Self-Regulation and Coping Across the Lifespan: Sensory Processing Measure, Second Edition

Douglene Jackson, PhD, OTR/L
Assessment Consultant
For over 75 years, WPS has been the leading independent publisher of educational and psychological assessments and related intervention resources in the areas of autism, speech and language, school and clinical psychology, and occupational therapy.
Douglene Jackson
PhD, OTR/L, LMT, ATP, BCTS

- PhD: Special Education in Early Childhood
- Master’s: Occupational Therapy
- Bachelor’s: Rehabilitation Services with a concentration in Counseling
- Diploma: Massage Therapy
- Over 20 years of experience in rehabilitation
- RESNA, Certified Assistive Technology Professional
- IBCCES, Board-Certified Telepractice Specialist
- Florida Occupational Therapy Association, President

Assessment Consultant

I am an assessment consultant with Western Psychological Services. I am a salaried employee and have no additional relevant financial interests or conflicts of interest related to this presentation.
Objectives

- Discuss self-regulation and coping across the lifespan in relation to sensory processing
- Provide an overview of the Sensory Processing Measure, Second Edition across the lifespan
- Discuss the Sensory Processing Measure, Second Edition Quick Tips
Self-Regulation and Coping Across the Lifespan
Self-Regulation: Defined

- What is self-regulation?
  - Process of managing thoughts, feelings, and emotions to enable goal-directed actions
What is self-regulation?

- Involves physical, emotional, mental, and social states/functions
- Multifaceted
- Involves adaptive responses
Coping: Defined

- What is coping?
  - Ability to manage the demands of and emotions generated by the person–environment relationship
  - Efforts to manage internal and external demands
  - Individual variability

(Lazarus & Folkman, 1984)
Coping: Defined (cont.)

- What is coping?
  - Efforts to manage internal and external demands
  - Individual variability
Self-Regulation Across the Lifespan

- Birth
- Early Childhood
- Adolescence
- Adulthood

Co-regulation

Self-regulation

Shared regulation
Supporting Self-Regulation & Coping Across the Lifespan

- Assessment
- Intervention
Coping & Self-Regulation: Relationship to Sensory Processing
Assessment Across the Lifespan
Assessment Across the Lifespan
Assessment: Sensory Processing

- Assessment
  - Rating scales
    - Sensory-based
    - Adaptive behavior
  - Performance-based assessments
  - Observation
Sensory Processing Measure, Second Edition
Sensory Processing Measure, Second Edition

- Easy to use
- Reliable
- Valid
- Time efficient
- Informative
The Sensory Processing Measure, Second Edition (SPM-2) is a revision and expansion of:

- Sensory Processing Measure (2007)
- Sensory Processing Measure–Preschool (2010)

The SPM-2 expands the age range downward to include infants and toddlers and upward to include adolescents and adults.
Overview (cont.)

- Used in many different settings where assessment of an individual’s developmental abilities, strengths, and weaknesses is useful
The SPM-2 supports identification and treatment of sensory integration and processing difficulties

Developed by occupational therapists and is appropriate to be used by various professionals

- Consult OT for intervention

May be used alone or as a screening instrument in conjunction with other assessments
SPM-2: What’s New

- Expanded age range includes infants, toddlers, preschool and school-age children, adolescents, and adults
- Updated norms based on new, nationally representative standardization samples
- Assess and compare across daily environments with new forms, including driving forms
SPM-2: What’s New (cont.)

- Updated SPM-2 Quick Tips now organized by additional sensory, cognitive, and behavioral objectives to develop intervention strategies for home, school, work, and in the community
- Compare sensory needs of individuals to those of the caregiver, parent, teacher, or other adult
- Updated item content reflects changes in technology for children’s play and activities
Assessment of sensory systems:

- T-scores provide norm-referenced indexes of function
  - Visual, auditory, tactile, olfactory, gustatory, proprioceptive, and vestibular sensory systems
  - Integrative functions of praxis and social participation
Key Features (cont.)

- Assessment of sensory integration vulnerabilities:
  - The SPM-2 items provide descriptive clinical information on processing vulnerabilities within each sensory system, including
    - Under- and over-reactivity
    - Sensory-seeking behavior
    - Difficulties with perception
Key Features (cont.)

- Assessment across multiple environments and raters:
  - Forms at each age level of the SPM-2 are designed for maximum flexibility in choosing and comparing among environments and raters, such as:
    - 12 main forms
    - Multiple caregivers
SPM-2 Components

- Print and digital materials on the WPS Online Evaluation System (OES)
- Manual
- Various forms across the lifespan for completion by caregivers, teachers, and self-report
  - Infant/Toddler
  - Preschool
  - Child
  - Adolescent
  - Adult
- Vision (VIS)
- Hearing (HEA)
- Touch (TOU)
- Taste and Smell (T&S)
- Body Awareness (BOD)
- Balance and Motion (BAL)
- Planning and Ideas (PLN)
- Social Participation (SOC)
SPM-2 Sensory Total (ST)

The ST is a composite of six sensory scales:

- VIS, HEA, TOU, T&S, BOD, and BAL

Not included:

- PLN and SOC

Represent higher level integrative processes influenced by cognitive, contextual, and multisensory information
SPM-2: Administration
Infant/Toddler
4–30 months

Preschool
2–5 years

Child
5–12 years

Adolescent
12–21 years

Adult
21–87 years
### SPM-2: Administration (cont.)

<table>
<thead>
<tr>
<th>Age of client</th>
<th>Age level to use</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 to 9 months</td>
<td>Infant</td>
</tr>
<tr>
<td>10 to 23 months</td>
<td>Toddler</td>
</tr>
<tr>
<td>24 to 30 months, <em>Attends formal day care outside of the home?</em></td>
<td>Toddler if No, Preschool if Yes</td>
</tr>
<tr>
<td>31 months to 4 years</td>
<td>Preschool</td>
</tr>
<tr>
<td>5 years, <em>Has started an academic kindergarten?</em></td>
<td>Preschool if No, Child if Yes</td>
</tr>
<tr>
<td>6 to 11 years</td>
<td>Child</td>
</tr>
<tr>
<td>12 years, <em>Has started middle school?</em></td>
<td>Child if No, Adolescent if Yes</td>
</tr>
<tr>
<td>13 to 20 years</td>
<td>Adolescent</td>
</tr>
<tr>
<td>21 years, <em>Still in high school?</em></td>
<td>Adolescent if Yes, Adult if No</td>
</tr>
<tr>
<td>Over 21 years</td>
<td>Adult</td>
</tr>
</tbody>
</table>

*Figure 2.1. SPM-2 Forms to Use by Client Age*
SPM-2: Administration (cont.)

- Environment forms
  - Art (ART)
  - School Bus (BUS)
  - Cafeteria (CAF)
  - Music (MUS)
  - Physical Education (PHY)
  - Recess/Playground (REC)
  - Driving
SPM-2: Administration (cont.)

- Items rated based on frequency of a specific behavior
  - Never
  - Occasionally
  - Frequently
  - Always
SPM-2: Scoring

- Paper
- AutoScore™ Form
SPM-2: Scoring (cont.)

- Online
  - WPS Online Evaluation System
SPM-2: Standardization

- Standardization sample included 3,850 typically developing participants
  - 4 months to 87 years
- Separate sample of 639 clinical participants (across all age levels) used to verify SPM-2 differentiates between typical and clinical populations
Separate demographically representative normative samples were collected for each age level:

- Infant/Toddler \( (n = 697) \)
- Preschool \( (n = 606) \)
- Child \( (n = 840) \)
- Adolescent \( (n = 985) \)
- Adult \( (n = 722) \)
Evidence supporting reliability included the following (median) estimates across all five age levels:

- Internal consistency (.86)
- Test–retest reliability (.84)
- Alternate-forms reliability (.78)
- Interrater reliability (.66)
SPM-2: Validity

- Content validity
  - Sensory domains
  - Vulnerabilities
- Structural validity
  - Strong
    - Interscale correlations
    - Factor analyses
SPM-2: Validity (cont.)

- **Construct validity**
  - Equivalence with SPM and SPM-P
  - Convergence with Sensory Profile and Sensory Profile 2
  - Convergence with Adaptive Behavior Assessment System, Third Edition (ABAS-3)
SPM-2: Validity (cont.)

- Clinical validity
  - Effect Size
    - .40 to .50 range for Infant/Toddler and Preschool age levels
    - .50 to .80 range for Child and Adolescent age levels
    - .20 to .30 range for Adult age level
### Conditional probability

**Table 5.35. Conditional Probability Analysis for Detection of Sensory Processing Disorder**

<table>
<thead>
<tr>
<th>Sensory Total (ST) T-score cutoff points</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>.87</td>
<td>.67</td>
</tr>
<tr>
<td>60</td>
<td>.72</td>
<td>.83</td>
</tr>
<tr>
<td>65</td>
<td>.51</td>
<td>.92</td>
</tr>
<tr>
<td>70</td>
<td>.23</td>
<td>.98</td>
</tr>
<tr>
<td>75</td>
<td>.03</td>
<td>.99</td>
</tr>
</tbody>
</table>

*Note. Sample included 39 individuals with sensory processing/integration disorders and 3,096 typically developing individuals from the standardization sample; analysis included every form.*
SPM-2: Validity (cont.)

- Equivalence: Paper vs. Digital Administration
  - High median correlations for Scales (.81–.87) and Sensory Totals (.92)
- Spanish–English
  - Moderate to Strong for Scales (.58) and Sensory Totals (.71)
Intervention Across the Lifespan
Intervention Across the Lifespan
Intervention: Sensory Processing/Sensory Integration

- Intervention
  - Ayres Sensory Integration®
Intervention: Sensory Processing/Sensory Integration (cont.)

- Intervention
  - Sensory-based strategies
Sensory Processing Measure, Second Edition (SPM-2) Quick Tips
Quick Tips across the lifespan

- Infant/Toddler
- Preschool
- Child
- Adolescent
- Adult
WPS Online Evaluation System
SPM-2: Use in Telehealth

- platform.wpspublish.com
- Online administration
  - WPS Online Evaluation System (OES)
Resources

WPS Online Evaluation System: platform.wpspublish.com

WPS Video Resources: https://www.wpspublish.com/webinars

WPS Content Hub: https://www.wpspublish.com/content-hub

Telepractice Page: https://pages.wpspublish.com/telepractice-101

WPS YouTube Channel:
- How to Use Digital Easels
- Overview of New DP-4
- What You Need to Know About the Arizona-4 Assessment
WPS Resources

Assessments

Resources

Training
SPM-2: Coming Soon

- Available for pre-order: [pages.wpsspublish.com/SPM2](pages.wpsspublish.com/SPM2)
- Pre-order today and get 10% OFF with code SPM2PW!
Questions?
Get valuable support from professionals you can trust:

WPS Assessment Consultants

Ashley Arnold, MA, LSSP, NCSP
aarnold@wpspublish.com
424.323.8553

Douglene Jackson, PhD, OTR/L, LMT, ATP
djackson@wpspublish.com
424.323.7323

Laura Stevenson, MS, CCC-SLP
lstevenon@wpspublish.com
424.318.9636

Stephanie Roberts, MA, CAS
sroberts@wpspublish.com
424.488.4902

Ann Rogers, PhD, NCSP
aroget@wpspublish.com
424.488.4622

Amanda Wynn, MSc
awynn@wpspublish.com
424.201.8840
Contact Us

WPS Headquarters

625 Alaska Avenue
Torrance, CA 90503-5124

Customer Service

866.784.3678 (U.S. and Canada only)
424.201.8800
424.201.6950 (Fax)

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