The Meanings of Self-Ratings of Health

A Qualitative and Quantitative Approach

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Self-ratings of health are central measures of health status that predict outcomes such as mortality and declines in functional ability. Qualitative and quantitative data are used to test the hypothesis that definitions of health that are narrowly biomedical are associated with underestimates of self-ratings relative to respondents' medical histories, while definitions that are broad and inclusive are related to relatively better self-ratings. A sample of 159 elderly African Americans rates their health and reports "what went through your mind." Analysis of variance shows that respondents who overestimate their health are more likely to report ratings based on social activities and relationships, or psychological, emotional, or spiritual characteristics, rather than biomedical criteria. The authors conclude that inclusive definitions of health facilitate more positive self-ratings of health, given a fixed health status; methodologically, they conclude that this is a promising method for exploring self-ratings of health.

Self-ratings of health have become an increasingly important topic of study, particularly for elderly populations. For one thing, their ability to predict mortality in long-term follow-up studies has been demonstrated so repeatedly now that it is almost becoming a cliché (Idler and Benyamini 1997). Even when more objective measures of health status are included in the study, simple, global self-ratings predict survival during short follow-up periods of just 2 years (Ho 1991; Rakowski, Mor, and Hiris 1991) and long periods of up to 13 years (Krzyanowski and Wysocki 1986; Chipperfield 1993). These studies

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have come from representative probability samples from all over the globe; the four just named come from, respectively, Hong Kong, the United States (national sample), Poland, and Canada. Other studies with similar findings have been reported from Israel (Kaplan, Barell, and Lusky 1988), Wales (Shahtahmasebi, Davies, and Wenger 1992), the Netherlands (Pijls, Feskens, and Kromhout 1993), Lithuania (Appels et al. 1996), and numerous sites around the United States. All in all, the powerful predictive effect of this variable has been shown in many languages and cultures.

And yet, the proliferation of epidemiological studies with large, representative samples and increasingly sophisticated measures of physical health status has not produced a significant amount of progress in understanding the mechanism by which this simple self-categorization should be so strongly related to subsequent events. What is it that people are saying when they rate their health? What do they mean?

Traditionally, qualitative approaches in the social sciences are used when an area of research is being mapped out for the first time (Creswell 1994). The virtues of qualitative approaches, their engagement with typical life situations, their naturalism, their sensitivity to the vernacular participants use, and their ability to capture the perceptions of respondents "from the inside" make them especially suitable for describing unknown terrain (Miles and Huberman 1994). Such studies are usually thought of as preceding more structured quantitative studies; for example, insights gained from open-ended interviews could be used to develop scales for new constructs. In our case, however, we are initiating a qualitative study following publication of a large number of quantitative studies, as these latter studies leave us with unanswered questions about the meaning of self-ratings of health.

Qualitative studies of the meaning of self-ratings of health are rare. Groves, Fultz, and Martin (1992) analyzed pretest data from the General Social Survey in which respondents ($N = 100$) were asked to give self-ratings of health and then to elaborate on them ("When you answered the last question about your health, what did you think of?"). Their coding of responses yielded 10 categories, of which the absence or presence of illness was the most frequently mentioned (31%). Other categories included health behaviors (14%), physical performance or ability (7%), and health service use (6%). The analysis presents results only of first responses, and no details of transcription or

coding procedures are given. Krause and Jay (1994) present data from interviews with 158 respondents, in which the self-rated health question was followed by "Tell me why you say that." Responses were taped and transcribed closely, but not verbatim. Coding produced 91 categories that were collapsed eventually to 4, including (in order of frequency) health problems, physical functioning, health behavior, and health comparisons. Data were analyzed primarily by first-mentioned responses but also by multiple mentions; results showed that there were age differences but no sex, race, or education differences in the referents used and that those who compared their health to others were especially likely to rate their own health as excellent. A shortcoming of both of these studies is that neither included an assessment of the respondent's health other than the self-rating, thus neither can provide much insight into the question of whether such meanings are related to differences between self-ratings and physical status.

One qualitative study did address this issue with a sample of elderly Floridians (Borawski, Kinney, and Kahana 1996) ($N = 885$) who were asked to rate their health (very healthy, healthy, fairly healthy, and sick or very sick) and then were asked, "Could you tell us why you feel this way?" Responses were recorded verbatim (on paper). Coding categories were developed from a sample of 50 responses, and two judges coded the remaining responses, with interrater reliability of 98.5%. Five global categories emerged for first-mentioned responses (in order of frequency): physical health focused, attitudinal/behavioral, health transcendence, externally focused, and nonreflective. The respondents' health status was assessed by counting the number of significant health problems, including severe conditions, intense pain, five or more prescription medications, or frequent shortness of breath. Self-ratings of health (dichotomized) and none versus one or more serious health problems were cross classified to produce four groups, two with congruent and two with noncongruent health appraisals. Health "optimists" were significantly more likely to use attitudinal/behavioral criteria for their ratings and were more likely to give answers reflecting a transcendence of physical health. The study also found that "poor health realists" and those respondents who gave nonreflective answers had higher risks of mortality. This study comes closest to the present study in the question it addresses, as it considers the respondent's actual physical health status when evaluating the meanings of self-ratings. The Borawski et al. (1996) study shares one

problem, however, with other studies of this type, and that is the problem of handling multiple responses. Borawski et al.'s (1996) solution, as in Krause and Jay (1994), was to create combinatorial codes, which produced very small frequencies and limited analytic power.

Despite the methodological issues, a substantive finding that emerges from all of these studies, and that is actually underscored by the problem of multiple mentions, is that the criteria respondents use in rating their health are complex and multilayered. This means that, while a majority of respondents use physical health criteria in evaluating their health, many respondents also discuss health in terms that focus more on what the body can do, on social role activities they are or are not capable of, or on even more expansive criteria such as their emotional or spiritual well-being. These are not generally thought of in connection with the biomedical model of physical health. Anthropological and qualitative sociological studies of definitions of health commonly conclude that health is not a unitary concept (Blaxter 1985), that perceptions of health are determined by many factors other than the absence or presence of disease (Litva and Eyles 1994), and that commonly held views of the meaning of health are far more inclusive than those held by health care practitioners (Fylkesnes and Førde 1991; Idler 1979). It bears repeating that the respondents in these studies, and in the large number of mortality studies, are, after all, being asked to rate their *health*, not their disease burden or their medical history.

The present study attempts to build on existing qualitative studies by employing qualitative and quantitative methods in the analysis of data that include both detailed measures of physical health status and open-ended data on the meanings of self-rated health, and by coding the qualitative data in a way that both preserves the detail of the original responses and handles the problem of multiple mentions. We construct a coding scheme that captures the criteria for self-ratings of health ranging from the most restrictive and biomedical to the most "wholistic" and inclusive and test it to see if that scheme differentiates respondents who have overestimated and underestimated their health, given their self-ratings and medical history. The coding scheme organizes the open-ended responses into six categories that range from answers that (1) reflect narrowly biomedical criteria, to those that (2) include functioning, to those that (3) add health behaviors, then to those that (4) use ability to engage in social activities, to those

that (5) discuss social relationships, and finally to those that (6) employ psychological, emotional, or spiritual criteria for describing health. The hypothesis to be tested is that respondents who use more expansive, wholistic criteria in rating their health will be more likely to overestimate their health relative to their medical history; those who use more restrictive criteria will more likely underestimate their health.

Method

DATA COLLECTION

The data used in this analysis were gathered as part of the Rutgers University Center for Health Promotion in Elderly African-Americans. The Center, one of six exploratory centers funded by the National Institute on Aging (NIA), has four primary projects: a medical history interview, an ethnographic interview, an immune study, and a hypertension study. The data described in this article were gathered in the medical history and ethnographic interviews.

A snowball sample of participants was recruited from the local area using several starting points, including health screenings sponsored by the center and the county Office on Aging, local churches, senior citizen centers, senior housing complexes, local community organizations, and an urban health clinic. Nine African American interviewers interviewed participants in the location of their choice, including homes, churches, and senior centers. Interviews lasted from 45 minutes to 2 hours and were entered directly into laptop computers using Computer Assisted Survey Execution System (CASES). Ethnographic interviewers taped the interviews for subsequent transcription. A total of 212 participants completed either the medical history or the ethnographic interview, 187 and 189, respectively. The number of participants completing both is 163; missing data on the open-ended question reduces the effective sample size to 159.

Recorded ethnographic interviews were transcribed verbatim by another interviewer back into space left for them in the CASES file for each interview. This novel use of the CASES program allowed us to maximize the relationship between the qualitative and quantitative data in the project; CASES allows for export of data as ASCII text files

as well as files that can be read into SPSS for quantitative analysis. We set a transcription limit of 7 lines of 70 characters per answer in CASES with an extra 15 lines added at the end of the transcribing file for responses that were more than 7 lines. Once transcribed, the qualitative data were imported into MAX (Kuckartz 1993), a program for the coding and analysis of qualitative data.

MEASURES

Self-rated health. Participants in the ethnographic interview were asked, "In general, would you say your health is: excellent, very good, good, fair, or poor? Could you tell me what goes through your mind when you say that?" This question was asked at the beginning of the interview to avoid influence from the health-related content of the interview.

Sociodemographic factors. Age, sex, and level of education were recorded.

Medical history. The respondent's medical history was assessed by a detailed review of approximately 64 diseases from 13 illness categories, with open-ended probes for additional illnesses in each category. A panel of six internists rated every disease in the list for its expected severity of impact on life expectancy (reliability of the six ratings was $\alpha = .97$). The score for each respondent sums all illnesses reported and weights them by severity as determined by the physician panel. Thus, this measure is not adjusted for the personal severity of each illness but only for "usual" severity and therefore is not as sensitive as a medical history elicited by a physician. However, the medical history interview is unusually extensive compared with other self-report surveys, and the physician-derived weighting is a further refinement.

ANALYSIS

Two undergraduate students were trained and supervised by the authors to code the interview transcripts; weekly meetings were held to resolve discrepancies and add new codes. Initial coding focused on preserving as much detail as possible; multiple codes were assigned to each response, as many as were necessary. Intercoder reliability for the self-rated health question was .85 (number of agreements / (number of agreements + number of disagreements)) (Miles and

TABLE 1
Descriptive Statistics for Quantitative Data,
Health of Elderly Minorities Project, $N = 159$

Variable	*Mean / Percentage*	SD	*Range*
Sex (male)	25.2%		
Age	74.2	7.36	58-95
Education (high school)	54.7%		
Marital status (married)	28.3%		
Self-rated health			
Excellent	6.3%		
Very good	24.5%		
Good	34.6%		
Fair	24.5%		
Poor	10.1%		
Medical history score	265.4	157.79	0-989

Huberman 1994). Using MAX, the large number of initial codes that had been assigned could be grouped into fewer categories, namely, the six categories mentioned above, for disease, functioning, health practices, social activities, social relationships, and psychological/spiritual criteria. We then took each individual's response and coded it just once for the most inclusive category into which any of its codes fell. This procedure eliminated the analytic problem of multiple mentions, because each individual's response was coded only once; the unit of analysis could remain the individual, but the assignment to a single category of inclusiveness implies the potential existence of less inclusive codes in the same response. Statistical analysis was performed with SPSS.

Results

Our elderly sample had an average age of 74.2 (see Table 1). Seventy-five percent were female, and more than half completed high school. Only 28% were married at the time of the interview. The sample's distribution on the self-rated health variable showed that 65% rated their health as good or better; this differs slightly from National Health Interview Survey data from 1994, in which 60% of Blacks aged 65 to 74, and 53% of Blacks aged 75 years and older gave good or

better self-ratings (U.S. Department of Health and Human Services 1996). The ratings of our sample are almost identical to those given by the sample of elderly Whites in the Borawski et al. (1996) study. The medical history scores for the sample average 265.4; the median score is 238.0.

Table 2 shows the coding, frequencies, and categorization for the open-ended responses to the self-rated health question. The middle column of Table 2 shows the complete list of initial codes assigned. The left-hand column shows how many respondents gave a reply with that code. So, for example, the following response was given three initial codes; one for "serious medical condition," although several conditions were mentioned; one for "have symptoms," since pain is mentioned; and one for "the doctor says":

> Eleven years ago I had a mastectomy. I've had a very bad case of high blood pressure for many years. For 15 years, I've had diabetes. I have a sciatic nerve problem, which causes my legs to hurt when I walk. The last doctor I went to wanted to do surgery to remove the nerves around my spine. I refused and said I'd come back when I couldn't walk at all. He said if I didn't want surgery, he couldn't help me

This woman's response is also an example of a response that belongs in the first grouped coding category, because it contains only the purely biomedical criteria of physical health, diagnoses, and symptoms. Her reasons for rating her health are restricted to diagnosed illnesses and symptoms and to what her doctor says about them; she also rated her health as poor. More than a third (37%) of the sample falls in this narrowly defined biomedical category.

The next set of codes adds physical functioning criteria to the range of considerations people report. The following response combines both symptoms and functioning criteria: "With the things I have I would say it's just fair. I can't walk any distance. I would say fair. I tire very easily. I'm pushing myself all the time now." This respondent uses information not only from symptoms (tiredness, having to push herself) but also from what she finds she can or cannot do in daily life (walk any distance). Her response is assigned a group code for the highest level initial code within it, a 2 for physical functioning. The physical functioning group code was assigned to 13.8% of the sample.

The next category adds health risk behaviors to the criteria considered by the respondent. This category is more inclusive because it

TABLE 2
Frequencies for Qualitative Data on Reasons
for Self-Rrated Health, Health of Elderly Minorities Project

N *Mentioning*[a]	*Initial Code Description*	*Group Coding Category (%)*[b]
		1. Physical health, diagnoses, Symptoms (37.1)
79	Do have serious medical condition.	
38	Doctor says . . .	
31	Have symptoms, that is, pain, tiredness.	
18	Have good physical feelings (i.e., energy).	
18	Do not have symptoms.	
18	Do not have serious medical conditions.	
6	Comparison to self in the past when health was better.	
6	Comparison to self in the past when health was worse.	
3	Do not have good physical feelings (i.e., energy).	
		2. Physical functioning (13.8)
16	Can get around.	
15	Can take care of myself.	
9	Cannot get around.	
7	Can eat without assistance.	
2	Cannot eat without assistance.	
3	Cannot take care of myself.	
2	Can think for myself.	
1	Can speak and hear well.	
1	Cannot speak or hear well.	
		3. Health risk behaviors (10.1)
12	I take care of myself.	
10	I see the doctor when I need to.	
4	I eat a good diet.	
3	I should lose some weight.	
2	I eat a poor diet.	
2	I exercise.	
2	My cholesterol is bad.	
2	I do not take care of myself.	
1	I rest.	
1	I am active.	
1	My cholesterol is good.	
		4. Social role activities beyond Basic functioning (8.8)
8	Can do what I want to do.	
5	Can still work.	
4	Can no longer do what I want to do.	
3	Can help others.	
2	Cannot work any more.	
1	Can attend social events.	
1	Can do my own shopping.	

(continued)

TABLE 2 Continued

N *Mentioning*[a]	*Initial Code Description*	*Group Coding Category (%)*[b]
		5. Social relationships (6.9)
10	Compared to others, my health is better.	
2	Compared to others, my health is worse.	
2	Having a good marriage, happy family.	
2	Tension in family.	
1	My good health keeps my children happy.	
		6. Psychological, spiritual, emotional (23.3)
16	Some days are good, some are bad.	
13	I try to keep my mind off my body.	
12	God blesses me.	
9	Aches and pains are normal for my age.	
9	I feel happy, satisfied with my life.	
5	I keep a positive attitude.	
3	I feel unhappy.	
2	I keep my mind alert, busy.	
2	I do not feel unhappy.	
1	I am lucky.	
1	I do not feel happy.	
Total 427		100

NOTE: Table refers to responses to question "What went through your mind (when you rated your health as excellent, very good, good, fair, or poor)?"
a. All reasons coded; multiple instances of same code within response counted only once.
b. Proportion of sample when each individual's whole response is categorized only once, by highest level code within it.

reveals the respondents' perception that they are in some way responsible for their health in that they attribute their present state of health to actions that they have or have not taken. Although some of the behaviors that were mentioned, such as avoiding fatty meats or losing weight, may have been the result of medical advice, other self-care activities, such as taking garlic or cod liver oil, were probably self-initiated. Here is an example of such a response:

> Right now I have diabetes and that's something you know about. I have to work with it. Most of my problems is cause by what I did in the past. I am taking my medicine and staying away from the sweets.

This respondent rated her health as fair. She includes a diagnosis in her reflections, but also shows an understanding of the causes of the disease, a result of her past habits, and a responsibility for "working

with" the disease in the present. Overall, 10.1% of the responses fell into this category.

The fourth category expands the concept of health further by including responses that mention social role responsibilities beyond basic functioning. Codes in this group include activities mentioned by respondents that are of the "want to do" rather than the "need to do" type. People mentioning work, shopping, or helping others are referring to meeting (or no longer being able to meet) the normative obligations that come with the social roles of employee, spouse, or friend. For example,

> I can go to a lot of organizations. On Monday I go to exercise, on Tuesday I go to embroidery, and on Wednesday I go to Senior Citizens. On Thursday I go back to embroidery, and on Friday, wherever anyone needs me I go. Then I go to [inaudible] twice a month.

This respondent rated her health as good. Her reflection on her health status is made up entirely of the roles she plays in various community organizations; she mentions no other criteria at all in deciding on her rating. In all, 8.8% of respondents fell into this category.

The next most inclusive level consists of responses that dwell on the relationship of the respondent with others. Social relationships are the basis for ratings when respondents say they arrive at a sense of their own health by comparing it with that of others that they know or by attributing their health to a happy marriage or a strong family. The use of social comparisons in perceptual processes has a long and distinguished tradition of research in social psychology (Suls and Wills 1991). Studies of patients have usually found that individuals who make comparisons of their own health with others often choose as their object of comparison others who are doing more poorly than themselves, thereby enhancing their own feelings of well-being. Our small data set supports this finding, in that 10 respondents felt their own health to be better than others, and only 2 perceived it to be worse. This man rated his health as very good:

> I look at others who are less fortunate. They don't have the ability to go around and do their work, wait on other people to do the things that they would like. Having to wait on somebody to come in and do for them. And I feel very thankful.

This is a more inclusive category than the others because it implies that the standards by which respondents are measuring their health are malleable, that the meaning of aches and pains, or the inability to walk a mile, or the fact that one cannot work at a job any longer are relative and can shift according to the social context in which they are judged. This category also includes the criteria that quality and supportiveness of social relationships are critical to health. In all, 6.9% of our respondents fell into this category.

The final category in our restrictiveness-inclusiveness scheme is for respondents who used psychological, emotional, or spiritual criteria for their health ratings. These respondents were all in some way asserting the importance of their emotional well-being, or their faith in God, as the reason for their rating. Frequently, the respondent also mentioned a set of physical health problems or limitations that they then discounted by saying, "but you have to keep a positive attitude." The most frequently cited code in this category is for people who report the relativizing perception that although they have bad days, those days are followed by good days, an interpretation other researchers have noted in studies of the chronically ill (Charmaz 1991). The power of positive thinking is exemplified by the following respondent:

> My mind is uplifted. I just have that mind, and when I said my health is very good, it helps to say it because you got to look up. It's your thinking . . . so many times we just think and look down but we have to think positive. We have to think and then it makes you feel good. Because if you down in the dumps and you think you down there and so many people complain and its no need. I'm just grateful I think positive.

Other respondents gave explicitly religious reasons for their ratings, including the nicely put, "I am a Christian and he made me very good." A key characteristic of this category, and the reason we placed it at the top of the hierarchy, is that the assertion of the importance of the nonphysical criteria of attitudes, emotions, or religious belief nearly always takes place in the context of already-mentioned health problems; virtually all of the responses in this category also had a code for physical health or for functioning. So these responses not only included other criteria beyond the biomedical but they were also, usually explicitly, actually denying the importance of the body in

determining one's state of health. Nearly a quarter (23.3%) of the respondents fell in this category.

Figure 1 shows how we constructed the relationship between the excellent, very good, good, fair, and poor ratings respondents gave themselves and their more objective physical health as it was determined by their score on the medical history. We divided the distribution for the medical history score to match the distribution of the respondents on self-rated health. Thus, for example, we match the best 6.3% of the medical history scores with the "excellent" health group because 6.3% of our respondents said their health was excellent. The "very good" group was 25.2% of the sample, so we take the next 25.2% of the medical history scores to match it, and so on. In the figure, we show the cross classification of these two sets of categories. Respondents whose medical history ranking matches their self-rating will fall on or near the diagonal. The figure shows that while there is some relationship between the self-ratings and medical history, it is only moderately strong. The Pearson r for the two variables is .28 ($p < .001$), a figure similar to that found in other studies. We created four categories from the figure, two for respondents whose ratings were as expected (good health and poor health realists); one for those whose "excellent," "very good," or "good" ratings were paired with a high medical history score (overestimators); and one whose "good," "fair," or "poor" ratings did not match their quite low medical history scores (underestimators). According to these criteria, almost half of the sample (42.9%) give themselves good or better self-ratings and have medical history scores to match (good health realists), 20.2% overestimate their health, 20.2% underestimate their health, and 16.6% are realistic about their poor health. This distribution is similar to that reported in the Borawski et al. (1996) study in which, with a less detailed measure of physical health status, 52.4% were good health realists, 14.1% are termed health optimists, 12.8% were health pessimists, and 20.7% were poor health realists.

Table 3 addresses the research question, "Are the criteria used to evaluate health, as given by these open-ended responses, related to the ratings individuals give their health, once those ratings have been adjusted for medical history?" In the last column, we see mean scores for the six-level grouped codes. If more expansive, wholistic definitions of health are associated with better relative self-ratings, then

	Medical history [2] No illness 6.3%	30.8%	65.4%	89.9%	Serious illness 100%
Self-rated health Excellent 6.3%	R+ 1 (10.0 %)	R+ 4 (10.3 %)	O 3 (5.5 %)	O 2 (5.3 %)	O 0 (0 %)
Very good 30.8%	R+ 4 (40.0 %)	R+ 11 (28.2 %)	R+ 13 (23.6 %)	O 7 (18.4 %)	O 4 (23.5 %)
Good 65.4%	U 4 (40.0 %)	R+ 17 (43.6 %)	R+ 18 (32.7 %)	O 12 (31.6 %)	O 4 (23.5 %)
Fair 89.9%	U 1 (10.0 %)	U 6 (15.4 %)	U 16 (29.1 %)	R- 12 (31.6 %)	R- 4 (23.5 %)
Poor 100%	U 0 (0 %)	U 1 (2.6 %)	U 5 (9.1 %)	R- 5 (13.2 %)	R- 5 (29.4 %)

O	Health overestimators	(N = 33)	20.2%
R+	Good health realists	(N = 70)	42.9%
R-	Poor health realists	(N = 27)	16.6%
U	Health underestimators	(N = 33)	20.2%

Figure 1: Construction of Categories for Health Overestimation/Underestimation by Cross Classification of Self-Rated Health and Medical History, Health of Elderly Minorities Sample[1]

1. Pearson r for these two variables is .28 ($p < .001$). χ^2 test of significance not valid because of the large number of cells with small (< 5) expected values.
2. Cutoffs for medical history categories match distribution for self-rated health categories; see Table 1.

those who overestimate their health should have the highest averages, reflecting the most inclusive definitions, and those who underestimate their health should have the lowest, reflecting the most restrictive. The data support this expectation. Health overestimators have the highest scores, with poor health realists and health underestimators virtually the same with the lowest. The differences are statistically significant ($p = .024$) overall; post hoc tests show that overestimators have significantly more inclusive definitions of health than underestimators.

Table 3 also shows that the tendency to underestimate or overestimate health is not related to age; while poor health realists tend to be younger than the other groups, one-way analysis of variance shows no significant differences in the mean ages of the four groups. Likewise, there are no differences in the gender distributions of the four groups. There are differences by education. The overall F test for the variable is significant, with health overestimators and good health realists having higher levels of education than poor health realists and health

TABLE 3
Analysis of Variance for Characteristics of
Health Overestimators, Underestimators, and Realists

	Age	*Education*	*Sex*	*Grouped Code*
Health overestimators	73.4	2.67	0.66	3.84*
Good health realists	75.4	2.87	0.78	3.13
Poor health realists	71.6	2.15	0.81	2.46
Health underestimators	74.5	2.21	0.73	2.55*
F value	1.88	2.87	0.78	3.22
df	3	3	3	3
p value	.135	.038	.509	.025

*Post hoc tests show that the indicated mean scores are significantly different from each other at the $p < .05$ level.

underestimators, although post hoc tests showed no significant differences within any pair. The direction of the differences is suggestive, however. Given the known association of education with better health status and lower mortality, the good health realists should be expected to have the highest scores, and they do; that the health overestimators also score this high is interesting, since this group has relatively poor physical health.

Discussion

The importance of this study rests at least as much on its development of a methodological approach to the study of a well-known problem in the research literature as it does on its findings; we enthusiastically endorse the usefulness of combining quantitative and qualitative approaches to the same data. First, we believe that it is essential to preserve the complexity and detail of respondents' answers. To this end, we (1) tape recorded and transcribed interviews rather than relying on interview notes and (2) coded every reason given within a response. Although this approach produces a large number of coding categories, it permits the combining and recombining of these categories to test different ideas. Second, the linking of quantitative and qualitative data deepened our understanding of the processes underlying self-assessments of health. What good would it do us to know how a person reasoned about their self-rating without knowing what that self-rating

was or how it compared with a more objective measure of their health status? The reasoning behind self-assessments of health is useful only if we know something about the state of health the respondent is reacting to.

The limitations of the study are significant and must be acknowledged. The sample is a nonrandom sample of elderly African Americans, and generalization to samples from other populations requires empirical testing. Although this and other related projects were motivated by an interest in minority health, our respondents made little or no reference to their minority status. Thus, it is difficult to say if their responses are distinctive in any way. The distribution in the sample of self-ratings of health and the correlation between the ratings and the medical history scores are quite similar to those reported in other studies. In addition, the relatively higher levels of participation in religious activities in the African American community and in the participants in our study may have influenced the prevalence of religiously related meanings of health. Moreover, some interviews were conducted inside church buildings, creating a source of potential bias in this area. Replication of the qualitative data collection and coding on more diverse and representative samples is needed.

Our study findings emerged only after we resolved the problem of multiple mentions by organizing the responses into groups defined by a theoretical model of how individuals interpret their health status. This model of restrictiveness-inclusiveness allowed us to represent each respondent's answer just once, at their high point of inclusiveness, but in a way that captured other responses they may have given. We did not arbitrarily choose one of several codes to represent a respondent's multiple answers, nor did we create cumbersome combination categories that could not be analyzed. The usefulness of our scheme lay in its ability to discriminate among self-ratings for so-called health optimists, health pessimists, and realists, which it did. This finding suggests that broader and more inclusive definitions of what "health" is allow respondents to be more versatile in their depiction of their own health; expansive definitions allow individuals to take more things into account when considering their well-being. The implication of the direction of the finding is that when individuals do this, they draw on social, psychological, and even spiritual resources that moderate the impact of poor physical health on self-ratings.

Indeed, throughout the quotations presented here, even in those in which respondents demonstrate relatively restricted definitions of health, we see evidence of active selves creating meaning, choosing points of view and rejecting others. The woman who rejected her doctor's advice about back surgery, or the diabetic who was "working with it," or the woman who criticized those who allow themselves to be "down in the dumps"—all of these respondents demonstrate the plasticity of conceptions of health. Our study supports other findings that show that respondents pick and choose their frames of reference and sources of comparison with respect to health and that they tend to do this in patterned, predictable ways (VanderZee, Buunk, and Sanderman 1995; Suls, Marco, and Tobin 1991).

We believe we have presented a testable model for the investigation of the meaning of self-ratings of health and provided preliminary empirical support. Our study also makes clear the feasibility of obtaining detailed qualitative data in community samples that are of sufficient size for statistical analysis. The techniques used for data collection, direct transcription into CASES, transformation of free response data from CASES into MAX to assess the frequency of responses for specific code categories, and conversion of the data to SPSS files for statistical analysis merit wider use for getting at the raw data of health perceptions. We urge other researchers to "take the plunge" and explore the intersection of these methods.

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