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Edited by Susan Schechter

Office of Research and Methodology
National Center for Health Statistics

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Welcome Address

Monroe G. Sirken
Associate Director, Research and Methodology
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Good morning and welcome to this symposium on the cognitive aspects of self-reported health status. I am delighted and pleasantly surprised to see such a large turnout for this event.

In sponsoring this symposium, the NCHS National Laboratory for Collaborative Research in Cognition and Survey Measurement is performing one of its major functions, namely to promote and advance interdisciplinary research on the cognitive aspects of survey methodology. By way of introduction, let me say a few words first about the National Laboratory.

The National Laboratory was established in 1986 and has been partially funded ever since by a series of National Science Foundation grants. The Laboratory has three objectives. One is to improve federal statistics that are used to plan, evaluate and legislate the nation's health and social services programs. Two is to conduct survey research on developing and applying methods that are effective for investigating the cognitive aspects of the survey measurement process. And the third objective is to collaborate with cognitive scientists to test cognitive theories relevant to understanding the cognitive aspects of survey methods.

The last objective is noteworthy, though often neglected. It presumes, and I believe for good reason, that ultimately the cognitive sciences will serve as the scientific foundation for developing substantive theories about the survey response process that will lead to much better control of non-sampling errors in surveys and other data systems. Therefore, it is in the best interest of survey takers and users to support basic research in the cognitive sciences on issues that are relevant to our mission for improving federal statistics.

During the past eight years, the National Laboratory has conducted and supported cognitive research on a large number of questionnaire design issues. Virtually all of these research initiatives were selected by NCHS staff. However, that is not true for the topic under discussion today. This topic had its origins in a telephone call I got from Jack Elinson a couple of years ago.

Jack was very intrigued by what might be learned from cognitive research to explain why survey responses to self-perceived health status questions appear to be better predictors of longevity than more tangible information such as medical histories and the findings of medical examinations. I found this intriguing too, and convened this meeting of behavioral scientist experts in survey research to discuss this issue, and more generally, to discuss and to begin to formulate a long term research agenda on the cognitive aspects of responding to survey questions on self-perceived health status. I look forward to hearing the thoughts of my distinguished colleagues today, as we try to understand better the cognitions involved in assessing one's health status.
Introductory Remarks

Jack Elinson, Chair
Cognitive Aspects of Self-Reported Health Status Meeting

To have a symposium and a workshop like this in a government agency is a tribute to Monroe Sirken and his imagination, courage, persuasiveness and persistence. The NCHS National Laboratory for Collaborative Research in Cognition and Survey Measurement, created and established by Monroe Sirken, has for nearly a decade now provoked serious reflection not only on the part of the NCHS staff, but also throughout the academic world concerned with the formulation of questions for health surveys. It is indeed a very special kind of setting in which we are talking here today.

Meetings like this come about through a confluence of events. I'd like to tell about how I came to be involved. First, a little history about the National Center for Health Statistics. In the 1930's a national health interview survey was carried out, demonstrating the feasibility, validity, and utility of collecting certain kinds of health data by means of household interviews. Several million people were interviewed (Perrott, G.St.J., Clark, T. and Britten, R.H., 1951). With that as a precedent, some twenty years later, in the 1950s, a national committee on health statistics considered the idea of a National Health Interview Survey as a systematic data collection strategy to report on the nation's health. By then, techniques for applying sampling theory to geographically defined populations had been well developed and enthusiastically accepted. And so, in 1957, the National Health Interview Survey was launched and continues even today.

At about the same time as the planning for the National Health Interview Survey was going on, a national Commission on Chronic Illness sponsored two closely related studies – one in a rural area (Hunterdon County, New Jersey) and one in an urban area (Baltimore, Maryland) (Elinson, 1953). The purposes of these studies were (1) to examine various methods of estimating the prevalence of chronic disease, manifest and nonmanifest; and (2) to estimate the needs for care for persons with chronic conditions. In the two study areas, household interviews and clinical examinations were used to develop information about chronic disease. In both the rural and urban areas, four times as many chronic conditions were discovered by means of clinical examinations as were elicited in household interviews (McDowell 1965a).

The principal reason for the difference between the findings of the clinical examinations and the household interviews covering the same persons was the simple fact that most people had never before had a thorough clinical examination, and thus, were unable to report to an interviewer chronic conditions that had not been diagnosed. Often, these chronic conditions were "non-manifest" such as atherosclerosis, diabetes, neoplasms, hypertension, and the like. Obviously, respondents without symptoms or complaints just did not know what physicians could have told them, had they undergone a thorough clinical examination, as they did in the studies (Trussell and Elinson, 1955; Trussell, Elinson, and Levin, 1956; Elinson and Trussell, 1957; Trussell and Elinson, 1959).

The findings of the Commission on Chronic Illness studies became known to the planners of what was to become the National Center for Health Statistics (NCHS). Consequently, a national health examination survey was included among the data collection methods to be employed by the NCHS. For those of you who are interested in the documentation of this history, I refer you to the early reports from NCHS on the planning and scope of the first
National Health Examination Survey (McDowell, 1965b).

There was, initially, great skepticism, even dismay, on the part of the planners of the Health Interview Survey about the differences that were found between the clinical examination and the interview survey in these two local studies. My colleague in the rural Hunterdon study, Dr. Ray Trussell, and I were asked to present our methods and findings at an informal seminar at NCHS by Ted Woolsey. We described in detail how we compared what was reported in the interview with what was found on clinical examination of the same individuals. On the evening of the same day of the NCHS seminar, I was invited to a dinner party at the home of Morris Hansen. Hansen was the mathematical advisor to the Bureau of the Census and a principal consultant on sampling to NCHS. Present at the dinner were Hansen's colleagues, Bill Hurwitz and Hal Nisselson, as well as Woolsey and myself. It was a marvelous dinner. Wine, whiskey, fine food prepared by Mrs. Hansen, and a hilarious stand-up comic routine by Nisselson about sampling theory and its application. When I was brought to a relaxed, albeit soggy, state, the intellectual inquisition began in earnest. "Just how did you match up the answers to the personal interview with the physician's diagnoses on the clinical examination?" My response was, "Here are the forms and the rules on how we did it." Then and there, Ted Woolsey scrutinized a convenience sampling of completed forms, item by item, along with the rules for classification of closeness of match. "Here is what was reported in the personal interview; and here is what was found on clinical examination. Yes, and here is how it was coded as a "close match", "probable match", or "not a match"." The overall result was four chronic conditions found on clinical examination for every one reported in the personal interview. I believe that dinner evening cross-examination convinced Woolsey, Hansen, Hurwitz and Nisselson that NCHS should also mount a Health Examination Survey in addition to the Health Interview Survey. Each of these data collection methods is uniquely capable of eliciting and producing health-related information, intrinsic to the method.

We easily recognize now the differences between the kind of information obtainable by personal interview and by clinical examination (Sheatsley 1958, and Feldman 1960). This is not to say that either method is "better" or "worse" than the other, but rather that each is capable of eliciting information that the other is not. Asymptomatic conditions detectable by EKGs, blood and urine tests, and now by CAT scans and MRIs, have an obvious place in arriving at diagnoses when assessing health status. A personal interview, however, is better able to elicit information which is predictive of whether a person will want to visit a doctor. People don't ordinarily go to doctors because they have unknown (to them) asymptomatic conditions, however diagnosable. Rather, they seek medical help when they are bothered by something.

To turn more directly to the issue at hand for this meeting, the question we wish to investigate is self-reported health status. More specifically, we are interested in the meaning of the answers to a single question: "In general, how do you rate your health?" I call it the "How are you?" question. In my recollection of doing health studies early on, forty or fifty years ago, we didn't consciously think of this general question as measuring health status. We thought of it simply as an appropriate and easy way of getting a conversation about health started. In other words, an interviewer would ask a non-threatening question about health, before launching into a medical litany about unpleasant symptoms and a series of unpronounceable diseases. The interviewer attempted to establish rapport with the respondent by asking the health status question. She (usually a "she") wanted respondents to be interested and involved and to cooperate with the interviewer's task. Now, of course, we are also required to obtain "informed consent."
This simple opening question came to be asked in a formal way. We didn’t just ask “How are you?”, as people informally address each other. "How are you?", "¿Cómo estás?", "Wie geht’s?" - is a universal greeting, whatever the language. Questionnaires constructed by survey researchers, sometimes social psychologists, often have a need to contain questions asked in a fixed way. Uniform, predetermined response categories are provided and the respondent is instructed to pick one of these predetermined responses. The responses are coded, numbers are assigned to them, and then counted. This procedure simplifies the task of statistically summarizing response distributions. It then becomes possible to see what relation this variable, i.e., responses to the "How are you?" question, has to other variables. And so, as we shall see later in today's presentations, the answers to the "How are you?" question not only correlates with other health-related variables at a given point in time, but also over time; and most surprisingly, have even been predictive of survival.

There is beginning to be serious speculation about the reasons for the predictive value of answers to this magical question of "How do you rate your health?" We are about to hear some of these speculations or potential explanations. Some of them may appear mystical, but evidence for the predictive power of the answers to this question will be convincingly, I believe, displayed. Despite our lack of understanding, some form of the "How are you?" question has come to be almost routinely included in studies purporting to assess a person's health status. Among the presentations that follow, we will hear about the different meaning this question has for different kinds of people.

References


