Surveying the Landscape of Autism Intervention Practices Across the U.S.: What Practitioners Are Doing and How to Build Bridges Across Disciplines in Research and Practice

SPARK Webinar
10/18/22

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On behalf of the Usual Care for Autism Survey (UCAS) Consortium

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Service Needs of ASD

• High service needs
• Who to ask?
  • Include the people DOING the interventions!
• Wide range of providers & disciplines
• Evidence-based practices (EBP)
  • Some are, some are not
  • Need to build a bridge!
  • What are people *actually* doing?
• Treatment-access gap
• How do we build a bridge?
  • Survey the landscape!
Previous work

- A few small studies (e.g., Christon et al., 2015; Olfson et al., 2014)
  - Limited sample size
  - Limited range of disciplines
  - One geographical region
- No previous study has
  - Looked across all disciplines across multiple site nationally
  - School-age and teenage populations
  - 3 core referral questions
    - Social, anxiety, & externalizing
Approach

- CEPR (community-engaged participatory research) → large scale data collection
UCAS Map
• “Rosetta Stone” Study

1) 66 experts, 2 rounds

<table>
<thead>
<tr>
<th>Clinical Discipline</th>
<th>Years in Practice</th>
<th>% Time Working With ASD Youth</th>
<th>No. of ASD Youth Served in Past 5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Psychologist</td>
<td>23 (34.8%)</td>
<td>51–79 (40.9%)</td>
<td>50–74 (22.7%)</td>
</tr>
<tr>
<td>Behavior Analyst</td>
<td>19 (28.8%)</td>
<td>80–100 (59.1%)</td>
<td>75 or More (77.3%)</td>
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<tr>
<td>Other (SLP, OT)</td>
<td>14 (21.2%)</td>
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<tr>
<td>School Psychologist</td>
<td>6 (9.1%)</td>
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<tr>
<td>Social Worker</td>
<td>6 (9.1%)</td>
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<tr>
<td>Special Education</td>
<td>4 (6.1%)</td>
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<tr>
<td>Teacher</td>
<td>2 (3%)</td>
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<tr>
<td>Psychiatrist</td>
<td>1 (1.5%)</td>
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<tr>
<td>Nurse Practitioner</td>
<td>1 (1.5%)</td>
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“Rosetta Stone” Study

1) 66 experts, 2 rounds

<table>
<thead>
<tr>
<th>SES*</th>
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<tbody>
<tr>
<td>High</td>
<td>48 (72.7%)</td>
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<tr>
<td>Medium</td>
<td>57 (86.4%)</td>
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<tr>
<td>Low</td>
<td>40 (60.6%)</td>
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<tr>
<td>Don’t Know</td>
<td>2 (3%)</td>
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<table>
<thead>
<tr>
<th>Comorbid Intellectual Disability</th>
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<tbody>
<tr>
<td>Frequently Treated</td>
<td>33 (50%)</td>
</tr>
<tr>
<td>Sometimes Treated</td>
<td>28 (42.4%)</td>
</tr>
<tr>
<td>Never/Rarely Treated</td>
<td>5 (7.6%)</td>
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<table>
<thead>
<tr>
<th>Age Range (Years)*</th>
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<tbody>
<tr>
<td>7–9</td>
<td>46 (69.7%)</td>
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<tr>
<td>10–12</td>
<td>43 (65.2%)</td>
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<tr>
<td>13–15</td>
<td>39 (59.1%)</td>
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<tr>
<td>16–18</td>
<td>37 (56.1%)</td>
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<tr>
<td>19–22</td>
<td>28 (42.4%)</td>
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<tr>
<td>Other</td>
<td>27 (40.9%)</td>
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<table>
<thead>
<tr>
<th>Ethnicity*</th>
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<tbody>
<tr>
<td>White</td>
<td>65 (98.5%)</td>
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<tr>
<td>Hispanic/Latino</td>
<td>39 (59.1%)</td>
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<tr>
<td>African American</td>
<td>34 (51.5%)</td>
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<tr>
<td>Asian</td>
<td>30 (45.5%)</td>
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<tr>
<td>Hawaiian/</td>
<td>4 (6.1%)</td>
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<tr>
<td>Pacific Islander</td>
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<tr>
<td>Other</td>
<td>2 (3.0%)</td>
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<tr>
<td>Native American</td>
<td>1 (1.5%)</td>
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<tr>
<td>Target Symptom</td>
<td>Anxiety Problems</td>
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<tr>
<td>----------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Useful, Common, and Research Supported</td>
<td>32 strategies total</td>
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<tr>
<td></td>
<td>Relaxation</td>
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<td></td>
<td>Cognitive restructuring</td>
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<td></td>
<td>Visual tools</td>
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<td></td>
<td>Graduated exposure/Desensitization</td>
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<td>Priming</td>
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<td>Self-awareness of bodily responses</td>
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<td>Target Symptom</td>
<td>Anxiety Problems</td>
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<tr>
<td>Useful but Limited Agreement (&lt; 50%) Regarding the Evidence Base</td>
<td>Stories/Vignettes</td>
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<tr>
<td></td>
<td>Self-management</td>
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<td>FBA</td>
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<td>Choice making</td>
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<td>Motivating with special interests</td>
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<td>FCT</td>
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<td>Positive reinforcement</td>
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<td>Prompt fading</td>
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<td>Performance feedback</td>
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<td>Sensory breaks</td>
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<td>Prompting</td>
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<td></td>
<td>Environmental structuring</td>
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<td>Extinction</td>
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<td>Target Symptom</td>
<td>Anxiety Problems</td>
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<tr>
<td>Useful but Lack of Agreement (&lt; 25%) Regarding</td>
<td>Didactic teaching</td>
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<tr>
<td>Evidence Base</td>
<td>Acceptance strategies</td>
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<tr>
<td></td>
<td>Socratic discussions</td>
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<td>Embedding social interests into social</td>
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<td>interaction</td>
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<td>Noncontingent reinforcement</td>
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<td>Useful but Limited Agreement (&lt; 50%) Regarding</td>
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<td>Common Use</td>
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<td>Not Useful</td>
<td>Time-out</td>
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<td>Response cost</td>
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Discussion

• There ARE practices that experts *across disciplines* agree on!
• We CAN communication with each other
• Useful, common, research-supported
  • Anxiety: relaxation, desensitization, etc.
  • Externalizing: positive reinforcement and related behavioral strategies
  • Social: Shaping, rehearsal, imitation
• Not useful
  • Anxiety & social skills: time out
• Foundation for examining what others (experts and non-experts) are doing
UCAS
Patterns of Familiarity and Use
Laying the Foundation

- 55 transdisciplinary practices
  - from the Delphi
- familiarity & use
Method

- 674 ASD community providers
  - 5 sites across the U.S.
  - completed a questionnaire of familiarity with and use of these practices;

- Provider type
  - 12.8% psychologists
  - 16.8% behavior analysts
  - 9.2% medical doctors
  - 29.5% allied health professionals
  - 16.8% Other (e.g., educational providers, admin, etc.)
  - 14.8% multiple disciplines
Method

• Provider categories:
  • Allied health
  • Behavioral
  • Education
  • Medical
  • Psychologists
  • Other

• Educational Attainment
  • <4 year
  • 4 year
  • MA
  • Doctoral

• Years working w/ASD
  • 0 – 10
  • 11 – 20
  • 20+

• Tx setting
  • 1 setting
  • Multiple

• Clients w/comorbid ID
  • Never
  • Sometimes
  • Frequently

• High SES
  • Yes/no

• Low SES
  • Yes/no
Familiarity

• Environmental modifications/antecedents
  • 9 strategies, including
    • Choice making/providing choices
    • Environmental structuring
    • Embedding special interests in social interaction

• Behavior analytic strategies
  • 18 strategies, including
    • Differential reinforcement
    • Extinction
    • Shaping

• Cognitive strategies
  • 5 strategies, including
    • Self-awareness of bodily response
    • Psychoeducation

Usual care for youth with autism spectrum disorder: Community-based providers’ reported familiarity with treatment practices

Matthew D. Lerner1*, Cynthia E. Brown1,2, Aksheya Sridhar3, Jessica E. Tschida3, Peter Felsman1,4, Erin J. Libsack1, Connor M. Kerns5, Lauren J. Moskowitz6, Latha Soorya7, Allison Wainer7, Elizabeth Cohn8 and Amy Drahota3
## Results - Familiarity

<table>
<thead>
<tr>
<th>Provider discipline</th>
<th>Overall&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Environmental modification/antecedent strategies</th>
<th>Behavioral analytic strategies</th>
<th>Cognitive strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider education</td>
<td>NS</td>
<td>Master's = Doctoral &gt; 4 year degrees or less</td>
<td>Master's = Doctoral &gt; 4 year degrees or less</td>
<td>Doctoral &gt; Master's &gt; 4 year degrees or less</td>
</tr>
<tr>
<td>Provider experience&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Most, least &gt; middle</td>
<td>Most &gt; least &gt; middle</td>
<td>most &gt; least &gt; middle</td>
<td>NS</td>
</tr>
<tr>
<td>Client characteristics&lt;sup&gt;c&lt;/sup&gt;</td>
<td>&quot;Yes&quot; High and/or low SES &gt; Others</td>
<td>Sometimes ID &gt; others</td>
<td>Frequent ID &gt; others</td>
<td>Awareness of ID &gt; &quot;Unsure&quot; ID&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&quot;Yes&quot; Low SES &gt; &quot;No&quot; Low SES</td>
<td>&quot;Yes&quot; Low SES &gt; &quot;No&quot; Low SES</td>
<td>&quot;Yes&quot; High SES &gt; &quot;No&quot; High SES</td>
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</tbody>
</table>
Discussion - Familiarity

- Doctorate
  - most familiar
- Medical
  - less familiar w/behavioral, more w/cognitive
- Experience
  - More years: familiar with behavioral & setting
  - Fewer years: more familiar with cognitive
- ID pattern
  - most with behavioral, moderate with setting & cognitive
- SES
  - mixed
Use

• Consequence-Based Strategies
  • 8 strategies, including
  • Positive reinforcement
  • Token economy

• CBT/Therapy Strategies
  • 12 strategies, including
  • Self-Awareness of Bodily Responses
  • Psychoeducation

• Antecedent-based strategies
  • 8 strategies, including
  • Embedding Special Interests in Social Interaction
  • Visual Tools or Supports

• Teaching
  • 4 strategies, including
  • Shaping
  • Stimulus control
Results - Use

Consequence-based
• Behavioral
• <4 year degree
• 0 – 10 years < all others
• ID: frequently

CBT/therapeutic strategies
• Behavioral
• 4 year & MA
• High SES: yes

Antecedent-based
• Behavioral & Other
• Doctorate < all others
• 0 – 10 years

Teaching
• Behavioral & mental health
• 4 year & MA
• Multiple settings
Discussion - Use

• Behavioral
  • more for all categories

• Less education
  • more consequence-based

• More education
  • *Less* teaching

• Experience
  • Less consequence-based
  • More antecedent-based

• ID
  • Consequence-based

• SES & setting
  • High SES, more CBT
  • mixed
Discussion

• Transdisciplinary practice sets for ASD

• Familiarity:
  • Setting/Learning contingencies
  • Behavioral analytic
  • Cognitive strategies

• Use
  • Consequence-based
  • CBT/therapeutic
  • Antecedent-based
  • Teaching

• Factors not exactly the same for familiarity & use
Discussion

ARE YOU EXPERIENCED?
Other Findings with UCAS

- Practices of Trauma Screening (Kerns et al., 2019)
- Predictors of expert familiarity (Cooper et al., in press)
- Identifying “fraudsters” (Lawlor et al., 2022)
Forthcoming Papers

• use and usefulness of empirically supported strategies
  • how this breaks down by specific domain
• Provider Self-Reported Use and Usefulness of Intervention Strategies for Externalizing Behaviors in Youths with ASD (Brown)
• Difference by presence of ID (Bracconier)
• genetic screening process (Cohn)
• trauma screening differences by race (Walker)
• Rurality & technology-aided interventions (Tschida)
Gaps & Directions

• When does familiarity lead to use?
  • Usefulness?
  • Empirical support?
  • **Stakeholder value?**

• When does it *not*?
  • i.e., practices that are known and *not* endorsed

• Other age groups & intervention targets

• Changes post-COVID

• Even larger follow up study – the rest of the country!
  • A “SPARK” for providers?
Take home messages

• To build a bridge, you must survey the landscape!
• We can find a common language among practitioners
  • How can we better loop in families?
• What are people actually doing, find useful, think is evidence based: not all the same!
• Finding these out can accelerate dissemination of new and improved practices
• Community-engaged participatory research (CEPR) & Dissemination/Implementation (D/I)
  • Helps make sure we’re asking the right questions
  • can open doors to other important questions
Thank you!!

• UCAS PI Team
• Other UCAS Authors
  • Cynthia Brown
  • Chelsea Day
  • Jennifer Lawlor
  • Steven Berkowitz
  • Craig Newschaffer
  • Carl Thomas
  • Andrew Guhin
  • Kendra Kenyon
  • Erin Libsack
  • Peter G. Felsman
  • Aksheya Sridhar
  • Jessica E. Tschida
• Delphi & UCAS Participants
• Funders