis of external validity (ability to generalize from the research participants to other individuals, groups, and settings).
 - ✦ WWC has recently released standards for evaluating single subject designs.

How Are Evidence-based Interventions Identified?

- Identification is more than finding a study to support an intervention.
- Identification involves distilling a body of knowledge to determine the strength of evidence.

How Are Evidence-based Interventions Identified?

- Distillation requires standards of evidence for reviewing the literature.
 - Standards specify:
 - ◊ the quantity of evidence
 - ◊ the quality of evidence

How Are Evidence-based Interventions Identified?

- Two approaches to validating interventions
 - Threshold approach:
 - ◊ Evidence must be of a specific quantity and quality before an intervention is considered evidence-based.
 - ✓ What Works Clearinghouse
 - » Meets evidence standards.
 - » Meets evidence standards with reservations.
 - » Does not meet standards at this time.

How Are Evidence-based Interventions Identified?

- Hierarchy of evidence approach:
 - ◊ Strength of evidence falls along a continuum with each level having differential standards.
 - ✓ National Autism Center
 - » Established
 - » Emerging
 - » Unestablished
 - » Ineffective/Harmful

No Agreed upon Standards for Validating Interventions

Intervention X

| | Validated | Not Validated |
|------------|-----------|---------------|
| Standard 1 | □ | |
| Standard 2 | | □ |

How are consumers to decide?

Actual Effectiveness

| | Effective | Ineffective |
|-------------|---|---|
| Effective | True Positive | False Positive Most likely with hierarchy approach |
| Ineffective | False Negative Most likely with threshold approach | True Negative |

Choosing Between False Positives and False Negatives

- At this stage, it is better to have more false positives than false negatives.

| | |
|--|--|
| <p>False Negatives: Effective interventions will not be selected for implementation. ✓ As a consequence, less likely to determine that they are actually effective.</p> | <p>False Positives: Progress monitoring will identify interventions that are not effective.</p> |
|--|--|

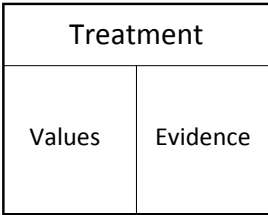
When Will Professional Judgment be Required?

- Selecting an intervention.
- Assuring contextual fit between intervention, client values, and characteristics of the setting.
- Modifying or discontinuing an intervention if it is not working.
- Selecting an intervention when there is no evidence-base to guide decision making.

What Is Meant by Client Values?

- Culture
- Language
- Preferences
 - Intervention goals
 - Intervention methods

Basis for Choosing Treatment
Szatmari (2004)



| Do Nothing | |
|------------------------------------|------|
| Unethical Clinical Paralysis | None |

| Toss a Coin | |
|--------------------------------------|------|
| Unethical in light of evidence | None |

| Training | |
|----------|------|
| Outdated | None |
| Current | lots |

| Etiology | |
|-----------|---------|
| Difficult | limited |

| ABA | |
|------------------------------|------|
| Not very humane effective | lots |

| Developmental Social cognitive | |
|-----------------------------------|---------|
| Love it | Not yet |

To be Ethical:

Inform Parents of Options

| | | | |
|------------------------------------|--------------------|--------------------------------------|-----------------|
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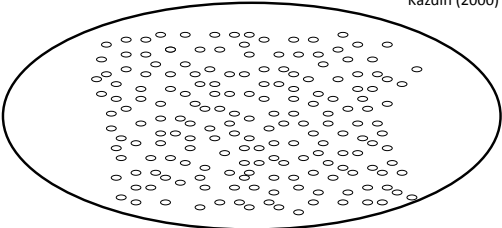
Questions

Seven Questions Parents/Advocates Should Ask
and Why They Are Important

- 1. What is the evidence-base for this intervention?
 - What is known about the effects for children like mine?
 - What is known about effects in settings like this?

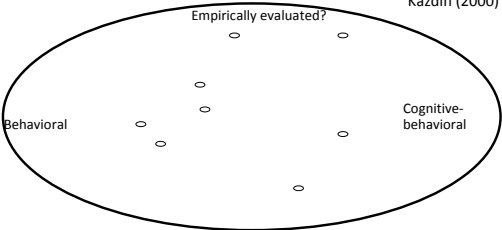
Are We Training Educators to Know What to
Do?

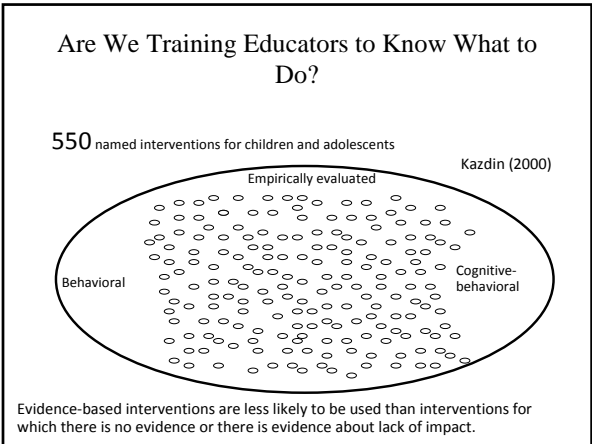
550 named interventions for children and adolescents
Kazdin (2000)



Are We Training Educators to Know What to
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Seven Questions Parents/Advocates Should Ask and Why They Are Important

2. What are the other options?

- Both Picture Exchange Communication System and Sign Language are evidence-based for non-verbal children with developmental disabilities.
 - Usually practitioners recommend one without discussing options.

Seven Questions Parents/Advocates Should Ask and Why They Are Important

3. Why is this intervention being recommended?

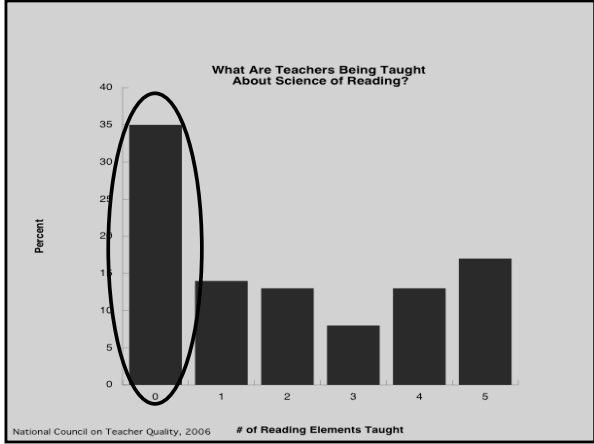
- A good answer describes how the recommended intervention is a good fit for a particular child.
 - A less desirable answer is anything that does not describe how it is the best match for this child.

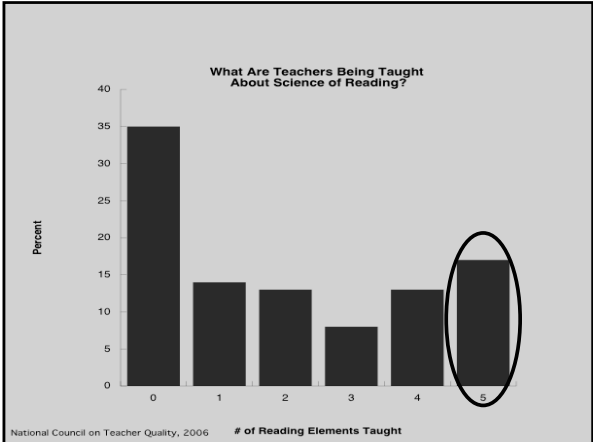
**Seven Questions Parents/Advocates Should Ask
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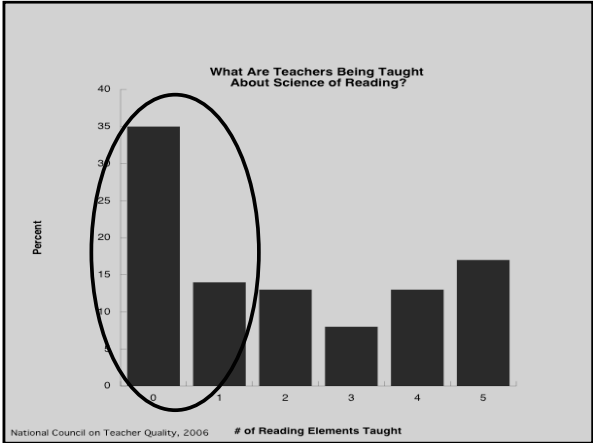
- 4. What are the risks?
 - All interventions have risks.
 - A good answer reflects that risks have been considered and steps taken to minimize when possible.
 - Both PECS and Sign Language have risks:
 - ◇ PECS requires the child always have access to the communication system which can be difficult to transport.
 - ◇ Sign language requires an community of others who sign.

**Seven Questions Parents/Advocates Should Ask
and Why They Are Important**

- 5. Do those responsible for implementing have the necessary training, skills, and knowledge to implement with adequate levels of treatment integrity?







Are We Training Educators to Know What to Do?

Survey of School Psychology Directors of Training
(Shernoff, Kratochwill, & Stoiber, 2003)

Evidence-based interventions

29% directors ~~knowledge~~

41% programs ~~Training~~

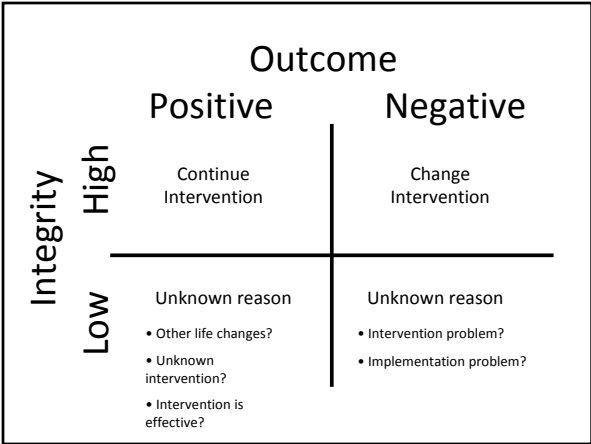
Seven Questions Parents/Advocates Should Ask and Why They Are Important

6. Are the resources available to implement with adequate levels of treatment integrity?

- Most commonly cited reasons for failing to implement with integrity:
 - Lack of training
 - Lack of materials
 - Lack of time

What We Know About Treatment Integrity

- It is estimated that drug prevention programs are implemented with integrity only 19% of the time. (Hallfors & Godette, 2002)
 - Programs have extensive research base as being effective.
 - This may be a generous estimate.
- No reason to assume that other interventions are immune to poor implementation.



**Seven Questions Parents/Advocates Should Ask
and Why They Are Important**

7. How will the effectiveness of the intervention be evaluated?

- How will the family be kept informed about effects?
- When shall we meet again to review progress?

Seven Questions Parents/Advocates Should Ask

- No intervention is assured of success.
 - Necessary to monitor effects whenever implemented.
 - ✧ Best available evidence is that frequent measures of relevant behavior is most effective method for progress monitoring.

Summary of Evidence-based Education

| | |
|---|--|
| <p>Will:</p> <ul style="list-style-type: none">➤ Enhance professional judgment.➤ Increase sensitivity to context.➤ Allow more informed decisions about appropriate intervention. | <p>Will Not</p> <ul style="list-style-type: none">➤ Prescribe a list of interventions that must be used.➤ Eliminate professional judgment.➤ Minimize the role of parent in decision making. |
|---|--|

Evidence-based Practice in Special Education: How Advocates Can Make it Happen

Resources :: Publications

Advances in Evidence-based Education: A Roadmap to Evidence-based Education (2008). Editors Detrich, Keyworth, & States. Available from the Wing Institute (winginstitute.org)

Detrich, Keyworth, & States, (2007). *A Roadmap to Evidence-based Education: Building an Evidence-based Culture*, Journal of Evidence-based Practices for Schools, 8 (1), pp. 26-44.

Detrich (2008). *From Policy to Practice: IDEIA and Evidence-based Practice*. In Educating Individuals with Disabilities: IDEIA 2004 and Beyond (Editor, E. L. Grigorenko). Springer.

Detrich, (2008). *Evidence-based, Empirically Supported, or Best Practice? A Guide for the Scientist Practitioner*. In Effective Practices for Children with Autism: Educational and Behavioral Support Interventions that Work. (Editors, Luiselli, Russo, Christian, & Wilczynski). Oxford.

Detrich, Keyworth, & States (2008). *Response to Intervention: What it is and What it is not*. Journal of Evidence-based Practices for Schools, 9 (2), pp. 60-85.

Detrich, Keyworth, & States (2010). *Treatment Integrity: A Fundamental Unit of Sustainable Educational Programs*, Journal of Evidence-based Practices for Schools, 11 (1), pp. 4-29.

Shinn & Walker (Eds.). *Interventions for Achievement and Behavior Problems in a Three Tier Model Including RtI*. NASP.

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M. & Wallace, F. (2005). *Implementation Research: A Synthesis of the Literature*. Available from <http://www.fpg.unc.edu/~nirn/>

Resources :: Internet Resources

Early Childhood

•Division of Early Childhood of CEC – Recommended Practices [http://www.dec-spced.org/About DEC/Recommended Practices](http://www.dec-spced.org/About_DEC/Recommended_Practices)

•Research and Training Center on Early Childhood Development - <http://www.researchtopractice.info/index.php>

- Center for Evidence-Based Practice: Young Children with Challenging Behavior-
<http://challengingbehavior.fmhi.usf.edu/resources.html>

- National Standards Project- <http://www.nationalautismcenter.org>

- What Works Clearinghouse- <http://ies.ed.gov/ncee/wwc/>

- Promising Practices Network - <http://www.promisingpractices.net/>

- NICHY Research to Practice Database-
<http://www.nichcy.org/Research/Summaries/Pages/Default.aspx>

Center on the Social and Emotional Foundations for Early Learning -
<http://www.vanderbilt.edu/csefel/ww>

Reviews of Evidence-based Practices and Programs
<http://www.fpg.unc.edu/~nirn/resources/detail.cfm?resourceID=236>

Developmental Disabilities

- National Standards Project- <http://www.nationalautismcenter.org>

- Promising Practices Network - <http://www.promisingpractices.net/>

- NICHY Research to Practice Database-
<http://www.nichcy.org/Research/Summaries/Pages/Default.aspx>

- National Secondary Transition Technical Assistance Center -
http://www.nsttac.org/ebp/ebp_main.aspx

Reviews of Evidence-based Practices and Programs
<http://www.fpg.unc.edu/~nirn/resources/detail.cfm?resourceID=236>

Mild-Moderate

- What Works Clearinghouse- <http://ies.ed.gov/ncee/wwc/>

- NICHY Research to Practice Database-
<http://www.nichcy.org/Research/Summaries/Pages/Default.aspx>

- Best Evidence Encyclopedia - <http://www.bestevidence.org/>

- Promising Practices Network - <http://www.promisingpractices.net/>

Reviews of Evidence-based Practices and Programs
<http://www.fpg.unc.edu/~nirn/resources/detail.cfm?resourceID=236>