Meet Dr. Saulnier

Bio

Celine Saulnier, Ph.D., is the Director of Research Operations at the Marcus Autism Center, Children’s Healthcare of Atlanta and Associate Professor in the Department of Pediatrics at Emory University School of Medicine. She obtained her doctorate in Clinical Psychology from the University of Connecticut, after which she completed a postdoctoral fellowship and then joined the faculty within the Yale Child Study Center’s Autism Program. At Yale, Dr. Saulnier worked closely with Drs. Ami Klin and Sara Sparrow investigating adaptive behavior profiles in ASD, and she eventually became both the Clinical Director and the Training Director for the Autism Program. At the Marcus Autism Center, Dr. Saulnier directs a large-scale clinical research operation that includes a multidisciplinary diagnostic assessment core for individuals participating in research. She is co-author of the book, Essentials of Autism Spectrum Disorders Evaluation and Assessment and is under contract to write a second book in the Essentials series on adaptive behavior.
History/Timeline and Goals of the revision

The Vineland Social Maturity Scale
(Edgar Doll; 1935 & 1965)

- Edgar Doll developed the Vineland Social Maturity Scale out of an interest in identifying the relationship between mental deficiency and social competence
- The VSMS encompassed 8 categories: Self-help general; self-help dressing; self-help eating; communication; self-direction; socialization; locomotion; and occupation
- Doll’s perspective on adaptive behavior was that it is developmental, multidimensional, and best assessed using a 3rd party informant (parent/caregiver rather than the individual)

“No mental diagnosis is complete if it does not begin with a sound estimate of social competence and end with a prediction of social competence following prognosis or treatment.”
History of the Vineland

- Sara Sparrow, David Balla, & Domenic Cicchetti
  developed the *Vineland Adaptive Behavior Scales* after
  US law included deficits in adaptive functioning in the
  Education for All Handicapped Children Act of 1975 (now
  IDEA).
- Expanded upon the Social Maturity Scales by focusing on
  broader areas of adaptive functioning beyond socialization
  (i.e., communication, daily living skills, & motor skills).
- Similar to Doll, Sparrow also endorsed the 3rd party
  administration, emphasizing that the most reliable method of
  obtaining accurate information on adaptive behavior is
  through a *semi-structured interview* with a parent or
  caregiver.

Uses for the Vineland
- Confirming or establishing Intellectual Disability
- Diagnosis of Autism Spectrum Disorder
- IDEA evaluations in the schools
- Program planning
- Measuring progress/Change over time
- RESEARCH:
  - In the United States, the Vineland is modeled
    in the National Institutes of Health’s National
    Database for Autism Research (NDAR) as one
    of the required measures for the diagnostic
    characterization of ASD

Vineland-3

Highlights
### Overview of the Vineland-3

<table>
<thead>
<tr>
<th>Form</th>
<th>Parent/Caregiver Form</th>
<th>Teacher Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Forms</td>
<td>Interview</td>
<td>Parent/Caregiver</td>
</tr>
<tr>
<td>Four Adaptive Domains</td>
<td>Communication</td>
<td>Daily Living Skills</td>
</tr>
<tr>
<td>11 Subdomains</td>
<td>Receptive</td>
<td>Personal</td>
</tr>
<tr>
<td>Maladaptive Sections</td>
<td>Internalizing</td>
<td>Externalizing</td>
</tr>
</tbody>
</table>

### Major Features that are NOT Changing

- Three Forms: Interview, Parent/Caregiver, Teacher
- Four Adaptive Domains: Communication, Daily Living Skills, Socialization, Motor Skills
- 11 Subdomains:
  - Receptive Expressive Whole Written
  - Personal Domestic Play/Leisure
  - Expressive Community Coping Skills
  - Interpersonal Gross Motor
  - Social Gross Motor
  - Community Motor Skills

### Highlights of What's New

- Updated Item Content
- New Online Administration
- Comprehensive vs. Domain-Level Forms
- Item-Level Comparison
- Intervention Guidance
Updated Item Content of the Vineland-3

- Items were updated to reflect changes in daily living (e.g., technology) and in conceptions of developmental disabilities (e.g., autism)
- Outdated items were dropped or modified
- Items are more general in wording to allow for potential cultural differences
  - "Understands what direction his/her language is written in"
  - "Responds politely when given something" (e.g., more general than "says thank you")
  - "Maintains culturally appropriate eye contact during social situations"
- Efforts to reduce redundancy and streamline similar items to specific subdomains (e.g., moving all conversational items to Socialization)

Examples of Updated Content

- We have expanded the Receptive subdomain to include more items at all developmental levels (e.g., more items about gesture use and nonverbal communication)
- We have expanded the Written subdomain to include more items at all developmental levels (e.g., more items about pre-reading & writing skills, as well as more advanced skills)
- We added items in the Personal subdomain to reflect healthy eating habits and exercise choices (e.g., not only showing awareness that some foods are healthier than others, but also taking the initiative to make healthy eating choices)
- We updated the Community subdomain to reflect use of technology for everyday purposes; (e.g., using the internet to obtain information)
- And we added items in the Coping subdomain to assess for social gullibility (e.g., "understands that a friendly appearing person may actually intend harm", "recognizes that advertising messages may not be accurate")

Changes to Basal & Ceiling Rules

**Comprehensive Forms**

<table>
<thead>
<tr>
<th>Form</th>
<th>Basal/Ceiling</th>
<th>VINELAND-II</th>
<th>VINELAND-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview</td>
<td>Basal</td>
<td>4 consecutive scores of 2</td>
<td>4 consecutive scores of 2</td>
</tr>
<tr>
<td></td>
<td>Ceiling</td>
<td>4 consecutive scores of 0</td>
<td>4 consecutive scores of 0</td>
</tr>
<tr>
<td>Parent/Caregiver</td>
<td>Basal</td>
<td>Parent completed entire form</td>
<td>5 consecutive scores of 2</td>
</tr>
<tr>
<td></td>
<td>Ceiling</td>
<td>Parent completed entire form</td>
<td>5 consecutive scores of 0</td>
</tr>
<tr>
<td>Teacher</td>
<td>Basal</td>
<td>Teacher completed age range</td>
<td>5 consecutive scores of 2</td>
</tr>
<tr>
<td></td>
<td>Ceiling</td>
<td>Teacher completed age range</td>
<td>5 consecutive scores of 0</td>
</tr>
</tbody>
</table>
Changes to Item Scoring Options

<table>
<thead>
<tr>
<th>RESPONSE OPTION</th>
<th>VINELAND-II</th>
<th>VINELAND-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Usually</td>
<td>Usually</td>
</tr>
<tr>
<td>1</td>
<td>Sometimes or Partially</td>
<td>Sometimes</td>
</tr>
<tr>
<td>0</td>
<td>Never</td>
<td>Never</td>
</tr>
</tbody>
</table>

Maladaptive Domain: Item Score of 2

<table>
<thead>
<tr>
<th>RESPONSE OPTION</th>
<th>VINELAND-II</th>
<th>VINELAND-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Usually</td>
<td>Often</td>
</tr>
</tbody>
</table>

Estimated Items

- The Vineland-3 no longer has “Don’t Know” (DK) or “No Opportunity” (N/O) item response options.
- The Vineland-II Teacher Form employed a Check if Estimated response option for every item.
  - In Vineland-3, this approach is used instead.
  - Across all forms.
- The % of estimated items per section is the # of estimated items divided by the total number of items answered.
- If 2+ sections of the form have >25% estimated items, the form may be invalid.
- % Est < 15%: Validity is not compromised
- % Est ≥15% but < 25%: Interpret with caution
- % Est ≥ 25%: Do not interpret scores

Maladaptive Behavior Domain

- Vineland-3 Interview Form has 3 Maladaptive Behavior sections to briefly assess for problem behaviors:
  - Internalizing
  - Externalizing
  - Critical Items
- The Parent/Caregiver & Teacher Forms label these as Sections A, B, & C, respectively, so as not to inadvertently influence responses.
- These domains are optional for individuals over the age of 3.
- Internalizing and Externalizing sections yield a v-scale score with a Mean of 15 and SD of 3 (more on v-scale scores later).
- The Critical Items section does not generate a scaled score, as these items are not a unified construct.
- Scores of “2” indicate “OFTEN” rather than “USUALLY”.
Vineland-3 Interview Form:

- The Vineland Interview Form remains the **LEADING MEASURE FOR ASSESSING ADAPTIVE BEHAVIOR!**
- Drs. Sparrow and Doll believed that an open-ended interview between a clinician and a caregiver provides more accurate and comprehensive information about adaptive behavior.
- Adaptive behavior is **NOT** capacity or repertoire of skills; it is the independent & functional application of skills to daily contexts and routines.
- Helps to differentiate the “can do” from the “does do”
- The test items are **not** read to the respondent; rather, open-ended questioning is used to probe for the true frequency and independent application of behaviors.

Vineland-3 Interview Form:

**Suggested Questions and Item-Specific Probes**

- **Suggested interview questions** are general questions designed to begin discussion of an adaptive behavior content area.
- **Item-specific probes** can be used to obtain more accurate information to score individual items.
- These are **for optional use.**
- Assists less experienced interviewers.
- Helps to “lower the learning curve” of the adaptive interview.
- These are **NOT** intended to fully script an interview!
Online Administration

- Options for online completion of all 3 forms
- Q-global will automatically keep track of basal, ceiling, and subdomain completion rules
- INTERVIEW FORM:
  - Process is the same as Vineland-II
  - BUT Q-global conveniently organizes items with related content by topic
  - Interview Topics include 2 to 6 items
  - All information for the items within an Interview Topic is displayed on a single screen
  - Q-global automatically tracks basals and ceilings

* Training for Q-global will start in July
  www.pearsonclinical.com

Sample Interview Topic Screen
Interview Topic Screen

- **TOPIC AREA:** The topic area name is at the top of the screen
e.g., “Friendships”
- **SUGGESTED INTERVIEW QUESTION:** Listed beneath the Topic Area
e.g., “Tell me about Stella’s Friendships”
- **ITEM-SPECIFIC PROBE:** Click to see a more detailed question
e.g., “How does Stella try to make friends with others her age?”
- **SCORING CRITERIA:** Click to see scoring criteria – e.g., “Examples include
asking for a play date or to go somewhere with another child”

SUGGESTED INTERVIEW QUESTIONS AND PROBES WILL BE AVAILABLE
IN THE VINELAND-3 BOOKLET AND MANUAL

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Online Administration of the Parent/Caregiver & Teacher Forms

- These are self-administering questionnaires conducted on the Q-global platform
- Q-global allows the examiner to send an email link to the parent/caregiver or teacher, who completes the form using a **computer, tablet, or smartphone**
- Q-global selects the appropriate sections to administer and uses built-in logic to sequence items and to track basals and ceilings
- Forms can be completed in one session or in multiple sessions
Changes to BOTH the Parent/Caregiver & Teacher Forms

- Introduction of basal and ceiling rules to the administration of the Comprehensive Parent/Caregiver & Teacher Forms
  - Basal: 5 consecutive scores of 2
  - Ceiling: 5 consecutive scores of 0
- This significantly reduces administration time of both forms for the computerized administration on Q-global
- For the paper Parent/Caregiver & Teacher Forms, the examiner will need to carefully prepare the test booklet to ensure that the required items are completed:
  - Clearly cross out sections not to be completed - based on the examinee's age and decisions about optional Motor & Maladaptive
  - Circle the Start Item in each subdomain - based on the Start Point Age that you determine for the examinee

Changes to the Parent/Caregiver Form

- Separation of the Interview and Parent/Caregiver Forms in Vineland-3
  - Reason for the change
  - Item content is identical between forms; however, item wording differs to achieve a 5th-grade reading level in the Parent/Caregiver Form
  - The two forms now have separate norms
- Vineland-3 Parent/Caregiver Forms (both Comprehensive and Domain-Level) are available in Spanish

Choosing between the Interview Form vs. Parent/Caregiver Form

Advantages of the Interview Approach
- Involvement of a professional interviewer protects against potential sources of inaccuracy in parent reporting
  - Misunderstanding of item content and/or item scoring rules
  - Deliberate over-reporting or under-reporting of adaptive competencies - designed to influence outcome of the assessment
  - Unintentional over-reporting or under-reporting of adaptive competencies - driven by unconscious motives
- Provides more in-depth information regarding the examinee's functioning and his/her home environment

Advantages of the Parent Questionnaire Approach
- Reliable & valid assessment of adaptive behavior when a face-to-face interview is not possible (also Spanish availability)
Changes to the Teacher Form

- Overall, the Teacher Form is the least changed of the three forms relative to Vineland-II
- Maladaptive Behavior domain added to assess problem behaviors in the school setting
- Motor domain now optional (as with the Interview & Parent/Caregiver Forms)
- Teacher Form is at a 7th-grade reading level
- As with Vineland-II, test range is ages 3 to 21, with 18-year-old norms used for ages 19, 20, & 21

NEW Domain-Level Forms

- Options for brief administration of Interview, Parent/Caregiver, and Teacher Forms.
- Scores meet AAIDD and DSM-5 requirements for diagnosing Intellectual Disability.
- Domains consist of items drawn from each of the Comprehensive Form subdomains (e.g., Interview Form Communication domain consists of 45 items sampled equally from Receptive, Expressive, & Written subdomains)
**Domain-Level Forms**

- **Age Ranges:**
  - Interview Form: 3 to adult
  - Parent/Caregiver Form: 3 to adult
  - Teacher Form: 3 to 21

- **Administration Time:**
  - Interview Form: ~25 minutes
  - Parent/Caregiver Form: ~10 minutes
  - Teacher Form: ~10 minutes

- No basal and ceiling rules – Every item is administered

**Vineland-3 Reports**

**Computer-Generated Reports**

- Computerized administration, scoring, and reporting will use Q-global
- Reports will offer all components of the Vineland-II ASSIST reports:
  - All raw and norm-referenced scores
  - Narrative text describing scores
  - Multi-rater comparisons when Interview or Parent/Caregiver form is given along with Teacher Form
  - Comparison to prior results when available for monitoring progress

- AND MORE, including item-level comparisons between tests
Multi-Rater Report:
Scale-Level Comparisons

NEW! Item-Level Comparisons for
Multi-Rater Report

Progress Monitoring

• Administering multiple Vineland-3 assessments over time enables the professional to monitor an individual’s progress (or lack thereof) in adaptive behavior.
• Q-global enables comparison of results from up to 5 different administrations of the same format.
• Results may be compared over time for the Comprehensive and/or Domain-Level versions of all 3 forms (Interview, Parent/ Caregiver, Teacher).
  – However, comparisons should not be made across formats because format differences could obscure actual behavioral changes.
Progress Report:
Scale-Level Comparisons

NEW! Item-Level Comparisons for Progress Report

<table>
<thead>
<tr>
<th>Recreational Subdomains</th>
<th>Time 1</th>
<th>Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Identifies at least three body parts on self</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>20. Follows instructions with one action and one object</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>22. Recognizes the questions that can be asked</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>23. Follows instructions, with two related actions</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Probably Improved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Responds to the tone of spoken words</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>21. Follows instructions with one action and two objects</td>
<td>0'</td>
<td>2</td>
</tr>
<tr>
<td>26. Pays attention to a story for at least 15 minutes</td>
<td>0'</td>
<td>1</td>
</tr>
<tr>
<td>27. Follows instructions with two related actions</td>
<td>0'</td>
<td>1</td>
</tr>
<tr>
<td>Unimpaired</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Understands at least three more advanced gestures</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>21. Identifies at least one pictured action</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

New: Intervention Guidance

- Generated for the Comprehensive form reports only.
- Items in each subdomain are identified with “Content Areas” that can help focus intervention efforts (e.g., Written Communication: Pre-reading; Developing Reading Skills; Developing Writing Skills; Applying Reading & Writing Skills).
- Items within each subdomain are ordered according to increasing developmental sequence (easiest to most difficult) based on normative data.
- Lowest subdomain v-scale scores are listed first, followed by second lowest, etc.
- All scores of 0 and 1 can be referenced to normative expectations and prioritized for intervention.
Intervention Guidance
Written Subdomain

Item Scores of 0/1 are shaded to highlight skills that need improvement.
Use Content Areas to identify intervention targets by topic (e.g., B & C).

Written Subdomain Content Areas:
A = Pre-reading
B = Developing Reading Skills
C = Developing Writing Skills
D = Applying Reading & Writing Skills

Vineland-3 Psychometrics

Clinical Samples Included in Vineland-3 Standardization
- Developmental Delay
- Intellectual Disability, School-Age Sample
  - Segmented by IQ: 50-70/35-49/<35
- Intellectual Disability, Adult Sample
  - Segmented by IQ: 50-70/35-49/<35
- Autism Spectrum Disorder
  - Segmented by age (3-8 & 9-20) and IQ: ≤70 vs. >70
- Hearing Impaired
- Visually Impaired
Comparisons to Other Measures of Adaptive Behavior

- The Vineland has the longest history, dating back to 1935
- The Vineland is, by far, the most researched measure of adaptive behavior
- Vineland-3 now offers the most options for tailoring to meet individual needs:
  - Interview, Parent, and Teacher formats
  - Comprehensive & brief Domain-Level formats
  - Option for online or paper administration
- Vineland-3 now has the most up-to-date, population-representative norms

Norms Compared to U.S. Population

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Vineland-3 (U.S. Population)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interview (n=2560)</td>
</tr>
<tr>
<td>White</td>
<td>53.9 (52.9)</td>
</tr>
<tr>
<td>African American</td>
<td>13.8 (13.2)</td>
</tr>
<tr>
<td>Asian</td>
<td>3.4 (4.7)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>23.5 (23.7)</td>
</tr>
<tr>
<td>Less than High School</td>
<td>14.4 (14.0)</td>
</tr>
<tr>
<td>High School Diploma</td>
<td>23.4 (23.3)</td>
</tr>
<tr>
<td>Some College/Technical</td>
<td>31.6 (31.7)</td>
</tr>
<tr>
<td>Bachelor’s Degree/More</td>
<td>30.6 (31.0)</td>
</tr>
</tbody>
</table>

Internal Consistency Reliability

<table>
<thead>
<tr>
<th>Domain</th>
<th>Interview</th>
<th>Parent</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>.95</td>
<td>.97</td>
<td>.97</td>
</tr>
<tr>
<td>Daily Living Skills</td>
<td>.94</td>
<td>.97</td>
<td>.96</td>
</tr>
<tr>
<td>Socialization</td>
<td>.96</td>
<td>.96</td>
<td>.98</td>
</tr>
<tr>
<td>Adaptive Behavior Composite</td>
<td>.98</td>
<td>.99</td>
<td>.99</td>
</tr>
<tr>
<td>Motor Skills</td>
<td>.90</td>
<td>.96</td>
<td>.96</td>
</tr>
<tr>
<td>Communication</td>
<td>.93</td>
<td>.94</td>
<td>.93</td>
</tr>
<tr>
<td>Daily Living Skills</td>
<td>.92</td>
<td>.93</td>
<td>.92</td>
</tr>
<tr>
<td>Socialization</td>
<td>.94</td>
<td>.95</td>
<td>.95</td>
</tr>
<tr>
<td>Adaptive Behavior Composite</td>
<td>.97</td>
<td>.97</td>
<td>.97</td>
</tr>
<tr>
<td>Motor Skills</td>
<td>.96</td>
<td>.91</td>
<td>.91</td>
</tr>
</tbody>
</table>
Test-Retest Reliability: Domains/ABC

<table>
<thead>
<tr>
<th>Standard Score</th>
<th>Interview</th>
<th>Parent</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>.89</td>
<td>.88</td>
<td>.88</td>
</tr>
<tr>
<td>Daily Living Skills</td>
<td>.84</td>
<td>.84</td>
<td>.86</td>
</tr>
<tr>
<td>Socialization</td>
<td>.79</td>
<td>.80</td>
<td>.84</td>
</tr>
<tr>
<td>Adaptive Behavior Composite</td>
<td>.86</td>
<td>.85</td>
<td>.88</td>
</tr>
<tr>
<td>Motor Skills</td>
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<tr>
<td>Communication</td>
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<tr>
<td>Daily Living Skills</td>
<td>.75</td>
<td>.85</td>
<td>.84</td>
</tr>
<tr>
<td>Socialization</td>
<td>.74</td>
<td>.79</td>
<td>.81</td>
</tr>
<tr>
<td>Adaptive Behavior Composite</td>
<td>.82</td>
<td>.87</td>
<td>.88</td>
</tr>
<tr>
<td>Motor Skills</td>
<td>.76</td>
<td>.90</td>
<td>.84</td>
</tr>
</tbody>
</table>

Thank you for attending!