Occupational Development

• “A systematic process of change in occupational behaviors across time marked by the changes in the specific occupations that an individual can and does perform over the course of life” (Davis & Polatajko, 2006, p.138)

• Process of gradual changes to occupational behaviors that occur as children mature and interact with their environment (Wiseman, Davis, & Polatajko, 2005)
Occupational Development (cont.)
The Problem

• Pediatric occupational therapists are tasked with enabling the occupational development of the children they serve.
  • To do this, therapists need
    • to understand the children’s needs;
    • to evaluate the occupational repertoire development of the children;
    • an occupational repertoire development tool
The Solution

- ORDM-P fuses notions of developmental sequence and person X environment interactions - informed by, but not determined by, child’s developmental age and stage

- The creation of a measure that would assist in identifying children who require occupational therapy services and in planning interventions: Occupational Repertoire Development Measure-Parent (ORDM-P)
## Test Construction: What Has Been Done?

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</table>
1. Goal Specification

To create a measure of early childhood occupational development at the level of:

• The occupation: occupational competence

• The individual: occupational repertoire

(Davis & Polatajko, 2010)
2. Construct Specification (cont.)

- **Occupational development**
  “A systematic process of change in occupational behaviors across time…marked by the changes in the specific occupations that an individual can and does perform over the course of life” (Davis & Polatajko, 2006, p. 138)

- **Occupational competence**
  “Adequacy or sufficiency in an occupational skill, meeting all requirements of an environment” (Townsend & Polatajko, 2007, glossary)

- **Occupational repertoire**
  “The set of occupations an individual has at a specific point in the life course” (Davis & Polatajko, 2006, p. 137)
3. Item Identification

- Seventeen potential markers or behaviors of children’s occupational development were uncovered across nine developmental measures.

- Method:
  - Occupational behaviors from pre-existing assessments extracted into an Excel spreadsheet.
  - Occupational behaviours categorized using the Taxonomic Code for Occupational Performance (TCOP).
TCOP: Categorizing Behaviours

**Figure 1.1** The Taxonomic Code of Occupational Performance¹ (TCOP)

<table>
<thead>
<tr>
<th>Level of complexity</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation</td>
<td>An activity or set of activities that is performed with some consistency and regularity, that brings structure, and is given value and meaning by individuals and a culture</td>
<td>Accountancy</td>
</tr>
<tr>
<td>Activity</td>
<td>A set of tasks with a specific end point or outcome that is greater than that of any constituent task</td>
<td>Financial report writing</td>
</tr>
<tr>
<td>Task</td>
<td>A set of actions having an end point or a specific outcome</td>
<td>Printing the report</td>
</tr>
<tr>
<td>Action</td>
<td>A set of voluntary movements or mental processes that form a recognizable and purposeful pattern (such as grasping, holding, pulling, pushing, turning, kneeling, standing, walking, thinking, remembering, smiling, chewing, winking, etc.)</td>
<td>Folding, remembering the meaning of numbers</td>
</tr>
<tr>
<td>Voluntary movement or mental processes</td>
<td>A simple voluntary muscle or mental activation (such as flexion, extension, adduction, abduction, rotation, supination, pronation, blinking, memory, attention, focusing, scanning, etc.)</td>
<td>Flexing, attending</td>
</tr>
</tbody>
</table>

¹All levels of performance are subserved by cognitive, physical, and affective performance components. Spirituality pervades.

(adapted from Polatajko et al., 2004; and Zimmerman, Purdie, Davis, & Polatajko, 2006)
Behaviors Merged to Create Item

Self-feeding

- Uses all utensils competently
- Eats all texture foods at table
- Uses fork/spoon well
- Cuts easy food with a knife
- Lifts open cup with one hand

Tongue movements

Legend
- Ages 2–4
- Ages 5–6
- Age 7

Tongue movements
## Current Assessments

- Feeding
- Grooming
- Bathing
- Dressing
- Toileting
- Play
- Crafts
- Watching TV/listening to music
- Attending social events
- Household chores
- Reading/writing/drawing
- Shopping
- Mobility
- Money management
- Engaging in a hobby
- **Using the telephone**

## Literature

- Feeding
- Grooming
- Bathing
- Dressing
- Toileting
- Play
- Crafts
- Watching TV/listening to music
- Attending social events
- Household chores
- Reading/writing/drawing
- Shopping
- Mobility
- Money management
- Engaging in a hobby
- **Communication technologies**
- Work (paid employment, volunteer)
- Health management
- Sports/bands/drama clubs
- Sleep
4. Measure Specification

Criteria/features

• Ages: 2 to 12 years
• Criterion-referenced
• Quick and easy use
• Caregiver report/caregiver friendly
• Incorporate the concept of opportunity
• Results communicated via a visual profile score
• Informative towards further assessment and occupational goals
5. Item Refinement

Analyzing the occupations

- **Item refinement**
  - Eliminated occupations that did not include items for the year/age range
  - Renamed occupations into caregiver/age appropriate language (e.g., money management → money awareness)
  - Fourteen occupations with over 1,000 items

<table>
<thead>
<tr>
<th>Self-Care</th>
<th>Productivity</th>
<th>Leisure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathing</td>
<td>Household chores</td>
<td>Play</td>
</tr>
<tr>
<td>Dressing</td>
<td>Shopping</td>
<td>Mobility/sports</td>
</tr>
<tr>
<td>Feeding</td>
<td>Money awareness</td>
<td>Crafts</td>
</tr>
<tr>
<td>Grooming</td>
<td>Reading</td>
<td>Talking on the phone</td>
</tr>
<tr>
<td>Toileting</td>
<td>Writing</td>
<td></td>
</tr>
</tbody>
</table>
6. Item Representation

Example:

Self-Care

- **Bathing**
  - Age 2: 3 items
  - Age 3: 2 items
  - Age 4: 3 items
  - Age 5: 3 items
  - Age 6: 1 item
  - Total: 12 items

- **Dressing**
  - Age 2: 7 items
  - Age 3: 5 items
  - Age 4: 7 items
  - Age 5: 3 items
  - Age 6: 2 items
  - Total: 24 items

- **Feeding**
  - Age 2: 5 items
  - Age 3: 6 items
  - Age 4: 3 items
  - Age 5: 4 items
  - Age 6: 5 items
  - Total: 23 items

- **Grooming**
  - Age 2: 3 items
  - Age 3: 4 items
  - Age 4: 2 items
  - Age 5: 3 items
  - Age 6: 1 item
  - Total: 13 items

- **Toileting**
  - Age 2: 5 items
  - Age 3: 7 items
  - Age 4: 5 items
  - Age 5: 0 items
  - Age 6: 0 items
  - Total: 17 items

Self-care: 89 items
Productivity: 73 items
Leisure: 155 items
Total: 317 items
## 7. Scale Generation

**Performance Key**

- **Can’t do**: the child cannot perform the item
- **Can do**: the child can perform the item
- **Does do**: the child can perform the item and it is part of his/her repertoire
- **N.O.**: no opportunity

<table>
<thead>
<tr>
<th>GROOMING</th>
<th>Does/can your child . . .</th>
<th>Does Do</th>
<th>Can Do</th>
<th>Can’t Do</th>
<th>No Opportunity</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation item</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brushes/Combs Hair</td>
<td>Brush or comb his/her hair?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brushes Teeth</td>
<td>Brush his/her teeth?</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Showers/Bathes</td>
<td>Shower/bathe self?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Wash his/her body?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Wash his/her hands?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wash his/her face?</td>
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</tbody>
</table>
8. Scale Validation

• Ensure the ORDM-P is clear, logical, and coherent (determine face validity)

• Ensure the proposed items of the ORDM capture the breadth of occupations for children ages 2 to 12 (determine utility and comprehensiveness)
Method

• Electronic survey of 39 questions
  - Open-ended, closed-ended, and Likert scale
• 53 expert pediatric occupational therapists responded
  - Expert: at least six years’ experience
• Participation: anonymous and voluntary
• Implied consent: through completion of the survey
• Analyses
  - Descriptive statistics
  - I-CVI score
### Findings: Self-Care

<table>
<thead>
<tr>
<th>Occupational Level Item</th>
<th>I-CVI Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grooming: Brushes/combs hair</td>
<td>1.00</td>
</tr>
<tr>
<td>Grooming: Brushes teeth</td>
<td>1.00</td>
</tr>
<tr>
<td>Grooming: Showers/bathes</td>
<td>1.00</td>
</tr>
<tr>
<td>Toileting: Uses toilet/potty Chair</td>
<td>1.00</td>
</tr>
<tr>
<td>Dressing: Dresses/undresses upper body</td>
<td>1.00</td>
</tr>
<tr>
<td>Dressing: Dresses/undresses lower body</td>
<td>1.00</td>
</tr>
<tr>
<td>Dressing: Puts on shoes</td>
<td>1.00</td>
</tr>
<tr>
<td>Feeding: Prepares meal/snack</td>
<td>0.91</td>
</tr>
<tr>
<td>Feeding: Eats food</td>
<td>0.91</td>
</tr>
<tr>
<td>Feeding: Drinks</td>
<td>0.91</td>
</tr>
</tbody>
</table>
## Findings: Productivity

<table>
<thead>
<tr>
<th>Occupational Level Item</th>
<th>I-CVI Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Household chores</em>: Cleans personal space/rooms personal space/room</td>
<td>0.83</td>
</tr>
<tr>
<td><em>Household chores</em>: Does laundry</td>
<td>0.25</td>
</tr>
<tr>
<td><em>Household chores</em>: Makes bed/organizes sleeping area</td>
<td>0.58</td>
</tr>
<tr>
<td><em>Household chores</em>: Sets table/eating area</td>
<td>0.75</td>
</tr>
<tr>
<td><em>Money management</em>: Counts money</td>
<td>0.75</td>
</tr>
<tr>
<td><em>Money management</em>: Does mathematics</td>
<td>0.75</td>
</tr>
<tr>
<td><em>Money management</em>: Shops for items</td>
<td>0.75</td>
</tr>
<tr>
<td><em>Reading</em>: Reads a book</td>
<td>0.91</td>
</tr>
<tr>
<td><em>Writing</em>: Prints</td>
<td>0.91</td>
</tr>
<tr>
<td><em>Writing</em>: Draws</td>
<td>0.91</td>
</tr>
</tbody>
</table>
Findings: Leisure

<table>
<thead>
<tr>
<th>Occupational Level Item</th>
<th>I-CVI Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playing: Plays games</td>
<td>0.91</td>
</tr>
<tr>
<td>Playing: Visits with friends</td>
<td>0.91</td>
</tr>
<tr>
<td>Sports: Rides a cycle</td>
<td>0.58</td>
</tr>
<tr>
<td>Sports: Plays sports</td>
<td>0.75</td>
</tr>
</tbody>
</table>
Discussion

• Important measure
• Some items need reconsideration
• Address competence in the measure
• Future steps
References


