

Paradigm Shifts in Early Childhood Intervention and the Implications for Practice

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Background for the Presentation

The main theme of the Kharkiv conference and the intended outcome is a better understanding of how to make:

“Significant reforms of the ECI system if we want to transform it into a free and universal systems approach of high quality connected services for all children and families reconfiguring early childhood and family support services to guarantee [child and family] rights.”

Background of the Presentation, *continued*

According to the conference program description, this type of transformation is envisioned by adoption of:

“Participatory (capacity-building) practices that take a proactive stance, as opposed to a deficit-oriented or treatment approach, and involve children and families’ use of existing strengths as well as the acquisition of new competencies to support families in ways that help them have the skills, knowledge, time, and energy to promote competence and other positive aspects of child and family functioning and development.”

What are Paradigms and Paradigm Shifts?

- The term **paradigm** is a relatively new word first appearing in the 15th century
- The origins of the term are the Greek and Latin word **paradeigma** meaning model, pattern, or example
- The term **paradigm shift** is even more recent, first introduced by Thomas Kuhn (1962) in his book *The Structure of Scientific Revolutions*
- Paradigm shifts are calls for changes in models or world views that result from **unfavorable evidence** that question generally accepted paradigms

Kuhn, T. (1962). *The structure of scientific revolutions*. Chicago. University of Chicago Press.

Paradigm shifts
involve seeing
problems and
solutions from new
points-of-view



"Man, you've got to try this
'walking upright' stuff! — it's
like a total paradigm shift!"

Paradigm Shifts Do Not Occur Easily

- According to Kuhn (1962), generally accepted models or world views are not instantaneously abandoned even in the presence of overwhelming evidence that a new model or approach “better explains” scientific or everyday phenomena
- Most people respond to alternative world views by “explaining away” conflicting evidence and alternative models

Kuhn, T. (1962). *The structure of scientific revolutions*. Chicago. University of Chicago Press.

When Different Paradigms Conflict With One Another

- Kuhn (1962), in *The Structure of Scientific Revolutions* also stated:

“When two scientific schools [of thought] disagree about **what is a problem and what is a solution**, they will inevitably **talk through one another** when debating the relative merits of their [differing] paradigms” (emphasis added)

- This is especially the case when capacity-building paradigms are proposed as an alternative to deficit, needs-based or problem-based paradigms for working with children and their families

Kuhn, T. (1962). *The structure of scientific revolutions*. Chicago. University of Chicago Press.

Expect Challenges to Calls for Paradigm Shifts

- Chin and Brewer (1993) in their analyses of responses to conflicting or contradictory evidence, note that individuals make one or more responses to anomalous data:
 1. Ignore the evidence altogether
 2. Outright reject the evidence
 3. Claim the evidence is not relevant
 4. State that they will “think about the evidence” but never do
 5. Reinterpret the evidence to fit their own world views
 6. Make small insignificant changes to their world views
 7. Argue that the data better explains another theory and not the one at hand
- Expect one or more of these responses when attempting to introduce or implement a paradigm shift

Chinn, C.A., & Brewer, W. F. (1993). The role of anomalous data in knowledge acquisition: A theoretical framework and implications for science instruction. *Review of Educational Research*, 63(1), 1-49.



“This should shake things up—I’ve just found conclusive evidence that acid rain is caused by whales.”

Three Types of Paradigms

- ***Scientific paradigms*** are theoretical models for describing or explaining relationships between variables of interest
- ***Practice-based paradigms*** or intervention models specify particular world views about problems and solutions for improving outcomes of interest
- ***Everyday life paradigms*** include individuals' personal beliefs about how the world works and how best to affect (or not affect) change

Example of a Response to a Paradigm Shift

- As part of a line of research and practice on children's everyday, natural learning opportunities (natural environments), my staff and I investigated the differential characteristics and consequences of using **everyday activities as sources of early childhood intervention** vs. **implementing early childhood intervention in everyday activities**
- Results showed that there are considerably more positive benefits to young children with disabilities or delays and their families using everyday activities as sources of early childhood intervention

Dunst, C. J., Bruder, M. B., Trivette, C. M., Hamby, D., Raab, M., & McLean, M. (2001). Characteristics and consequences of everyday natural learning opportunities. *Topics in Early Childhood Special Education, 21*, 68-92.

Dunst, C. J., Bruder, M. B., Trivette, C. M., & Hamby, D. W. (2005). Young children's natural learning environments: Contrasting approaches to early childhood intervention indicate differential learning opportunities. *Psychological Reports, 96*, 231-234.

Dunst, C. J., Bruder, M. B., Trivette, C. M., & Hamby, D. W. (2006). Everyday activity settings, natural learning environments, and early intervention practices. *Journal of Policy and Practice in Intellectual Disabilities, 3*, 3-10.

Dunst, C. J., Trivette, C. M., Hamby, D. W., & Bruder, M. B. (2006). Influences of contrasting natural learning environment experiences on child, parent, and family well-being. *Journal of Developmental and Physical Disabilities, 18*, 235-250.

Another Example of a Response to a Paradigm Shift

- As part of an applied research and demonstration project, we investigated the role children's interests and strengths played in their participation in community activities in two different communities (Dunst, 2001)
- At the same time, another intervention program working in the same communities was using a US federal law to argue with community organizations that children with disabilities had a right to be involved in community activities and they had no choice but to allow the children to be involved in organizational activities

Dunst, C. J. (2001). Participation of young children with disabilities in community learning activities. In M. J. Guralnick (Ed.), *Early childhood inclusion: Focus on change* (pp. 307-333). Baltimore, MD: Brookes Publishing Co.

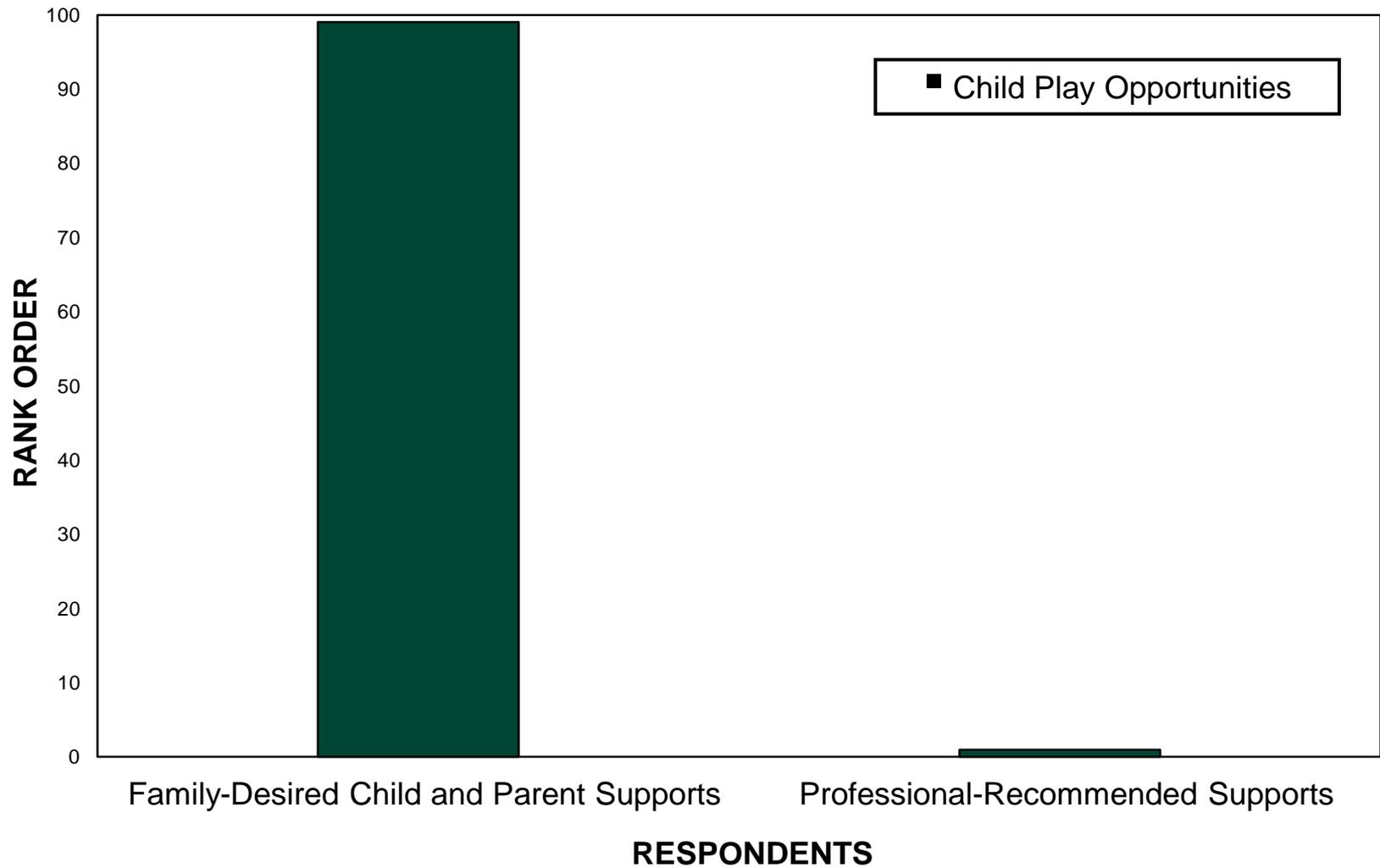


*"So how come I get "adapted leisure skill and fine motor skill therapy"
and you get to just "play"?"*

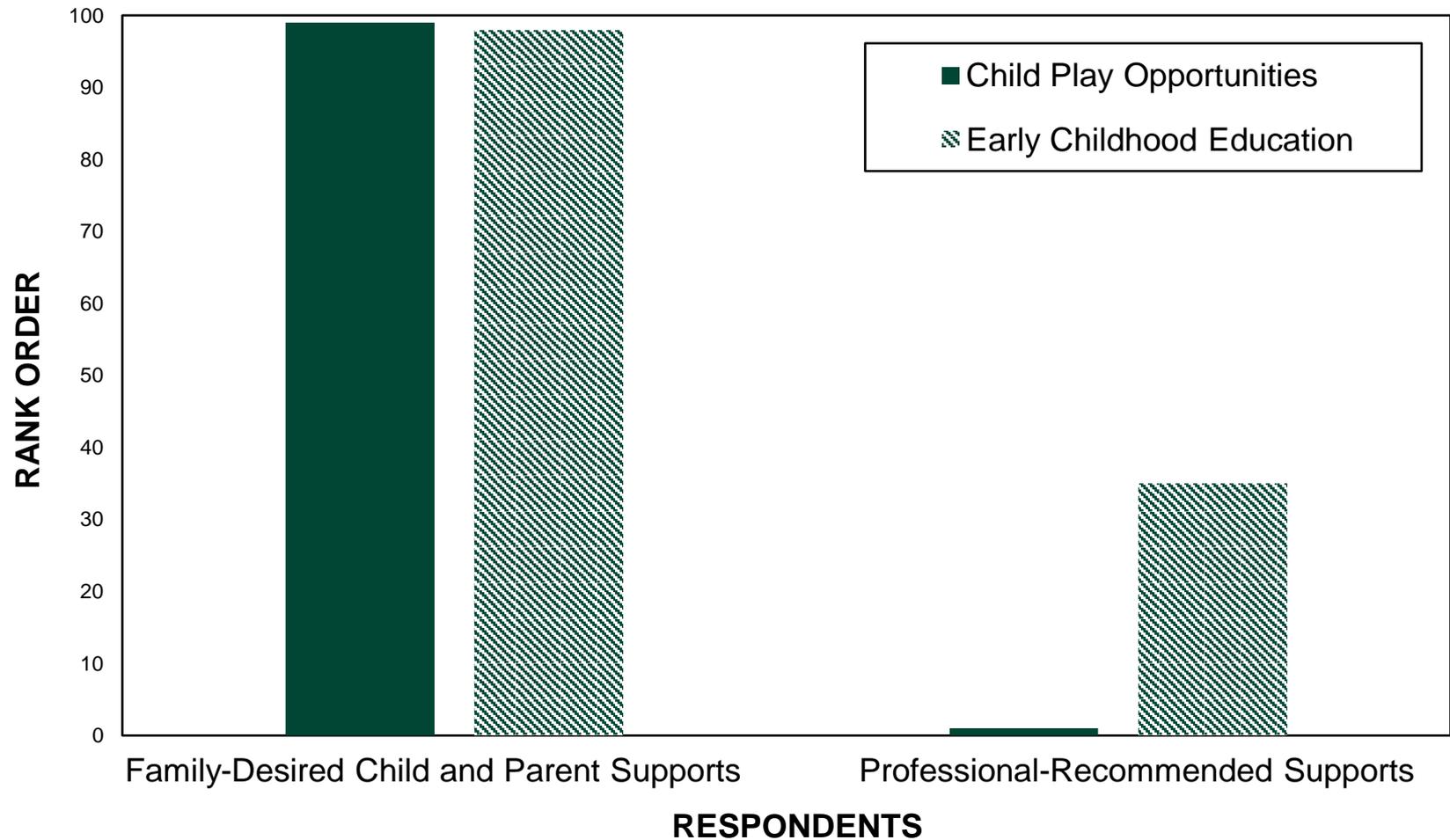
Professional vs. Family World Views

- One hallmark of family-centered and family support practices is the provision of supports and resources ***in response to family preferences and desires***
- As part of surveys of professionals and family members' beliefs about desired parent and child, parent, and family activities, we asked respondents to indicate for 50 different child, parent, and family activities which ones were desired (parent) or should be provided (professionals) by family support programs
- What professionals said families needed was the complete opposite of what family members indicated they wanted (a recipe for disaster)

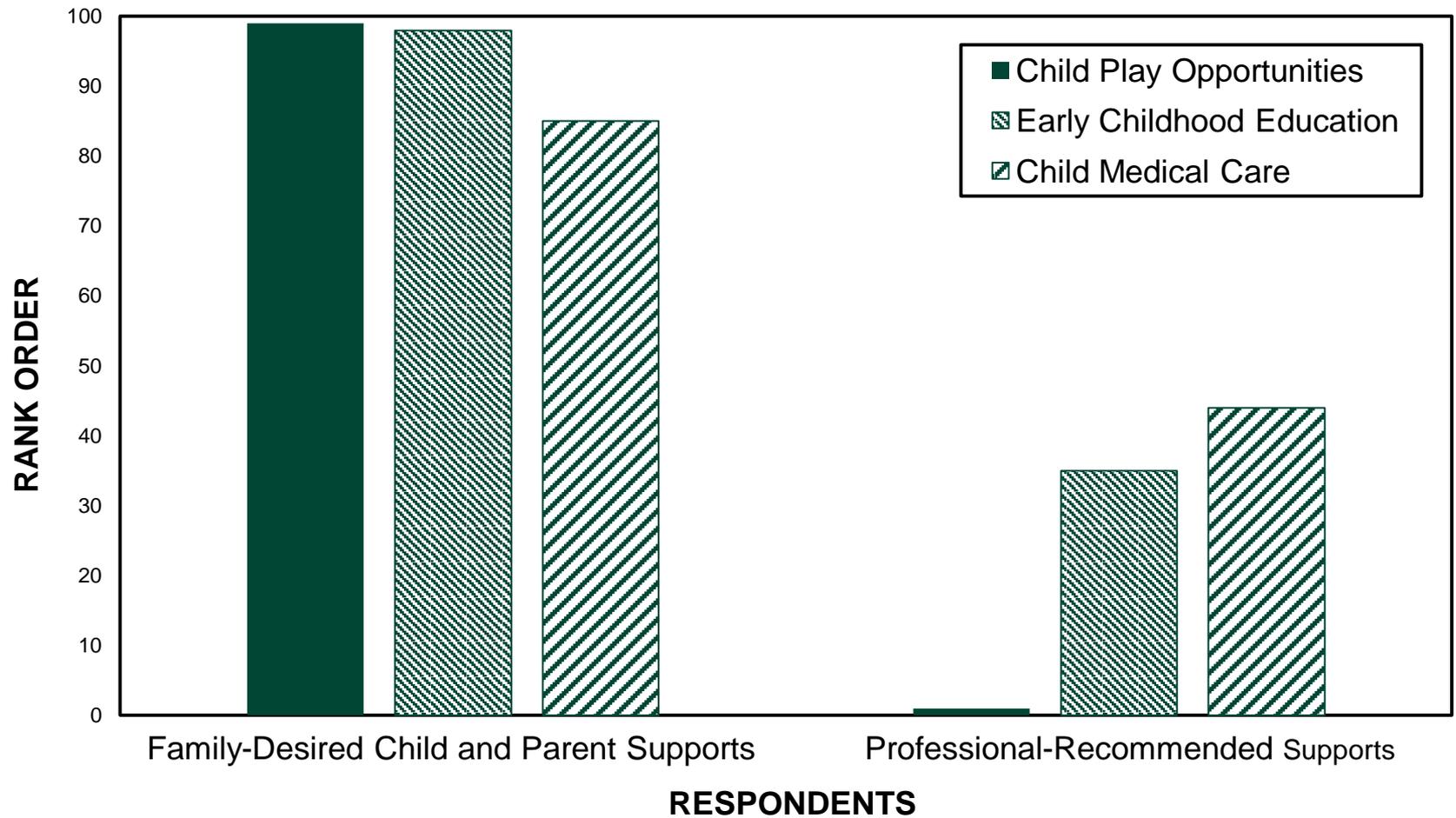
Relative Importance of Different Kinds of Supports



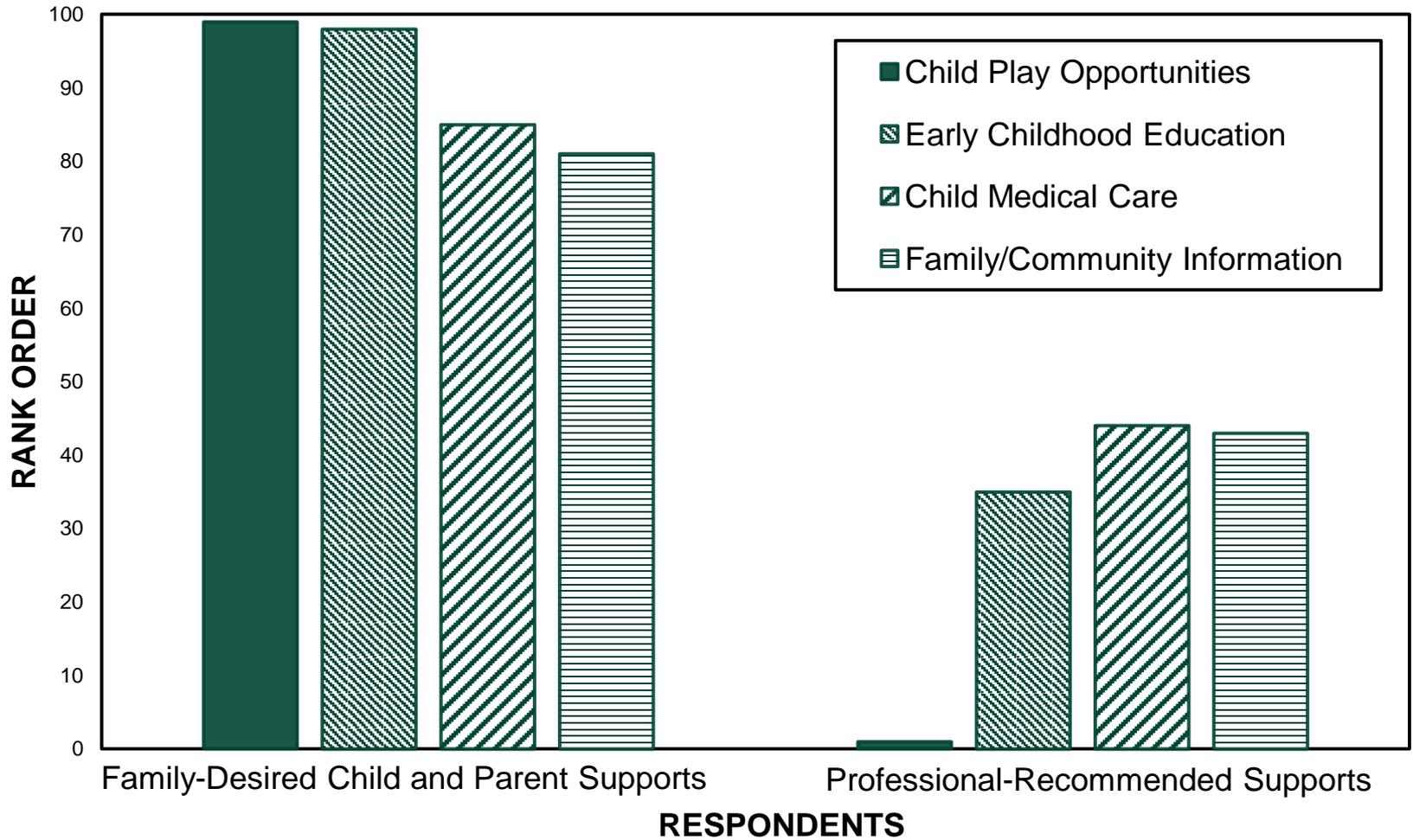
Relative Importance of Different Kinds of Supports



Relative Importance of Different Kinds of Supports



Relative Importance of Different Kinds of Supports



Implications of Paradigms for Changing Practice

Julian Rappaport (1981), whose work has influenced my own thinking, once stated that:

“Empowerment implies that many competencies are already present or at least possible....Empowerment implies that ***what you see as poor functioning is a result of social structure and lack of resources which makes it impossible for the existing competencies to operate.*** It implies that in those cases where new competencies need to be learned, they are best learned in a context of living life rather than in artificial programs where everyone, including the person learning, knows that it is really the expert who is in charge (emphasis added).”

Rappaport, J. (1981). In praise of paradox: A social policy of empowerment over prevention. *American Journal of Community Psychology*, 5, 1-25.

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ETTA
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Etta Hulme, Fort Worth Star-Telegram, Newspaper Enterprise Association

'My family's great. The problem is that I come from a dysfunctional planet.'

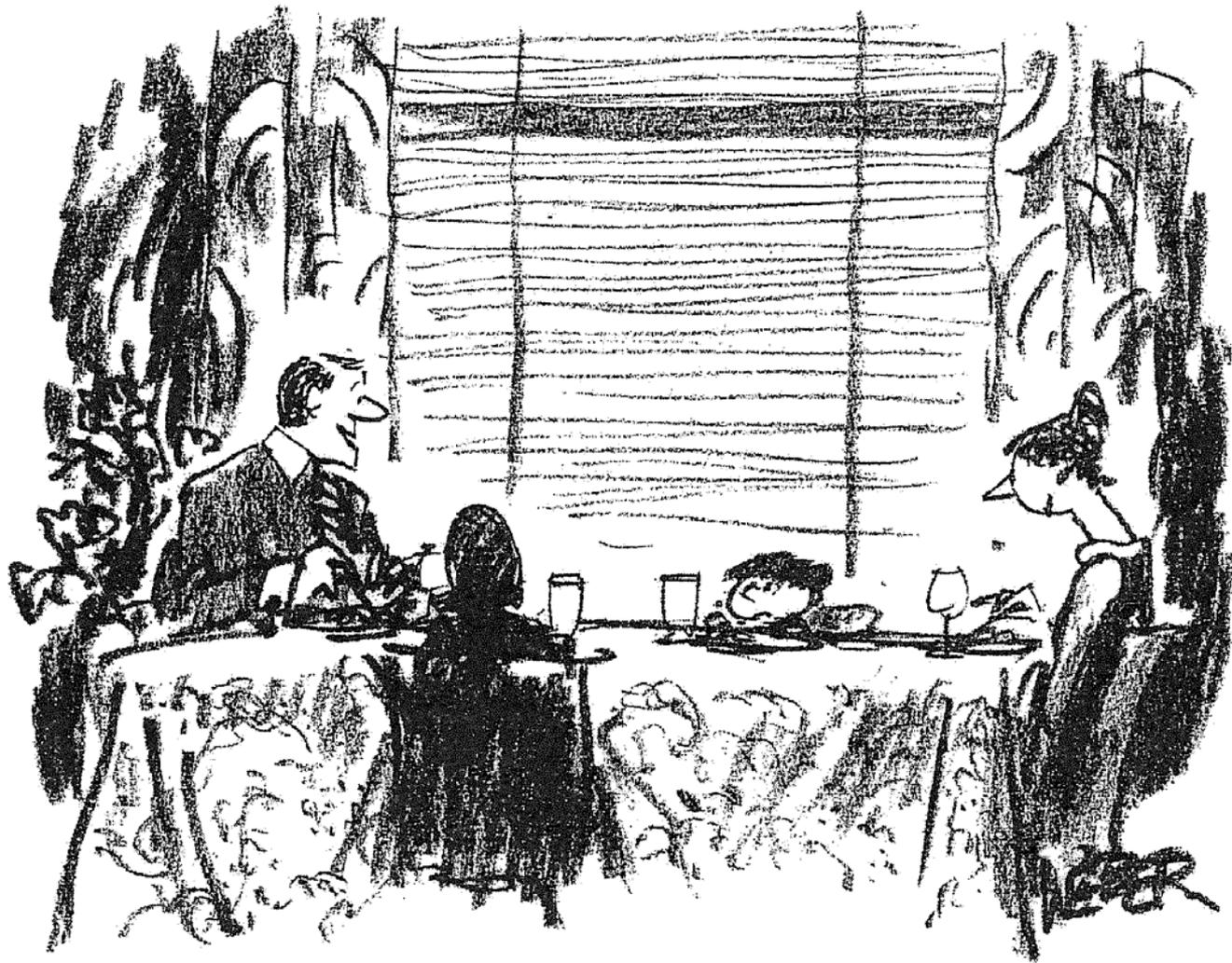
Bronfenbrenner's World View of Parenting

“Whether parents can perform effectively in their child-rearing roles within the family depends on the role demands, stresses, and supports emanating from other settings.... Parents' evaluation of their own capacity to function, as well as their view of their children, are related to such **external factors** as flexibility of job schedules, adequacy of child care arrangements, the presence of friends and neighbours who can help out in large and small emergencies, the quality of health and social services, and neighbourhood safety. The **availability of supportive settings** is, in turn, a function of their existence and frequency in a given culture or subculture” (emphasis added).

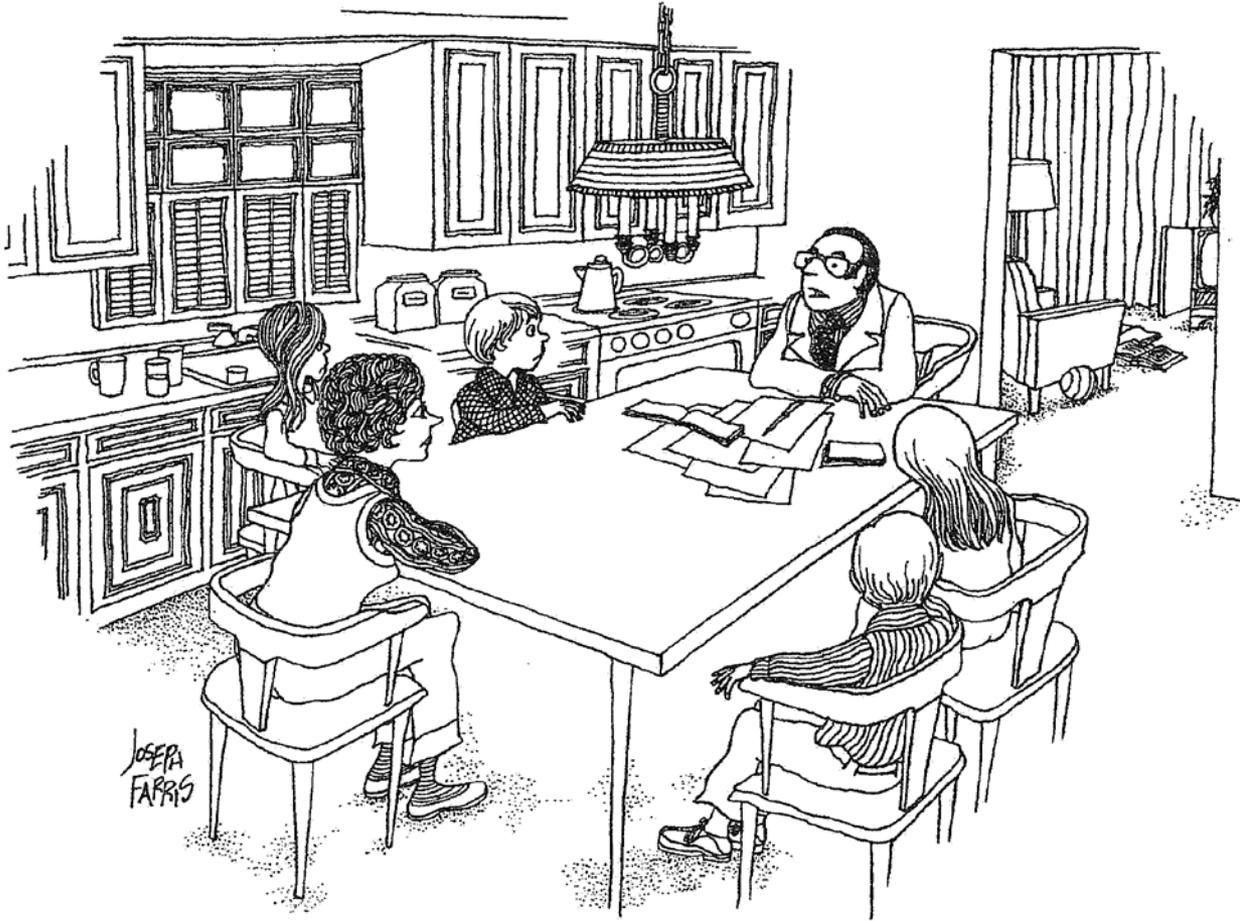
Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Parents' and Children's World Views of Parenting

- You may or may not be surprised to know that parents and our children see parenting differently and act on those everyday world views in quite different ways
- No matter how hard we try to parent effectively, our children sometimes see us in unflattering ways
- We should always remember that we need to take our responsibility seriously and parent as best we can



*"Thank you, Adrian. Parenting is a learning process,
and your criticisms help."*



JOSEFA
FARRIS

*"I've called the family together to announce that, because of inflation,
I'm going to have to let two of you go."*

Paradigm Shifts in My Work in Early Childhood Intervention and Family Support

- Resource-Based vs. Service-Based Intervention
- Family-Centered vs. Professional-Centered Intervention
- Promotion vs. Prevention Intervention
- Strengths-Based vs. Deficit-Based Intervention

Contrasting Models of Early Childhood Intervention

Capacity-Building Models

Traditional Models

Promotion

Treatment

Empowerment

Expertise

Strengths-Based

Deficit-Based

Resource-Based

Service-Based

Family-Centered

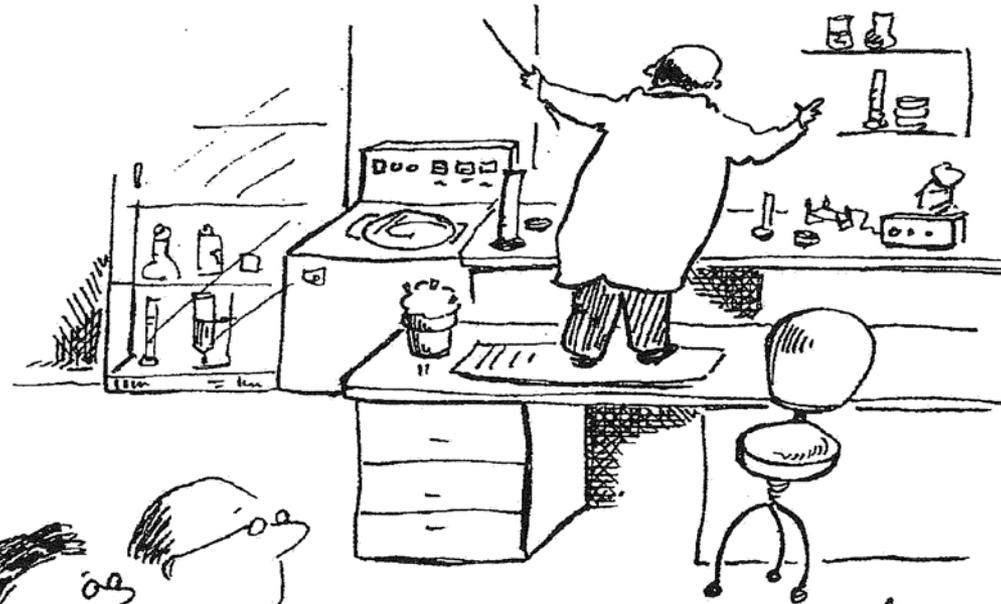
Professional-Centered

Reaching a Tipping Point in Paradigm Shifts in Early Childhood Intervention

- Three agent of change or paradigm shifts include:
(1) a concerted effort by a few dedicated individuals,
(2) communicating the benefits of one approach over another, and (3) amassing context-specific examples of successes (Gladwell, 2000)
- Need for replicated research evidence that Paradigm A is associated with better outcomes than Paradigm B (Centola et al., 2018)

Gladwell, M. (2000). *The tipping point: How little things can make a big difference*. New York: Little Brown

Centola, D., Becker, J., Brackbill, D., & Baronchelli, A. (2018). Experimental evidence for tipping points in social convention. *Science*, 30(6393), 1116-1119.



*Geneta
Epstein*

THE CHRONICLE OF HIGHER EDUCATION

“That’s Dr. Espe-Sherwindt conducting research”

An Example of Evidence for a Tipping Point in Early Childhood Intervention Practice

- My colleagues and I have been involved in a line of research and practice on the response-contingent learning of young children with significant developmental delays and multiple disabilities since the early 1980s
- The research and practice has focused on children for whom traditional early childhood intervention practices do not work and therefore an alternative approach is warranted
- We have used a strengths- or asset-based approach to early contingency learning and have compared it to a deficit- or needs-based approach to intervention

Child Strengths-Based vs. Child Deficit-Based Interventions

Purpose: Compare the effectiveness of a strengths-based vs. deficit-based approach to contingency learning among children with significant developmental delays and disabilities

Study Participants: 70 infants, toddlers, and preschoolers 20 months of age on average functioning on average at 4 months of age

Outcome Measures: Six different measures of child learning opportunities, child response-contingent behavior, and learning efficiency

Methodology: Randomized controlled design study of children assigned to either type of intervention

Raab, M., Dunst, C. J., & Hamby, D. W. (2016). Effectiveness of contrasting approaches to response-contingent learning among children with significant developmental delays and disabilities. *Research and Practice for Persons with Severe Disabilities, 41*(1), 36-51.

Raab, M., Dunst, C. J., & Hamby, D. W. (2017). Efficacy trial of contrasting approaches to the response-contingent learning of young children with significant developmental delays and multiple disabilities. *Journal of Educational and Developmental Psychology, 7*(1), 12-28.

Two Types of Intervention

Strengths-Based Practices

An investigator-developed checklist was used to record the occurrence and frequency of child behavior, including, but not limited to, head, body, arm, leg, fist, and hand movements; vocalizations; and directed gaze and visual fixation but not used intentionally to produce reinforcing or interesting effects. Behavior that a child produced frequently or for considerable durations of time were selected as intervention targets.

Deficit-Based Practices

The children in the deficit-based group were administered the birth to 3-year-old *Assessment, Evaluation and Programming Systems Scales* to identify missing skills operationalized as behavior at or just above the ceiling level in each domain on the scale. Results were used to select different child behavior in each domain as the intervention targets.

Response-Contingent Learning Games

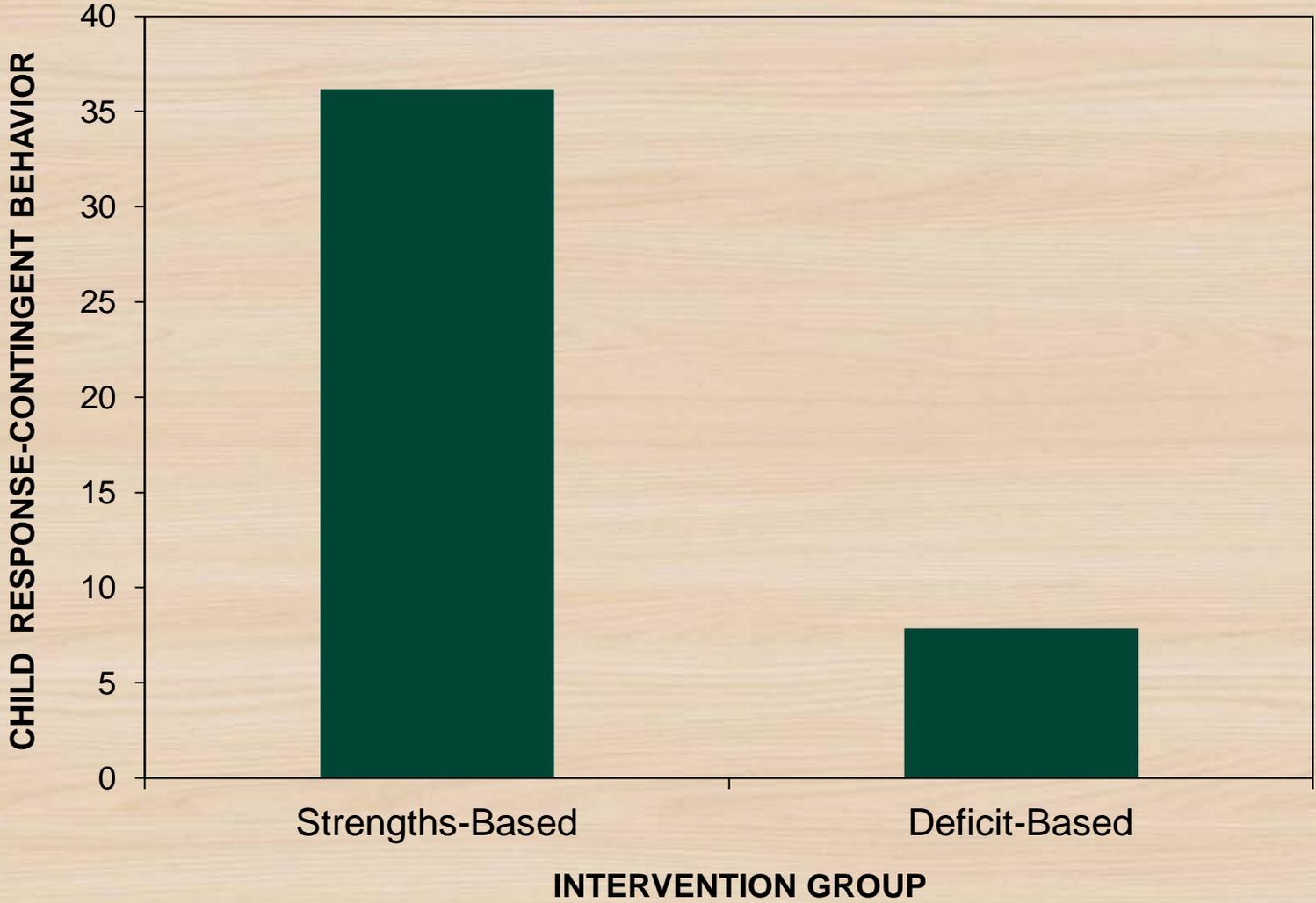
- The same types of response-contingent learning games for children in both intervention groups were used to promote the children's use of targeted behavior to elicit or produce interesting or reinforcing consequences.
- Learning games included targeted operant behavior that either resulted in reinforcing consequences (e.g., swiping at a mobile producing movement or sound) or were reinforced by a caregiver (e.g., an adult talking to a child each time he or she looked at the adult's face).

Main Results

After just 8 weeks of intervention, the strengths-based group outperformed the deficit-based group in terms of:

- Number of learning games played with the children
- Number of learning trials afforded the children
- Number of response-contingent behavior used to produce reinforcing consequences
- Average number of response-contingent behavior per game
- Efficiency of child learning opportunities (response-contingent behavior per number of learning trials)

Average Number of Child Contingency Behavior Per Game



Strengths-Based Early Child Contingency Learning Reports

Effects on Child Learning

Raab, M., Dunst, C. J., & Hamby, D. W. (2016). Effectiveness of contrasting approaches to response-contingent learning among children with significant developmental delays and disabilities. *Research and Practice for Persons with Severe Disabilities, 41*(1), 36-51.

Raab, M., Dunst, C. J., & Hamby, D. W. (2017). Efficacy trial of contrasting approaches to the response-contingent learning of young children with significant developmental delays and multiple disabilities. *Journal of Educational and Developmental Psychology, 7*(1), 12-28.

Raab, M., Dunst, C. J., & Hamby, D. W. (2018). Multilevel linear modeling of the response-contingent learning of young children with significant developmental delays. *Research in Developmental Disabilities, 81*, 113-121.

Effects on Child Social-Emotional Behavior

Dunst, C. J., Raab, M., & Hamby, D. W. (2017). Contrasting approaches to the response-contingent learning of young children with significant delays and their social-emotional consequences. *Research in Developmental Disabilities, 63*, 67-73.

Effects on Parent Social-Emotional Behavior

Dunst, C. J., Raab, M., & Hamby, D. W. (2018). Effects of contrasting approaches to the response-contingent learning of young children with significant developmental delays on parents' social-affective behavior. *International Journal of Child Care and Education Policy, 12*(12).

Dank

Dziękuję

Gracias

Obrigado

Merci

Takk

Gràcies

Dyakuyu

Thank You

Tack

Köszönöm

Kiitos

Grazie

Danke

Tak

Questions and Comments



Ana
Serrano



Marilyn
Espe-Sherwindt

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