

COVERAGE OF ASPECTS OF OCCUPATIONAL FUNCTIONING BY HEALTH STATE UTILITY INSTRUMENTS

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BACKGROUND

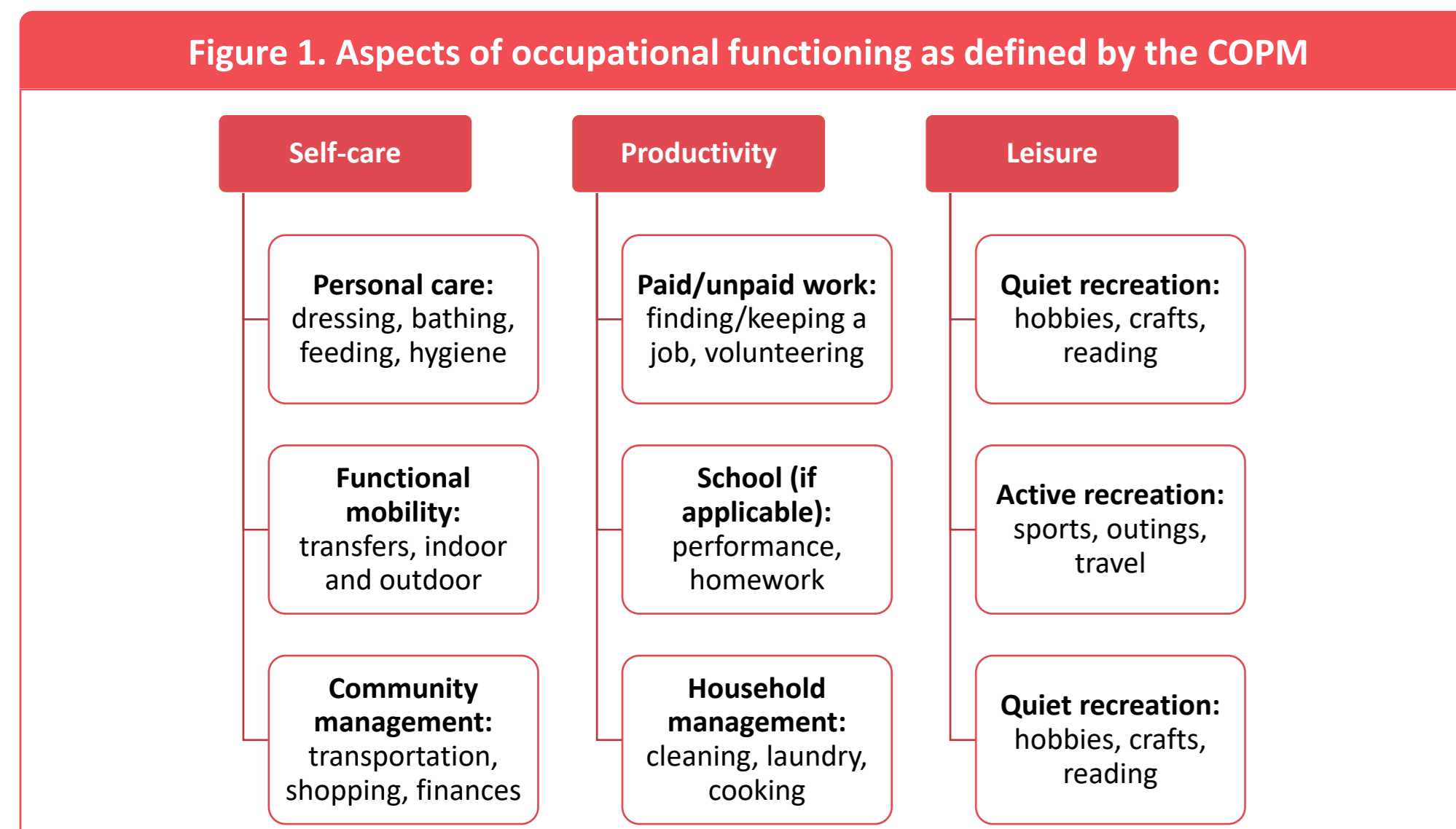
- Generic health state utility instruments (HSUIs) measure health-related quality of life (HRQoL) for use in economic evaluation.
- In addition to the widely used EuroQoL EQ-5D, Health Utilities Index Mark 2 and Mark 3 (HUI2/3), and Short Form-6 Dimension (SF-6D), notable generic HSUIs include the Quality of Well-Being (QWB) scale, 15 Dimension instrument (15D), and the Assessment of Quality of Life (AQoL).^{1,2}
- While these HSUIs differ conceptually,^{2,3} items related to activities of daily living (ADL) are included in all six.
- Although ADL function is only a component of HRQoL, it is associated with HRQoL.⁴
- For health conditions which impair ADL function, understanding how instruments assesses ADL function is important.⁵
- To better understand ADL function, we can use an occupational therapy lens.
- ADL function assessment is the cornerstone of occupational therapy, which considers self-care, productivity, and leisure to be the key aspects of occupational functioning.^{6,7}

OBJECTIVE

- To evaluate the inclusion of occupational functioning aspects in adult HSUIs.

METHODS

- HSUI items were reviewed against the Canadian Occupational Performance Measure's (COPM) categorization of occupational functioning (**Figure 1**).⁸



- HSUI coverage of self-care, productivity, and leisure was classified as definite or potential; and could be specific or broad.
 - Definite:** The item measures the occupational functioning aspect *beyond doubt*; e.g., in the EQ-5D, the self-care item explicitly measures personal care (washing and dressing).
 - Potential:** The item *may* measure the occupational functioning aspect; e.g., in the EQ-5D, the mobility item may indicate functional mobility performance for some respondents but not for others (e.g., those who have problems walking but can mobilize with mobility aids).
 - Specific:** The item measures *one aspect* of occupational functioning; i.e., productivity only.
 - Broad:** The item measures *more than one aspect* of occupational functioning; i.e., leisure and productivity together.
- Two researchers (trained occupational therapists; JD and EG) initially assessed coverage, KO and SMS reviewed assessments, and all authors met to discuss any disagreements.

RESULTS

Table 1 shows coverage of aspects of occupational functioning by HSUI: definite and specific coverage (darkest shade green); definite, but broad coverage (medium shade green); and potential coverage (lightest shade green).

Self-care

- Only two HSUIs (QWB and AQoL) have definite and specific coverage of all self-care aspects.
- While all HSUIs have definite and specific coverage of personal care; functional mobility and community management are less frequently covered.
 - The SF-6D has definite but broad coverage of functional mobility and community management, but the items (Q3, Q4, Q15, and Q18) also cover productivity and leisure.
 - The HUI2/3 have definite and specific coverage of functional mobility, but only potential coverage for community management.
 - The 15D and EQ-5D do not cover community management, and only have potential coverage for functional mobility.

Productivity and leisure

- One (QWB) has definite and specific coverage for both productivity and leisure.
- Three (EQ-5D, 15D, SF-6D) have definite but broad coverage of productivity and leisure.
 - The EQ-5D and 15D items ask about "usual activities" which could include both productivity and self-care activities.
 - The SF-6D items (Q3, Q4, Q15, and Q18) could cover any of the three aspects of occupational functioning.
- Two (SF-6D and AQoL) include definite and specific items for socialization.
- Additionally, the AQoL has definite and specific coverage for household management.
- The HUI2/3 do not have definite coverage of productivity or leisure.

Aspects	Self-care			Productivity			Leisure		
	Personal care	Functional mobility	Community management	Household management	School	Paid/unpaid work	Quiet recreation	Active recreation	Socialization
QWB-SA	Personal care e.g., eating, dressing, bathing, or getting around home (Q5.b)			Usual activities e.g., work, school, or housekeeping (Q8.a)			Usual activities e.g., visiting, hobbies, shopping, recreational/religious activities (Q8.b)		
	Sleeping (Q3.a)	Physical movements (Q7.a-d, Q7.g-h)	Driving or public transportation (Q6.c)					Sexual interest or performance (Q3.i)	
	Chewing food (Q1.h)	Balance, standing, walking (Q2.y)							
		Lifting or carrying everyday objects e.g., books, a briefcase, or groceries (Q7.e)							
15D	Plans or activities (Q8.c)								
	Sleeping (Q5)			Usual activities e.g., employment, studying, housework, and free time activities performance (Q9)					
	Eating (Q6)	Walking and climbing stairs (Q1)						Sexual activity (Q15)	
EQ-5D	Breathing washing or dressing (Q4.4)	Breathing walking (Q4.2)				Breathing during heavy work (Q4.2)	Reading papers and/or TV text (Q2)	Breathing during sports (Q4.2)	Hearing conversation (Q3.3)
	Washing and dressing (SELF-CARE)	Walking (MOBILITY)		Usual activities e.g., work, study, housework, family or leisure activities (USUAL ACTIVITIES)					
SF-6D ^a	Work or other activities limitations due to physical and emotional health (Q15, Q18)								
	Moderate and vigorous activities limitations (Q3-4)								
	Bathing or dressing (Q12)			Work interference due to pain (Q22)					Social activities interference (Q32)
	Eating, bathing, dressing and toileting (Q28-30)	Getting around (Q16-23)	Seeing friend across the street (Q4-5)				Reading ordinary newsprint (Q1-2)		Hearing conversation (Q6-7, Q9-10) Understood when speaking (Q11-14)
HUI2/3 ^b	Help with tasks due to limitations in use of hands and fingers (Q24-26)								
	Activities limitations due to pain/discomfort (Q40)								
				Community role e.g., residential, sporting, church or cultural activities (8D: Q32)					
									Social isolation and exclusion (8D: Q28-29) Relationships (8D: Q26-27, Q30-31) Communicating with others (8D: Q10)
AQoL ^c	Washing, toileting, dressing, eating, or caring for appearance (8D: Q4)	Moving around (8D: Q3)		Help with jobs around residence (8D: Q1)					
	Sleeping (8D: Q16)	Getting around outside residence (8D: Q2)							
	Organizing any assistance (7D: Q24)								
	Energy to do things (8D: Q23)								
Pain interference with usual activities (8D, Q7)									
Affect of vision on movement, everyday activities, roles, and friendships (7D: Q21, Q23, Q25-26)									

^a Item numbers from the SF-36 questionnaire are shown; however, only the 11 items used in the SF-6D were assessed; ^b Item numbers from the HUI 40-item questionnaire are shown; ^c The AQoL 7D and 8D were assessed as together the two version include all items in the other available versions.

DISCUSSION & CONCLUSION

- Only the QWB scale has definite and specific coverage for self-care, productivity, and leisure (**Table 2**).
- Other HSUIs do not definitely or specifically capture all aspects.
 - HSUI items with potential coverage do not holistically capture occupational functioning (as defined in occupational therapy), and resultant utility values may not reflect true level of ADL function.
 - Although not a concern for economic evaluation, HSUIs with broad coverage are unable to identify which specific aspect of functioning is impacted.
- These findings may enhance understanding of resultant utility value data in health conditions which impact ADLs; and help inform the choice of HSUI for upcoming research where accurately classifying ADL impact is critical.
- Future HSUIs may consider how function is defined in occupational therapy.
- A similar study of coverage of items related to ADL within child and adolescent HSUIs may help inform instrument selection for future studies.

Table 2. Summary of coverage

		QWB-SA	15D	EQ-5D	SF-6D	HUI	AQoL
Self-care	Personal care		Definite and specific	Definite and specific	Definite and specific	Definite and specific	Definite and specific
	Functional mobility	Definite and specific	Potential only	Potential only			
	Community management		None	None		Potential only	
Productivity	Household management	Definite and specific			Definite, but broad		Definite and specific
	Paid/unpaid work					Potential only	Potential only
	School						
Leisure	Quiet recreation		Definite, but broad	Definite, but broad			
	Active recreation	Definite and specific				Potential only	Potential only
	Socialization				Definite and specific		Definite and specific

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DISCLOSURES

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