Reliability of the MIDVAQ, a French Quebec Ecological Adaptation of the *Melbourne Low Vision ADL Index, Weighted Version*

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Disclaimer

No conflicts of interest exist for the presenter, financially or otherwise
The MIDVAQ

Mesure de l’Impact de la Déficience Visuelle dans les Activités Quotidiennes

French-Quebec translation and adaptation of the Melbourne Low Vision ADL Index – Weighted version


Objective of the MIDVAQ

- To measure the personal impact of the disability caused by the visual impairment in instrumental activities of daily living (IADL’s), considering:
  - The ability to perform the task
  - The personal importance of the activity
Part A – Observed Performance

16 near vision items

- Finding information (medicine label, account, packet labels, letter, tel book)
- Telling time (wrist watch, digital display, wall clock)
- Reading (newspaper print, headlines)
- Writing (cheque)
- Faces
- Coins
- Telephone
- Needle threading
- Pouring water

Source: Community Eye Health, on flickr

Part B – Questionnaire

9 self-care and domestic life activities

1. Dressing
2. Grooming
3. Bathing
4. Eating
5. Managing medicine
6. Preparing meals
7. Mobility
8. Housework
9. Shopping
Ratings and Scores

\[ \text{Ability} \times \text{Importance} = \text{Disability impact} \]

- Ability: Very satisfactory to Very UNSatisfactory
- Importance: Totally UNimportant to Essential
- Disability impact: No impact to Maximal impact
Research Objective

To determine the **Reliability** of the MIDVAQ

- Interjudge
- Test-retest
  - MIDVAQ components
  - Part A parallel versions (*Ability rating*)

Subjects

- **N = 100** (52 F, 48 M)
  - 71 ± 14 yrs old (range 33 - 95)
- No active rehabilitation services episode
- Moderate to profound low vision
  - Central vision loss: **n = 40**
- Independent living
- No significant physical or cognitive impairment
**Method**

- Experimenters: 3 senior LVRS
- Administration
  - **At home**, with own visual and non-visual aids
  - **Twice**, 2-week interval (test – retest)
  - **T1**: parallel rating by a 2nd examiner (interjudge)
- Part A material
  - Half the sample evaluated with V1 at T1, and V2 at T2
  - Reversed order for the other half

**Interjudge Reliability**

- N = 35
- 3 pairs of experimenters
- 11-12 subjects / pair

![Bar chart showing interjudge reliability for Part A, Part B, and Total with ICC values ranging from 0.0 to 1.0. The chart is divided into three categories: Ability, Importance, and Disability impact.](chart.png)
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Test-Retest Reliability

Parallel versions reliability:
identical results

Item ratings and scores:
Acceptable T1-T2 Difference
Item ratings and scores: Subjects within T1-T2 Acceptable Range of Difference

Research Limits

- Small sample size
- Interjudge reliability tested by simultaneous rating
- Part A: not enough consideration of the use of common accessible information technology
Conclusion

- Most item ratings and composite scores of the MIDVAQ show excellent to perfect interjudge and test-retest reliability, which are essential qualities for any assessment tool.
- Some items will be revised and modified, for metric quality improvement.

Future Plans

Short term

- Content and construct validity evaluation
- Global revision of the MIDVAQ

Long term

- Reliability of the modified items
- Change sensitivity evaluation
Research Project Team

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