FROM THE LAB TO THE LIVING ROOM:
INVOLVING SIBLINGS OF INDIVIDUALS WITH AUTISM SPECTRUM DISORDER

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AGENDA

- Models
- Research
  - Overall research
  - Stress among siblings
  - Siblings as interventionists
- Examples and tips
EXISTING SIBLING RESEARCH

- Many studies of “baby sibs”
- Multiple outcomes studied
- “Findings are mixed”
Functioning Among Typically Developing Siblings of Individuals with Autism Spectrum Disorder: A Meta-Analysis

Carolyn M. Shivers · Jeffrey B. Jackson · Casey M. McGregor
META-ANALYSIS

- Are typically-developing siblings of individuals with ASD more likely to have poor social, emotional, psychological, or behavioral outcomes than other neurotypical populations?
META-ANALYSIS

- Statistical synthesis of existing quantitative results
  - Effect size-based
  - Studies must have a comparison group
    - Must provide sufficient data (sample size, statistical results, etc.)
  - Effect size (Hedges’ g) is calculated for each study based on sample size, spread of data, and strength of original result
Articles excluded
- No comparison group
- Young sample
- Wrong outcome measures
- Unusable statistics

Full articles reviewed $k = 112$

Full articles included $k = 39$

Theses/dissertations included $k = 28$

Total Final Sample (includes 1 research abstract and 1 research poster) $k = 69$
OUTCOMES AND MODERATORS

- Outcomes
  - Adjustment
  - Behavior problems*
  - Beliefs
  - Coping
  - Family functioning
  - Psychological functioning*
  - Sibling relationship
  - Social functioning

- Moderators
  - Comparison group
  - Reporter
  - Sample age
  - Nationality
  - Report status
  - Measure type
OUTCOMES

- Behavior problems
  - Measured continuously
    - Internalizing
    - Externalizing
    - ADHD/hyperactivity

- Psychological functioning
  - Measured diagnostically (often Yes/No)
    - ADHD
    - Anxiety/depression
    - Behavior problems
RESULTS

- Overall, ASD-Sibs had:
  - More internalizing problems
  - More negative beliefs about disability
  - Higher levels of ADHD, anxiety/depression, and externalizing behavior symptoms
  - Poorer sibling relationships
  - Poorer social skills
"On average" does not mean “for everyone”

Many studies did not include information on age, gender, or other potentially meaningful characteristics

Studies did not examine causes of these outcomes
Self-reported stress among adolescent siblings of individuals with autism spectrum disorder and Down syndrome

Carolyn M Shivers, Casey McGregor and Ashlea Hough
METHODS

- Online survey
  - Overall stress
  - Specific sources of stress
    - Academics, extracurricular activities, social life, significant other, family, brother/sister, general environment, personal health
  - Perceived social support
  - Sibling relationship
  - Behavior problems of the child with ASD
SAMPLE

- Adolescents aged 12-18
  - 116 ASD Sibs (mean age = 15.00)
    - Brother/sister mean age = 14.78
  - 99 Down syndrome Sibs (mean age = 14.87)
    - Brother/sister mean age = 11.82
RESULTS

Overall Stress
Family Support
Friends' Support
Significant Other Support

ASD-Sibs
DS-Sibs

***
ASD-Sibs reported more stress due to their brother/sister
DS-Sibs reported more stress due to extracurricular activities
Both groups reported the highest levels of stress due to academics
- Brother/sister behavior problems were related to higher stress
- Family support was related to lower stress
- **Group membership was related to stress**
STRESS BY BEHAVIOR PROBLEMS

- DS
- ASD

Low Behavior Problems  High Behavior Problems
J Autism Dev Disord
DOI 10.1007/s10803-014-2222-7

ORIGINAL PAPER

Sibling Involvement in Interventions for Individuals with Autism Spectrum Disorders: A Systematic Review

Carolyn M. Shivers • Joshua B. Plavnick
SIBLING INVOLVEMENT IN INTERVENTIONS

- Interventions for the sibling
  - Not rigorously studied
- Interventions for the child with ASD
  - 17 peer-reviewed studies since 1977
SIBLING INVOLVEMENT IN INTERVENTIONS

Included Articles N=17

Intervention Co-Recipient n=3
  - Social Skills n=2
  - Physical Fitness n=1

Agent of Intervention n=14
  - Instructor n=9
    - Play Skills n=2
    - Social Skills n=4
    - Academic/Functional Skills n=2
    - Sibling Teaching Skills Only n=1
  - Model n=5
    - Play Skills n=2
    - Academic/Functional Skills n=3
SIBLING INVOLVEMENT IN INTERVENTIONS

- Outcomes for individuals with ASD
  - 15 out of 17 reported improvements in the targeted skills
- Outcomes for the sibling
  - 9 reported sibling outcomes
  - Only 3 reported non-procedural outcomes
- No replication
EXAMPLES AND TIPS
EXAMPLES

- Younger brother, age 7
  - “You’re still gonna hang out with me, right?”

- Younger brother, age 15
  - “The way our family functions…is more tailored to her”

- Mom (older son, age 10)
  - “We wanted his life to be as normal as possible”
SUGGESTIONS

- Talk!
  - Don’t assume you know what the sibs want
- Plan ahead
  - All transitions for everyone can be challenging – make sure you discuss expectations
- Take care of yourself
  - Parent-focused parentification can be challenging (Tomeny, Barry, Fair, & Riley, 2017)
Study participants and their families

Collaborators and mentors and the Vanderbilt Kennedy Center
- Elisabeth Dykens, PhD
- Julie Lounds Taylor, PhD
- Robert Hodapp, PhD
- Elizabeth Roof, MS
- Miriam Lense, PhD

Collaborators and Mentors as Michigan State University
- Michael Leahy, PhD
- Joshua Plavnick, PhD
- Marisa Fisher, PhD
- Gloria K. Lee, PhD
- Erica Lydey

Collaborators at Virginia Tech
- Jeff Jackson, PhD
- Casey McGregor
- Ashlea Hough
- Libbie Sonnier-Netto, PhD
- Katarina Krizova, MS
QUESTIONS?