Field-testing an earlier draft of the WG/UNICEF Question Set in Cameroon, India and Fiji

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1. Building Evidence Study

AIM:

To develop a comprehensive population-based survey methodology that is compatible with the ICF, and to explore the inter-relationship between the *impairment* and *activity limitation* components of this framework

1. Building Evidence Study

METHODS:

1. All age population-based survey (n=4056 per country) of:
    1. Self reported functional limitations
    2. Clinically measured visual impairment, hearing impairment , musculoskeletal impairment and depression

2. Nested Case-control study (age 5+):
    CASES: People with disabilities
    CONTROLS: People without disabilities

1. Building Evidence Study

Cameroon: North West Region (July-Sept 2013)

India: Mubabnager, Andra Pradesh (Feb-April 2014)

1. Building Evidence Study

Screening tools

1. WG/UNICEF and WG-ESF Self-Reported Screen (2+)*
2. PHQ-9 Clinical Depression Screen (18+)
3. RAAB Vision Screen (all ages)
4. WHO E&H Hearing Screen (all ages)
5. RAM Musculoskeletal Screen (all ages)

- Clinical examination, diagnosis and referral for all participants screening positive to any clinical screen
- Case/Control interviews for all participants screening positive to **any** screen aged 5+

*NB. Children <8 or participants unable to communicate screened via proxy, 9+ self-report

1. Building Evidence Study

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1. Building Evidence Study

DOMAIN TYPE	AGE GP	No.	DOMAIN OF FUNCTIONING
Basic activity domains	2-17	D1	Seeing
		D2	Hearing
		D3	Walking
		D4	Understanding
		D5	Being Understood
		D6	Learning
	5+ only	D7	Remembering
		D8	Self Care

DOMAIN TYPE	AGE GP	No.	DOMAIN OF FUNCTIONING
Complex activity/ participation domains	2-17	D9	Controlling Behaviour
		D10	Playing
	5+ only	D11	Anxiety/Sadness
		D12	Completion of Task
		D13	Accept Change
		D14	Get along with other children

Draft Module Domains (no probes)

2. Findings

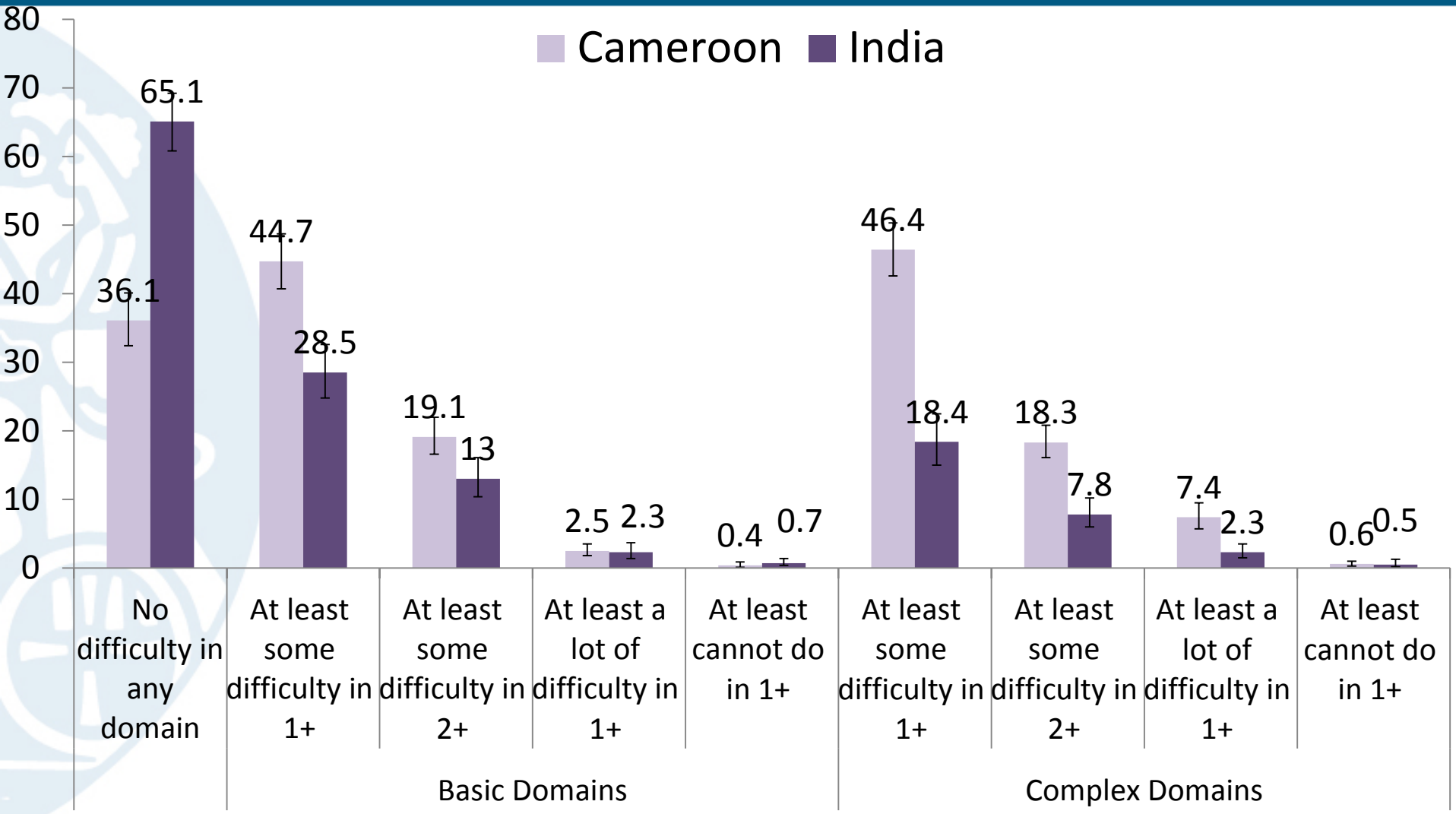
International Centre for Evidence in Disability

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Cohort Descriptives

	Cameroon			India		
	Male	Female	Total	Male	Female	Total
	n (%)	n (%)	n (100%)	n (%)	n (%)	n (100%)
2 to 5	237 (46.9)	268 (53.1)	505	113 (48.5)	120 (51.5)	233
6 to 9	256 (51.3)	243 (48.7)	499	163 (53.8)	140 (46.2)	303
10 to 13	230 (51.7)	215 (48.3)	445	138 (50.5)	135 (49.5)	273
14 to 17	126 (47.7)	138 (52.3)	264	161 (55.1)	131(44.9)	292
Total	849 (49.6)	864 (50.4)	1,713	575 (52.2)	526 (47.8)	1,101

2. Findings - Overall



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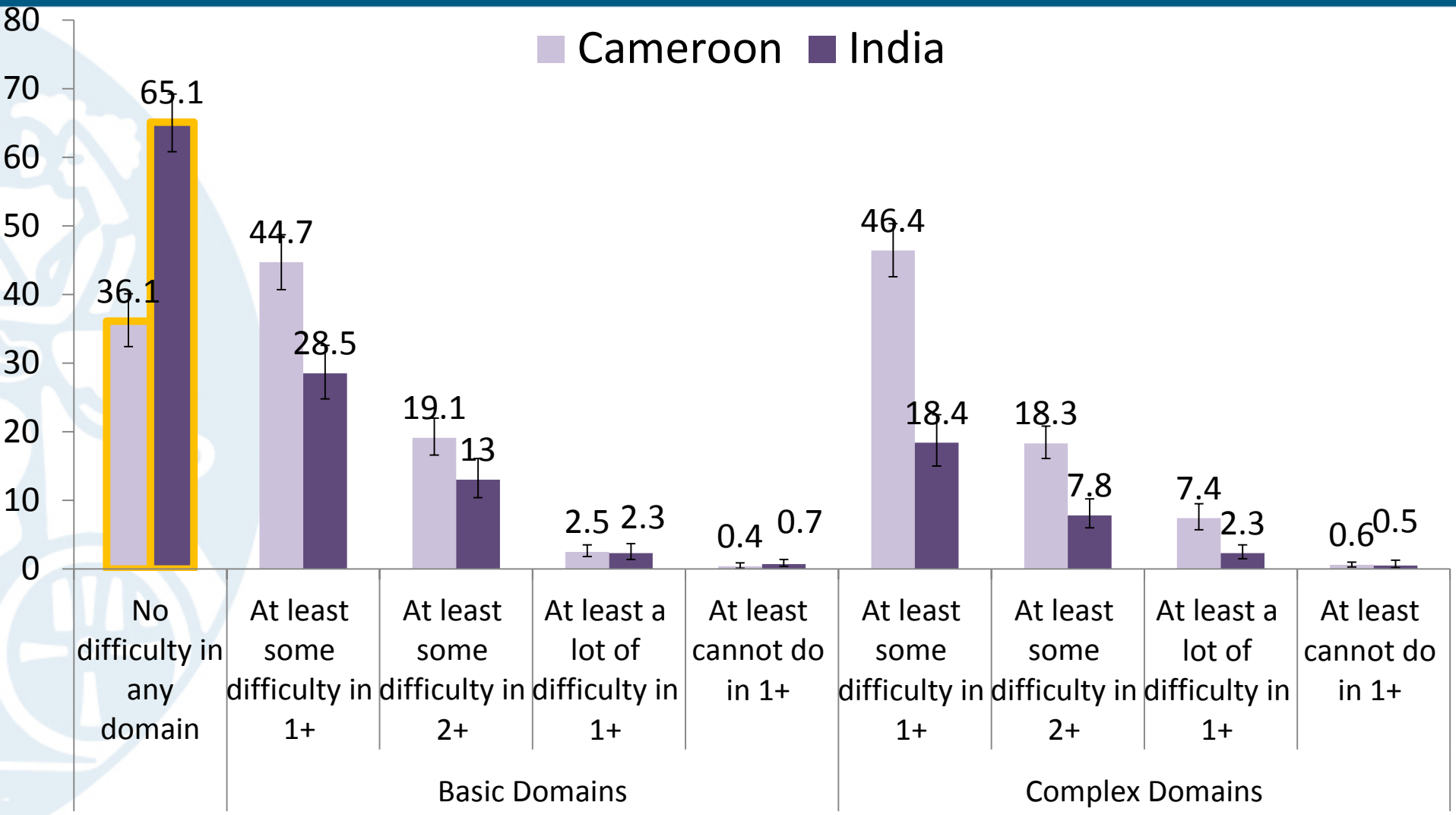

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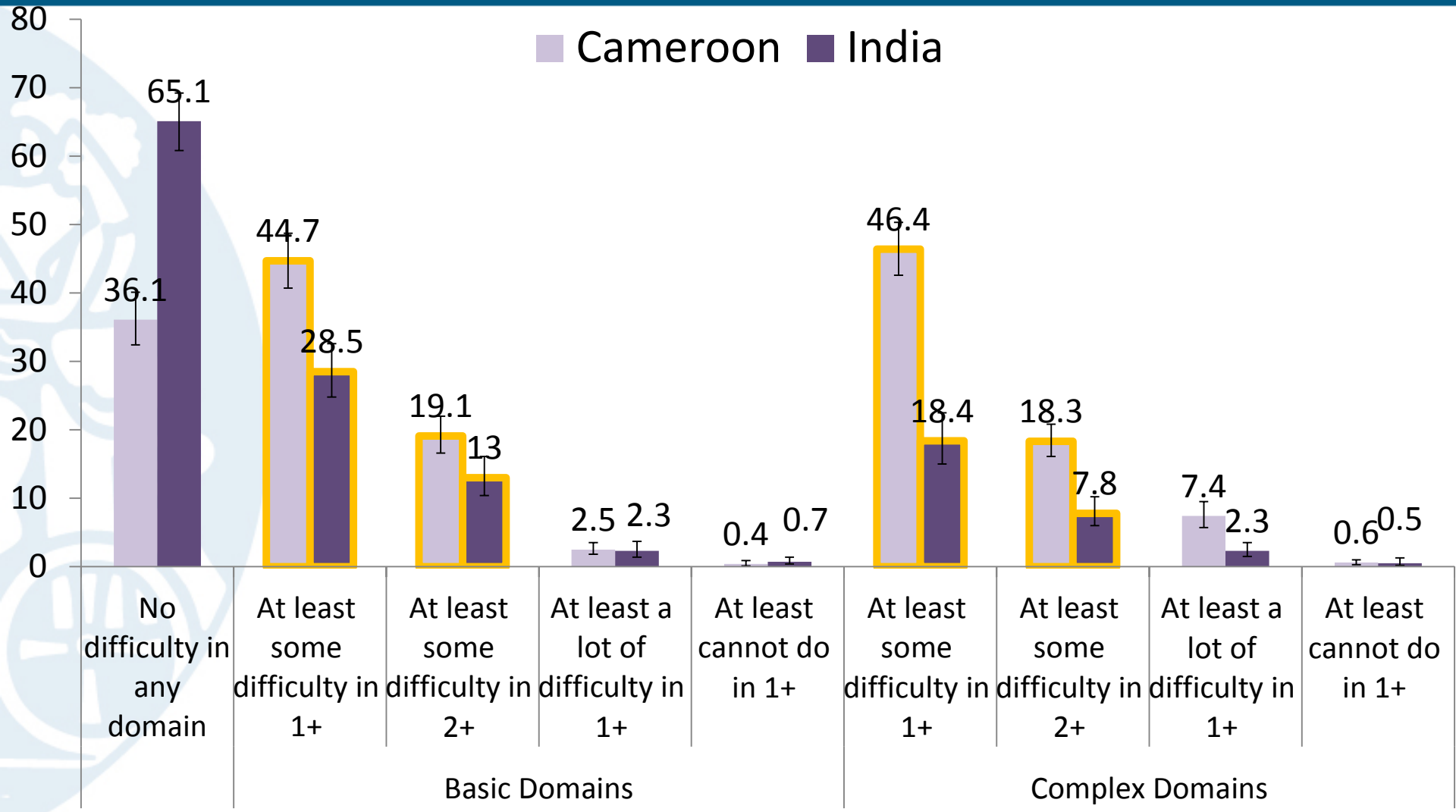

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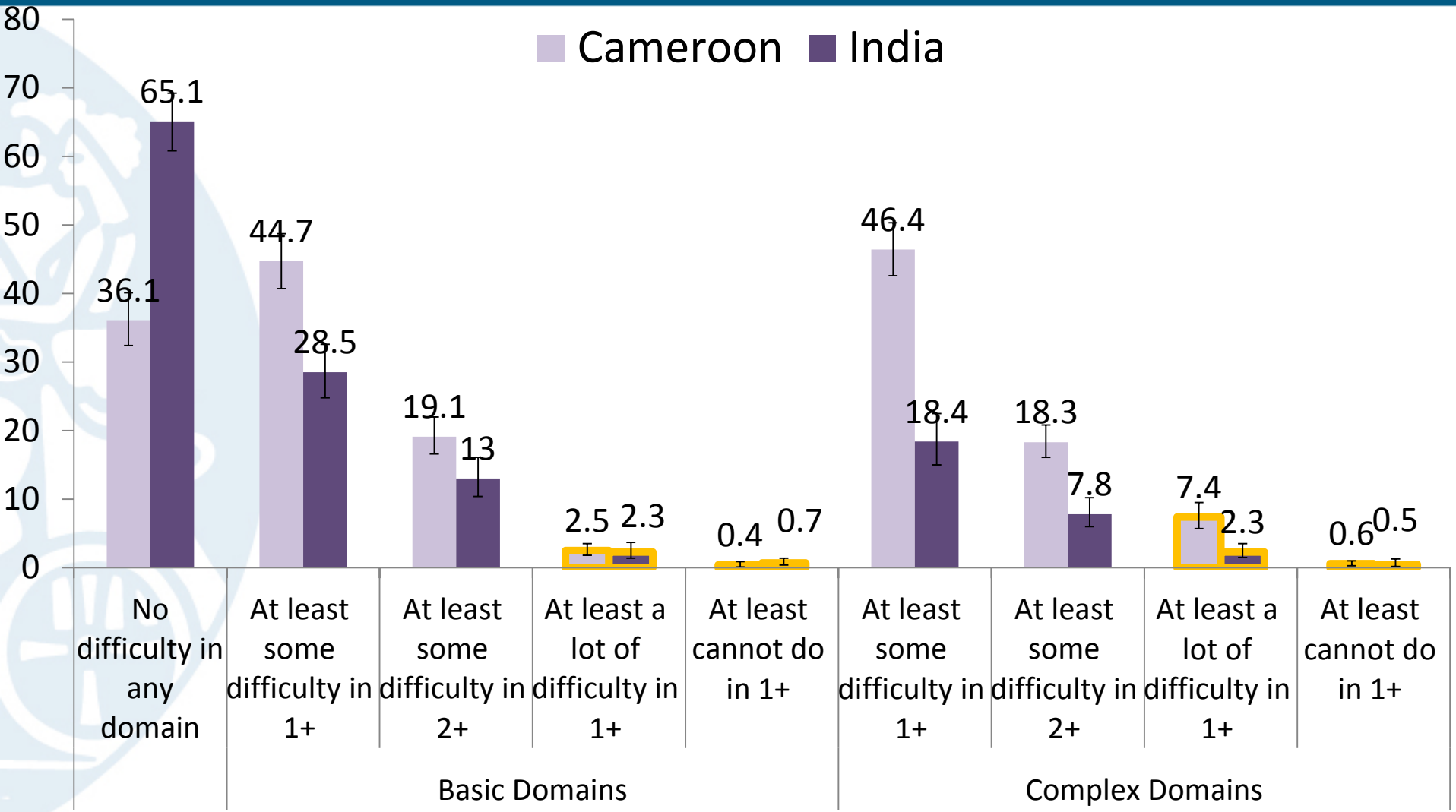
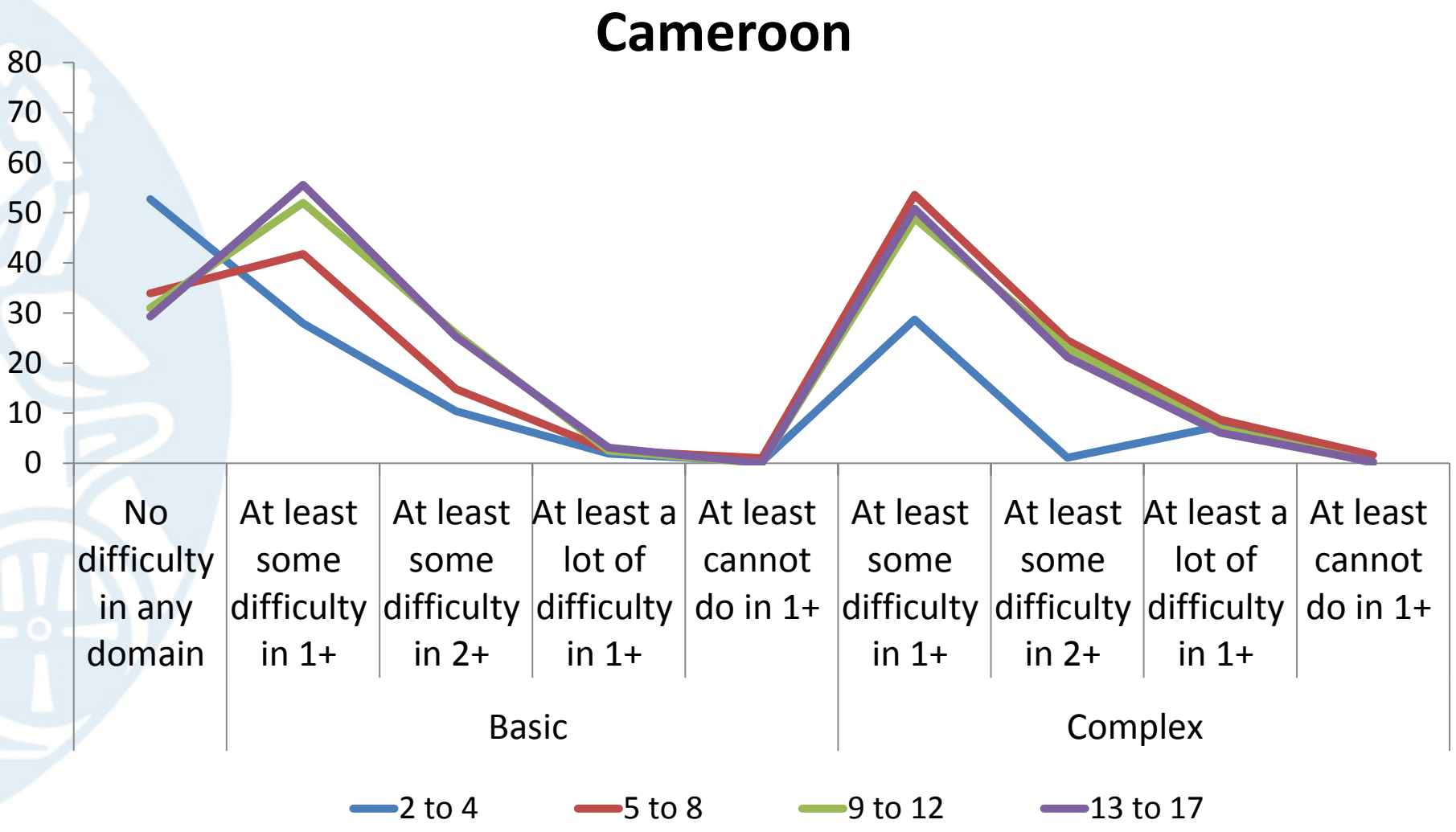
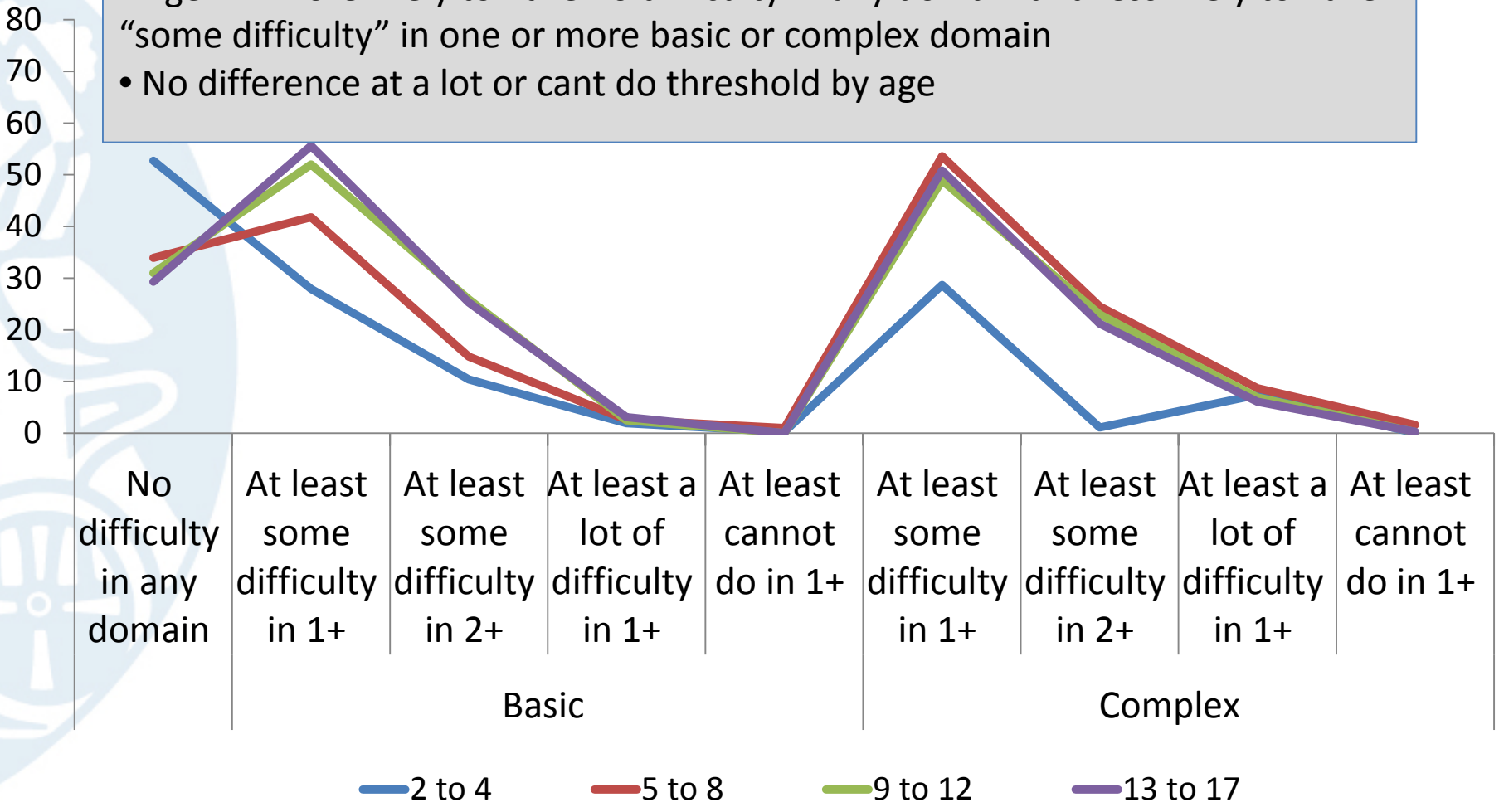


2. Findings – by age



2. Findings – by age

- No difference by sex (not shown)
- Age 2-4 more likely to have no difficulty in any domain and less likely to have "some difficulty" in one or more basic or complex domain
- No difference at a lot or cant do threshold by age



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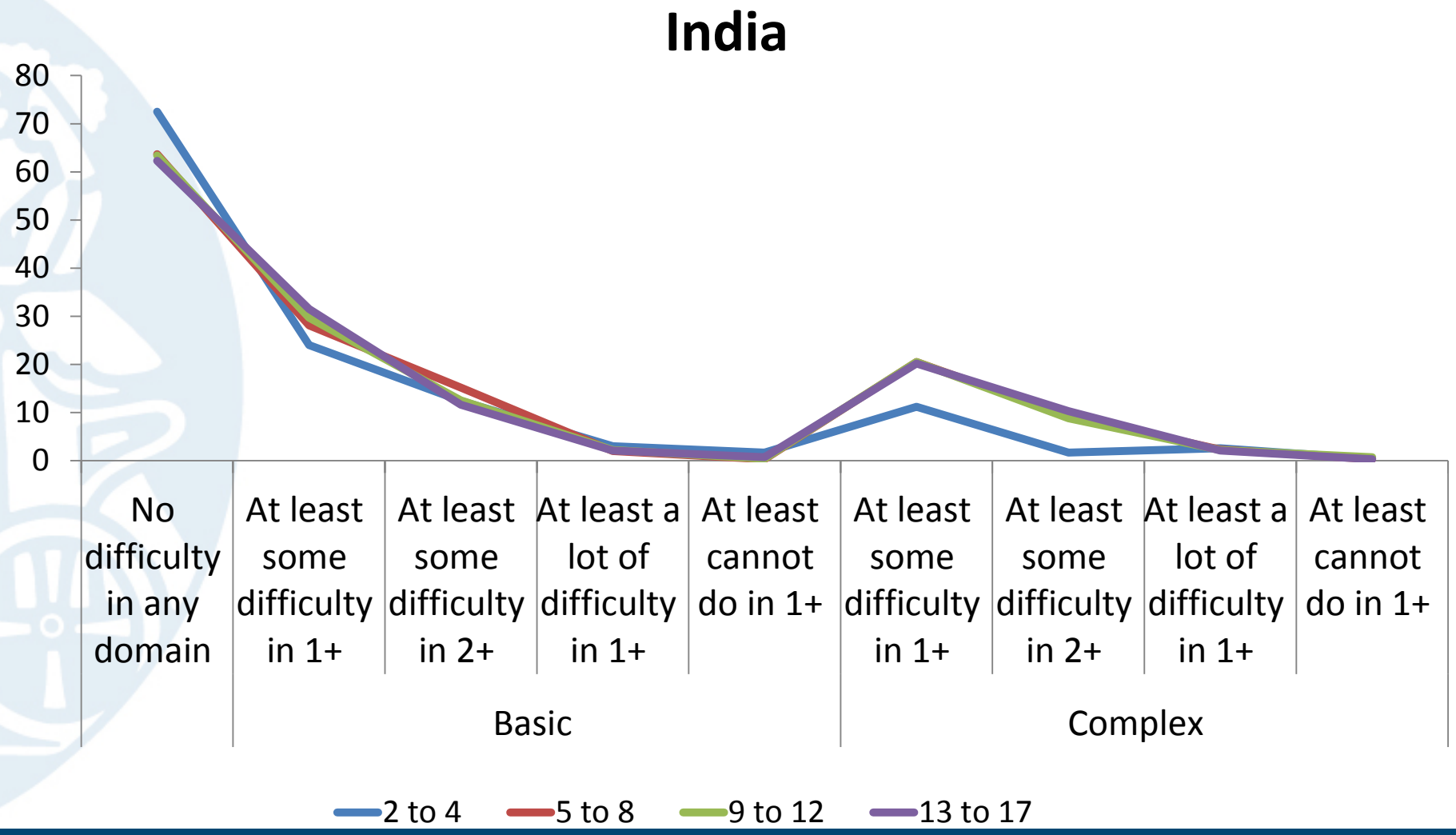
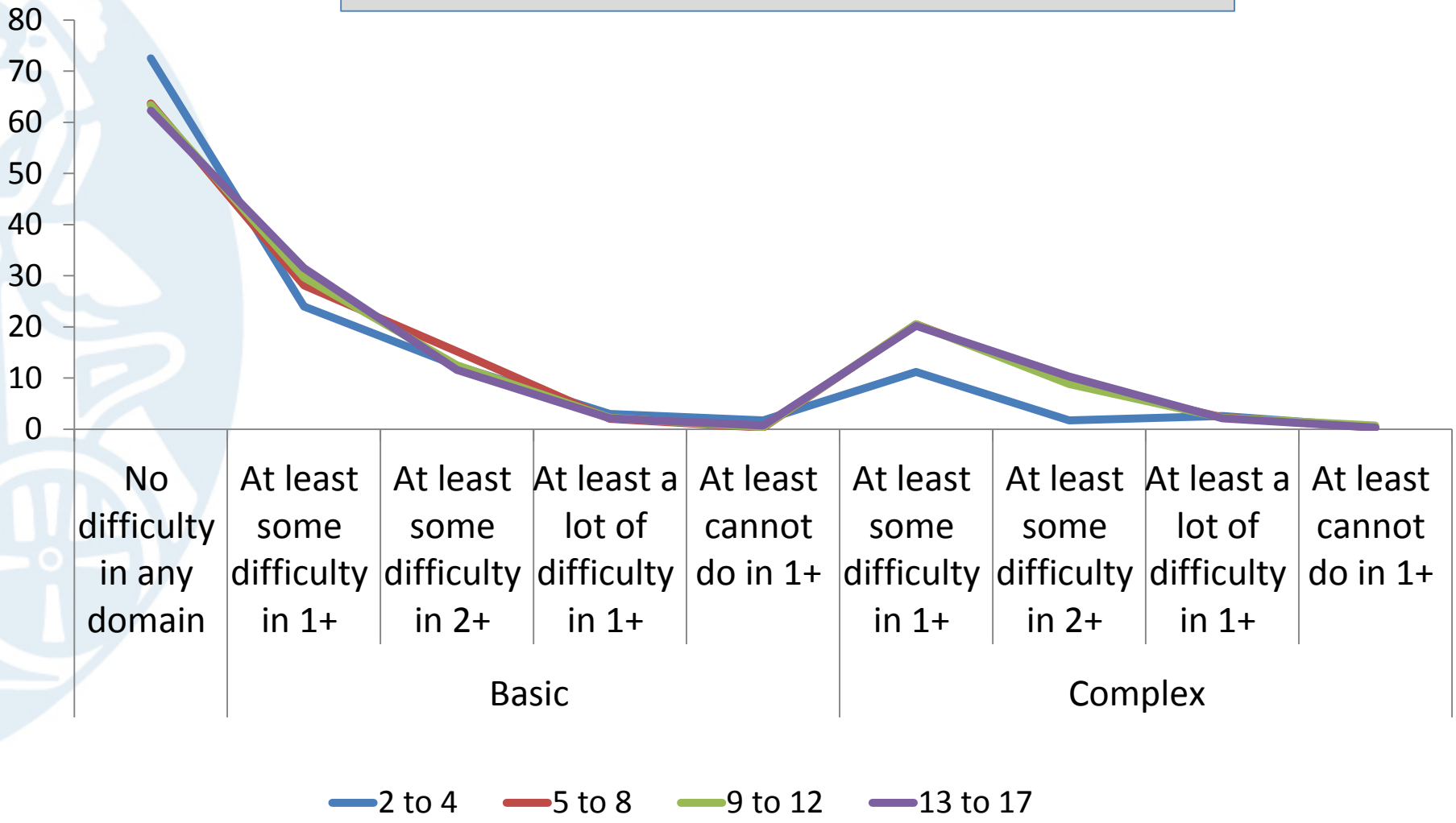
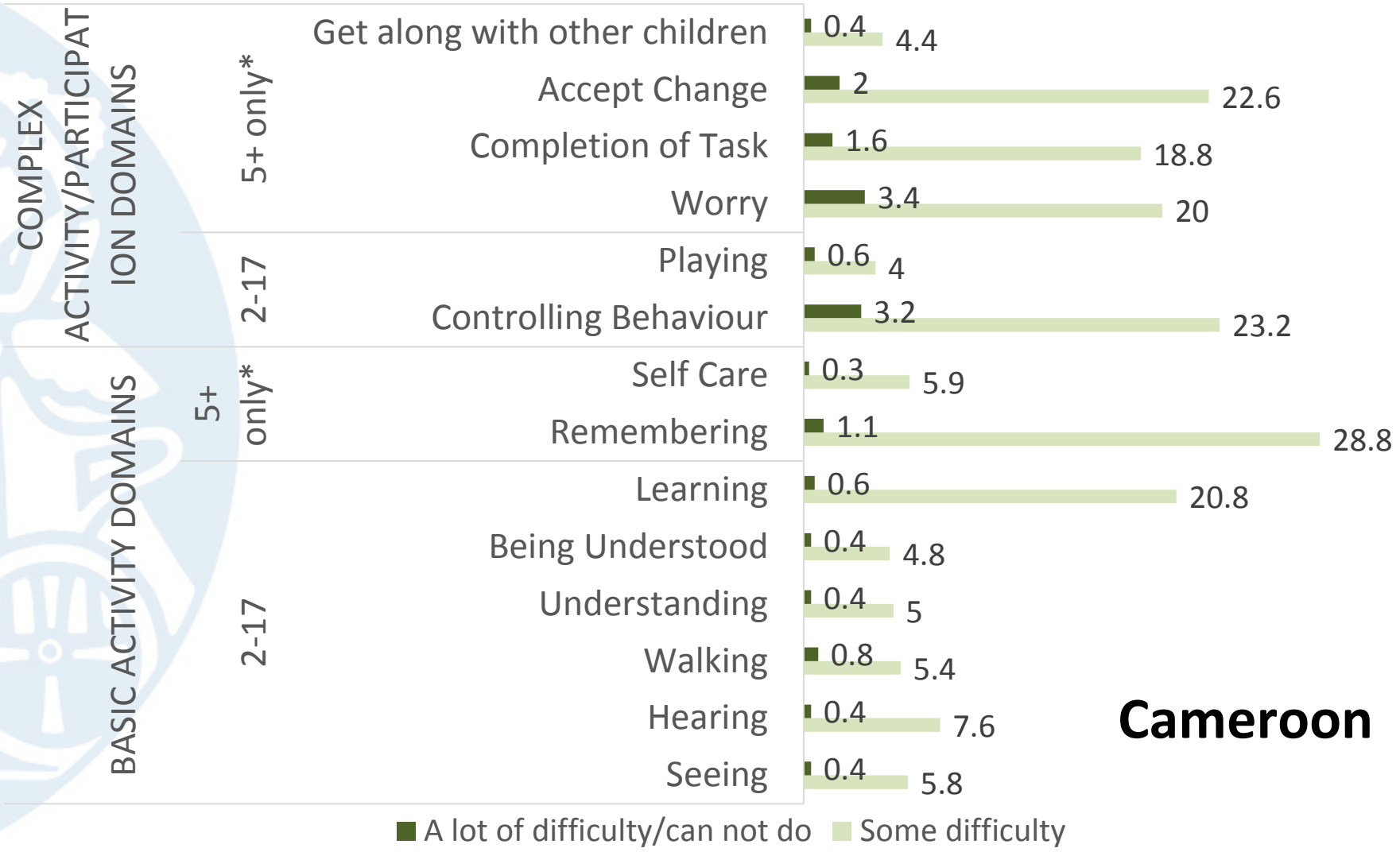


2. Findings – by age

As in Cameroon but less differences across age groups

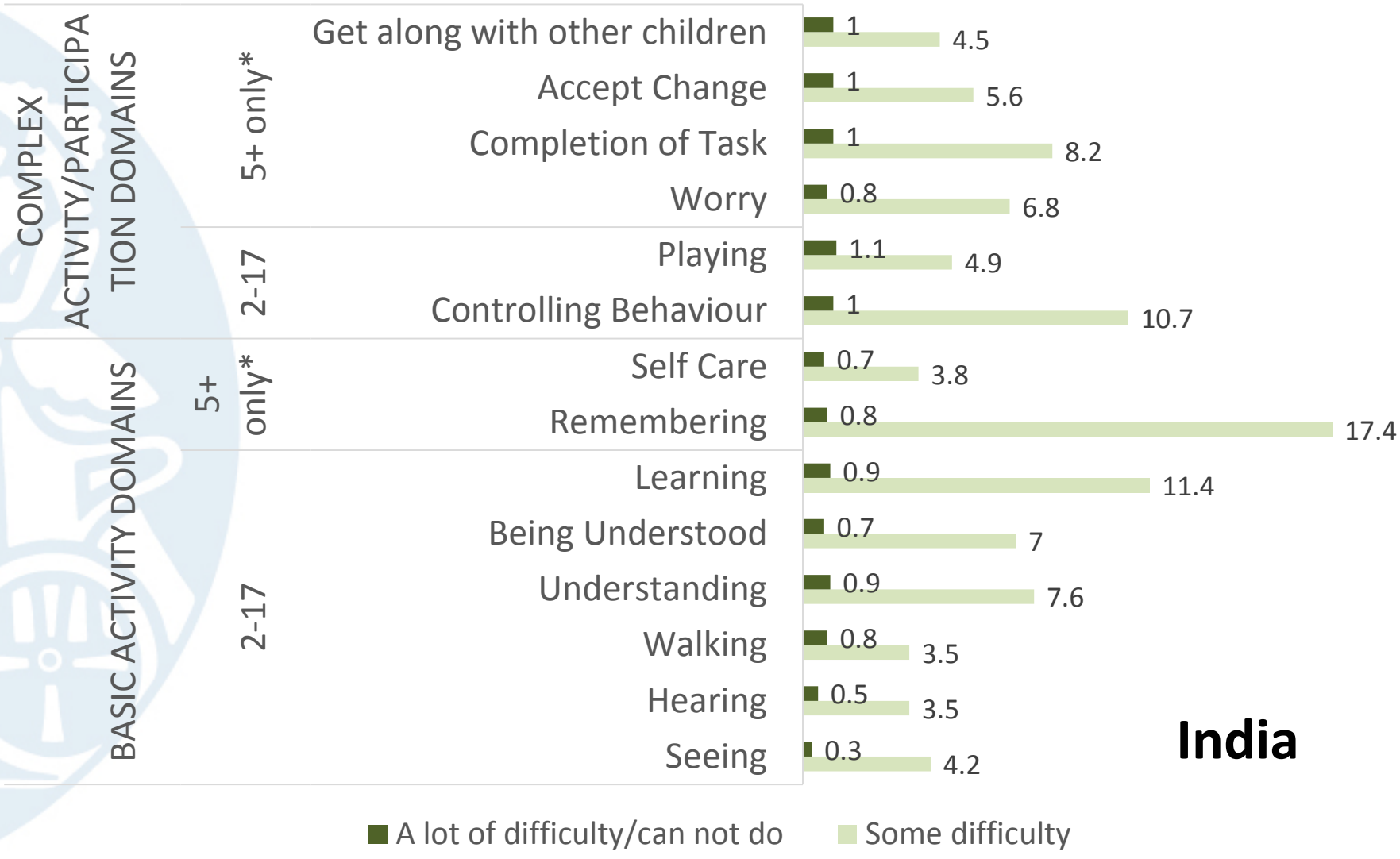


2. Findings – by domain



Cameroon

2. Findings – by domain



2. Findings – by domain x age

Cameroon Basic Domain endorsement (some) by age (% age group)						
Domain	**2-4**	**5-8**	**9-12**	**13-17**	**Total**	**P value (chi²)**
Increasing with age:						
Seeing	1.6	3.4	7.4	11.0	5.8	<0.001
Hearing	1.9	5.5	10.0	12.8	7.6	<0.001
Remembering	-	22.1	31.3	34.7	28.8	<0.001
Decreasing with age:						
Being Understood	8.2	4.3	3.8	3.6	4.8	<0.01
Self-Care	-	11.8	3.6	0.8	5.9	<0.001

No significant association with age for: walking, learning, understanding

2. Findings – by domain x age

Cameroon Complex Domain endorsement (some) by age (% age group)						
Domain	**2-4**	**5-8**	**9-12**	**13-17**	**Total**	**P value (chi²)**
Increasing with age:						
Worry	-	16.6	19.0	25.8	20.0	<0.01
Decreasing with age:						
Completing a task	-	26.0	16.1	12.5	18.8	<0.001

No significant association with age for: Controlling behaviour, playing, accepting change and getting along with other children.

2. Findings – by domain x age

India Basic Domain endorsement (some) by age (% age group)						
Domain	**2-4**	**5-8**	**9-12**	**13-17**	**Total**	**P value (chi²)**
Increasing with age:						
Seeing	1.3	1.0	5.5	8.6	4.2	<0.001
Decreasing with age:						
Being Understood	9.9	7.6	5.9	5.1	6.0	<0.05
Learning	16.7	11.2	8.4	9.9	11.4	<0.05

No significant association with age for: hearing, remembering, walking, self care, understanding

2. Findings – by domain x age

India Basic Domain endorsement (some) by age (% age group)						
Domain	**2-4**	**5-8**	**9-12**	**13-17**	**Total**	**P value (chi²)**
Increasing with age:						
Seeing	1.3	1.0	5.5	8.6	4.2	<0.001
Decreasing with age:						
Being Understood	9.9	7.6	5.9	5.1	6.0	<0.05
Learning	16.7	11.2	8.4	9.9	11.4	<0.05

No significant association with age for <u>any</u> complex domains

3. Evidence Study - Discussion

- 63.9% of children in Cameroon and 34.9% of children in India endorsed at least one domain with at least "some difficulty"
  → May reflect translation issues (Pidgin)
  → May also reflect contextual interpretation of "some" category

- High levels of endorsement ("some") and negative age association in domains related to early childhood development (e.g. Being understood, learning, self care) amongst younger children
  → May suggest reflection of development rather than functional limitation

3. Evidence Study - Discussion

- Much smaller percentage endorsing at least one domain with at least "a lot or can not do" → requires age x domain analysis with larger sample

- Similar findings for basic domains in both countries (2.5% Cameroon and 2.3% India)

- Higher proportion complex domains reported in Cameroon (7.4% vs 2.3% in India)

- Higher levels of worry in Cameroon amongst older children (self report 9+)

  → Consistent with research on limitations of parent reported emotional functioning

Validating a tool for schools to identify children with disabilities in Fiji

with the purpose of

Disaggregating Fiji's Education Management Information System by disability

Very preliminary analysis – for consideration by the Washington Group, Oct 2015

Beth Sprunt & Manjula Marella

Nossal Institute for Global Health
The University of Melbourne

4. FEMIS Study - methods

Aim: to develop and test an approach to disaggregating the Fiji Education Management Information System (FEMIS) by disability.

Methods: Cross-sectional, case-control approach to assess the validity of the draft *Washington Group/UNICEF Module on Children's Functioning and Disability (WG/UNICEF Module)* in identifying children at risk of disability, using a multidisciplinary team clinical assessment as the comparison.

- Children underwent clinical assessments: vision, hearing, musculoskeletal (and speech and cognitive).
- Responses of parents and teachers to the *draft WG/UNICEF Module (current Feb 2015)* were compared.

5. FEMIS Study - findings

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LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Functional limitation (parent response)	Severity based on clinical assessment*, n (%)				Total n (%)
Difficulty seeing	No/mild VI	Moderate VI	Severe VI	Blind	
No	167 (97.7)	1 (2.3)	0 (0.0)	0 (0.0)	171 (100)
Some	23 (54.8)	6 (14.3)	1 (2.4)	12 (28.6)	42 (100)
A lot	0 (0.0)	2 (50.0)	1 (25.0)	1 (25.0)	4 (100)
Cannot do	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100)

Visual impairment based on visual acuity assessment

5. FEMIS Study - findings

Functional limitation (parent response)	Severity based on clinical assessment*, n (%)				Total n (%)
Difficulty seeing	No/mild VI	Moderate VI	Severe VI	Blind	
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A lot	0 (0.0)	2 (50.0)	1 (25.0)	1 (25.0)	4 (100)
Cannot do	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100)

Visual impairment based on visual acuity assessment

- Over 50% of "some" category have no or mild VI

5. FEMIS Study - findings

International Centre for Evidence in Disability

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Functional limitation (parent response)	Severity based on clinical assessment*, n (%)				Total n (%)
Difficulty hearing	No/mild	Moderate HI	Severe HI	Profound HI	
No	136 (98.6)	1 (0.7)	1 (0.7)	0 (0.0)	138 (100)
Some	17 (54.8)	5 (16.1)	2 (6.5)	7 (22.6)	31 (100)
A lot	4 (36.4)	2 (18.2)	2 (18.2)	3 (27.3)	11 (100)
Cannot do	0 (0)	3 (37.5)	1 (12.5)	4 (50.0)	8 (100)

Hearing Impairment based on audiometry assessment

5. FEMIS Study - findings

Functional limitation (parent response)	Severity based on clinical assessment*, n (%)				Total n (%)
Difficulty hearing	No/mild	Moderate HI	Severe HI	Profound HI	
No	136 (98.6)	1 (0.7)	1 (0.7)	0 (0.0)	138 (100)
Some	17 (54.8)	5 (16.1)	2 (6.5)	7 (22.6)	31 (100)
A lot	4 (36.4)	2 (18.2)	2 (18.2)	3 (27.3)	11 (100)
Cannot do	0 (0)	3 (37.5)	1 (12.5)	4 (50.0)	8 (100)

Hearing Impairment based on audiometry assessment

- Over 50% of "some" category have no or mild HI

5. FEMIS Study - findings

International Centre for Evidence in Disability

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Functional limitation (parent response)	Severity based on clinical assessment*, n (%)				Total n (%)
Difficulty walking	None	Mild	Moderate	Severe	
No	113 (95.8)	3 (2.5)	2 (1.7)	0 (0)	118 (100)
Some	4 (36.4)	1 (9.1)	6 (54.5)	0 (0)	11 (100)
A lot	1 (14.3)	2 (28.6)	1 (14.3)	3 (42.9)	7 (100)
Cannot do	0 (0.0)	0 (0.0)	1 (9.1)	10 (90.9)	11 (100)

Based on Rapid Assessment of Musculoskeletal Impairment

 # includes: difficulty walking for children who do not need equipment, plus those who require equipment but have difficulty walking without it (allows comparison with the RAM which tests function without equipment)

5. FEMIS Study - findings

- parent report consistent with physiotherapy assessments
- however for wheelchair users the responses for the walking questions are confusing for data collectors and respondents

Functional limitation (parent response)	Seve				(%)
Difficulty walking	None	Mild	Moderate	Severe	
No	113 (95.8)	3 (2.5)	2 (1.7)	0 (0)	118 (100)
Some	4 (36.4)	1 (9.1)	6 (54.5)	0 (0)	11 (100)
A lot	1 (14.3)	2 (28.6)	1 (14.3)	3 (42.9)	7 (100)
Cannot do	0 (0.0)	0 (0.0)	1 (9.1)	10 (90.9)	11 (100)

Based on Rapid Assessment of Musculoskeletal Impairment

 # includes: difficulty walking for children who do not need equipment, plus those who require equipment but have difficulty walking without it (allows comparison with the RAM which tests function without equipment)

5. FEMIS Study - findings

WG/UNICEF – parent vs teacher responses

1) Similar trends between parents and teachers across the domains:
   seeing
   anxious/nervous/ worried
   sad/depressed
2) Hearing: parents more likely to report "some difficulty"; but reasonable consistency between teachers and parents in the categories "a lot of difficulty" and "cannot do at all"
3) Teachers tend to rank the level of difficulty higher in: self-care, learning, remembering and controlling behavior
4) Walking – teacher data needs further cleaning to be useful; they got the skips wrong on too many occasions to be worth reporting at this stage
5) Being understood inside and outside the household – note in the teacher version, this states inside or outside the "classroom"
   1) As expected, more difficulty in being understood by people outside the house / classroom (in both parent and teacher responses)

6. FEMIS Study - Discussion

- The WG/UNICEF CFD questions appear promising as a means of disaggregating an administrative data system (for the vision, hearing and physical domains; speech and cognitive yet to be analyzed).
- The category “some” appears that it should be a trigger for clinical assessment to ensure cases are not missed.

Next steps:

More data still arriving and further analyses required
Comparison of WG/UNICEF questions and clinical findings vs “participation/learning support needs” responses by teachers
Analysis of speech and cognition findings vs WG/UNICEF questions
Provide dataset to WG (particularly for review of built-in cognitive questions, e.g. CFD9A, 9B, etc.)

International Symposium

Disability in the SDGs: Forming Alliances and Building Evidence for the 2030 Agenda

February 18 & 19, 2016 at the London School of Hygiene & Tropical Medicine, London, UK

AIM: To bring together researchers, activists and practitioners to discuss new research findings and debate academic and policy issues related to **Global Disability, Health and Development**.

OBJECTIVES: To form alliances, build evidence and maintain momentum in the field of global disability and development.

Key Topics:
Evidence on Inclusive Development and Universal Access; Measuring Disability Inclusion; Evidence of Best Practice in Disability Programmes

Deadline for abstracts: November 30, 2015.

Sponsors:

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