The Adult Social Care Outcomes Toolkit: A Systematic Review of Psychometric Properties

Siyue Yu[1], Yingxuan Wang[1], Annie Wai-Ling Cheung[1,2], Judy Chu-Dik Sze1[1], Richard Xu Huan[3], Eliza Lai-Yi Wong[1,2*]

1. JC School of Public Health and Primary Care, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong, China;
2. Center for Health Systems and Policy Research, JC School of Public Health and Primary Care, Centre for Health Systems and Policy Research, The Chinese University of Hong Kong, Hong Kong, China;
3. Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, Hong Kong, China.

* Corresponding author

INTRODUCTION

- The aging population and increasing prevalence of age-related chronic conditions worldwide will increase demand for long-term care (LTC), and subsequently pressure public funds. This highlights the need for a tool to measure the quality and cost-effectiveness of LTC services.
- The Adult Social Care Outcomes Toolkit (ASCOT) is the first preference-based instrument of quality of life specially designed for LTC. Although its psychometric properties have been evaluated in several individual studies, a systematic review using the updated COnsensus-based Standards for Selection of Health Status Measurement INstruments (COSMIN) guidance is needed to evaluate its suitability in different LTC contexts.

METHODS

Study design: a systematic review

Search strategy: ("Adult Social Care Outcome*" OR ASCOT) AND (“valid*” OR “psychometr*” OR “reliab*” OR "factor analys*”)

Databases: Medline (via PubMed), Embase (via Ovid), CINAL, Web of Science, Scopus, PsycINFO, and EconLit

Study eligibility

Reported the development of the ASCOT or evaluated at least one of the eight psychometric properties of the ASCOT (i.e., content validity, test-retest reliability, measurement error, hypothesis testing for construct validity including convergent validity and known-group validity, cross-cultural validity and responsiveness) as defined in the COSMIN taxonomy.

Assessment of study quality/risk of bias

- assessed using the latest COSMIN Risk of Bias checklist.
- Each psychometric property was rated on “very good”, “adequate”, “doubtful” or “inadequate”.
- The ‘worst score counts’ principle was applied to determine the overall methodological quality.

Evaluation of psychometric properties

- the updated COSMIN guideline for good measurement properties.
- The results of each study on psychometric properties were rated as “sufficient”, “insufficient” or “indeterminate”

Grading of the quality of evidence

- the modified GRADE approach.
- The quality of the overall evidence per psychometric property was graded as “high”, “moderate”, “low” and “very low”

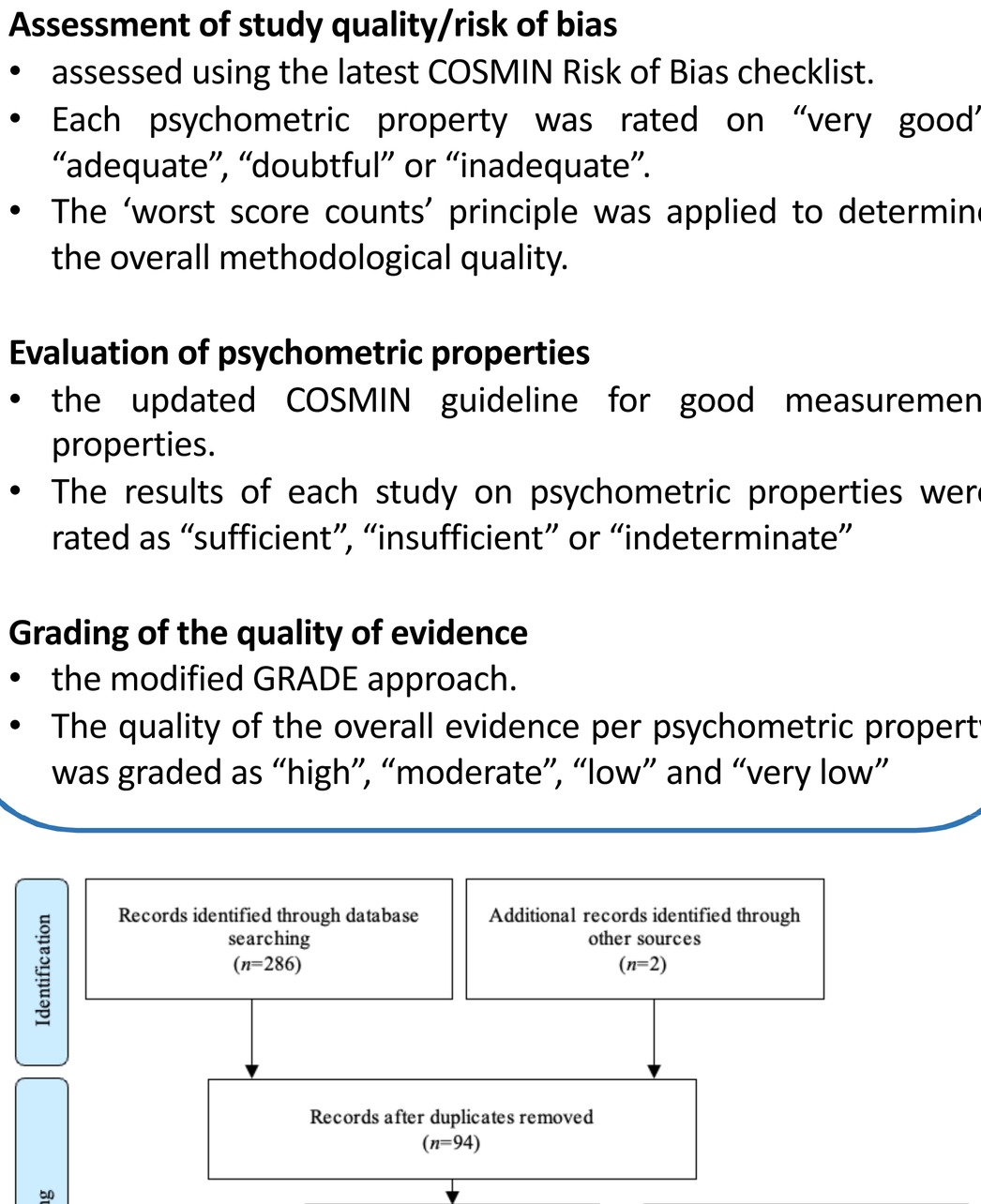

Figure 1. Process of study selection

Table 1. Summary of review results

Psychometric properties (included studies)	Study quality	Evidence criteria	Evidence quality
Content validity-relevance (n=3)	Adequate	Sufficient	Moderate
Content validity-comprehensiveness (n=3)	Doubtful	Sufficient	Low
Content validity-comprehensibility (n=6)	Doubtful	Sufficient	Moderate
Test-retest reliability (n=3)	Adequate	Sufficient	High
Measurement error (n=1)	Adequate	indeterminate	/
Convergent validity (n=5)	Adequate	Sufficient	High
Known-group validity (n=4)	Very good	Sufficient	High

Results and Discussion

Search results: A total of 11 studies with 4923 adults were included in the review (Figure 1).

Study characteristics:

- The studies were carried out across six different countries, most of which were in Europe (n=9), followed by Japan (n=1) and Australia (n=1).
- Sample sizes varied from 10 to 1364 adults aged 18 to 100 years. Eight studies included older adults aged 55 years and over only.

Study results:

- The results of this systematic review showed sufficient high-quality evidence for test-retest reliability, convergent validity, known-group validity, moderate-quality evidence for relevance and comprehensibility, and low-quality evidence for comprehensiveness.
- No information was available for cross-cultural validity and responsiveness. In countries outside the UK, the ‘Dignity’ and ‘Control’ items of the ASCOT were commonly reported as poorly understood.

Discussion:

- Further validation studies are needed to provide evidence on measurement error, cross-cultural validity, and responsiveness. In addition, its psychometric performance in residential care settings should be tested.

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