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The criterion validity of the Rural ADL Manual Handling Sort - a new instrument for contextual medico-legal practice in South Africa.

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Development and Validation of the Rural ADL Manual Handling Sort

- **Previous** descriptive, quantitative, two-phase study
- Data collection done in Limpopo Province, South Africa
- Instrument development design:
 - Phase 1:
 - Electronic survey of OTs (ML field)
 - Discussion groups with CCWs (4 villages) (Participatory Mapping)
 - Home Visits (12 homes in 4 villages) (transect walks)
 - Phase 2:
 - Instrument Development (RAMS)
 - Determination of Content Validity (RAMS)
- **Current study: Criterion (concurrent) Validity**





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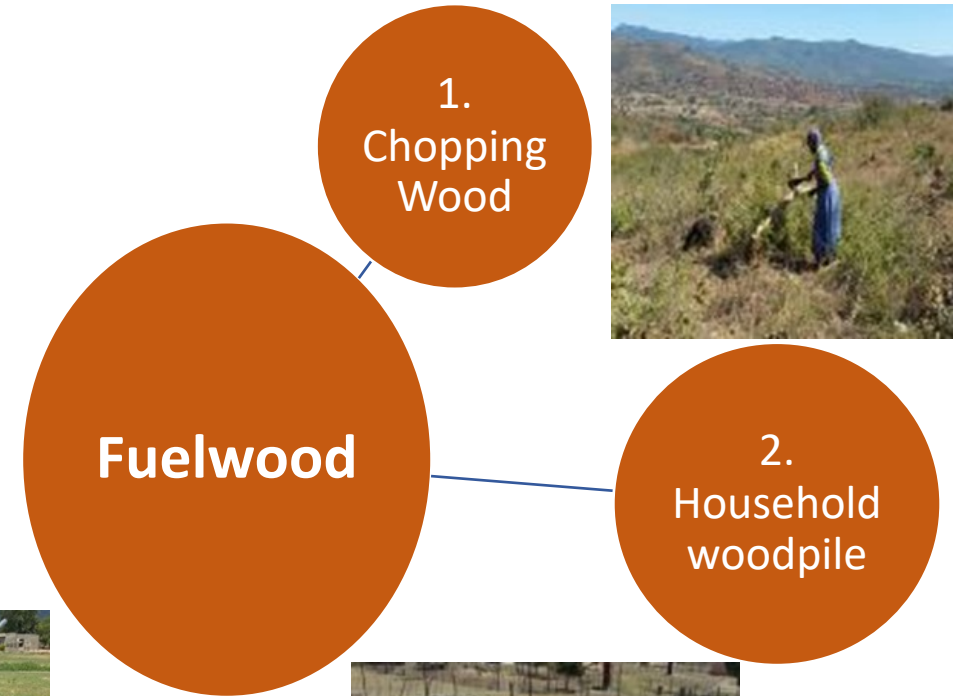
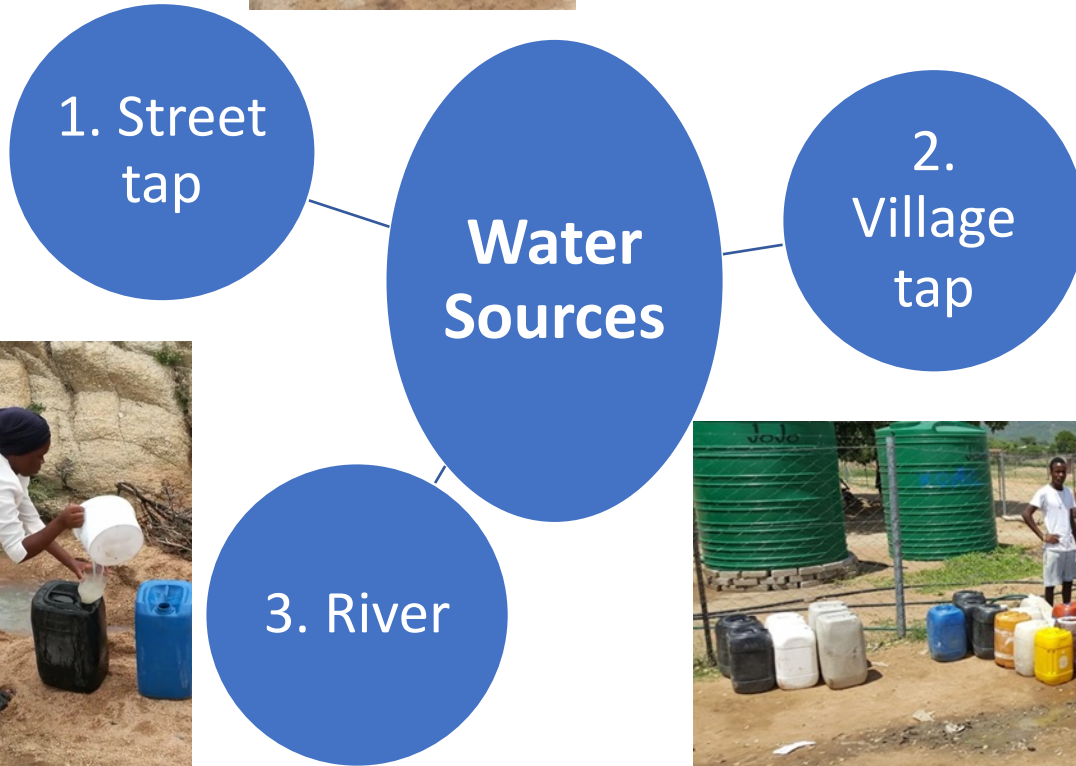
Contextual occupations:

- Limited access to water and energy
 - No indoor or on-site piped water supply
 - Inadequate electricity supply - cooking & water-heating on outdoor wood fires
 - High physical demand & time requirements
 - Other bADL and iADL tasks dependent on these resources
 - **Most NB determinant of bADL and iADL type and form**
- Activity analysis – rural versus urban bADL & iADL types & forms
- **Water and fuelwood collection identified as occupations & proposed as iADLs**





Contextual occupations: Water & Fuelwood Collection



Lifting demands: water collection

Tasks:

- Lifting 25kg water-container onto wheelbarrow
 - Occasional lift;
 - Floor to knuckle;
- Lifting 25kg water-container to head-load or storage
 - Occasional lift;
 - Knuckle to shoulder.

Comparison to industry norms:

- heavy (DOT);
- very heavy (DOT).





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RAMS Development

- ADL instrument for Medico-Legal OT practice in rural South Africa
- bADLs and iADLs assessed
 - Independence viewed as a prerequisite of work ability.
 - Different household amenities in less-resourced rural communities - existing assessment instruments do not consider the unique manual handling demands
- Self-review measure utilised in FCEs
 - Patient-Reported Outcome Measure (PROM)
 - Pictorial Activity and Task Sort (PATS)



RAMS Constructs, Domains & Items

- The patient is shown black and white drawings of components of ADL tasks and is then asked to rate their ability to perform the tasks independently.
- 3 sub-tests:
 - Lifting Subtest
 - Carrying subtest
 - Pushing Subtest

Constructs, Domains and Items of the Rural ADL Manual Handling Sort

Constructs	Domains	Items
Manual Handling Domains	Domain 1 – Lifting	16 items
	Domain 2 – Carrying	7 items
	Domain 3 – Pushing	7 items
ADL Domains	Domain 4 – Collecting water	14 items
	Domain 5 – Collecting fuelwood	7 items
	Domain 6 – Doing laundry	8 items
	Domain 7 – Doing cooking	6 items
	Domain 8 – Bathing	9 items



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RAMS description

- The RAMS utilises black and white drawings of manual handling tasks carried out during ADLs in rural contexts.
- The focus is the manual handling of household objects during the performance of ADLs in real world rural settings
- Good content validity:
 - I-CVI = 0.99
 - S-CVI/Ave = 0.99
 - S-CVI/UA = 0.98
- a valid measure of the performance of ADL tasks that have significant manual handling demands in adult patients that reside in rural less-resourced contexts



1.9. Can you lift a full 25 litre water container onto a wheelbarrow?

Criterion validity study

Methodology

- A quantitative, descriptive research design was used.
- 10 Purposively selected medico-legal occupational therapists were invited to participate
- Systematic sampling followed to select their medico-legal clients who lived in rural settings
 - RAMS Amenities checklist completed to establish suitability for inclusion in the study

Data collection procedure

- Selected participants were provided with the Participant Information Sheet and consent was obtained.
- Data was collected as part of their 'as usual' Functional Capacity Evaluation (FCE) assessment battery:
 - biographical information sheet
 - the Progressive Isoinertial Lifting Evaluation (PILE)
 - the RAMS



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Practice Implications

- Preliminary results support good criterion validity
- RAMS results can
 - Be triangulated with other standardised assessment results
 - Enable OTs to provide realistic evidence to compensation funds
 - Inform provision of contextually relevant intervention
 - Contributes to addressing theoretical imperialism and coloniality in FCEs
- Further development of the RAMS
 - Field-testing of remaining psychometric properties



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Thank you!



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