

**RO&M**ing with **Lil**

Episode 9

**Comparisons and  
precision with VROOM  
and OMO**



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# Introduction to Episode 9

In Episode 5, the VROOM-OMO assessment with Erica Tandori raised questions about choosing assessment environments (Episode 8).

It also raised questions about comparisons using the VROOM and OMO tools in relation to individual clients, and research studies.

What is the difference between validity and precision?

And what comparisons can be usefully made with VROOM-OMO assessments?

# VROOM and OMO assessment tools

- Download the VROOM and OMO tools with brief instructions from

[www.lildeverell.net/resources/vroom-and-omo-tools/](http://www.lildeverell.net/resources/vroom-and-omo-tools/)

VROOM – vision related outcomes in O&M – yellow for light/vision

OMO – orientation and mobility outcomes – green for grass/walking

# Validity vs precision

- Validity means that the tool measures the thing it is supposed to measure; precision refers to the degree of accuracy
  - VROOM measures functional vision for mobility and related wellbeing
  - OMO measures O&M skills and related wellbeing
- How do we know this?
  - Research into what matters to people with ultra-low vision (n=43), re their vision and mobility (Deverell, 2016) identified what to measure
  - Tools were piloted, and wording refined by guide dog handlers (n=51) (Deverell et al 2019)
  - O&M specialists critique the tools during training workshops – ongoing
  - Co-rating process – assessor checks relevance to client in every assessment

# Comparisons

Take a baseline measure and then compare vision and mobility:

- Day v night
- Fresh v fatigued
- Medicated v unmedicated
- Pre-seizure v post seizure
- Pre-post training program
- The trajectory of a disease over time
- Cohort studies - different clients with the same condition/aid

# Translational Research

- Benchtop (theory, lab) to bedside to everyday life
- Happens in two phases:
  1. Clinical research demonstrates that the intervention works in standardised conditions:
    - Gold standard: Randomised controlled trials
    - Complexity is stripped back
    - Statistical analysis of selected independent and dependent variables
  2. Functional research demonstrates that the intervention is beneficial to everyday people in everyday life
    - Gold standard: finding out/measuring what matters to participants
    - Mixed methods research/analysing capturing words and numbers together
    - Embracing complexity in lived environments
    - Confirming analysis with participants

# Amy's long cane research project

- All ages?
- Baseline VROOM and OMO scores within 1 month before program
- Long cane program
- Post program assessment within 1-3 months of program finishing

Interrogate the dataset:

- Constant contact travellers v full long cane skillset
- City-country comparisons
- Cane tip selection

# Precision within the tools

- Scales measure what matters to clients (grounded theory research)
- Behaviourally anchored rating scales – reduce drift by describing every number with performance indicators
- Generic scale – makes Part A ratings consistent across tools (reliability):  
3=elite, 2=competent, 1=basic, 0=beginner
- Scales include full range of human capability - a place for everyone
  - Incompetence rated 0, without adding to the capability score
  - Scales allow for better than good – elite
- Mixed methods – words explain numbers, exceptions, surprises; numbers reduce words, making comparisons easier



# Precision by the assessor

- Capability can fluctuate (lighting, fatigue), so rate Part A in one session, preferably both VROOM and OMO
- Observe at least 2 levels of environmental complexity
- Set tasks, not routes, and step back – observe incidental and intentional mobility, planning, memory, orientation
- Ask questions and reasons for client's actions & choices... listen and respect
- Nominate aid, and rate accordingly. Do a separate rating for different aid use
- Verify ratings – co-rating with client, stakeholders, using observation, video
- If in doubt, rate lower
- Include notes, stories, vignettes with ratings
- Ratings become more confident with practise, so practise!

# Precision = completion /50

You must complete all ratings to get valid score out of 50.

- If you missed one or two ratings, guess from the conversation and phone the client to confirm
- If you observed only one environment in Part A, duplicate these ratings for the second environment, adjusting from conversation, and phone the client to confirm
- If you didn't get a baseline measure pre-intervention, try retro-scoring:
  - book a co-rating session with the client
  - include other stakeholders if possible
  - choose a specific day/session/trip (pre-intervention) for Part A ratings
  - is there any video footage available?

# Thanks again, Podcast Pals!

from Guide Dogs NSW/ACT:

- Jo Anson-Smith
- Amy McKibbins
- Tayler McBrien

# References

Deverell EAL. Functional vision research: Measuring vision-related outcomes in orientation and mobility - VROOM. Melbourne, Australia: University of Melbourne; 2016. <https://minerva-access.unimelb.edu.au/handle/11343/116129>

Deverell L, Bradley J, Foote P, Bowden M, Meyer D. Measuring the benefits of guide dog mobility with the Orientation and Mobility Outcomes (OMO) tool. *Anthrozoos*. 2019;32(6):741-55.

# Contacts / Resources

- VROOM and OMO tools

[www.lildeverell.net/resources/vroom-and-omo-tools/](http://www.lildeverell.net/resources/vroom-and-omo-tools/)

- Podcast links and PowerPoint slides

[www.lildeverell.net/resources/roaming-with-lil/](http://www.lildeverell.net/resources/roaming-with-lil/)

- To discuss VROOM and OMO, offer feedback, suggest a topic, or record an episode together:

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# Credits

- Music
  - *Happy Stroll*, a royalty-free download from Purple Planet Music
- Graphics created by Lil Deverell with
  - PhotoShop lessons and technotherapy from Erin Deverell
  - Photos from
    - An amateur drone photographer from Cornwall, flying over a spaghetti junction in Birmingham (royalty-free)
    - Christine Darwood, a wildlife spotter in the ACT who snapped our sprightly echidna crossing the road (used with permission)
    - Rob Keating, a Canberra-based photographer, who found a weathered wombat crossing the road (purchased from <https://keatingmedia.com.au>)

