A GLOBAL DISABILITY INDICATOR

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ABSTRACT: Disability is difficulty performing roles and activities due to health problems. It is largely experienced by older persons as they accumulate progressive chronic conditions. To measure functional status of individuals and populations, contemporary surveys include sets of detailed items about disability. Little effort has gone into developing global indicators of disability that cover the concept briefly but well. A global disability indicator is a compact and inexpensive device for public health surveillance and scientific study of disablement. I present and critique items that have been used in North American surveys. Good candidates are selected for methodological study. Both laboratory-based cognitive studies and large-scale statistical studies are recommended; the first will reveal meanings of items and responses, and the second, items' systematic structure and prediction ability. The ultimate goal is to identify one or a few fine indicators for widespread inclusion in population health surveys.

INTRODUCTION

Disability is intrinsically a multifaceted phenomenon. Health-related limitations can occur in numerous roles and activities such as job, bathing, going shopping, socializing with friends, and active recreation. Reflecting this diversity, health surveys contain detailed items about limitations in specific activities. Although multiple items have strong merit and value, they also frustrate professional and political users of disability statistics who often need brief summaries of population functioning and health.

In sharp contrast to the situation for disability, surveys regularly contain one global indicator of health, namely, self-rated health. Actually, health is just as multifaceted as disability is, involving presence/absence of specific conditions, their severity, and their duration. Yet one short question about health status is esteemed and commonly used alone or in conjunc-

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tion with detailed items. The indicator is not only useful for policymakers and program managers, but has also proved its scientific merit as an excellent prospective predictor of outcomes such as institutionalization and death (Idler 1992; Idler and Angel 1990; Jagger and Clarke 1988; Kaplan and Camacho 1983; Kaplan et al. 1988; Wolinsky and Johnson 1992).

The success of a global indicator of health is instructive. Absence of global disability indicators in surveys may be due to inattention rather than infeasibility.

There is current interest in conducting in-depth studies of self-rated health—why it is so easily understood by respondents, how they choose responses, and why the item measures health so well (Schechter 1994). This article recommends that parallel intellectual and methodological effort be applied to "self-rated disability".

I begin this article by defining disability, thus setting the inclusion scope for a global disability indicator. The need and rationale for a global item are then discussed, and desirable characteristics for it. Brief items used previously in North American surveys are shown and evaluated. Several short comprehensive items are identified and offered for consideration by researchers in future survey testing and design. Finally, issues for formal methodological study by health survey researchers that will help evaluate candidate indicators are discussed.

What is the relevance for aging? Disability rates rise with age, as adults accumulate chronic conditions and incur associated functional problems. Individual chances of disability and also population numbers of persons with disabilities are highest among older persons.

**DEFINITION OF DISABILITY**

Disability refers to the impacts of health problems on people's social functioning, that is, their ability to perform roles and activities in their society.

The term social can be broadly or narrowly construed by researchers. At one end, it can refer to the whole set of necessary, typical, and personally-desired activities an individual does, ranging from the most basic and universal such as dressing and eating to the most discretionary and diverse such as one's favorite hobby. Asked about activities overall, respondents judge whether health impedes performance of any activity in their self-defined repertoire. Narrowing the scope, researchers may focus on activities deemed essential for survival and independent living; these are known as ADLs (activities of daily living) and IADLs (instrumental activities of daily living), respectively. Emphasis on ADLs and IADLs stems from three features: these activities are universal or nearly so in a society; trouble doing them implies serious dysfunction; and personal or equipment assistance is needed to counter ADL/IADL dysfunctions, thus entailing public and private costs. This scope has a normative aspect (introduced by the survey designers and funders), namely, the assumption that ADLs and IADLs are more important than other activities people do. Lastly, some researchers use the term social functioning to refer to interactions with friends and acquaintances for pleasure, support, or assistance. This is a very narrow scope; "socializing" is just one activity in a person's repertoire of roles/activities.¹

Two essential qualifiers for disability questions are health-relatedness and duration. **Health-Relatedness**: Trouble doing roles/activities can be due to health or many other
reasons (lack of training, low motivation, poor environment, etc.). In health surveys, one wants to capture just health-related dysfunctions, so a clause is needed to indicate that to respondents. Until recently, such clauses stated or implied just physical conditions as causes of disability, but now they appropriately include mental (cognitive and emotional) conditions as well. Surveys often query duration of the condition causing disability, and then count just the disabilities due to chronic (long-term) conditions. **Duration:** Reported limitations may be protracted or transient. Usually, health survey planners want indicators to measure rather persistent statuses of individuals, not evanescent ones. To do so, duration of disability should be queried, and only limitations which have lasted some months (a number determined by the survey planners) counted. Disability presence and duration should be asked separately; this gives flexibility for calculating disability prevalence (any duration, or chronic only).

In sum, the scope of disability varies across surveys depending on decisions made about included activities, health-relatedness, and duration. **For global disability, the aim is a question about protracted, health-related difficulties in a rather broad span of roles/activities.** Its format can be a single item (one question), a branch-and-stem item (main question with essential probes), or several brief items always combined into one variable. All of these yield one indicator about a person’s disability status.

**NEED AND RATIONALE FOR A GLOBAL DISABILITY INDICATOR**

A global measure of disability serves three purposes: description, explanation, and screening. (1) **Description:** The indicator documents the “state of functional health” of a population at a given time and, if measured repeatedly, over time. Subgroups in a population can be compared, or when the item is used in various communities or states, broad geographic populations can be compared. A global indicator can be reported as is (percentage distribution of responses) or serve as the basis for calculating active life expectancy (expected years of disability-free life) (Branch et al. 1991; Crimmins et al. 1989; Rogers et al. 1989). The data have good utility for policy and program development since they are readily understood by health statistics users ranging from politicians to journalists. (2) **Explanation:** A global disability indicator has scientific utility as a dependent variable and as a predictor. Researchers can identify risk factors and chronic conditions that are most strongly associated with overall disability status, and also how disability affects life satisfaction and happiness, acute medical events, hospitalization, institutionalization, and death. There is a growing literature showing that, net of morbidity, disability has its own prediction power for outcomes (Harris et al. 1989; Reuben et al. 1992; Tinetti et al. 1986; Williams 1987; Wolinsky et al. 1993). The analyses noted use multiple detailed indicators of disability. Global indicators are likely to have equal or better prediction ability, in the same manner that self-rated health has proven a better predictor than multiple detailed morbidity items. (3) **Screener:** A global disability indicator can serve as a screener for “persons with disabilities”, who are then asked additional questions or are targeted for longitudinal followup.

It is important to recognize that any summary measure of disability accomplishes these goals. Aggregate variables derived from detailed items (e.g., number of disabilities, any disability) fulfill them as well. What is so attractive, then, about a global item? A global
item has the distinctive advantages of being brief, straightforward, and inexpensive to collect compared to such aggregate variables.

The best setting for using a global disability indicator is population health surveys. A global indicator is not appropriate in settings that require precision and detail such as clinical monitoring and decision-making for patients or institutional residents, or for reimbursement and disability program participation decisions (Myers 1992).

**DESIRABLE CHARACTERISTICS OF A GLOBAL DISABILITY INDICATOR**

Ten desirable features of a global disability indicator are discussed relating to content, demographic scope, words, dimensions, response range, response metric, qualifiers, comparisons, number of items, and measurement qualities.

1. **Comprehensive Content.** Included roles/activities, time frame, and causes must be indicated in the question or its preface and probes. Whether a broad span of activities is included, or a limited one such as ADLs/IADLs, this must be conveyed by examples or clear implication. The author’s preference is for a broad span inclusive of obligatory, committed, and discretionary activities. Functional status that characterizes the respondent now (current) and has lasted awhile (longterm duration) is the desired time frame. How long a limitation must last (3+, 6+, 12+ months) to be considered “longterm” varies among surveys and is essentially arbitrary. It is standard to ask retrospective duration (if difficulty doing an activity has already lasted n or more months), but increasingly surveys designers also ask prospective duration (if difficulty is expected to last at least n months). An example is “Has the difficulty doing X lasted or is it expected to last 12+ months?” This allows dysfunctions with recent onset that are likely to endure to be included. Whatever one’s choice, duration must be asked directly rather than left vague or implied. A probe about health-relatedness is also necessary. If only disability related to chronic health problems is wanted, then duration of the attributed condition must be asked as well.

2. **Broad Demographic Scope.** Ideally, the global indicator should be relevant for all ages, both genders, and diverse race/ethnic groups. Age poses the biggest problem: First, children’s roles and activities differ so much from adults’, wording that encompasses all ages may be very difficult to devise. A separate question may be needed for children. Second, older adults have a different repertoire of productive and leisure activities than young and middle-aged adults. This has prompted survey designers to query certain activities for middle-aged persons (such as job) and other activities for older persons (such as ADLs and IADLs). Disability statistics like this promulgate stereotypes. In truth, all activities are germane to all ages; degree of participation varies by age but not relevance. A global indicator that is eclectic about activities serves all adults ages well.

3. **Plain Words.** Question wording should be simple and colloquial. The question should make sense to respondents on first hearing. Linguistic specificity and refinement are not the goals.

4. **One Dimension.** There are various dimensions of disability in an activity: difficulty doing it, ability/inability to do it, limitation in amount or kind, performance/nonperformance, use of personal or equipment assistance (called dependency), need for
assistance, pain while doing the activity, satisfaction with performance, and others. Surveys with detailed items often query several dimensions (e.g., difficulty and personal assistance). When a global indicator is used, brevity requires just one dimension, chosen to suit the survey’s scientific or public health purposes.4

5. **Full Response Range.** The response scale should cover the full range of best to worst functioning, with several gradations between. The two polar categories should be readily understood and the gradations should be well-spaced. These features seldom happen in disability items; instead one tends to find dichotomous response scales (e.g., no difficulty vs any difficulty) and ordinal scales with emphasis on poor-function responses (e.g., no difficulty, some, a lot, unable).

6. **Severity Response Metric.** A response metric indicates how much, or how often, a phenomenon occurs. For disability, the most desirable metric is severity. Response categories should distinguish people from no disability to those with the worst conceivable level short of death. In current questionnaires, severity is obtained by asking degree of disability (none, some, a lot, unable).

7. **Minimal Qualifiers.** The question should be short and uncluttered with qualifiers. This issue is troublesome for a global indicator because of the requirements that dysfunction be protracted and health-related. There are three options to get the qualifiers in: a preface that tells respondents to think about long-term health-related things in the ensuing question; embedding the two aspects into the question itself; or a branch-and-stem format with a brief question about limitations followed by probes about health-relatedness and duration. Each option has its disadvantages: The first and second have cognitive burdens (can respondents remember a preface, or can they comprehend a long question that embeds the aspects?). The third option lightens the cognitive burden but takes more field administration time.

8. **No Comparisons.** We recommend that the question be free of comparisons to other persons, such as asking respondents to compare their current function to people the same age, to own prior status, or to own birth cohort. Comparison lengthens and complicates a question, thereby posing a larger cognitive task for respondents. Without explicit comparison, people are free to choose their own most important basis(es) for an answer. The comparisons people use for their responses can be studied as a methodological issue.

9. **One Item If Possible.** A global indicator comes from one item, a branch-and-stem format, or several always-combined items. The fewer the items to create a global indicator, the better. One question is best of all.

10. **Validity and Short-Term Reliability.** These are desirable measurement qualities for any survey item. In professional discussions, two criticisms are advanced about global items—that they are less valid than multiple-item batteries and they produce unstable responses. Studies comparing the qualities of global and detailed items must be done to know whether these claims are true or not.

Typically, researchers also want high precision (minute gradations) and high sensitivity to change (responsiveness) in indicators. These may not be necessary for the scientific and descriptive uses to which global indicators are put. Global indicators can work very well with ordinal scores (4–6 categories) and insensitivity to small changes. They should, however, be capable of detecting large ("significant" as judged by the survey planners) changes in function over time.
Summary. All ten topics should be consciously considered during question design. Readers are likely to agree on their importance even if they do not agree with certain opinions expressed above. Later in this article, the topics are revisited by stating issues for methodological study.

GLOBAL DISABILITY ITEMS USED IN SURVEYS

Brief indicators of disability from North American health surveys are shown in the Appendix. A few items from European surveys are included as well. Each number (#1–#46) includes an item or brief set of items exactly as in the survey—altered only by our using a uniform presentation style for skips, emphasis, and response categories. Initial notes state the item’s background and characteristics. Most items are designed for adult ages or all ages; items designed for children are shown as well.

Overall, how do the items fare with regard to the ten desirable characteristics? (1) **Content:** Most items concentrate on particular roles such as job, housework, school, and play. Occasionally they stretch to include “other activities”, stated as a nonspecific residual. All have explicit or implicit health-relatedness. There is a good deal of variation about duration: not asked, asked about the condition causing disability, or occasionally asked about disability itself. (2) **Demographic Scope:** The surveys are attentive to issues of age and gender, and questions are tailored to the samples. But improvements are needed for older persons (ages 65+); there is a tendency to focus on ADL/IADLs and nothing else that older persons do. (3) **Words:** Questionnaires have largely borrowed language used in preceding surveys, rather than initially test alternatives in laboratory and pilot studies. (4) **Dimensions:** The most common dimensions used are limitation, difficulty, and dependency. (5) **Response Range:** Response categories emphasize negative functioning, with few if any gradations of positive functioning. This stems from public health orientations that underlie surveys (the need to know what’s wrong with the population) and also from greater ease in asking people about dysfunction than “eufunction”.

(6) **Response Metric:** Many studies use Yes/No responses to each question (thus, presence vs absence of dysfunction). This is more common than ordinal responses, which require the respondent to subjectively grade their dysfunction. (7) **Qualifiers:** There is great variation in the location of qualifiers and length of questions. Some are so long, one wonders how respondents can keep the requested boundaries in mind. (8) **Comparisons:** Most questions have no explicit comparisons, leaving respondents free to think about their functioning relative to anyone, anything, anytime. (9) **Number of Items:** We have chosen the briefest items in an array of mostly national surveys. There are very few instances of extreme brevity, that is, of a single item to compass disability. What seems like one question on paper is sometimes really several (e.g., #2,#23,#33). (10) **Measurement Qualities:** Few items have had psychometric scrutiny with the exception of those in the Medical Outcomes Study.

In sum, the brief items in surveys to date leave plenty to be desired. Their content is often narrow; duration of disability is seldom asked; queried activities are age-specific (and thus age-biased); qualifiers make questions long and complex; there are few instances of genuine brevity; and measurement qualities are unknown.
### TABLE 1

Candidates for a Global Disability Indicator


Note: Canada’s global disability items have been very similar from one census/survey to the next (Appendix). We choose the most recent one (#29) but alter other activities from “such as transportation to or from work or leisure time activities” to “such as local travel, sports, or leisure”—a close reprise of what appears in the earlier surveys. The item is asked of All Ages. It is really four items in one, but brief nevertheless. A weakness is asking about condition duration rather than disability duration; this could be altered in the initial clause or by a probe.

Preface: “The next few questions deal with any health limitations which affect...’s daily activities. In these questions, ‘long-term conditions’ refer to conditions that have lasted or are expected to last 6 months or more.”

“Because of a long-term physical or mental condition or a health problem, are/is...limited in the kind or amount of activity...can do:

- At home?
- At school?
- At work?”
- In other activities such as local travel, sports, or leisure?”

For each: Yes, No.

2. **Pilot Study on Subjective Health (modified)**

Note: The item is modified from #46 in Appendix. We simplify the lead question, add the duration period for disability, and use different severity gradations.

“Is there anything about your health that makes it hard for you to do your usual activities?” Yes, No.

If Yes: Has the difficulty with your activities lasted 6 months or more, or do you expect it to last that long?” Yes, No.

If Yes to 6+ Months:

“What are the activities you have trouble doing because of health?” [Interviewer records responses.]

“Would you say your difficulty doing these activities is a little, some, or a lot?” A little, Some, A lot.


Note: We use the Phase One item about emotional/cognitive problems (#19) and add a parallel item about physical problems. Health-relatedness is based on presence of specified conditions. To assure broad capture of health problems that may cause disability, presence of “any other conditions” can be asked in the screen. A weakness is the time frame: protracted duration is implied but not explicitly stated and thus inclusion of short-term disability is possible. See the EC Health Panel question (#32) for an analogous format.

[After specific questions about physical conditions, If Yes to Any:] “During the past 12 months, did any of these problems seriously interfere with...ability to work or attend school or to manage...day-to-day activities?” Yes, No.

[After specific questions about cognitive and emotional problems, If Yes to Any:] “During the past 12 months, did any of these problems seriously interfere with...ability to work or attend school or to manage...day-to-day activities?” Yes, No.

4. **Baltimore Longitudinal Study of Aging Followup 1 (modified)**

Note: We modify the BLSA item (#43) by adding the descriptor “in your home, work, and leisure activities” and by including the category “very good” to match the five response categories (excellent, very good, good, fair, poor) now regularly used for self-rated health items. This item comes very close to the style of self-rated health questions. Respecting its simplicity, I would not include duration or health-related qualifiers. But to make any sense at all, it must be asked in the context of health and disability: else “functioning” is vague.

“Would you describe your overall level of functioning in your home, work, and leisure activities as: excellent, very good, good, fair, poor, don’t know?” Excellent. Very good, Good, Fair, Poor.

5. **New**

Note: The item covers many domains, has a six-month period for disability duration, and has severity gradations.

“Because of a physical, mental, or emotional condition, are you limited in doing your daily activities like personal hygiene, house or yard care, shopping, your work, or other things you need to do?” Yes, No.

If Yes: “Has the limitation lasted for at least 6 months or do you expect it to last that long?” Yes, No.

If Yes to 6+ Months: “Are you limited just a little, somewhat, or a great deal in your daily activities? Just a little, Somewhat, A great deal.
Based on the review, we have chosen five items that are good candidates for discussion, revision, tryout, and evaluation. They are shown in Table 1; the initial notes state their background and characteristics.7

METHODOLOGICAL ISSUES

Good items can be crafted with common sense and strong survey research skills, but their merits are increased by formal methodological scrutiny. Here we state central issues for methodological work, whose answers will guide the choice of global disability indicators.

1. **Content.** The scope of disability is long-term, health-related social dysfunctions. Is brevity possible for something so broad yet qualified? Consider the three features: (1) Social: Can a short question bring to mind the whole range of included activities? Do examples of activities (as in #17b, #21) help, and do they also subtly harm by excluding from a person’s mind the unstated activities? (2) Health-Relatedness: Can health-relatedness be left implicit when the whole questionnaire is about health, or is a qualifier needed stating that reported difficulties be due to health problems? Is a further query about chronicity of the health problem needed? (3) Duration: If short-term disability is excluded, where should the duration qualifier be placed and should it be numeric (number of months) or general (“long-term”)? If numeric, should only retrospective duration (e.g., “has lasted six months or more”) be queried or also prospective duration (e.g., “has lasted or is expected to last six months or longer”)? Without numeric bounds, what do people think “long-term” means?

2. **Demographic Scope.** Global questions must say little but still manage to encompass the diverse experience of population subgroups. For disability, age is the biggest issue and gender next. What are suitable questions for older adults? Their roles are not so limited as public perceptions imply, and many persons are engaged in paid and unpaid productive activity. Disability items that focus on ADLs and IADLs (e.g., #6) do disservice to the pursuits and commitments of older persons.* Gender must also be closely considered since roles and activities still systematically differ for men and women (Allen et al. 1993).

3. **Words.** Words make a difference (Schuman and Presser 1981)! What are the meanings of “limited”, “difficulty”, “disabled”, “functioning”, and “interfere with” for various age and race/ethnic groups? After researchers have used terms awhile, they may readily think the words are in the public lexicon and have universal meaning (i.e., the researchers’). What seems commonplace in scientific discourse may not be colloquial at all, but instead esoteric or diversely construed. Pilot-testing of wordings is imperative.

Furthering this line of thought, there may be a profound difference between the concepts of health and disability. “Health” is a commonly used term in daily life, and people have no trouble understanding it in surveys. But is that true for “activity limitation” or “disability”? If there is no broad lay conception about disability/dysfunction, then it is dangerous for surveys to use a general word and expect it to be widely understood. Research is needed about whether overall conceptions of functioning exist in the populace.

4. **Dimensions.** What dimensions (degree of difficulty, frequency of difficulty, etc.) convey best the experience of disability? When several dimensions are queried, how
strongly associated are the responses? All in all, does one dimension (such as degree of difficulty) do the job?

5. **Response Range.** How can response categories that cover the full range of excellent to poor function be crafted? Are “disability” and “dysfunction” questions destined to measure degrees of negative functioning, leaving out gradations of positive function? Can “ability” and (good) “function” questions be designed and if so, will they maybe end up with the opposite problem of positively-oriented response categories but few negative ones? Are the implicit spaces between ordinal categories equal or not?

6. **Response Metric.** Does “degree of difficulty” measure severity of disability adequately? What other options are feasible in interview surveys?

7. **Qualifiers.** Placement, wording, and syntax of the qualifiers for “health-relatedness” and “protracted duration” is an issue that needs dedicated study. Disability researchers note this often, but no one has formally studied the matter. This is high on the agenda of needed research.

8. **Comparisons.** An especially intriguing topic for study is how people use internal (own life) or external (other people) comparisons for their responses. What are the time frames for internal comparison? And, what are the groups used for external comparison? This can be readily studied by having a base question modified by various comparisons, or by laboratory-based cognitive studies of how people answer an unmodified base question.

9. **Number of Items.** The broader the scope of activities and the more explicit the qualifiers, the more problematic it is to craft an all-in-one item. Some researchers dismiss the notion of a global item as being infeasible and vague, while others find it an attractive and worthy challenge. Fulfilling the dual criteria of economy and clarity will require savvy and talented research.

10. **Measurement Qualities.** (1) Reliability and Sensitivity to Change: What constitutes a reliable disability score? Disability is a dynamic phenomenon, so change must be expected over the long run of months or years. But in a short time frame (interviews spaced several days or a week apart), one wants the same responses on an indicator that concerns a long-term status. Our recommended approach of directly asking about disability duration solves much of the trouble: If long-term difficulties are elicited by a duration probe, then one can indeed expect responses to be similar several days hence. By contrast, the common situation is questions that ask about current disability status, without a duration probe; “today” status is elicited and chances of the same response a few days later are lower. How to craft questions that have both short-term response stability and sensitivity to long-term change is a crucial and very difficult issue. Especially problematic for this goal is episodic disability such as the genuine sharp fluctuations in abilities experienced by persons with rheumatoid arthritis. Finally, how global items compare in reliability to indexes based on detailed questions is not certain (Katz et al. 1992). (2) Validity: What types and degrees of validity are desirable? Types include criterion (“gold standard”), predictive, content, construct, face, discriminant, and more. Just how much evidence must be assembled for scientists to say that a disability indicator measures disability well? Among disability researchers, there is sentiment that high reliability is more important than high validity (so long as validity is moderately good).

As a general principle, assessments of reliability and validity are valuable, but their extent must be reasonable and suitable. How much these two qualities matter depends on the indicator’s purpose (population description, screening, clinical decision-making, etc.)
In many cases, reliability and validity do not matter as much as purists claim. Professional preferences and conventions have great influence on the extent of psychometric evaluation considered sufficient. In sum, both how one chooses to study these topics and how the results are interpreted are matters of judgment, not canon.

11. **Clusters and Hierarchy.** In surveys with specific disability items, psychometric assessments of correlation, clustering, factors, and hierarchy help researchers identify key underlying concepts. Once those concepts are identified, researchers can develop broad (global) questions that have both good internal coverage and conceptual distinctness. If hierarchy is strong, researchers can adopt interviewing devices that efficiently start questioning somewhere along the scale and then move up or down to a demarcation (where Yes responses switch to No, or vice versa). There is excellent empirical literature on the dimensional structure of health and functioning (e.g., Bergner et al. 1981; Brook et al. 1979; Fitzgerald et al. 1993; Johnson and Wolinsky 1993; Liang 1986; Whiteclaw and Liang 1991) and more limited study of hierarchical aspects of function (Kempen et al. 1995; Kempen and Suurmeijer, 1990; Lazaridis et al. 1994; Myers 1992; Norstrom and Thorslund 1991; Reuben et al. 1990; Spector et al. 1987).

12. **Placement.** Item placement in a survey and the survey’s overall bulk can influence responses (Sudman and Bradburn 1974). Do responses about self-perceived disability (#18, #42) differ if asked at the interview’s outset versus its end? Do respondents with mild disabilities tire or become angry during a questionnaire that has some appropriate questions but many others pertinent to moderately/severely disabled persons? If so, what response strategies do they use to speed up and finish the interview?

13. **Nonverbal Strategies.** Questionnaires have become longer and more cognitively complex in recent decades. Whether interviewer-administered or self-administered, they require verbal and literacy skills—something the researchers have mastered well, but not all the respondents. Nonverbal strategies such as performance-based protocols and visual ones are attractive for that reason, and also because they are fun and give diversity to an interview. Performance-based protocols are becoming commonplace for measuring physical function, but they are too difficult to adapt to social function (one has to observe and score a person doing his/her roles) for large-scale surveys. An example of a fine visual protocol is the six COOP charts (Beaufait et al. 1992; Nelson et al. 1990; Nelson et al. 1987). The current COOP chart with a global disability indicator is in Beaufait et al. (1992).

**Summary.** These methodological issues can be studied separately, but one important theme twines across several of them. The issues of Content, Words, and Clusters/Hierarchy are integrated: Qualitatively stated, is there a general lay conception of function/dysfunction? Quantitatively stated, are detailed disability items sufficiently unidimensional? If the answers are yes, then researchers can be more confident about crafting global disability questions with broad coverage of roles/activities and using simple words that will be readily understood by respondents.

Methodological issues can be addressed by cognitive and statistical approaches. Both are valuable for evaluating the content and quality of global disability indicators. Cognitive techniques are especially suited to studying the process of thinking about the question and choosing answers; for example, meanings of words, unclear and aggravating terms, respondent upset and uncertainty, and the impact of comparisons, duration and health-relatedness qualifiers, and included examples. Statistical techniques help to find structure
(correlations, clusters, hierarchy) of multiple items, evaluate reliability, and assess concurrent and predictive validity in large multivariate data sets. Statistics also come to the service of cognitive studies with moderate-size samples. A methodological program that uses both cognitive and statistical approaches is desirable since they yield different but complementary information.

Relevant work can already be done with existing large-scale data sets. With their numerous detailed disability items (and rare global ones), item structures and variations across response dimensions can be studied. (The large amount of repetition across surveys limits how much new information each analysis will yield.) More important, we think, is the formal design of pilots and pretests in which question wordings are varied and meanings queried. Pilots and pretests are often done in a state of urgency and analyses are minimal. We are suggesting a slower, more formal approach with methodological issues in mind at the outset and published analyses that provide answers at the end. A program that combines pilot studies and secondary analyses is especially valuable, with opportunities for mutual discussion and collaborative analyses by the researchers. In short, methodological work can evaluate existing detailed items and try out new global ones, with the possible product of one or several high-quality items for use in large-scale surveys.

CONCLUSION

This article suggests that disability might be captured briefly in surveys, in the same way that morbidity is captured by self-rated health. To know for sure, imaginative research is needed with existing data sets and deftly-designed new ones.

A global disability indicator has descriptive, analytic, and screening value. It can serve as the sole item about disability in surveys with limited coverage of health/functioning. And, it can routinely join the numerous detailed disability items in surveys focused on health/functioning. Brevity and low cost are its powerful advantages.

Our argument is not that a global item should replace detailed ones. Instead, it is that a global item provides a compact overall view of disability, with straightforward descriptive utility and potentially high scientific utility. By providing examples of brief disability questions and choosing several with attractive qualities, we give readers a launching pad for their inventiveness and enterprise to develop and use global disability indicators.

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APPENDIX

General Notes
Ages: The majority of questions shown are for adults (ages 18+). Questions for children (ages <18) and All Ages are so indicated.
Response Categories: Categories of informative responses (e.g., Yes, No) are shown. Categories of noninformative responses (e.g., Don’t know, Refused) are not shown.

HEALTH-RELATENESS: All questions are about health-related disability. “Health relatesness” is sometimes implicit by questionnaire context, sometimes explicit.

DURATION: Most questions do not check that disability is long-term. When prefaces or probes exist for disability duration, we shown them. All questions are about current status.

PROBES: Some questions have additional probes about condition(s) causing disability and condition duration (or age at onset). In most cases, these are not shown.

ITALICS: Emphasis is shown by italics.

... Interviewer states person’s name or “you” (the respondent).

U.S. Census of Population 1990

NOTE: The 1990 Census long form (1-in-6 households) contained three short items about work, mobility, and personal care disabilities.

1. “Does...have a physical, mental, or other health condition that has lasted for 6 or more months and which:
   Limits the kind or amount of work...can do at a job?”
   Prevents...from working at a job?”
For each: Yes, No.
2. “Because of a health condition that has lasted for 6 or more months, does...have any difficulty:
   Going outside the home alone, for example, to shop or visit a doctor’s office?”
   Taking care of his or her own personal needs, such as bathing, dressing, or getting around inside the home?”
For each: Yes, No.

National Health Interview Survey, U.S. (NHIS)

Note: NHIS annually has a set of questions about limitations in principal role (called major activity) and other activities (called secondary activities). A respondent’s age and stated major activity determine which limitation questions are asked. From this diverse questioning approach, a single analytic variable with four categories is created that applies to everyone: unable to carry on major activity, limited in kind or amount of major activity, limited in secondary activities only, not limited in major or secondary activities. Here, we have condensed the question set (see copy of NHIS for actual sequence). The survey is being redesigned (new format 1996) and the questions may change.

Definition of Main Activity: Persons ages 18+ are asked “What was...doing most of the past 12 months: working at a job or business, keeping house, going to school, or something else?” This is called the person’s major activity. It determines which limitation questions are asked and their sequence. For children ages <5, major activity is assumed to be play; for children ages 5–17, school.

Definition Of Secondary Activities: Persons all ages who report no limitation in major activity are then asked about limitation in any other activities. These are called “secondary activities”.
Global Disability

3. [For Ages 18-69:]
   If Keeping House: "Does any impairment or health problem now keep you from doing any housework at all?" Yes, No.
   If No: "Are you limited in the kind or amount of housework you can do because of any impairment or health problem?" Yes, No.
   If Working: "Does any impairment or health problem now keep you from working at a job or business?" Yes, No.
   If No: "Is...limited in the kind or amount of work...can do because of any impairment or health problem?" Yes, No.
   If Keeping House, Going To School, Something Else: "Does any impairment or health problem keep you from working at a job or business?" Yes, No.
   If No: "Are you limited in the kind or amount of work you could do because of any impairment or health problem?" Yes, No.
   If No To All Questions Asked: "Are you limited in any way in any activities because of any impairment or health problem?" Yes, No.
   [Note: "an" impairment or health problem instead of "any"; same in all instances of this Q below.]

4. [For Ages <5:]
   "Is...able to take part at all in the usual kinds of play activities done by most children...age?" Yes, No.
   If Yes: Is...limited in the kind or amount of play activities...can do because of any impairment or health problem?" Yes, No.
   If No: "Is...limited in any way in any activities because of any impairment or health problem?" Yes, No.

5. [For Ages 5-17:]
   "Does any impairment or health problem now keep...from attending school?" Yes, No.
   If No: [There are three further Qs about attending special school, needing to attend special school, or limited in school attendance.]
   If No To All Four Questions: "Is...limited in any way in any activities because of an impairment or health problem?" Yes, No.

6. [For All Persons Ages 60+ AND Persons Ages 5-59 Who Are Limited in Main or Secondary Activity:]
   "Because of any impairment or health problem, does...need the help of other persons with personal care needs, such as eating, bathing, dressing, or getting around this home?" Yes, No.
   If No And Also Age 18+: "Because of any impairment or health problem, does...need the help of other persons in handling routine needs, such as everyday household chores, doing necessary business, shopping, or getting around for other purposes?" Yes, No.
   If No And Also Age 70+: "Is...limited in any way in any activities because of an impairment or health problem?" Yes, No.

National Health and Nutrition Examination Survey III (NHANES III)
Note: An increasing number of surveys take the NHIS limitations questions as their model, but modify them into shorter versions. Here are the questions for NHANES III:
7. "What were you doing most of the past 12 months, working at a job or business, retired, keeping house, going to school, or something else?"
   If Working: "Are you limited in the kind or amount of work you can do because of any impairment or health problem?" Yes, No.
   If Keeping House Or Retired: "Are you limited in the kind or amount of housework you can do because of any impairment or health problem?" Yes, No.
   If Going To School Or Something Else Or If No To Above Q About Work/Housework: "Are you limited in any way in any activities because of an impairment or health problem?" Yes, No.
   If Yes To Any Of Above Q's: "Have you ever changed your job, stopped working, or made any changes in your housework because of a disability or health problem?" Yes, No.

Survey of Income and Program Participation 1984 (SIPP)
Note: The 1984 SIPP used NHIS as a model. Note the greater emphasis on children than in NHIS. There are complex checkpoints for these questions; we show their basic format.

8. [For Ages 16+:
   For Ages 16-67: "Does...have a physical, mental, or other health condition which limits the kind or amount of work...can do?" Yes, No.
   If Yes: "Does...'s health or condition prevent...from working at a job or business?" Yes, No.
   For Ages 68+ Or If No To Initial Question (Ages 16-67):
   "Does...have a physical, mental, or other health condition which limits the kind or amount of work...can do around the house?" Yes, No.
   IF YES: "Does...'s health or condition completely prevent...from doing work around the house?" Yes, No.

9. [For Ages <6:]
   "Because of a physical, learning, or mental health condition, do any of ...'s children under 6 years of age have any limitations at all in the usual kind of activities done by most children their age?" Yes, No.
   [For No, there is a followup Q about receipt of medical services for developmental needs.]

10. [For Ages 6-21:
   "Because of a physical, learning, or mental health condition, do any of ...'s children between the ages of 6 and 21 have limitations in their ability to do regular school work?" Yes, No.
   [For No, there are two followup questions about ever use and current use of special education services.]

11. [For Ages 3-14:
   "Do any of ...'s children between the ages of 3 and 14 have a long lasting condition that limits their ability to walk, run, or use stairs?" Yes, No.

National Medical Expenditure Survey, 1987 (NMES)
Note: The NMES questions have dual virtues of brevity and scope by combining job, housework, and school in one question. The item is from the self-administered questionnaire. Both Qs are asked for persons of All Ages.
12. "Does your health keep you from working at a job, doing work around the house, or going to school?" Yes, No.

13. "Are you unable to do certain kinds or amounts of work, housework, or schoolwork because of your health?" Yes, No.

**Behavioral Risk Factor Surveillance System (BRFSS), CDC**

Note: CDC has taken a lead in developing global disability items. BRFSS is a telephone interview of adults conducted by all U.S. states. It has a Core questionnaire and optional modules. #14 was introduced into the Core in 1993 and continues to be there (Centers for Disease Control and Prevention 1994, Hennessy et al. 1994).

14. [In the BRFSS Core]
   "During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?" Interviewer records number of days, or None.

15. [In the 1995 Quality of Life/Functional Status (QOL/FS) Optional Module]
   "Are you limited in any way in any activities because of any impairment or health problem?" Yes, No.
   If Yes: "For how long have your activities been limited because of your major impairment or health problem?" Interviewer records respondent's statement of years/months/days. [Question is preceded by a query about the "major" cause of limitation.]
   "Because of any impairment or health problem, do you need the help of other persons with your personal care needs, such as eating, bathing, dressing, or getting around the house?" Yes, No.
   "Because of any impairment or health problem, do you need the help of other persons in handling your routine needs, such as everyday household chores, doing necessary business, shopping, or getting around for other purposes?" Yes, No.

16. [Other QOL/FS Questions drafted and considered by CDC staff]
   "Now thinking about your health, do you have any physical or mental condition that limits you in any way, and that has lasted for 6 or more months?" Yes, No.

17. [In Activity Limitation Module developed in 1993-94. Questions are worded closely to the NHIS activity limitations items.]

a. [For Ages 18–69:]
   "What were you doing most of the past 12 months: working at a job or business, keeping house, going to school, or something else?" Working at a job or business, Keeping house, Going to school, Something else.
   If Keeping House: "Does any impairment or health problem now keep you from doing any housework at all?" Yes, No.
   If No: "Are you limited in the kind or amount of housework you can do because of any impairment or health problem?" Yes, No.
   If Working: "Does any impairment or health problem now keep you from working at a job or business?" Yes, No.
If No: “Are you limited in the kind or amount of work you can do because of any impairment or health problem?” Yes, No.
If Keeping House, Going To School, Something Else: “Does any impairment or health problem keep you from working at a job or business?” Yes, No.
If No: “Are you limited in the kind or amount of work you could do because of any impairment or health problem?” Yes, No.
If No To All Questions Asked: “Are you limited in any way in any activities because of any impairment or health problem?” Yes, No.

(Note: Uses “any” impairment or health problem, whereas NHIS uses “an”. Same in all instances of this Q below.)

b. [For Ages 60+:] “Because of any impairment or health problem, do you need the help of other persons with personal care needs, such as eating, bathing, dressing, or getting around this home?” Yes, No.
If No: “Because of any impairment or health problem, do you need the help of other persons in handling routine needs, such as everyday household chores, doing necessary business, shopping, or getting around for other purposes?” Yes, No.
If No And Also Age 70+: “Are you limited in any way in any activities because of any impairment or health problem?” Yes, No.

*Disability Supplement 1994–95 National Health Interview Survey*
Note: The 1994–95 National Health Interview Survey had a Disability Supplement (NHIS-Disability) with two phases. Phase One has questions asked about all household members; it is conducted at the same time as the NHIS core questionnaire. Phase Two is for persons who screen-in as having disabilities; it is conducted several months later. NHIS-Disability has many detailed questions but only a few global ones (#18–22). They are in Phase One and for All Ages except where stated. Note there are global questions related to mental (emotional&cognitive) problems, but none related to physical problems. Phase Two has no global items.

18. “Do you consider yourself (or anyone in your family) to have a disability?” Yes, No.
   “Would other people consider you (or anyone in the family) to have a disability?” Yes, No.

19. [After specific questions about emotional/cognitive problems:] If Yes To Any: “During the past 12 months, did any of these problems seriously interfere with...ability to work or attend school or to manage...day-to-day activities?” Yes, No.

20. [After specific questions about emotional/cognitive problems and mental conditions:] If Yes To Any And Also Age 18+: “Because of (this/these) mental or emotional problem(s), is...unable to work or limited in the kind or amount of work...can do?” Yes, No.
   If No: Because of (this/these) mental or emotional problem(s), does...have trouble finding or keeping a job or doing job tasks?” Yes, No.

21. [For Ages 2-17:]
"Because of a physical, mental, or emotional problem, do(es)...now have any difficulty participating in strenuous activity, such as running or swimming, compared to other children their age?" Yes, No.
If Yes: "Has the problem or condition which causes...to have difficulty participating in strenuous activity been going on or is it expected to go on for at least 12 months?" Yes, No.

22. [For Ages 2-17.]
"Because of a physical, mental, or emotional problem, do(es)...now have any difficulty playing or getting along with others their age?" Yes, No.
If Yes: "Has the problem or condition which causes...to have difficulty getting along with others been going on or is it expected to do on for at least 12 months?"

Canadian Census of Population 1986
Note: Canada has used its population censuses as sampling frames for national disability surveys. These items from the long form (1-in-5 households) were used as screeners for the 1986-87 Health and Activity Limitation Survey (HALS1; next section). Persons with Yes on either item were chosen for HALS1. A subsample of persons with No was also chosen on the premise that the Census questions might miss some individuals who were genuinely disabled.

23. "Are you limited in the kind or amount of activity that you can do because of a long-term physical condition, mental condition or health problem:
   At home?"
   At school or at work?"
   In other activities, e.g., transportation to or from work, leisure time activities?"
   For each: No, Yes.

24. "Do you have any long-term disabilities or handicaps?" No, Yes.

Canadian Health and Activity Limitation Survey 1986–87 (HALS1)
Note: Separate HALS1 questionnaires exist for adults (ages 15+), children (<15), institutionalized adults, and institutionalized children. At the start of the HALS1 interview, there are about 20 questions to ascertain the disability status of the sampled person. People may screen out of HALS1 at that point (some were Yes on Census and some were No). These global items are in the initial questions for community-dwelling adults. No global questions appear in the children or institutionalized persons questionnaires.

25. [For Ages 15+:]  
"Because of a long-term physical condition or health problem, that is, one that is expected to last 6 months or more, are you limited in the kind or amount of activity you can do:
   At home?"
   At school or at work?"
   In other activities such as travel, sports, or leisure?"
   For each: Yes, No.

26. [For Ages 15+:]
"Because of a long-term emotional, psychological, nervous, or mental health condition or problem, are you limited in the kind or amount of activity you can do:
  At home?"
  At school or at work?"
  In other activities such as travel, sports, or leisure?"

For each: Yes, No.

**Canadian Health and Activity Limitation Survey 1991 (HALS2)**

Note: The 1991 Census of Population had the same two disability questions as in 1986 (see above). They were used as an initial screen for selection into HALS2; all persons with a Yes were chosen and a subsample of those with No. There are separate HALS2 questionnaires for adults (ages 15+), children (<15), institutionalized adults, and institutionalized children. At the start of the HALS2 interview, about 20 questions ascertain the disability status of the sampled person. These global items are in that section for community-dwelling adults. There are minor changes from their HALS1 versions.

27. [For Ages 15+:]  
"Because of a long-term physical condition or health problem, that is one that has lasted or is expected to last 6 months or more, are you limited in the kind or amount of activity you can do:
  At home?"
  At school?"
  At work?"
  In other activities such as travel, sport or leisure?" [NOTE: no 's' on sport.]

For each: Yes, No.

28. [For Ages 15+:]  
"Because of a long term [sic] emotional, psychological, nervous or psychiatric condition, that is one that has lasted or is expected to last six months or more, are you limited in the kind or amount of activity you can do:
  At home?"
  At school?"
  At work?"
  In other activities such as travel, sport or leisure?"

For each: Yes, No.

**National Population Health Survey, Canada 1994–1995**

Note: The two global items differ slightly from their predecessors in the Census, HALS1, and HALS2.

29. "The next few questions deal with any health limitations which affect ...'s daily activities. In these questions, 'long-term conditions' refer to conditions that have lasted or are expected to last 6 months or more."

"Because of a long-term physical or mental condition or a health problem, are/is... limited in the kind or amount of activity...can do:
  At home?"
  At school?"
  At work?"
In other activities such as transportation to or from work or leisure time activities?"

For each: Yes, No.

30. “Do(es)...have any long term disabilities or handicaps?” Yes, No.

REVES Harmonization Committee
Note: The International Network on Health Expectancy (dubbed REVES) is a collection of researchers engaged in methodological and analytical studies of disability. A committee has worked to develop brief questions about functional domains. Two forms of the proposed question on “occupation” (role) disability are shown (Chamie 1990). See discussion of European work in text footnote.

31. [Option 1:]
“Because of your health, are you usually limited in your daily activities, apart from personal care?” Fully able to perform any activity (apart from personal care), Severely limited in daily activities, Slightly limited in daily activities, Not limited in daily activities.

[Option 2:]
“Because of a health-related problem are you limited/restricted in the amount of time you spend each day in regular activities other than personal care? By that, I mean: Not occupied with work at home, school, or at a job; Limited occupation at home, school, or at a job; Fully occupied/no limitation?”

Responses already noted.

European Community Health Panel
Note: A panel study is being conducted in 15 European countries. The global disability item is a followup Q for persons with chronic health problems broadly stated.

32. “Do you have any chronic physical or mental health problem, illness or disability?”
Yes, No.

If Yes: “Are you hampered in your daily activities by this physical or mental health problem, illness or disability?” Yes, No.

Medical Outcomes Study Short-form Health Survey (SF-36)
Note: The Medical Outcomes Study (MOS) is conducted by researchers committed to using compact items with demonstrated psychometric quality. Several short-form instruments have been developed to cover physical health, emotional health, functioning, pain, and vitality. The instruments have 36 items (SF-36), 20 items (MOS-20), and 6 items (6-Item General Health Survey; called global items). We will show the disability-related items from all three. Reference for MOS: Stewart and Ware 1992. Reference comparing the instruments: McHorney et al. 1992.

Shown here are the SF-36 items for the concepts “role functioning” (#33–34) and “social functioning” (#35). References for SF-36: McHorney et al. 1993; Ware and Sherbourne 1992.

33. “During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?”
Cut down on the amount of time you spent on work or other activities?"
Accomplished less than you would like?"
Were limited in the kind of work or other activities?"
Had difficulty performing the work or other activities (for example, it took extra effort)?"
For each: Yes, No.

34. “During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?”
   Cut down the amount of time you spent on work or other activities?"
   Accomplished less than you would like?"
   Didn’t do work or other activities as carefully as usual?”
For each: Yes, No.

35. “During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?” Not at all, Slightly, Moderately, Quite a bit, Extremely.

Medical Outcomes Study Short-form Health Survey (MOS-20)
Note: Shown here are the MOS-20 items for the concepts “role functioning” (#36; no skip pattern: both Qs asked of all persons) and “social functioning” (#37). References for MOS-20: Stewart et al. 1988; Ware, Sherbourne, and Davies 1992.

36. “Does your health keep you from working at a job, doing work around the house or going to school?” Yes for more than 3 months; Yes for 3 months or less; No.
   “Have you been unable to do certain kinds or amounts of work, housework or schoolwork because of your health?” Yes for more than 3 months; Yes for 3 months or less; No.

37. “How much of the time, during the past month, has your health limited your social activities (like visiting with friends or close relatives)?” All of the time, Most of the time, A good bit of the time, Some of the time, A little of the time, None of the time.

Medical Outcomes Study 6-Item General Health Survey Measures
Note: Shown here are items for the concepts “role functioning” (#38) and “social functioning” (#39). Reference for 6-Item format: Ware, Nelson, Sherbourne, et al. 1992.

38. “During the past 4 weeks, how much difficulty did you have doing your daily work, both inside and outside the house, because of your physical health or emotional problems?” None at all, A little bit, Some, Quite a bit, Could not do daily work.

39. “During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?” Not at all, Slightly, Moderately, Quite a bit, Extremely.

International Center for the Disabled Survey 1985 (ICDS)
Note: This is a survey of disabled persons ages 16+. A first-stage screen for disability was done in a national telephone sample (#40). Persons with long-term role limitations, certain long-term impairments, or self-perceived status as a “disabled or handicapped person”
were selected. Screened-in persons were then contacted for an interview; the second-stage began with a check for disability status (#41; some persons screened out at that point). #42 shows three questions asked later in the second-stage interview. Reference: Louis Harris and Associates, Inc. 1986.

40. [First-stage Screening Qs]
"Does a health problem, disability, or handicap currently keep you or anyone in your household from participating fully in work, school, housework, or other activities?" Yes (screens in), No.
If No: "Have you, or has anyone in your household ever been limited in any way for a year or more because of a handicap, impairment or health problem?" Yes, No.
If Yes: "Are you (Is that person) limited in any way now, or was that in the past?"
Limited now (screens in), Limited in past.
If Limited In Past: "Do you (Does that person) still have an impairment or health problem, or not?" No longer have it (screens out), Still have it (screens in).
If No: "Is there anyone in your household, including yourself, who:
Has any learning disability of any kind?"
Has any emotional or mental disability or condition?"
Has any physical handicap or disability?"
Has any talking, hearing, or visual disability, except for ordinary eyeglasses?"
Considers themself a disabled or handicapped person, or not?"
Most other people would consider a disabled or handicapped person, or not?"
For each: Yes (screens in on first item with Yes; questions stop), No (screens out if No to all).

41. [Second-Stage Screening Qs; at start of interview for sampled persons]
"Does a health problem, handicap or disability now keep you from participating fully in school, work, housework, or other activities?" Yes, No.
If No: "Have you ever been limited in any way in your activities for a year or more because of a handicap, impairment, or health problem?" Yes—limited now, Yes—limited in past, No.
If Limited In Past: "Do you still have a disability or health problem, or not?"
No longer have it (screens out), Still have it.
If No: "Do you:
Have any learning disability of any kind, or not?"
Have an emotional or mental disability, or developmental disability, or not?"
Have a physical disability or handicap, or not?"
Have any talking, hearing, or visual disability, except for ordinary eyeglasses, or not?"
For each: Yes (questions stop at first Yes), No (screens out if No to all).

42. "Do you consider yourself a disabled or handicapped person, or not?" Yes, No.
"Do you think most other people would consider you a disabled or handicapped person when they first meet you, or not?" Yes, No.
"Do you think most people who get to know you fairly well consider you a disabled or handicapped person, or not?" Yes, No.
Baltimore Longitudinal Study of Aging Followup

Note: BLSA is a life-long study of adults who have medical exams and questionnaires every two years. It is conducted by the Gerontology Research Center, National Institute on Aging. Reference: Shock et al. 1984. The items are from a telephone followup on dropouts (had not returned for biennial exam) conducted in 1989.

43. “Would you describe your overall level of functioning as: excellent, good, fair, poor, don’t know?” Excellent, Good, Fair, Poor.

44. “Has your ability to function or take care of yourself changed in the last 2 years?” No, Yes.
   If Yes: “Has your ability to function or take care of yourself improved or declined?” Improved, Declined.

45. “Does your health allow you to do everything you would like to do?” No, Yes, Uncertain.
   If No Or Uncertain: “What are you unable to do for yourself that you would like to do?” [Interviewer writes respondent’s description.]

Pilot Study on Subjective Health

Note: The items come from a small-scale pilot study ("Subjective Health: Perceptions of Health Status and Health Care") conducted by Charles Cannell and colleagues for the National Center for Health Statistics in 1975. No publications.

46. “Is there anything about your physical condition—that is, your health and the amount of energy you have—that makes it hard for you to do your usual (work/activities)?” Yes, No.
   If Yes (Ask Both Below):
   “Would you say it is hard or very hard for you to do your usual (work/activities)?” Hard, Very hard.
   “What are some of the things you have trouble with?” [Interviewer writes responses.]

NOTES

1. A conceptual scheme used widely by researchers distinguishes three kinds of dysfunctions: physical, mental (includes cognitive and emotional), and social (Nagi 1991; Pope and Tarlov 1991; Verbrugge and Jette 1994). The difference is briefly explicated: Basic physical and mental abilities serve as the foundation for accomplishing roles and activities in one's society. Limitations in these building blocks are called "functional limitations". When functional limitations become numerous or severe, "disability" in one or more roles/activities ensues. For other conceptual treatments of disability, see Badley (1993), Freedman and Soldo (1994), Granger and Gresham (1984), Guralnik et al. (1989), Haber (1990), Lawton (1986), and Verbrugge (1991).

2. Not included are short-form instruments. They have brief questions for several concepts; we are seeking brief question(s) for a single concept.

3. Further discussion and empirical comparisons of global and aggregate variables are in Verbrugge et al. (forthcoming).

4. Some of the dimensions are, we think, conceptually problematic. (1) Use of personal/equipment assistance, or need for such assistance, is called dependency. On face, dependency measures severe disability and is objective. It is actually a proxy indicator (it measures an intervention for dysfunction, not dysfunction itself). And an objective measure is not necessarily superior to a subjective
one (self-rated functional status). In short, dependency is certainly an important aspect of disability, but its virtues can be overstated. (2) Pain during an activity may be descriptively interesting, but it imbeds a key risk factor for disability into the disability indicator itself. The data allow us to say how often disabled persons feel pain in an activity, not how readily pain experience prompts disability. For the latter, pain and disability must be separate questions.

5. European colleagues helped the author review items currently used or proposed for surveys there. Extensive work has gone into developing short-form instruments for physical, mental, and social dysfunction (this effort was initiated in the OECD disability index; McWhinnie 1981). Work on global indicators has started: (1) The World Health Organization sponsors a cross-national effort to develop common methods and instruments for health interview surveys (Netherlands Central Bureau of Statistics 1993). (2) A committee of the International Network on Health Expectancy works on harmonization of indicators and concepts (Chamie 1990); its suggested item for "occupation" (or role) disability is #31, Appendix. (3) The European Community is sponsoring a health survey that contains a global disability item; it is #32, Appendix.

6. For readers interested in children, the following surveys contain extensive detailed items: 1994–1995 National Health Interview Survey, Disability Supplement; 1988 NHIS, Child Health Supplement; 1979–1980 NHIS, Home Care Supplement; 1991 Health and Activity Limitation Survey, Children Under 15 and Institutionalized Children Under 15 questionnaires; Survey of Program Dynamics (successor to the Survey of Income and Program Participation); Adolescent Health Survey (currently funded by the National Institute of Child Health and Human Development); and the health screen used in the National Child Health and Assessment Planning Project (Stein and Westbrook 1993).

7. For further discussion of candidate items, see Verbrugge, Van den Bos, and Van de Water, 1997.

8. An empirical problem arises as well: The National Health Interview Survey estimates disability prevalence from job/housework limitations for adults ages <65 and from ADL/IADL limitations for adults ages 65+. This produces odd patterns of age differentials in disability, namely, a drop in prevalence when the estimates shift from job/housework to dependency.

REFERENCES


