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Is Self-Rated Health Comparable Across Cultures and Genders?

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Self-rated health is a frequently used health indicator, but there is little data on its comparability across cultures. We employed samples from Tampere, Finland, and Florence, Italy, of the European Longitudinal Study on Aging to examine the cultural and gender differences in self-rated health. Personal interview data was used and vital status ascertained after 7 years. After adjusting for several health-related variables, we found no substantial difference in self-rated health between genders, although women in Florence were three times and men in Florence four times more likely to report good self-rated health than men in Tampere. The correlational structure of self-rated health was similar in both areas. The significant graded association between self-rated health and mortality in both areas was mostly explained by other health indicators included in a multivariate model. Results suggest that self-rated health is a useful summary of physical health, but it may predict mortality better in men than in women and be sensitive to cultural environment. Therefore, direct gender and cultural comparisons of self-rated health should be made with caution.

SINCE the 1950s, self-rated health has been one of the most frequently used variables in gerontological and health research. Self-rated health is particularly interesting because of its mediating role between human biology and psychology. While self-rated health is a subjective, general indicator, it has also been found to be a strong predictor of mortality (Idler, Kasl, & Lemke, 1990; Kaplan & Camacho, 1983; Mossey & Shapiro, 1982; Pijls, Feskens, & Kromhout, 1993; see also Idler & Benyamini, 1997) and other traditional biomedical outcomes such as hip fracture (Cummings et al., 1995) and ADL disability (Kaplan, Strawbridge, Camacho, & Cohen, 1993).

Self-rated health is a useful health outcome in research because it is simple, short, and global. However, because of the subjective and evaluative nature of the indicator, researchers cannot standardize or even know which dimensions of health the respondent really is assessing or what criteria he or she is using. Even if we presume that people living in roughly similar social environments and sharing similar values also use roughly similar criteria in their health evaluations, comparability of self-rated health across heterogeneous populations remains a problem. This may challenge the usefulness of self-rated health in cross-national studies or studies including different ethnic groups.

In this study we focus on cross-cultural and gender differences in self-rated health. By cultural differences, we refer to relative differences in patterns of social structures, ways of life, ways of thinking, and values characteristic of nationalities, ethnic groups or other subpopulations. Our main focus is on cultural differences. However, given the marked differences found in many cultures between genders in various dimensions of health and health perceptions, we also wanted to examine whether potential cultural differences in self-rated health are similar for both genders.

The classic studies by Zborowski (1952) and Zola (1966) demonstrated cultural differences in experiencing and reporting specific symptoms such as pain. Shanas et al. (1968) indicated that Americans were more likely than the English or Danes to assess their own health as poor, although they reported fewer disabilities than the other two groups. More recently, cross-cultural differences have been found both in the level and the association with mortality of self-rated health. Cockerham, Sharp, and Wilcox (1983) found that Black Americans reported more symptoms but better self-ratings of health than Whites. In southern Colorado (Shetterly, Baxter, Mason, & Hamman, 1996), Hispanics were, after adjusting for illness indicators, 3.6 times more likely to report fair or poor health than non-Hispanics.

Very few studies have examined whether correlates of self-rated health are similar across cultural groups. A recent analysis by Hays, Schoenfeld, Blazer, and Gold (1996) on Established Populations for Epidemiologic Studies of the Elderly data from North Carolina indicates significant urban versus rural and gender variations in the effect of self-rated health on mortality and in the confounders of this association. In their comparative study, Appels, Borma, Grabauskas, Gostauskas, and Sturmans (1996) found that men in Rotterdam, the Netherlands, rated their health better than men in Kaunas, Lithuania. Adjusted for age, coronary heart disease, parental life span, and socioeconomic and marital status, self-rated health was significantly associated with 10-year mortality in Rotterdam, but not in Kaunas. However, the comparative self-rating ("What do you think of your own health compared to that of other men of your

age?") was an independent predictor of mortality in both populations.

Between the genders, studies indicate either no differences in unadjusted distributions of self-rated health (Ferraro, 1980; Fillenbaum, 1979; Idler, 1993) or a tendency for males to assess their health more positively than women do (Anson, Paran, Neumann, & Chernichovsky, 1993; Moum, 1992; Murray, Dunn, & Tarnopolsky, 1982). However, most of the latter studies that adjust their analyses for medical indicators have shown that after this adjustment the gender difference disappears (Anson et al., 1993), or women tend to assess their health more favorably than men (Ferraro, 1980; Fillenbaum, 1979; Idler, 1993; for an exeption, see Moum, 1992). Idler (1993) has suggested that better self-rated health in women reflects, at least in part, their probability of longer survival compared to men. The explanation is plausible but also tautological, and it remains unclear how the "knowledge" of survival chance is incorporated into self-assessments.

In their review of 27 studies on self-rated health and mortality, Idler and Benyamini (1997) concluded that self-rated health seems to predict mortality in men better than in women. However, at least Wolinsky and Johnson (1992) and McCallum, Shadbolt, and Wang (1994) found the opposite to be true. It is also interesting to note that in studies where mortality has been analyzed with gender as one of the covariates, gender difference in mortality has not been explained either by self-rated health or by other health-related variables (e.g., Rakowski, Mor, & Hiris, 1991; Schoenfeld, Malmrose, Blazer, Gold, & Seeman, 1994; Tsuji et al., 1994). Indirectly the result suggests that self-rated health reflects severe medical conditions differently for men and women.

Very little is known of the cross-cultural patterns of gender differences in self-rated health. However, given that the magnitude of gender differences in health, social status, and social roles varies markedly from one culture to another, it cannot be assumed that the gender differences in subjective assessments of health would be similar. Basically, similar self-rated health found in two cultural areas could actually mask opposite cross-cultural differences for men and women. Therefore, when studying cross-cultural differences in self-rated health we consider it important also to examine whether differences in the level and structure of self-rated health in these cultures are similar for men and women.

Here, we examine cultural and gender differences in self-rated health using samples from two European areas, the cities of Tampere, Finland, and Florence, Italy, two of the sites of the European Longitudinal Study on Aging (ELSA) (Heikkinen, Waters, & Brzezinski, 1983). In this study, identical self-reported data on various dimensions of health are available, including reports of medical conditions diagnosed by a physician, functional status observed by the respondent in daily life, and symptoms and sensations directly accessible only to the respondent. If marked cultural differences in correlational structure of self-rated health or its impact on mortality are found when these variables are used as covariates, cross-cultural comparability of the variables as indicators of physical health is challenged. In this study, we address four research questions: (1) Are there differences in self-ratings of health between the two cultural areas? (2) Are there differences in health-related correlates of self-rated health between the two cultural areas? (3) Are the possible cultural differences in self-rated health influenced by gender? and (4) Does culture or gender modify the association of self-rated health with mortality?

Methods

Study Areas

From the ELSA study samples, Tampere and Florence were selected for comparison for several reasons. First, both areas had highly representative samples with relatively low nonresponse rates, low numbers of unanswered questions, and high quality data (Heikkinen, Jokela, & Waters, 1995). Also, reliable mortality data was available only for these areas. Second, the areas provide an interesting setting for comparison with both similarities and differences: both cities are relatively large in their own countries, with high standards of living and high-quality health care. At the time of the baseline survey, 16.5% of the population was over 60 years in Tampere and 22.9% in Florence (Heikkinen, Waters, & Brzezinski, 1983). Life expectancies at the age of 65 were available only for the countries, not for the cities; they were 12.7 years for men and 17.0 years for women in Finland (WHO, 1983), and 13.8 years for men and 17.4 years for women in Italy (WHO, 1984). There are also many differences in social conditions and ways of life between Finland, representing Nordic welfare states, and Italy, representing Southern Europe. In Finland, a vast majority of elderly people live alone with public home-help equal to or more important than the help they receive from family and friends. In Italy the role of extended family is much more crucial and public home-help is practically nonexistent (see Anderson, 1994). The situation of women, both in the labor market and the family, also varies between the countries (OECD, 1985). Although regional differences in Italy are even more pronounced than in Finland, and the differences between Tampere and Florence are likely to be smaller than those between Finland and Italy on average, Tampere and Florence still are, in many ways, different social and cultural environments in which elderly people live, take care of their health, and perceive and evaluate health-related phenomena. Although the differences between the genders in life expectancy are smaller in Italy than in Finland, it seems justified to conclude that the differences between men and women in social roles and social life are larger in Florence than in Tampere.

Data Collection

The study design of the ELSA project has been described in detail elsewhere (Heikkinen, Waters, & Brzezinski, 1983; Ferrucci et al., 1995; Waters, Heikkinen, & Dontas, 1989). Briefly, the baseline interviews were conducted in 1979–80. Subjects aged 60 to 89 listed in the local population registers were stratified according to gender and 5-year age group (men aged 60–64, 65–69 . . . 85–89 years, and women aged 60–64, 65–69 . . . 85–89 years). A random sample was drawn from each of the 12 strata.

In Tampere the sample included 1,494 persons. A total of 1,059 persons were interviewed in 1979 (Table 1). After excluding those who died or moved from Tampere, the response rate was 82%. For the survival follow-up in 1986, the vital status and dates of death were provided by the national Population Register Center. There were no losses in mortality follow-up. (Heikkinen, Jokela, & Waters, 1995; Jylhä et al., 1992)

In Florence the sample size was 1,440 persons, of whom 1,022 subjects were interviewed in 1980. After excluding from the sample those who died or moved away from Florence, the response rate was 79%. In 1987, vital status was not documented for 159 persons, and baseline data for 2 additional persons was incomplete and was not included in the analyses. Thus, 864 subjects were included in the survival analysis (Table 1). To examine the possible bias caused by persons whose mortality status was not known, the original Florentine sample interviewed in 1980 was compared with the sample traced in 1987. There were no differences between the groups in age structure, gender distribution, living arrangements, years of education, or functioning (Ferrucci et al., 1995; Heikkinen, Jokela, & Waters, 1995).

In each participating center, interviewers were trained using the same set of instructions, and a similarly structured questionnaire was used (Heikkinen, Jokela, & Waters, 1995). To ensure maximum comparability of the results, the national research groups had the original English version of the questionnaire translated into their own language, and then translated back into English to check whether there had been any loss or change of meaning in the translation process. However, even with perfectly accurate and grammatical translation, expressions referring to subjective experiences and evaluations, such as perceived health or loneliness, are more dependent on cultural ways of understanding than questions concerning objective facts, such as occupation or the number of children. These cultural connotations may also contribute to the possible cross-cultural differences in self-rated health.

Variables

The question concerning self-rated health was, "How would you evaluate your present health? Is it: (1) very good, (2) fairly good, (3) average, (4) fairly poor, or (5) poor?" For the logistic regression analyses these were combined into two categories: (1) good, including very good and fairly good, and (2) average and poor, including average, fairly poor, and poor.

Subjects were asked to report any chronic disease that was diagnosed by a physician. In this study, the diseases were coded as cardiovascular, musculoskeletal, nervous system, endocrine, gastrointestinal, infectious, respiratory and urinary diseases, diseases of skin, and cancers. For analyses, the number of reported disease categories was classified as 0–1, 2, and 3 or more.

Functional ability was assessed using a set of 12 questions dealing with physical and instrumental activities of daily living (ADL). The respondents were asked if they could perform a specific task (1) without difficulty, (2) with difficulty but without help, (3) only with help, or (4) not at all. A three-category indicator of functional ability was constructed in the following way: If the respondent reported difficulty in at least one of the four basic physical ADL functions (walking between rooms, dressing and undressing, getting in and out of bed, and feeding oneself), his or her functional ability was classified as poor. If there was no difficulty in any of these functions but some difficulty with other tasks (walking at least 400 meters, washing oneself and taking a bath, moving outdoors, using stairs, carrying heavy loads, doing one's own cooking, cutting toenails, and doing light housework), functional ability was classified as moderate. If there were no difficulties in any of the 12 tasks, functional ability was classified as good. The a priori classification forms a hierarchical Guttman scale, which was found to be reliable in both cities (Ferrucci et al., 1995; Jylhä, Jokela, & Heikkinen, 1995).

Table 1. Number of Respondents and 7-Year Survival Rate in Tampere and Florence

Gender and Age Group	Tampere		Florence	
	N in the Baseline Interview	7-Year Survival (%)	*N* in the Baseline Interview	7-Year Survival (%)
Men				
60–74	272	65.1	221	67.9
75–89	256	30.9	246	31.7
Total	528	48.5	467	48.8
Women				
60–74	277	83.8	190	83.2
75–89	254	46.1	207	40.1
Total	531	65.7	397	60.7

Symptoms experienced by the participants were assessed by ascertaining the frequency of 24 symptoms from a checklist (headache, worsening of memory, lack of appetite, heartburn, stomach pain, diarrhea, nightmares, difficulties in falling asleep, dizziness, palpitation, tremor of hands, excessive sweating without physical effort, difficulties in breathing or shortness of breath without physical effort, lack of energy, tiredness or feelings of faintness, nervous tension or nervousness, irritability or bursts of anger, low spirits or depression, problems in passing urine, constipation, aching or pain in the joints or back trouble, significant changes in weight, thirst or polyuria, temporary loss of sensation, movement or speech). The number of symptoms experienced often or nearly continuously during the past 2 weeks were classified as 0, 1, and 2 or more.

Hearing was assessed by asking whether the subject was able to hear what a person speaking at normal volume is saying in a face-to-face situation. Vision was assessed by the question "Can you read newspapers or books?" Answers indicating difficulty or inability in seeing were classified as problems with vision. Number of drugs indicates the number of prescribed drugs that had been taken regularly each day for the previous three months (0 through 2 and 3 or more). Education was categorized as years of full-time education (0 through 5 and 6 or more).

In models where the structure of self-rated health is examined, a dichotomized variable indicating survival over

the next seven years is included. Following the hypothesis by Idler (1993) that self-rated health differences between subpopulations are caused by differential survival, the indicator of future survival represents a proxy variable for the potentially life-threatening processes that are not captured by other health variables used, but may be reflected in self-ratings of health.

Analysis

The differences in the distribution of self-rated health between the genders and between the two areas were tested using the χ^2 method. In stratified analyses age was categorized in two groups, 60–74 and 75–89 years, whereas in multivariate models it was considered as a continuous variable. Multiple logistic models were used to examine the association of site, gender, and other correlates with self-rated health. Survival was analyzed using a Cox proportional hazards model.

Results

Self-rated health.—In Florence both the 60–74 year-old and the 75–89 year-old men rated their health better than women in the same age group (Figure 1). In Tampere there were no differences between the genders within any age strata. In both age groups, men and women in Florence rated their health significantly better than the respondents in Tampere (for men aged 60–74 years $\chi^2 = 48.5$, $p < .001$; for men aged 75–89 $\chi^2 = 42.3$, $p < .001$; for women 60–74 years $\chi^2 = 9.5$, $p = .050$; for women aged 75–89 years $\chi^2 = 12.1$, $p = .017$).

Predictors of self-rated health.—Both in Tampere and Florence, men reported better functional ability and higher education, but more problems with hearing than women (Table 2). In Florence, men reported less diseases, less frequent symptoms, and less problems with vision than women. In Tampere there were no gender differences in these variables. In both areas there were no differences between men and women in the number of prescribed drugs taken. Between the areas, differences were found only in two variables. Problems with hearing were more frequent and the use of more than three drugs was less frequent in Tampere than in Florence (analysis not shown).

The structure of self-rated health in Tampere and Florence.—The next step in our analysis was to examine the correlational structure of self-rated health for the two areas. Table 3 shows the age-adjusted odds ratios of reporting good self-rated health according to individual independent variables in Tampere and Florence. In both areas, good self-rated health was significantly associated with all the health indicators and education, the associations being of similar magnitude across the sites. Those who subsequently survived for the next seven years were 1.6 to 2 times more likely to report good self-rated health.

A multiple logistic regression model was used to test the independent association of age, health indicators, education, and gender with good self-rated health, first separately in Tampere and Florence, and, second, in a combined model with area as a covariate (Table 4). In both areas, the likelihood of positive self-ratings increased with increasing age when health was controlled for. Fewer diseases, better functional ability, fewer symptoms, better vision, fewer medical drugs, and better education were all significantly associated with good self-rated health both in Tampere and Florence. (The same predictors were also significant correlates of self-rated health in analyses that were done sepa-

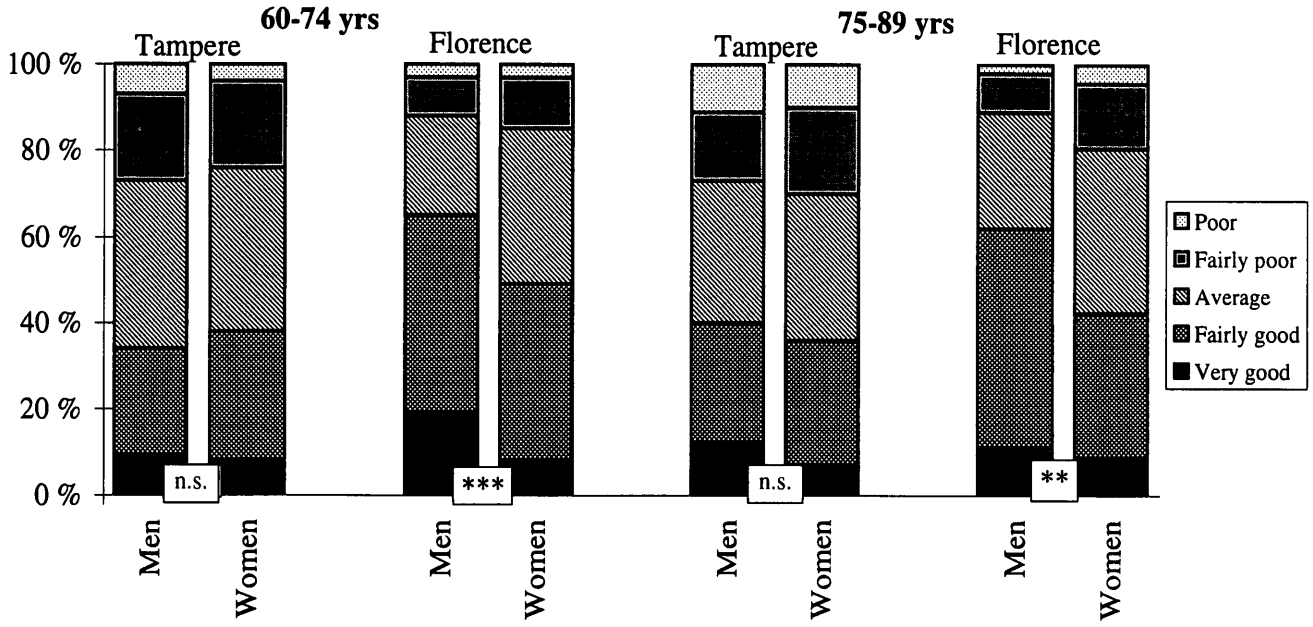

Figure 1. Self-rated health among two age groups of men and women in Tampere and Florence (%). Differences in the distributions between men and women in the same age group are tested by the χ^2 test. ***$p < .001$, **$p < .01$, n.s. = not signficant.

Table 2. Characteristics of the Study Populations in Tampere and Florence by Gender and Age Group, and Odds Ratios of the Characteristics for Men Versus Women

	Tampere					Florence				
	Men		Women		*OR* (men vs women, age-adjusted)	Men		Women		*OR* (men vs women, age-adjusted)
	60–74	75–89	60–74	75–89		60–74	75–89	60–74	75–89	
Number of Diseases										
0–1	40.4	30.5	37.9	31.1	1.05	46.0	37.5	32.3	30.3	1.56***
2	27.6	35.2	29.6	29.9		28.4	32.2	28.8	34.5	
3 or more	32.0	34.4	32.5	39.0		25.6	30.4	38.9	35.2	
Functional Ability										
Good	62.1	35.9	50.7	18.6	1.92***	59.1	28.5	54.1	21.2	1.53***
Moderate	29.0	32.4	40.9	42.3		34.0	53.4	41.0	51.2	
Poor	8.8	31.6	8.3	39.1		6.9	18.1	5.0	27.7	
Frequent Symptoms										
None	29.8	25.8	27.1	27.2	1.04	37.2	31.4	11.9	23.6	2.32***
1	19.5	21.9	21.3	14.2		18.8	18.7	17.3	12.7	
2 or more	50.7	52.3	51.6	58.7		44.0	49.8	70.8	63.7	
Problems With Hearing										
No	83.5	62.4	91.3	74.8	0.53***	88.0	74.6	93.8	78.5	0.70*
Yes	16.5	37.6	8.7	25.2		12.0	25.4	6.2	21.5	
Problems With Vision										
No	88.6	66.4	89.1	59.8	1.21	88.0	72.4	79.1	58.1	1.98***
Yes	11.4	33.6	10.9	40.2		12.0	27.6	20.9	41.9	
Number of Drugs										
0–2	77.9	65.2	77.6	65.9	0.99	81.8	70.9	81.0	72.7	0.98***
3 or more	22.1	34.8	22.4	34.1		18.2	29.1	19.0	27.3	
Education										
0–5 years	44.4	66.3	50.7	74.2	1.38*	46.2	55.4	71.0	65.8	2.07***
6 years or more	55.6	33.7	49.3	25.8		53.8	44.6	29.0	34.2	

Note: Odds ratios of having 0–1 versus 2 or more diseases, good versus moderate or poor functional ability, none versus 1 or more symptoms, none versus some problems with hearing, none versus some problems with vision, < 3 versus 3 or more drugs used regularly, and 6 or more versus 0–5 years of education are calculated with logistic regression models for all men and women separately in Tampere and Florence, and are adjusted for age.

*$p < .05$; ***$p < .001$.

rately for both men and women in each area [analyses not shown]). In Tampere, but not in Florence, female gender was associated with good self-rated health after adjustment for other variables. In a combined model, people in Florence were 2.91 times more likely to rate their health as good than people in Tampere.

In Table 4, survival over the next seven years was not included in the models. When it was included, the odds ratios (*OR*) for all the health indicators and education remained practically unchanged, both in the separate models for Tampere and Florence, and in the combined model. This was true also for gender differences in Florence (*OR* for women vs men 0.71, 95% CI 0.97–1.03), and in the combined model (*OR* for women vs men 1.10, 95% CI 0.80–1.30). However, in Tampere the gender difference in self-rated health that was found in the previous model diminished and was not significant as survival over next seven years was included in the model (*OR* for women vs men 1.35; 95% CI 0.97–1.89).

In order to demonstrate the influence of culture, gender, and their interactions on self-rated health, three indicator variables were constructed to compare the odds ratios of good self-rated health in other gender-by-culture groups with that in men in Tampere (Table 5). Adjusted for all the covariates in Table 4, women in Tampere were more likely to report good self-rated health than men in Tampere. Both men and women in Florence gave more positive ratings than either men or women in Tampere. Adjusted also for survival over next seven years, gender was not associated with self-rated health in Tampere, but men in Florence were 4.01 and women in Florence 2.94 times more likely to report good self-rated health than men in Tampere.

Thus, our analyses showed that the correlational structure of self-rated health was similar for both genders in both cultures, but we found marked differences in the level of self-rated health between the two cultures. Adjusted for several self-reported health indicators, women in Tampere rated their health slightly more positively than men did. This difference disappeared when survival over next seven years was included in the model, and in Florence no difference was seen between genders.

Self-rated health and mortality.— The association of self-rated health with mortality and the effect of area and gender on this association were examined using a Cox pro-

Table 3. Odds Ratios of Good Versus Average or Poor Self-Rated Health in Tampere and Florence—Adjusted for Age

	Tampere		Florence	
	OR	95% CI	*OR*	95% CI
Gender				
Women	1.01	0.78–1.31	0.52	0.40–0.67
Men	1.00	—	1.00	—
Number of Diseases				
0–1	6.62	4.65–9.42	5.96	4.25–8.27
2	2.25	1.56–3.26	2.05	1.48–2.86
3 or more	1.00	—	1.00	—
Functional Ability				
Good	9.68	6.04–15.62	14.94	8.83–25.12
Moderate	1.95	1.22–3.12	3.84	2.41–6.11
Poor	1.00	—	1.00	—
Frequent Symptoms				
None	12.41	8.60–17.90	11.69	7.61–17.97
1	3.73	2.62–5.30	5.11	3.48–7.52
2 or more	1.00	—	1.00	—
Problems With Hearing				
No	1.55	1.11–2.19	2.14	1.50–3.04
Yes	1.00	—	1.00	—
Problems With Vision				
No	4.12	2.02–6.18	3.17	2.31–4.32
Yes	1.00	—	1.00	—
Drugs Used Regularly				
0–2	4.50	3.15–6.38	3.81	2.79–5.22
3 or more	1.00	—	1.00	—
Education				
0–5 years	1.00	—	1.00	—
6 years or more	1.76	1.33–2.30	2.17	1.64–2.84
Survival Over Next 7 Years				
Yes	1.96	1.45–2.65	1.57	1.16–2.13
No	1.00	—	1.00	—

portional hazard model. Age-adjusted relative risk (*RR*; analysis not shown) for mortality was lowest for women in Tampere. Compared to this group, mortality was not significantly higher in women in Florence (*RR* 1.04, 95% CI 0.84–1.29), but it was higher in men in Florence (1.32, 95% CI 1.09–1.61) and men in Tampere (1.70, 95% CI 1.41–2.06).

We analyzed mortality first separately for Tampere and Florence, with gender as one of the predictors, and then separately for men and women, with area as one of the predictors. Both analyses were first adjusted only for age, and then for all the health indicators and education. In an analysis done separately for Tampere and Florence and adjusted only for age, both self-rated health and gender were significant predictors of seven-year mortality (Table 6). Both in Tampere and in Florence, there was a graded increase in mortality risk from very good to poor self-rated health. After adjustment for other health indicators and education, self-rated health was no longer a significant predictor of mortality in Tampere, and in Florence mortality risk was significantly higher only for persons who estimated their health as poor. In both areas, mortality risk was higher among men than among women, and the difference was not explained by the other covariates included in the model.

In an analysis done separately for men and women (not shown), area was not a significant predictor of mortality. Adjusted only for age, a graded increase in mortality risk from very good to poor self-rated health was found among men. Compared to the group with very good self-rated health, mortality was significantly higher for average (*RR* 1.77, 95% CI 1.25–2.51), fairly poor (*RR* 2.68, 95% CI 1.83–3.93) and poor (*RR* 3.0, 95% CI 2.45–5.91) self-rated health. In women, mortality was significantly higher only for persons who estimated their health as poor (*RR* 2.37, 95% CI 1.29–4.33). Adjusted also for other health indicators and education, men with fairly poor and poor self-rated health still had a higher mortality risk than men with very good self-rated health, but among women there were no differences in mortality between the levels of self-rated health.

In conclusion, our analyses showed that adjustment for self-reported health indicators markedly diminished the significant association of self-rated health with mortality in both areas and both genders. Self-reported health did not predict mortality identically for both genders, but was a stronger predictor in men than in women.

Discussion

In this study, samples from Tampere, Finland, and Florence, Italy, of the European Longitudinal Study on Aging were employed to analyze cultural and gender differences in self-rated health, using measures collected by identical, standardized questionnaires. We found significant differences in the distribution of self-rated health between the cultures and, in Florence, between genders. After adjusting for age, education and several indicators of disease and disability, no substantial difference in self-rated health between genders was found in either area, although women in Florence were three times and men in Florence four times as likely to report good self-rated health as men in Tampere. We also found that the correlational structure of self-rated health was similar in both cultures; both in Tampere and in Florence self-rated health was significantly associated with the number of diagnosed diseases, functional ability, number of experienced symptoms, problems with vision, number of medical drugs in regular use, and length of education. Age had a positive association with better self-rated health, indicating decreasing aspiration level regarding good health with advancing age (Tornstam, 1975; Idler, 1993). In both cultures, self-rated health significantly predicted mortality when age was controlled for. The association showed a dose-response pattern, where, compared to very good self-rated health, gradually and significantly elevated mortality was found for average, fairly poor, and poor self-rated health. This association was explained by other health indicators, and in the fully adjusted model elevated mortality was found only in Florence for poor self-rated health. Self-rated health explained mortality better in men than in women, and it did not explain differences in mortality between genders.

If the structure of self-rated health and its association with mortality are so similar in both areas, why are there

Table 4. Multiple Logistic Regression Models Showing the Independent Associations of Age, Gender, Different Health Indicators, and Education With Good Versus Average or Poor Self-Rated Health in Tampere and Florence

	Tampere		Florence		Both Sites	
	OR	95% CI	*OR*	95% CI	*OR*	95% CI
Age (one year increase)	1.07	1.05–1.10	1.05	1.03–1.07	1.06	1.05–1.08
Gender						
Women	1.42	1.01–1.96	0.84	0.59–1.19	1.06	0.85–1.34
Men	1.00	—	1.00	—	1.00	—
Site						
Tampere	—	—	—	—	1.00	—
Florence	—	—	—	—	2.91	2.30–3.96
Number of Diseases						
0–1	2.23	1.45–3.42	2.60	1.70–3.96	2.39	1.78–3.20
2	1.22	0.79–1.88	1.50	0.99–2.24	1.34	1.00–1.80
3 or more	1.00	—	1.00	—	1.00	—
Functional Ability						
Good	3.20	1.83–5.60	7.55	3.99–14.28	4.68	3.07–7.13
Moderate	1.31	0.77–2.24	3.08	1.72–5.51	1.98	1.34–2.93
Poor	1.00	—	1.00	—	1.00	—
Frequent Symptoms						
None	6.42	4.26–9.68	5.65	3.43–9.31	6.02	4.41–8.16
1	2.69	1.82–3.96	3.60	2.27–5.71	2.97	2.22–3.97
2 or more	1.00	—	1.00	—	1.00	—
Problems With Hearing						
No	0.85	0.56–1.30	1.65	1.10–2.69	1.13	0.82–1.56
Yes	1.00	—	1.00	—	1.00	—
Problems With Vision						
No	1.94	1.20–3.15	1.69	1.08–2.63	1.84	1.33–2.54
Yes	1.00	—	1.00	—	1.00	—
Number of Drugs						
0–2	2.21	1.45–3.37	2.22	1.48–3.33	2.21	1.65–2.95
3 or more	1.00	—	1.00	—	1.00	—
Education						
0–5 years	1.00	—	1.00	—	1.00	—
6 years or more	1.46	1.04–2.14	1.41	1.00–2.01	1.42	1.11–1.78

Table 5. Odds Ratios for Good Self-Rated Health for Men and Women in Tampere and Florence

	Adjusted for Variables in Table 4[a]		Adjusted for Variables in Table 4 and Survival Over Next 7 Years	
	OR	95% CI	*OR*	95% CI
Men in Tampere	1.00	—	1.00	—
Women in Tampere	1.40	1.01–1.93	1.34	0.96–1.86
Men in Florence	3.69	2.66–5.12	4.01	2.85–5.62
Women in Florence	3.18	2.26–4.46	2.94	2.07–4.20

[a]Adjusted for age, number of diseases, functional ability, frequent symptoms, problems with hearing, problems with vision, number of drugs used regularly, and education.

still marked differences in the level of self-rated health? At least in part, the explanation can reflect the cultural connotations of the preset alternative answers given to the respondent. We have already discussed the difficulty in translating evaluative questions so that the meanings would be the same in different languages. Further, as Idler and Benyamini (1997) suggest, the response scales measuring self-rated health may be used differently depending on cultural and linguistic conventions of describing "normal" health. This does not necessarily indicate, as our results show, that the correlations of self-rated heath to more objective health measures would vary, but that the reference point or normative category in the scale may be different in different cultural environments.

Our results are consistent with the model in which self-rated health is understood as a global summary measure of health status. According to this way of thinking, self-rated health can capture medical conditions and functional disability as well as several preclinical (or nonclinical) symptoms and sensations (see Idler & Benyamini, 1997), and, indeed, any information that an individual recognizes as belonging to his or her health status (Jylhä, 1994). Self-ratings of health are always produced through active interpretative processes. People enjoy remarkable freedom in choosing which aspects of health they want to take into ac-

Table 6. Relative Risk of Mortality Over 7 Years According to Self-Rated Health and Gender in Tampere and Florence

	Adjusted for Age				Adjusted for All Variables*			
	Tampere		Florence		Tampere		Florence	
	RR	95% CI	*RR*	95% CI	*RR*	95% CI	*RR*	95% CI
Self-Rated Health								
Very good	1.00	—	1.00	—	1.00	—	1.00	—
Fairly good	1.29	0.84–1.98	1.33	0.91–1.95	1.04	0.66–1.62	1.14	0.74–1.74
Average	1.75	1.15–2.64	1.70	1.14–2.53	1.18	0.75–1.89	1.32	0.83–2.11
Fairly poor	2.17	1.40–3.36	2.13	1.34–3.35	1.32	0.79–2.21	1.52	0.87–2.66
Poor	2.81	1.76–4.49	4.95	2.76–8.88	1.63	0.93–2.87	3.03	1.48–6.24
Gender								
Women	1.00	—	1.00	—	1.00	—	1.00	—
Men	1.98	1.61–2.43	1.38	1.12–1.70	2.16	1.74–2.68	1.46	1.16–1.84

*Adjusted for age, number of diseases, functional ability, frequent symptoms, problems with hearing, problems with vision, number of drugs used regularly, and education.

count and which kind of logic they want to use in evaluating their health status. Basically, numerous nonmedical factors, such as mood, social networks, or social comparisons may influence the ways in which different health-related conditions are summarized in self-ratings. As our results indicate, however, the patterns of evaluating one's health are not arbitrary or completely subjective, but reflect different dimensions of health in a very similar way for both genders in different cultural areas, at least in Western Europe. If self-rated health is understood as a summary measure of different dimensions of health, as we would like to suggest, it is understandable that its association with mortality in statistical models is explained when the models adjust for various valid covariate measures of health.

Finally, why does it seem, as noted by Idler and Benyamini (1997), that self-rated health is a better predictor of death among men than among women, and why does it not explain mortality differences between genders? A well-known paradox is that at least in Western countries women live longer but experience higher morbidity and disability rates (e.g., Verbrugge, 1989). In general, men suffer more frequently from life-threatening diseases, whereas nonfatal chronic conditions are more frequent among women (Verbrugge, 1985). In our study, musculoskeletal disorders were more prevalent in women than in men in both areas. The prevalence of another large disease category, cardiovascular diseases, was not dependent on gender, but the overall prevalence may well mask opposite gender differences in various individual conditions, such as hypertension and myocardial infarction. Lack of information on the severity of the disease was one of the limitations of the study. However, we can assume that in their self-ratings people are also likely to take into account dimensions of health that are not directly related to mortality. If these are more important constituents of self-ratings in women than in men, the relation of self-rated health with mortality will, consequently, be weaker. This also makes it understandable that if adjusted only for quantity of present health problems, but not for their seriousness or fatality, women may report better self-rated health than men.

In conclusion, our results suggest that self-rated health is a useful global measure that at least in Western countries both correlates with several indicators of physical health status and predicts mortality. However, its use in heterogeneous populations or as a substitute for clinical health indicators requires an understanding of the special nature of the measure. First, self-rated health cannot be reduced to being simply a predictor of mortality or any other objectively measurable health indicator, in the same way that health cannot be equated only with survival. It has to be understood as a summary measure of all the dimensions of health that are relevant to the individual respondent. Second, cultural and linguistic factors may affect the ways in which people use the scale when giving their assessments. Therefore, direct comparisons of the level of self-rated health across cultures and genders should be made with caution. Future studies should examine the comparability of self-rated health between culturally more different populations than the two in our study. Qualitative research is needed in order to better understand the processes of reasoning through which the self-ratings are produced.

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