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Questions for Disability Statistics

Overview and preliminary results from WHO/UNESCAP field tests

Nenad Kostanjsek, Bedirhan Üstün
World Health Organization, Geneva

P1-10

Abstract As part of the WHO/UNESCAP project on health and disability statistics 5 pilot countries from the Asia Pacific region field tested two ICF-based disability question sets for use in censuses and surveys. The questions were tested on cognitive understanding, translatability, sensitivity, specificity and reliability. The field tests gave valuable information on where and how the existing disability question sets need be improved and they provided a scientific and evidence-based input for development of a general disability measure.

Introduction

WHO/UNESCAP Project overview

Goal: to improve disability statistics by applying the ICF framework and using international measurement standards

Activities: (2004-2005)

- Training in the use of ICF for disability data collection, in standard methodologies and in design of collection tools
- Developing national action plans for improving disability information systems
- Field testing of standard sets of disability questions in pilot countries
- Evaluation of results for application in real data collections

Target group: producer and users of disability data from 20 countries in the Asia & Pacific region

Outcome: improved ability to produce better disability data that meet policy needs

Other Partners: Australian Bureau of Statistics (ABS) and Australian Institute for Health and Welfare (AIHW)

Methods & Materials

WHO/UNESCAP Disability Question Set Field Testing

Objective: To propose a common set of disability questions to use in national data collections (census and survey)

Test protocols:
Study One: Testing specificity & sensitivity of questions (n=1000 per country)
Study Two: Test-Retest Reliability (n=100 per country)
Study Three: Linguistic Evaluation & Cognitive interviewing (n=100 per country)

Question Sets for Testing:
Question set 1: Washington Group's general disability measures - 6 questions
Question set 2: World Health Survey impairment questions 17 items; WHO Disability Assessment Schedule II 36 items; Australian Bureau of Statistics need-for-assistance measures 4 items

Support Material:
•Translation, Guidelines & Ling. Evaluation
•Interview Guidelines & Q by Q Spec.
•Disability Statistics Training Manual
•Quality Assurance Standards & Guidelines
•Data Entry Program

Participating countries: Fiji, India, Indonesia, Mongolia and Philippines

Period: May-Sept 2005

Initial Results

Item properties

Question Set 1 (WG Short Set) has good specificity but low sensitivity (see Table 1)

Substantial proportion (> 10%) of people may not be not picked up by Question Set 1 but by A&P domains from Question set 2 (see Table 2 & 3)

Table 1: Individual item properties between Question Set 1 (WG Short set) and Question Set 2 (WHO/UNESCAP)

n=4512	Sensitivity	Specificity
Seeing (W1) * Seeing a person across the road (B1.6)	59%	90%
Seeing (W1) * Seeing an object at arm's length (B1.7)	62%	90%
Hearing (W2) * Hearing someone talking (B1.8)	38%	98%
Hearing (W2) * Hearing what is said in quite room (B1.9)	37%	96%
Hearing (W2) * Understanding what people say (D1.5)	20%	95%
Hearing (W2) * Starting & maintaining a conversation (D1.6)	20%	95%
Hearing (W2) * Need for assistance communication (E3)	25%	95%
Walking or climbing steps (W3) * Walking a long distance >1km (B2.5)	50%	91%
Walking or climbing steps (W3) * Need for assistance: Movement (E2)	75%	82%
Remembering or concentrating (W4) * Remembering to do important things (D1.2)	45%	88%
Self care (W5) * Washing whole body (D3.1)	50%	98%
Self care (W5) * Getting dressed (D3.2)	57%	97%
Self care (W5) * Need for assistance: Self Care (E1)	84%	98%
Communicating (W6) * Understanding what people say (D1.5)	31%	95%

Table 2: Individual item properties of "Hearing" and "Understanding what people say" question

Hearing (W2) * Understanding what people say (D1.5) Crosstabulation

			Understanding what people say (D1.5)		
			Yes	No	Total
Hearing (W2)	Yes	Count	138	158	296
		% of Total	3.1%	3.5%	6.6%
	No	Count	526	3690	4216
		% of Total	11.7%	81.8%	93.4%
Total		Count	664	3848	4512
		% of Total	14.7%	85.3%	100.0%

Table 3: Individual item properties of "Walking & Climbing" and "Walking a long distance >1km" question

Walking or climbing steps (W3) * Walking a long distance >1km (B2.5) Crosstabulation

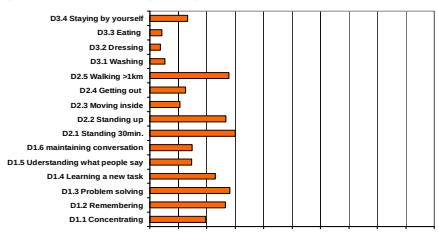
			Walking a long distance >1km (B2.5)		
			Yes	No	Total
Walking or climbing steps (W3)	Yes	Count	636	285	921
		% of Total	14.1%	6.3%	20.4%
	No	Count	622	2969	3591
		% of Total	13.8%	65.8%	79.6%
Total		Count	1258	3254	4512
		% of Total	27.9%	72.1%	100.0%

Frequencies

Within Question set 1 high endorsement rates for question W3, 4, 1 *(mobility, cognition, vision)*

Very high endorsement rates for Question set 2 across the whole severity spectrum

Graph 1: Frequencies of any difficulty by Question Set 2 (Activities & Participation), n=4512



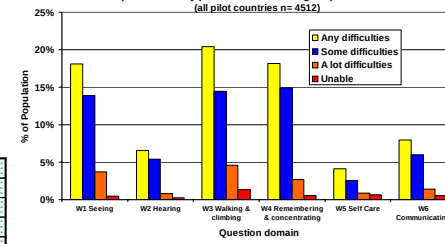
Question wording

Inclusion of meaningful thresholds are found to be useful in cognitive tests

Utility

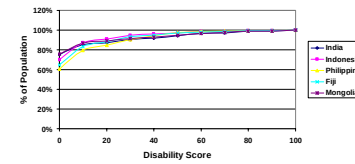
Question set 1:
FIXED prevalence rate: <5% for severe and complete difficulties, and >20% for any and mild difficulties (non-scalable) (see Graph 2)

Graph: 2 Disability prevalence according to question W1-W6 (all pilot countries n= 4512)

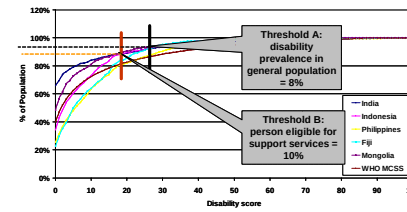


Question set 2 :
MULTIPLE and scalable prevalence rates: the same data set can be used for various purposes (see Graph 3 & 4)

Graph 3: Domain Score on difficulties in Getting Around
computed from question D2.1 - D2.5 with WHO DAS II polytomous scoring algorithm
n=4490



Graph 4: Overall Disability Score by country
computed from question D1.1 - D6.8 with WHO DAS II polytomous scoring algorithm
n=3914



Recommendations

For Washington Group's general disability measures for census

- Include thresholds in questions
- Replace question W2 Hearing with question D1.5 Understanding what people say
- Clarify question W4 Remembering & Concentrating
- Improve phrasing of question W5 Self care & W6 communication
- Test possible extension to cover missing dimensions of disability

For Washington Group's extended disability measures for surveys

Cover full spectrum rather than focus on deeper detail in selected domains