

Are Citizens Of The World Satisfied With Their Health?

Gallup polling data show remarkable consistency across regions in people's assessments of their own health, and perceptions of health correlate strongly with income.

by **Jim Clifton and Newt Gingrich**

ABSTRACT: This paper represents initial analyses of data on self-perceived health conditions and satisfaction with personal health from a representative survey of citizens in 130 countries. The analysis examines the effects of income and age on health perceptions along with the combined effect of cultural norms and income. Three important conclusions can be drawn. First, individual perceptions regarding personal health status are remarkably consistent around the world. Second, the incidence of satisfaction with personal health in the United States is comparable to that in most countries. Third, perceptions of personal health correlate strongly with respondents' income level, both globally and regionally. [*Health Affairs* 26, no. 5 (2007): w545–w551 (published online 17 July 2007; 10.1377/hlthaff.26.5.w545)]

DURING THE PAST TWENTY YEARS, the emergence of a global economy has helped make worldwide health conditions a more salient topic in the developed world. Most discussions about world health are now based on country-level data derived from government records. Life expectancy and infant mortality rates are commonly referenced, as is the prevalence of HIV/AIDS and many other statistics. These are critical measures of a country's or region's development, but the picture they offer is in one respect incomplete: They say nothing about the relative impact of health conditions on the quality of individual lives.

Systematic surveys addressing global health conditions at the individual level are arduous, expensive, and thus hard to come by. Robert Blendon and Cathy Schoen have explored patient satisfaction by comparing data from sick people, health care providers, and policymakers in a half-dozen primarily English-speaking countries.¹ The Gallup World Poll provides a broader reach. It collects data from citizens in more than 130 countries and territories concerning their living conditions, personal well-being, and health.

This paper is a preliminary examination of this large data set with respect to

Jim Clifton (jclifton@gallup.com) is the chairman and chief executive officer of the Gallup Organization in Washington, D.C. Newt Gingrich (newt@healthtransformation.net) is the former speaker of the U.S. House of Representatives and founder of the Center for Health Transformation in Washington, D.C.

two factors deemed to be fundamental differentiators of individual health: income and age. It also examines regional differences in satisfaction with health and self-reported health status.

Study Data And Methods

■ **Data.** Data were collected for this study using two primary methodological designs. A random-digit-dial (RDD) telephone survey design was used in countries where 80 percent or more of the population has landline phones. This situation is typical in the United States, Canada, most of Europe, Japan, Australia, New Zealand, and South Korea. In the developing world and other areas in which telephone penetration falls below 80 percent, interviews were conducted face to face in respondents' homes. These regions include all of Latin America, many post-Communist countries, nearly all of Asia, the Middle East, some portions of Eastern Europe, and Africa. In all cases, an area frame design is used, and the resulting sample represents the entire country, including all rural areas.

■ **Methods.** In all countries the target population was all people age fifteen and older (with the exception of the United States, where only those age eighteen and older were interviewed). Face-to-face interviews were approximately one hour in length; telephone interviews lasted approximately thirty minutes. A standard set of seventy-five questions was used around the world, and all surveys were conducted between July 2005 and November 2006. Results for each country displayed in the exhibits were weighted to match existing population parameters for that country. Regionwide results were then compiled by weighting each country's data by the size of its population above age fifteen. Data were collected by Gallup country offices or Gallup-supervised agencies.² A variety of parametric and nonparametric statistical tests were used in this analysis. The large total sample size resulted in alpha levels of less than 0.001 for most differences seen in the exhibits. It is reasonable to assume that any difference of two percentage points or greater is significant, with the exception of comparisons within the U.S. data in the analysis of regional health broken out by income quartiles.³

Study Findings

■ **Regional differences in self-reported health conditions and satisfaction with health.** The item used to assess satisfaction with personal health (Exhibit 1) is worded simply as follows: Are you satisfied or dissatisfied with your personal health? The three items addressing self-reported health conditions are as follows: Do you have any health problems that prevent you from doing any of the things people your age can normally do? Did you experience the following feelings during a lot of the day yesterday (pain, depression)?⁴

The regional results are remarkable in that satisfaction rates appear similar despite the considerable socioeconomic and cultural gaps between regions. Citizens of relatively undeveloped countries, where, for example, clean water and mosquito

EXHIBIT 1
Self-Reported Health And Satisfaction With Personal Health, By Region, 2006

Region/country	Percent satisfied or reporting a given problem			
	Satisfaction with health	Limiting health problems	Pain a lot of yesterday	Depression a lot of yesterday
United States	79	24	27	15
Latin America	83	23	32	15
U.K., Australia, New Zealand, Canada	83	21	22	11
Western Europe	85	22	22	9
Eastern Europe, Russia	57	34	25	15
Central Asia, Middle East, North Africa	74	36	26	15
Sub-Saharan Africa	80	21	30	18
Asia	81	21	18	14

SOURCE: Authors' analysis of data from 2006 Gallup World Poll.

NOTES: Appendix 3 online lists the specific countries included in each region and the sample sizes from each country; Appendix 6 gives confidence intervals for Exhibit 1. See Note 2 in text.

nets are real priorities, are just as satisfied with their personal health as those in developed countries, where priorities are more likely to include recent medical advances, such as access to the latest blockbuster drug. Gerard Anderson and colleagues have shown that U.S. per capita spending on health care is more than double the median health spending of the rest of the world.⁵ Despite this massive difference, the proportions of those who claim satisfaction with their health are all within a few percentage points of each other in nearly every region of the world. Only the people of Eastern Europe and Russia are meaningfully less likely to report satisfaction. The same pattern is evident in responses to the question about health problems that limit respondents' activities, while responses to the questions about pain and depression exhibit even fewer regional disparities.

This study is not designed to reveal why such uniformity persists from region to region. But it seems reasonable to infer that satisfaction is, indeed, in the eye of the beholder. Respondents' judgments regarding their own health are most likely shaped by their expectations of how healthy they think they should be. These expectations are in turn formed by their own experiences and those of their families, friends, and neighbors; they rarely have anything to do with international health benchmarks or the experiences of populations elsewhere in the world.

Expectations may also help explain why populations in Eastern Europe and the former Soviet Union are less likely than others to claim personal health satisfaction. With the collapse of the Soviet Union in the early 1990s, the health care infrastructure in many former Soviet countries virtually fell apart. Today, countries in these regions typically spend a bare 6 percent of their gross domestic product (GDP) on health, and this lack of investment means that many residents struggle to obtain access to even routine health care services.⁶

■ **Effect of age.** Given that health declines with age, it is to be expected that re-

spondents' satisfaction with their personal health and self-reported health conditions would show that pattern as well. What may be noteworthy is the rate at which satisfaction declines and health problems and pain increase (Exhibit 2).

■ **Effect of income.** When the data are divided into household income categories based on international dollars (current exchange rate adjusted for purchasing power parity), it becomes clear that at the level of individual respondents, personal income is strongly related to self-perceived health. As household wealth increases, so, too, does satisfaction with personal health. Conversely, the incidence of health problems that prevent people from doing things that others their age can do, as well as the incidence of having experienced pain and depression the previous day, decreases among those in higher income groups. This effect plateaus somewhat among income levels above \$14,000, as satisfaction increases more slowly and the incidence of reported health problems declines more slowly.

Perhaps the most extraordinary feature of these data is their consistency. Higher income is related to more favorable responses to all questions (Exhibit 3). Particularly striking is the twenty-percentage-point gap between the 13 percent in the wealthiest bracket who say that they have health problems that limit them from doing what other people their age can do and the 33 percent in the lowest income bracket who say the same thing.

Of course, there are unresolved confounders among wealth, individual health, and age in these data. People suffering from long-term or disabling health problems are likely to see their incomes decrease because of their reduced ability to engage in income-producing behavior. They are also likely to be older. Additionally, people from lower-income households tend to have less access to health care and are more likely to suffer from serious health problems as a result; the impact of these differences also increases with age. Cultural and regional differences add to the story: For example, the age distribution of African residents is very different

EXHIBIT 2
Self-Reported Health And Satisfaction With Personal Health Among People In Eight Countries/Regions, By Age, 2006

Age (years)	Health satisfaction (%)	Health problems (%)	Physical pain (%)	Depression (%)
15-19	90	13	20	10
20-29	88	14	21	13
30-39	84	17	22	13
40-49	78	24	27	14
50-59	72	32	31	16
60-69	70	38	33	15
70-79	60	47	40	16
80+	60	48	42	17

SOURCE: Authors' analysis of data from 2006 Gallup World Poll.

NOTES: Appendix 7 gives confidence intervals for Exhibit 2. See Note 2 in text.

EXHIBIT 3
Worldwide Income Brackets And Self-Reported Health, 2006

Annual income	Satisfaction with health (%)	Limiting health problems	Pain a lot of yesterday	Depression a lot of yesterday
<\$2 a day	66	33	35	22
\$730-\$1,999	70	31	32	19
\$2,000-\$4,999	75	28	30	17
\$5,000-\$8,999	78	26	25	15
\$9,000-\$13,999	80	24	23	12
\$14,000-\$19,999	82	20	22	12
\$20,000-\$27,999	84	20	20	10
\$28,000-\$39,999	86	18	18	8
\$40,000-\$54,999	86	18	21	8
\$55,000+	87	13	18	8

SOURCE: Authors' analysis of data from 2006 Gallup World Poll.

NOTES: Appendix 4 online provides values for regional health income quartiles. Figures are in international dollars; see Appendix 5 online for definition and calculation procedures. Appendix 8 online gives confidence intervals for Exhibit 3. See Note 2 in text.

from that among Western Europeans. However, as Exhibit 1 demonstrates, such region-specific circumstances may be less important than commonly imagined.

■ **Effect of income within regions.** Taking the income-based analysis one step further, we broke each of the regions listed previously into three groups: the quartile with the lowest household income, the 50 percent in the middle, and the quartile with the highest income (Exhibit 4). Within each region, the results mirror the pattern found in the aggregated global data: Those in the poorest quartile of a regional population are least likely to report satisfaction with health and are more likely to report health problems, pain, and depression than those in the middle 50 percent. The wealthiest 25 percent report more favorable results than the middle bracket.

Additionally, in terms of how they view their own health status, it appears that the least affluent residents in each region have more in common with low-income residents of other regions than they do with wealthier people in their own region. The poorest residents of the developed Western world do not appear to feel better off than the poorest in sub-Saharan Africa or Central Asia. Those in the lowest income bracket in the United States earn on average nearly six times as much as those in the middle bracket in sub-Saharan Africa, yet they are much less likely to give favorable responses regarding their personal health.

That is not to say that people around the world who fall into the same income brackets are all equal in terms of their subjective health. Those in the lowest income bracket in Eastern Europe and Russia (40 percent) and Central Asia–North Africa (69 percent) are significantly more likely than those in other regions to say that they have health problems that keep them from doing age-appropriate activities, and there are other differences between regions by income category.

It is worth noting in this regard that overall, subjective health data are by far the

EXHIBIT 4
Regional Health Broken Out By Income Quartiles, 2006

Region/mean household income	Satisfaction with health (%)	Limiting health problems (%)	Pain a lot of yesterday (%)	Depression a lot of yesterday (%)
United States				
Lower quartile	73	35	32	23
Middle 50%	82	19	25	10
Top quartile	87	11	22	3
Latin America				
Lower quartile	79	29	36	18
Middle 50%	85	19	30	13
Top quartile	89	17	27	10
U.K., Australia, New Zealand, Canada				
Lower quartile	73	33	30	17
Middle 50%	85	18	19	10
Top quartile	90	12	16	7
Western Europe				
Lower quartile	77	31	30	14
Middle 50%	89	18	19	7
Top quartile	90	16	16	5
Eastern Europe, Russia				
Lower quartile	40	50	35	22
Middle 50%	62	29	23	14
Top quartile	72	23	19	10
Central Asia, North Africa^a				
Lower quartile	69	39	34	21
Middle 50%	73	36	25	13
Top quartile	82	34	19	11
Sub-Saharan Africa				
Lower quartile	75	24	34	24
Middle 50%	81	21	28	17
Top quartile	86	18	27	14
Asia				
Lower quartile	77	28	25	18
Middle 50%	84	20	17	13
Top quartile	84	17	12	11

SOURCE: Authors' analysis of data from 2006 Gallup World Poll.

NOTES: Appendix 9 online gives confidence intervals for Exhibit 4. See Note 2 in text.

^aNo income data were available for the Middle East.

least favorable in Eastern Europe and Russia, where only 40 percent of the poorest people are satisfied with their personal health and 50 percent report having health problems that limit the activities they can do. What's more, Eastern Europe and Russia claim the largest gaps between the low-income quartile and the high-income quartile in terms of satisfaction with health (thirty-two percentage points) and reported health problems (twenty-seven percentage points).

Although these data do not address reasons for the evident worldwide correlation between income and health, there is no shortage of possible contributing factors. People with higher incomes may live in areas of their country where the economy is strongest; they may live in areas where clean water and nutritious foods are more abundant; and they may have better access to routine and preventive care.

Further study is needed to test the relative influence of each of these hypothetical factors in various global environments.

IN 1690, WHEN ENGLAND WAS THE RICHEST and most powerful nation on Earth and North America was a vast, relatively uninhabited wilderness, John Locke said that “a king of a large and fruitful territory [in America] feeds, lodges, and is clad worse than a day-labourer in England.”⁷ Today, when one compares the lives of citizens of the United States and other developed countries to those in much of the rest of world, Locke’s hypothesis still mostly rings true. However, satisfaction with one’s personal health is a clear exception.

These data confirm a significant correlation between income and age with self-reported health and satisfaction with personal health. These data also confirm a remarkable consistency and similarity across the globe, with the exception of Russia and other former Soviet republics. This is somewhat surprising given the considerable differences among these regions in wealth, availability of health care, and prevalence of diseases such as malaria and HIV/AIDS.

Within each region, income plays a key role in differentiating respondents’ satisfaction with health and self-reported health problems. In every region the wealthiest quartile of respondents are most likely to offer favorable responses and the bottom quartile, the least likely. Income groups are more similar to each other across regions than they are to other income groups in the same region.

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NOTES

1. See C. Schoen et al., “Taking the Pulse of Health Care Systems: Experiences of Patients with Health Problems in Six Countries,” *Health Affairs* 24 (2005): w509–w525 (published online 3 November 2005; 10.1377/hlthaff.w5.509); C. Schoen et al., “Primary Care and Health System Performance: Adults’ Experiences in Five Countries,” *Health Affairs* 23 (2004): w487–w503 (published online 28 2004; 10.1377/hlthaff.w4.487); R.J. Blendon et al., “Confronting Competing Demands to Improve Quality: A Five-Country Hospital Survey,” *Health Affairs* 23, no. 3 (2004): 119–135; and R.J. Blendon et al., “Common Concerns amid Diverse Systems: Health Care Experiences in Five Countries,” *Health Affairs* 22, no. 3 (2003): 106–121.
2. A detailed description of the polling methodology is available in Appendix 1, online at <http://content.healthaffairs.org/cgi/content/full/hlthaff.26.5.w545/DC2>.
3. Specific confidence intervals associated with the exhibits are available online in Appendices 6–9; *ibid.* (The remaining appendices are mentioned in the specific exhibits to which they apply.)
4. Appendix 2 online contains full questions and response lists; *ibid.*
5. G.F. Anderson et al., “Health Spending in the United States and the Rest of the Industrialized World,” *Health Affairs* 24, no. 4 (2005): 903–914.
6. World Health Organization, *World Health Report 2006: Working Together for Health* (Geneva: WHO, 2006).
7. J. Locke, *Two Treatises of Government* (1689; repr., ed. P. Laslett, New York: Cambridge University Press, 1988), 297.