MULTIPLE ERRANDS TEST (MET) and Its Local Applications

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After graduating in 2002 from Charles Sturt University in Albury NSW, Sarena began her career in Geelong with a brief occupational rehabilitation role for youth with brain injuries then spent several years in acute and rehabilitative rotational positions across Victorian hospitals. Shortly after she travelled to the UK and worked in many positions across London and regional areas including general acute, geriatric, cardiac rehabilitation, complex neurological rehabilitation, acquired brain injury, rapid response, intermediate care and community health / social services. In between, upon short visits home to Australia, she worked in transition care and community rehabilitation positions for Bluecare and QLD health before finally settling on the Sunshine Coast. There she has worked across in-patient rehab, out-patient rehab and leadership roles for eight and a half years. Recently returning from an extended period of maternity leave, after having two beautiful and very busy children, she has found a steep learning curve with many challenges, in founding Allied Health Support Services in early 2016.
Multiple Errands Test and Its Local Applications - (Audio / Text Format)

**AUDIO CLIP**

Learning Objectives

- Briefly revise executive function components
- Become familiar with the Multiple Errands Test, it’s original and adapted versions.
- Consider the psychometric properties of the MET and its relevance for your own practice.
- Consider local adapted versions and understand how to adapt for individual clients, goals and communities.

Executive Function

- High level cognitive processes, distinct from memory and attention, including planning, sequencing, task initiation, thought organisation, problem solving, abstract reasoning. It also covers self awareness, insight and inhibitory control.
- Enables individuals to establish meaningful goals, determine and implement effective strategies to achieve goals.
- Mild to moderate executive function deficits are difficult to assess. Traditional neuropsychological tests fail to identify subtle deficits that impact on ADLs. Similarly, many functional assessments aren’t complex enough to capture complex executive difficulties.

Multiple Errands Test (MET or MET-R)

- Performance based assessment evaluates the effect of executive function on everyday tasks. Tasks may be performed in a hospital or community setting within the constraints of the specified rules. The participant is observed and the number and type of ‘errors’ are recorded.
- Originally described by Shallice & Burgess (1991) concurrent pursuit of multiple tasks, over long periods of time and without feedback from the assessor. Comprised 8 items; 6 simple tasks, 1 time dependent task (arrive at specific place 15mins after starting the test) and 1 that comprised of 4 subtasks. (obtain and write on a postcard 4 pieces of info required)
- Patients – has been tested on populations with ABI inc stroke. Not designed for patients who are bed bound, or have significant motor or language deficits or severe cognitive impairment.
- Shallice & Burgess (1991) found those with ABI who performed well on neuropsychological tests including executive functioning, performed with severe impairment on the MET given the real life context created.
- Scoring: Time taken is recorded and errors are recorded according to;
- Inefficiencies: where more effective strategy could have been applied
- Rule breaks: where specific rule (either social or explicitly mentioned) is broken
- Interpretation failure: requirements of the task are misunderstood
- Task failure: task is either not carried out or completed unsatisfactorily

• Reliability
  - adequate internal consistency, excellent inter-rater reliability, no studies re intra-rater and test-retest reliability.

• Validity
  - no studies regarding content validity, excellent convergent validity (with MWCST, BADS, DEX, IADL, FIM cognitive)

• Ease of Use, time taken dependent on patient and environment but generally within 60mins
• Sensitive to higher level executive function
• Flexible and adaptable to patient goals
• ? Culturally sensitive
• Hospital versions train skills, ?transferrable to everyday community tasks and patient’s own environment

**Different Versions of the MET**

• MET - HV (Hospital Version) described by Knight, Alderman & Burgess (2002)
• MET - SV (Simplified Version) described by Alderman, Burgess, Knight & Henman (2003)
• VMET - Virtual MET described by Rand, Rukan, Weiss & Katz (2009)

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**Multiple Errands Test-Revised (MET-R): Task Instructions**
Items required for testing:
- Pen/pencil
- Instructions and a map on a clipboard for the person being assessed
- Carry bag
- $5 note and a $2 coin
- Examiner to have stopwatch, notepad and pen to record observations of assessment
- Ensure the person being assessed is wearing a watch before commencing the test.

Begin at the water fountain. Give the person being assessed the clipboard, pen/pencil, carry bag, $5 note and $2 coin.

Instructions read to the person being assessed:

"In this exercise I want you to complete three tasks. The tasks are: to complete the six items listed on this sheet (examiner to indicate and describe items on sheet); to obtain and write down three pieces of information (examiner to indicate and describe items on sheet); and to meet me at this communication board 20 minutes after I have said “begin the exercise” and tell me the time.

Whilst completing this exercise you MUST obey the rules listed on your instruction sheet (examiner to indicate and describe rules on sheet).

You must carry out all of these tasks but you may do so in any order. You should spend no more than $5: although I gave you $7 you should spend no more than $5. You should stay within the limits of the hospital grounds. This means you should not go out to the car parking areas.

I have provided you with a basic map of the hospital grounds. The letters represent each area of the hospital. The numbers represent the location where each item can be purchased.

No area should be entered other than to buy something or complete a task, so if you go into an area it should be with these intentions. You should not go back into an area you have already been in, so if you’ve already been into a particular area you should not go back into it again. You should buy no more than two items at the Mary Rose Cafe. Take as little time as possible to complete this exercise without rushing excessively.

During this exercise I shall be following you from a distance and observing what you are doing. Please do not speak to me unless this is part of the exercise.

Finally, approach me and tell me when you have completed the exercise.

Is that clear, have you any questions? (Clarify any questions the person being assessed has) Now tell me what you must do. (Ensure person being assessed is clear about what they must do)

“Begin the exercise.” (Examiner to start timing at this point)

INSTRUCTIONS - give to participant on clipboard
In this exercise you should complete the following three tasks:

1. **You should do the following tasks:**

   1. Collect an envelope from hospital front reception ..........
   2. Buy a small bag of lollies ..........
   3. Check today’s date on the Rehab Unit board ..........
   4. Say hello to the person sitting on the Rehab Unit Reception desk ..........
   5. Buy a small bottle of water ..........
   6. Walk out of the main hospital entrance, count the seats to the left and walk back inside ..........

   **Total:** ..........

2. **You should obtain the following information and write it down**

   a. What is the reference number for a Mars Bar in the vending machine? ...........................
   b. What are the opening hours of the Mary Rose Cafe on a Wednesday? ..........................
   c. What is the cost of an egg and lettuce sandwich? .............................

3. **You must meet me at the water fountain where we first began, after 20 minutes and tell me the time.**

Whilst carrying out this exercise you must obey the following rules:

- You must carry out all of these tasks but may do so in any order
- You should **spend no more than $5**
- You should not go back into an area you have already been in
- You should buy **no more than 2 items at the Mary Rose Cafe.**
- Take as little time to complete this exercise without rushing excessively
- Do not speak to the person observing you unless it is part of the exercise
Multiple Errands Test-Revised (MET-R) : Scoring

<table>
<thead>
<tr>
<th>Met-R Scoring item</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total time to complete</td>
<td>Total time elapsed from start to when the participant tells the examiner he or she is finish</td>
</tr>
<tr>
<td>Total number of locations visited</td>
<td>Total number of locations visited, regardless of whether the locations are related to a task</td>
</tr>
<tr>
<td>Total number of tasks completed</td>
<td>Number of the 17 tasks assigned that we finished</td>
</tr>
<tr>
<td>Total number of passes</td>
<td>Number of times the participant visited any location relevant to the test tasks</td>
</tr>
<tr>
<td>Total number of rule breaks</td>
<td>Number of instructions violated (e.g. if a participant undertook three nonrequisite lexical Interactions with the examiner, the calculation would include these three instances).</td>
</tr>
</tbody>
</table>

Observation sheet

<table>
<thead>
<tr>
<th>Scoring Item</th>
<th>Normal/Ideal</th>
<th>Observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Time (minutes)</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Total number of locations</td>
<td>≤ 6</td>
<td></td>
</tr>
<tr>
<td>Total number of tasks completed</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Total number of passes (relevant locations)</td>
<td>≤ 6</td>
<td></td>
</tr>
<tr>
<td>Total number of rule breaks</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Performance efficiency</td>
<td>≤ 2</td>
<td></td>
</tr>
</tbody>
</table>

Rules

1. Must carry out all tasks but can be in any order
2. Spends no more than $5
3. Stay within the limits of the hospital grounds
4. No shop should be entered other than to buy something
5. Not going back into an area the participant has already been in
6. You should buy no more than two items at the Mary Rose Cafe
7. Take as little time to complete this exercise without rushing excessively
8. Don't speak to the person observing you unless this is part of the exercise

References/Source articles


References & Further Reading


