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Describing health state by measuring health domains

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Abstract The measurement of health is an essential requirement for the evaluation of health policies, assessment of intervention effectiveness, and measurement of the efficiency of the health. The main objective of this study is to report average levels of health by age and sex groups for each domain of health based of ICF framework.

Introduction

Without meaningful measures of health, in a way that is comparable over time and across populations, it would be difficult to appraise whether health systems are achieving their primary goals: to improve population health levels and reducing health inequalities.

The WHO definition of health notes that health is a multidimensional concept. There are potentially three sets of domains that can be specified in order to describe health, to operationalise the measurement and contribute to a health state description:

•Core domains of health that almost all people agree upon as important to the direct measurement of health (affect, mobility, cognition, pain, vision)

•Additional domains that most people agree are direct measures of health, but that might not provide important information to the core domains

•Other domains that are related to health and serve as good proximate measures of the experience of health - those that are indirect measures of health (self care, social functioning)

Domains of health to be selected using the following guiding principles. They should be:

•Valid in terms of intuitive, clinical and epidemiological concepts of health

•Linked to the conceptual framework of the ICF

•Amenable to self report, observation or measurements

•Comprehensive enough to capture all important aspects of health states that people value

•Cross-population comparable

One of the main advantages of data collected through household surveys is that they provide person or household based health statistics rather than data collected through health services or disease registries, wich are episode or event based.

Self-reported responses in household or other types of interview based survey data are therefore widely used for assessing the health status of population.

One key analytical issue is that these self-reported ordinal responses are not necessarily comparable across or even within populations primarily because or response category cut-point shifts

Addressing the challenge of cross population cut-point shifts, one external means to calibrate responses were included within the data collection component of the survey, vignettes for each domain assessed.

The results presented reflect the use of the vignette approach to calibrate responses

Methods & Materials

The National Performance Evaluation Survey (ENED -2002) was the source of data used. Level of health was obtained for health domains.

The ENED included eight domains, six of which are known as direct health domains (mobility, cognition, pain, affect, sleep/energy, vision) and the remaining two are health related domains (self-care, social function).

Based on the eight domains assessed selected, questions assessing each domain were selected form existing standardized surveys. For each domains was applied two questions, main and auxiliary.

For all questions, the recall period is the last 30 days. Questions either asked the respondent to assess the degree to which a particular state was experienced, or the amount of difficulty associated with a particular state, by domain.

The Compound Hierarchical Ordered Probit Model (CHOPIT) was used to enhance comparability.

Sex, age and education level are used as covariables in the model.

Figure 1 Multi-dimensional Health Profile in Mexico 2003

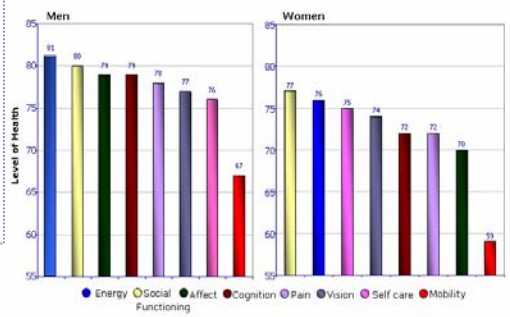


Table I
Level of Health domains acoording to selected variables
Mexico 2003

	Social Functioning	Energy	Cognition	Pain	Vision	Self care	Affect	Mobility
General	78	78	76	75	75	75	74	62
Stratum								
Rural	78	77	74	74	74	72	74	60
Urban	78	78	76	75	75	74	74	63
Metropolitan	78	78	76	75	76	76	74	63
Income level								
Q1	78	78	75	74	74	73	74	61
Q2	79	78	75	75	75	75	74	62
Q3	79	78	75	74	76	76	74	62
Q4	79	78	76	75	76	76	74	62
Q5	79	78	76	75	76	77	74	62
Poor	76	76	73	73	73	72	73	58
Not poor	79	78	76	75	76	76	74	63
Age group								
18-29	86	85	84	83	86	84	80	78
30-44	80	80	78	77	78	78	76	66
45-59	74	74	70	70	69	70	70	53
60-69	68	69	63	64	62	64	66	41
70-79	64	65	58	59	56	59	63	33
80 >	61	62	54	55	50	55	60	24
Education level								
None	70	71	65	65	64	64	67	44
Elementary	76	76	72	72	72	72	72	57
Secondary	82	81	80	78	80	80	77	69
University	84	83	82	81	83	84	79	74

Source: National Performance Evaluation Survey 2002

Results

•The domains with the highest level on a 0 to 100 scale (100 being the best health state) were sleep/energy with a score of 81 in males and social function with a score of 77 in females. Mobility received the lowest level for both sexes and all age groups. Figure 1

• Table I provides further detail of level of health domain by selected variables (income, age group and education level). That the estimated levels of health decrease as age increase.

•There are differences between males and females. Level health females for each domain are lowest that males. Table II

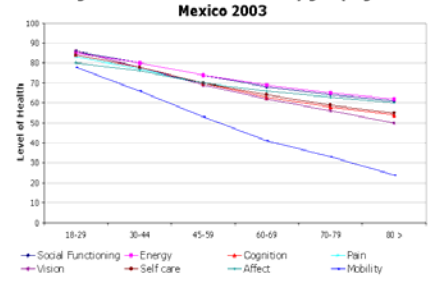
Table II
Level of Health domains, by sex and age group
Mexico 2003

	Cognition		Vision		Energy		Social Functioning		Pain		Affect		Self care		Mobility	
Age group	M*	W**	M*	W**	M*	W**	M*	W**	M*	W**	M*	W**	M*	W**	M*	W**
18 - 29	88	82	88	84	87	82	87	84	86	80	85	76	84	82	82	74
30 - 39	83	76	81	78	83	78	82	80	81	75	82	73	79	77	73	64
40 - 49	78	71	76	72	80	74	79	76	77	71	79	69	74	72	65	56
50 - 59	73	66	70	66	76	70	74	71	72	66	75	66	69	67	55	47
60 - 69	70	63	66	62	74	68	72	69	69	63	74	64	66	64	50	41
70 - 79	65	59	61	57	70	65	68	65	65	59	70	61	62	60	42	34
80>	58	51	52	48	64	59	62	60	58	52	66	56	54	53	29	21

M*:Men
W**: Women
Source: National Performance Evaluation Survey 2002

Conclusions

Figure 2 Level Health domains by group age
Mexico 2003



Levels of health estimated for all domains decrease as age increase, is very clear for mobility. Figure 2

It was obtained also levels of health domain for each state in Mexico.

•Overall, males have a better perception of their health state than females, and this perception worsens as age increases.

•This is also the case when scores are adjusted (CHOPIT) by expectations and health domains.

•Measurement of health states should follow international standards and consider the multi dimensional measurement of health based on the conceptual framework of ICF.