

US Opinions on Health Determinants and Social Policy as Health Policy

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To examine what factors the public thinks are important determinants of health and whether social policy is viewed as health policy, we conducted a national telephone survey of 2791 US adults from November 2008 through February 2009. Respondents said that health behaviors and access to health care have very strong effects on health; they were less likely to report a very strong role for other social and economic factors. Respondents who recognized a stronger role for social determinants of health and who saw social policy as health policy were more likely to be older, women, non-White, and liberal, and to have less education, lower income, and fair/poor health. Increasing public knowledge about social determinants of health and mobilizing less advantaged groups may be useful in addressing broad determinants of health. (*Am J Public Health*. 2011;101:1655–1663. doi:10.2105/AJPH.2011.300217)

Increasing attention is being paid to research demonstrating that, in addition to access to medical care, a broad array of social, political, and economic factors affect health. There is evidence that a person's health behaviors (e.g., exercise, diet, smoking), psychosocial stressors and resources, and socioeconomic status (e.g., education, income, wealth, occupational prestige) all affect health. Moreover, the social, economic, environmental, and political conditions in which people live, work, and play affect people's ability to make healthy behavior choices and shape their psychosocial stressors and resources.^{1–5}

Some experts suggest that improving early childhood development, educational attainment and quality, and poverty and economic attainment might be just as important to improving health and reducing health disparities as improving access to health care (if not more important).^{6–14} In fact, efforts in many countries, including significant efforts in the United Kingdom, Sweden, Canada, and the Netherlands, have begun to advance social and economic policy agendas as a means to improve health.^{15–18}

However, in the United States there has been less public discourse about how to improve health by advancing social and economic policy.^{19,20} Most health discourse and media attention in the United States have focused on improving access to health insurance and health care and on individual health behaviors such as diet, exercise, and smoking.^{21–25} However,

some recent US initiatives have attempted to broaden the health discourse to consider the wide array of factors that affect health. For example, the 7-part video series *Unnatural Causes* highlighted the nonmedical determinants of health.²⁶ In addition, the Robert Wood Johnson Foundation established the Commission to Build a Healthier America, whose work highlighted the nonmedical interventions and policies that are necessary to promote health.^{4,14} More recently, the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute produced the first set of county-specific health rankings within each of the 50 states.²⁷ These rankings are based on a broad model of population health addressing the multiple factors that affect health (health behaviors, clinical care, social and economic factors, and the environment). It is not yet clear how these and other recent efforts will change the health discourse in the United States, particularly as health care reform implementation continues to take center stage.

We do not know what the general US public thinks about the broad determinants of health and about the potential role of social and economic policy in improving health. In the United States, public opinion surveys about health have generally focused on opinions about health care or on public health prevention services but not on people's beliefs about a broad range of determinants of health and health disparities.^{28–31} Surveys in other

countries have examined public opinion on a broad range of determinants of health, and a US survey on this topic was conducted among Wisconsin residents.^{32–36}

US public opinion research also has not examined the range of strategies—excepting improved access to health care or health insurance—that the public believes would be effective at improving health. The public's opinions about the nonmedical determinants of health and their level of support for social and economic policies to improve health are likely to influence policymakers' willingness to address social and economic policy as health policy.^{37–39}

We conducted the National Opinion Survey on Health and Health Disparities to better understand US public opinion regarding the determinants of health and health disparities and the policies relevant to improving health and reducing health disparities. We also examined whether opinions differed depending on respondents' education level, income, race/ethnicity, political views, age, gender, and self-rated health status.

METHODS

We contracted with the National Opinion Research Center to complete a national random-digit-dial telephone survey, building on an earlier public opinion survey conducted in Wisconsin.³⁶ The sample was selected to be nationally representative, with an oversample of counties in which at least 40% of the population was Hispanic or African American, or where at least 20% of the population lived below the poverty level, or where at least 40% of households had less than a high school education. Data collection took place from November 13, 2008, through February 15, 2009.

The National Opinion Research Center completed a total of 2791 interviews, with 28% of all interviews coming from the high-density minority or low income and education oversample. In the final sample, the unweighted

racial/ethnic distribution was 77% non-Hispanic White, 16% non-Hispanic Black, and 7% Hispanic. A Council of American Survey Research Organizations response rate of 28% was achieved, with a screener completion rate of 79% and an interview rate of 46%. Weights were created to account for differential probability of selection, unresolved telephone numbers, nonresponse, and multiple phone and landline phone coverage, and to represent the national adult distribution by age, gender, and race/ethnicity.

We summarized the weighted distribution of responses to a number of opinion questions. Comparisons in response distributions were made by respondents' education level (\leq high school education vs $>$ high school education), income ($<$ 200% poverty level, referred to as low income, vs \geq 200% of the poverty level, referred to as higher income), race/ethnicity (White, non-Hispanic vs other), self-rated health status (fair/poor health vs good/very

good/excellent), and political views (conservative, moderate, liberal). We used the χ^2 test to test for statistical significance of differences in subgroup responses. We then conducted logistic regression analyses to determine whether age, gender, education, income, race/ethnicity, health, and political views were each associated with these opinions when we controlled for other variables.

RESULTS

Tables 1 and 2 present people's opinions regarding the factors that they believed to have a very strong effect on health. Tables 3 and 4 summarize respondents' views about the best approaches to improving health.

Factors Affecting Health

Respondents were asked to rate 19 factors that potentially affect people's health, on a scale from 0 to 10, where 0 means the factor has no

effect on health and 10 means it has a very strong effect. The order of these questions was randomized to reduce question-order bias.

Table 1 summarizes the percentages of respondents who rated each of the 19 factors as having a very strong effect on health (a value of 8–10 on a scale of 0–10). Results are presented for the full sample and for subsamples by respondents' education level, income, race/ethnicity, self-rated health, and political views.

Table 1 shows that among American adults, the top 5 factors viewed as having a very strong effect on health were a person's smoking status (88%), personal health practices (86%), access to affordable health care (73%), level of stress (73%), and knowledge about health (72%).

Within subgroups, the ordering of these top 5 rankings stayed about the same for more advantaged subgroups (individuals who were White or had more education, higher income, or better health) and for non-White and

TABLE 1—Survey Respondents Rating Factors as Having a Very Strong Effect on Health: US Adults, 2008–2009

Factors Rated	Full Sample, %	Education, %		Income, %		Race/Ethnicity, %		Self-Rated Health, %		Political Views, %		
		>HS	\leq HS	Higher	Low	White, Non-Hispanic	Other	Good/Very Good/ Excellent	Poor/Fair	Conservative	Moderate	Liberal
Smoking	88	88	84	89	81	87#	89	87#	87	87#	88	90
Personal health practices	86	88	82	87	82	86#	85	87	79	86#	85	87
Access to affordable health care	73	71	76	70	82	69	81	70	86	63	74	83
Stress	73	70	78	71	76	69	80	70	82	71#	73	74
Knowledge about health	72	71#	72	70	75	67	81	71#	72	70#	70	74
Physical environment	70	67	77	66	78	66	78	69	78	64	72	75
Neighborhood options for healthy food and exercise	68	67#	71	68	72	65	76	68#	71	61	68	77
Having health insurance	68	64	73	64	76	63	78	64	85	59	68	77
Having a job	58	54	66	53	68	52	70	55	72	53	58	62
Amount of social support	53	51	57	48	61	49	60	51	62	51	52	56
Genetic makeup inherited from parents	52	50	55	48	57	50	55	49	62	50#	51	54
Income	47	43	56	42	65	43	59	43	70	39	48	54
Community safety	46	43	52	41	57	41	57	43	59	41	46	50
Housing quality	42	39	52	36	61	37	56	40	55	38	42	47
Education	41	39	47	36	51	34	56	40	47	38	40	44
Type of job	41	36	51	37	50	36	53	39	52	40#	37	45
Where a person lives	31	25	44	23	47	27	42	28	44	29#	31	34
Personal religion/spirituality	28	25	36	24	33	25	35	28#	31	36	26	18
Race/ethnicity	22	20	28	19	29	17	34	21	29	21	21	26

Note. HS = high school. Very strong effect on health = rating of 8–10 on a 0–10 scale. All subgroup differences (education $>$ HS vs \leq HS; White, non-Hispanic vs other; higher income vs low income; good/very good/excellent health vs poor/fair health; or political views) were statistically significant ($P < .05$), except for those noted with a # next to the first column of the pair or trio.

Hispanic respondents, but the rank order varied slightly for respondents with less education and lower income and who were in fair/poor health.

As shown in Table 1, almost all US adults (88%) said that smoking is a very strong determinant of health, with no differences by respondents' race/ethnicity, political views, or health status and relatively small differences by respondents' education level.

The second-ranking factor (86%) was personal health practices (the specific survey item gave examples such as what people eat or whether they exercise). Although there were some differences by respondents' education, income, and self-rated health, most subgroups rated this factor highly.

Americans with more education and income were more likely than were those with less education and income to say that smoking and personal health practices have a very strong effect on health; however, they were less likely to list any of the other 17 factors as having a very strong effect on health. In other words, individuals with lower socioeconomic status were more likely than were those with higher socioeconomic status to list a range of health care, genetic, and social factors as having a very strong effect on health. For example, only 25% of those with more than a high school education said they thought that where a person lives has a very strong effect on health, compared with 44% of those with a high school education or less.

There was a gap of at least 10% between the low-income and higher-income groups' ratings for almost all of the remaining factors, with more respondents in the low-income group rating each of the factors as having a very strong effect on health. This finding included a person's level of income (65% of low-income respondents vs 42% of higher-income respondents), the quality of a person's housing (61% vs 36%), and where a person lives (47% vs 23%) as very strong determinants of health.

Although there was no statistically significant difference by race/ethnicity in the percentages reporting smoking and personal health practices as having a very strong effect on health, non-White respondents were more likely than were White respondents to list each of the other 17 factors as having a very strong

effect on health. Only the rating of genetic makeup had less than a 10% difference by race/ethnicity. The 3 biggest differences in ratings between White non-Hispanic and other racial/ethnic groups, respectively, were for whether a person has a job (52% vs 70%), housing quality (37% vs 56%), and level of education (34% vs 56%).

People reporting their health to be fair or poor were less likely than were those in good to excellent health to say that a person's health practices have a very strong effect on health. However, they were more likely to say that many of the other factors, including access to affordable health care, having health insurance, having a job, and level of income have a strong effect on health.

Table 1 shows that there were fewer rating differences by political views than by other individual characteristics. There were no significant differences among self-labeled conservatives, moderates, or liberals in beliefs that smoking, personal health practices, stress, knowledge about health, genetic makeup, a person's job, or where a person lives are very important to health.

Logistic Regression Analyses

Table 2 shows the association between each demographic variable and each opinion item after we controlled for the other demographic variables. Each row represents a separate weighted logistic regression analysis in which a response that a given factor (e.g., whether a person smokes) has a very strong effect on health (rated 8–10=1) or not (rated 0–7=0) is regressed on all the demographic dummy variables (age, gender, education, income, race/ethnicity, self-rated health, and political views).

Opinions about the determinants of health were strongly patterned by multiple factors, even after we controlled for each one. Those with a high school education or less were 28% less likely than were those with more than a high school education to say that smoking has very strong effects on health, and they were 29% less likely to say that personal health practices have very strong effects on health. Similarly, low-income respondents were 47% and 31% less likely than were those with higher incomes to say that smoking and personal health practices, respectively, have very strong effects on health. However, as shown in Table

1, there was a high level of agreement among all groups—even those with less education and income—that smoking and personal health practices have very strong effects on health. For example, 82% of low-income or less-educated individuals rated personal health behaviors as having a very strong effect on health.

Respondent age was associated with opinions about most of the factors affecting health. In general, younger adults (18–44 years) were less likely than were either middle-aged adults (45–64 years) or older adults (≥65 years) to report that a range of social factors have a very strong effect on health. There were particularly large differences between older adults and younger adults in the beliefs that religiosity/spirituality and race/ethnicity affect health, with older adults being 183% and 166% more likely than were younger adults to cite religiosity/spirituality and race/ethnicity, respectively, as having very strong effects on health.

In most cases women were more likely than were men to report each factor as having a very strong effect on health (with the exceptions of smoking, personal health practices, level of education, and where a person lives).

Although there were no socioeconomic differences in opinions about the role of genetics in health, there were strong socioeconomic differences in opinions on most other factors. Adults with lower education and income were almost always more likely to endorse broad social determinants of health than were their counterparts of higher socioeconomic status. For example, respondents with less education and lower income were 46% and 37% more likely, respectively, than were their peers of higher socioeconomic status to think that having a job has a very strong effect on health, 40% and 91% more likely to think that a person's level of income has a very strong effect on health, and 87% and 147% more likely to think that where a person lives has a very strong effect on health.

Race/ethnicity was the most consistent predictor of opinions about determinants of health. Although there were no racial/ethnic differences in views of the effect of personal health practices on health, non-White and Hispanic respondents were much more likely to cite every other listed determinant of health as very important to health when we controlled for other demographic and personal

TABLE 2—Predictors of Rating a Factor as Having a Very Strong Effect on Health: US Adults, 2008–2009

Factors Rated	Age, Years (Ref = 18–44)		Gender (Ref = Men)	Education (Ref => HS)		Income (Ref = Higher)		Race/Ethnicity (Ref = Non-Hispanic White)		Self-Rated Health (Ref = Good/Very Good/Excellent)		Political Views (Ref = Conservative)	
	45–64, OR (95% CI)	≥ 65, OR (95% CI)		Women, OR (95% CI)	HS or Less, OR (95% CI)	Low, OR (95% CI)	Other, OR (95% CI)	Poor/Fair, OR (95% CI)	Moderate, OR (95% CI)	Liberal, OR (95% CI)			
Smoking	1.21 (0.92, 1.60)	1.28 (0.89, 1.84)	1.15 (0.90, 1.48)	0.72* (0.56, 0.94)	0.53* (0.40, 0.71)	1.54* (1.16, 2.04)	1.12 (0.80, 1.57)	0.98 (0.74, 1.30)	1.32 (0.96, 1.82)				
Personal health practices	0.73* (0.57, 0.95)	0.82 (0.59, 1.14)	1.05 (0.83, 1.32)	0.71* (0.56, 0.91)	0.69* (0.52, 0.91)	1.08 (0.83, 1.39)	0.84 (0.62, 1.13)	0.98 (0.75, 1.28)	1.06 (0.79, 1.43)				
Affordable health care access	1.27* (1.04, 1.57)	1.23 (0.94, 1.61)	1.82* (1.51, 2.19)	1.15 (0.94, 1.42)	1.30* (1.02, 1.66)	1.93* (1.55, 2.41)	2.02* (1.49, 2.74)	1.57* (1.28, 1.94)	2.72* (2.11, 3.49)				
Stress	1.36* (1.11, 1.66)	1.30 (0.99, 1.69)	1.79* (1.49, 2.15)	1.37* (1.11, 1.68)	1.10 (0.87, 1.39)	2.28* (1.82, 2.84)	1.60* (1.20, 2.12)	1.06 (0.85, 1.31)	1.05 (0.83, 1.32)				
Knowledge about health	1.27* (1.05, 1.55)	1.30* (1.01, 1.69)	1.33* (1.11, 1.58)	0.98 (0.81, 1.19)	1.16 (0.93, 1.46)	2.19* (1.77, 2.71)	1.05 (0.81, 1.35)	0.99 (0.81, 1.22)	1.14 (0.91, 1.43)				
Physical environment	1.26 (1.03, 1.53)	1.02 (0.79, 1.31)	1.49* (1.25, 1.78)	1.65* (1.34, 2.02)	1.46* (1.16, 1.84)	1.83* (1.48, 2.25)	1.17 (0.90, 1.53)	1.48* (1.21, 1.81)	1.77* (1.41, 2.22)				
Neighborhood options for healthy food and exercise	0.95 (0.79, 1.15)	0.84 (0.66, 1.07)	1.26* (1.06, 1.50)	1.15 (0.95, 1.39)	1.04 (0.83, 1.29)	1.73* (1.42, 2.11)	1.00 (0.78, 1.27)	1.34* (1.10, 1.63)	1.94* (1.55, 2.43)				
Having health insurance	1.58 (1.29, 1.92)	1.49* (1.15, 1.93)	1.89* (1.59, 2.26)	1.29* (1.06, 1.57)	1.24 (0.98, 1.56)	2.17* (1.76, 2.67)	2.57* (1.91, 3.45)	1.37* (1.12, 1.67)	2.29* (1.81, 2.89)				
Having a job	1.53* (1.27, 1.85)	2.51* (1.94, 3.23)	1.48* (1.25, 1.75)	1.46* (1.21, 1.76)	1.37* (1.11, 1.69)	2.34* (1.93, 2.83)	1.53* (1.20, 1.95)	1.13 (0.93, 1.38)	1.45* (1.17, 1.80)				
Amount of social support	1.33* (1.11, 1.60)	1.55* (1.22, 1.96)	1.57* (1.34, 1.85)	1.18 (0.99, 1.42)	1.46* (1.19, 1.79)	1.61* (1.34, 1.93)	1.21 (0.96, 1.52)	1.05 (0.87, 1.26)	1.25* (1.02, 1.53)				
Genetic makeup	1.29* (1.08, 1.55)	1.16 (0.92, 1.47)	1.88* (1.60, 2.21)	1.16 (0.97, 1.39)	1.13 (0.93, 1.39)	1.33* (1.11, 1.59)	1.39* (1.11, 1.75)	0.99 (0.82, 1.19)	1.10 (0.90, 1.36)				
Income	1.51* (1.25, 1.82)	1.81* (1.42, 2.32)	1.76* (1.48, 2.09)	1.40* (1.16, 1.68)	1.91* (1.55, 2.36)	2.03* (1.69, 2.45)	2.08* (1.64, 2.65)	1.32* (1.09, 1.62)	1.76* (1.42, 2.18)				
Community safety	1.35* (1.13, 1.63)	1.59* (1.25, 2.02)	1.89* (1.60, 2.23)	1.28* (1.07, 1.54)	1.34* (1.09, 1.64)	2.05* (1.71, 2.46)	1.44* (1.15, 1.81)	1.21 (1.00, 1.46)	1.47* (1.19, 1.81)				
Housing quality	1.08 (0.90, 1.06)	1.08 (0.85, 1.38)	1.93* (1.63, 2.29)	1.43* (1.19, 1.72)	2.12* (1.72, 2.60)	2.19* (1.82, 2.63)	1.23 (0.98, 1.56)	1.08 (0.89, 1.32)	1.34* (1.09, 1.66)				
Education	1.44* (1.19, 1.74)	1.81* (1.42, 2.30)	1.14 (0.97, 1.35)	1.20 (0.99, 1.44)	1.64* (1.33, 2.01)	2.67* (2.22, 3.20)	1.06 (0.84, 1.34)	1.11 (0.92, 1.36)	1.31* (1.06, 1.62)				
Kind of job	1.55* (1.28, 1.87)	1.85* (1.45, 2.35)	1.44* (1.21, 1.70)	1.68* (1.40, 2.01)	1.30* (1.06, 1.60)	2.25* (1.87, 2.70)	1.22 (0.97, 1.54)	0.83 (0.69, 1.02)	1.22 (0.99, 1.51)				
Where a person lives	1.58* (1.29, 1.94)	1.75* (1.35, 2.27)	1.19 (0.99, 1.43)	1.87* (1.54, 2.27)	2.47* (1.99, 3.06)	1.85* (1.53, 2.25)	1.13 (0.89, 1.44)	1.12 (0.91, 1.39)	1.37* (1.09, 1.72)				
Personal religion/spirituality	2.02* (1.64, 2.50)	2.83* (2.18, 3.68)	1.46* (1.21, 1.76)	1.67* (1.37, 2.04)	1.39* (1.10, 1.74)	1.88* (1.53, 2.30)	0.95 (0.74, 1.23)	0.64* (0.52, 0.79)	0.39* (0.31, 0.51)				
Race/ethnicity	2.00* (1.59, 2.53)	2.66* (1.99, 3.56)	2.17* (1.76, 2.68)	1.51* (1.21, 1.89)	1.40* (1.09, 1.79)	3.20* (2.58, 3.97)	1.12 (0.86, 1.47)	0.95 (0.74, 1.21)	1.33* (1.03, 1.71)				

Note. CI = confidence interval; HS = high school; OR = odds ratio. Each row shows results from a logistic regression in which responses that a given factor has a very strong effect on health (1) or not (0) are regressed on age, gender, education, race/ethnicity, income, self-rated health and political views. Each regression controls for the other predictors.
*P ≤ .05.

TABLE 3—Survey Respondents Rating Approaches as Very Effective at Improving Health: US Adults, 2008–2009

Approaches Rated	Full Sample	Education		Income		Race/Ethnicity		Self-Rated Health		Political Views		
		>HS, %	≤HS, %	Higher, %	Low, %	White, Non-Hispanic, %	Other, %	Good/Very Good/Excellent, %	Poor/Fair, %	Conservative, %	Moderate, %	Liberal, %
Reducing smoking	87	88	83	87	83	85#	88	87	83	89#	84	88
Providing health insurance to more people	72	70	77	69	82	68	82	69	88	58	74	86
Programs to encourage people to improve personal health practices	66	63	70	65	68#	63	72	66#	66	65#	63	68
Reducing pollution	65	61	73	61	74	61	75	62	79	57	65	75
Reducing poverty	65	61	71	61	74	60	76	61	78	55	65	76
Improving access to early childhood development programs	63	62#	65	60	68	59	73	62	71	57	64	70
Reducing violence in communities	57	53	65	52	66	54	65	56	65	52	57	62
Reducing unemployment	50	48	56	46	62	46	62	47	68	43	52	55
Increasing the number of people who finish high school	47	45	51	43	56	43	57	46	53	42	50	49
Improving social supports and social networks	40	37	44	37	47	35	51	38	49	35	40	46
Improving housing quality	36	33	45	31	53	31	50	33	52	33	35	43

Note. HS = high school. Very effective at improving health = rating of 8–10 on a 0–10 scale. All subgroup differences (> HS vs ≤ HS; White, non-Hispanic vs other; higher vs low income; good/very good/excellent health vs poor/fair health; or political views) were statistically significant ($P < .05$), except for those noted with a # next to the first column of the pair or trio.

characteristics. Indeed, the magnitude of these differences was quite strong, with non-White and Hispanic respondents more than 100% more likely than Whites to list stress, knowledge about health, health insurance, having a job, income, community safety, housing quality, level of education, and type of job as very important to health. They were also 220% more likely to say that a person's race or ethnicity has a very strong effect on health.

When we controlled for other demographic and personal characteristics, some of the differences of opinion by health status were muted, though a number of significant differences remained. In particular, those in fair or poor health were more than 100% more likely to say that a person's access to affordable health care, whether a person has health insurance, and income each have very strong effects on health.

Political views, particularly liberal versus conservative views, were associated with opinions about the broad social determinants of health, even after we controlled for other demographic and personal characteristics. There were no political differences in the opinions that smoking, personal health practices, stress, knowledge about health, and

genetics have a very strong effect on health. But liberals were 172% more likely than were conservatives to say that access to affordable health care has a very strong effect on health and 129% more likely to say that having health insurance has a very strong effect on health. Liberals were also much more likely than were conservatives to consistently report that broader social determinants of health have a very strong effect on health.

Approaches to Improving Health

Respondents were provided a list of 11 possible approaches for improving people's health and were asked whether they thought each approach would be very effective, somewhat effective, or not effective at improving people's health. Table 3 shows the percentage of respondents reporting that each approach would be very effective at improving health, for the full sample and by respondent education, income, race/ethnicity, self-rated health status, and political view.

A high percentage of respondents (87%) said that approaches aimed at reducing smoking would be very effective at improving health; respondents with more education, more

income, or better health reported slightly higher percentages. Providing health insurance to more people was ranked second overall and was considered very effective by most subgroups, except for conservatives. In third place for the full sample were programs to encourage people to improve their personal health practices.

In general, more of the respondents who had less education, lower income, liberal political views, or fair/poor health, or who were non-White or Hispanic, said that each approach would be very effective at improving health than did respondents in the more advantaged groups or who were conservative. Furthermore, the ordering of the most effective approaches was not the same for the more disadvantaged groups as it was for the more advantaged groups. In particular, whereas "programs to encourage people to improve their personal health practices" was ranked third among very effective approaches for all 4 of the more advantaged subgroups (those with more education, higher income, or good/excellent health, or who were White), this approach was ranked lower by the subgroups with less education, lower income, or fair/poor health, or who were non-White or Hispanic.

TABLE 4—Predictors of Rating an Approach as Being Very Effective at Improving Health: US Adults, 2008–2009

Approaches Rated	Age, Years (Ref= 18–44)		Gender (Ref= Men)		Education (Ref=> HS)		Income (Ref= Higher)		Race/Ethnicity (Ref= Non-Hispanic White)		Self-Rated Health (Ref= Good/Very Good/Excellent)		Political Views (Ref= Conservative)	
	45–64, OR (95% CI)	≥ 65 OR, (95% CI)	Women, OR (95% CI)	HS or Less, OR (95% CI)	Low, OR (95% CI)	Other, OR (95% CI)	Poor/Fair, OR (95% CI)	Moderate, OR (95% CI)	Liberal, OR (95% CI)					
Reducing smoking	1.67* (1.27, 2.18)	1.80* (1.25, 2.59)	1.26* (0.99, 1.60)	0.73* (0.56, 0.93)	0.87 (0.65, 1.17)	1.59* (1.21, 2.10)	0.73* (0.53, 0.99)	0.62* (0.47, 0.82)	0.83 (0.60, 1.13)					
Providing health insurance to more people	0.99 (0.80, 1.22)	0.99 (0.76, 1.30)	2.26* (1.87, 2.74)	1.43* (1.15, 1.76)	1.28 (0.99, 1.64)	2.06* (1.65, 2.58)	2.73* (1.97, 3.80)	1.93* (1.57, 2.38)	4.28* (3.28, 5.57)					
Programs to encourage people to improve personal health practices	0.96 (0.80, 1.16)	1.40* (1.09, 1.79)	0.97 (0.82, 1.15)	1.30* (1.08, 1.57)	0.99 (0.80, 1.22)	1.52* (1.25, 1.83)	0.91 (0.72, 1.15)	0.96 (0.80, 1.17)	1.21 (0.98, 1.50)					
Reducing pollution	1.00 (0.82, 1.21)	1.41* (1.09, 1.82)	1.56* (1.32, 1.86)	1.66* (1.37, 2.03)	1.25* (1.00, 1.56)	1.97* (1.61, 2.40)	2.00* (1.52, 2.62)	1.40* (1.15, 1.70)	2.28* (1.82, 2.86)					
Reducing poverty	1.10 (0.91, 1.33)	1.54* (1.19, 2.00)	1.70* (1.42, 2.02)	1.45* (1.19, 1.77)	1.36* (1.08, 1.70)	2.25* (1.84, 2.76)	1.66* (1.28, 2.17)	1.53* (1.26, 1.86)	2.50* (2.00, 3.14)					
Improving access to early childhood development programs	1.17 (0.97, 1.40)	1.13 (0.88, 1.44)	1.23* (1.04, 1.46)	1.01 (0.84, 1.21)	1.28* (1.03, 1.58)	1.86* (1.53, 2.25)	1.30* (1.02, 1.65)	1.25* (1.03, 1.51)	1.69* (1.36, 2.10)					
Reducing violence in communities	1.65* (1.37, 1.98)	2.22* (1.73, 2.84)	1.48* (1.26, 1.75)	1.51* (1.26, 1.82)	1.44* (1.17, 1.78)	1.58* (1.31, 1.90)	1.15* (0.91, 1.45)	1.27* (1.05, 1.54)	1.57* (1.27, 1.93)					
Reducing unemployment	1.48* (1.23, 1.78)	1.82* (1.43, 2.32)	1.65* (1.40, 1.95)	1.15* (0.96, 1.39)	1.43* (1.16, 1.75)	2.10* (1.75, 2.52)	1.72* (1.36, 2.17)	1.37* (1.13, 1.66)	1.54* (1.25, 1.89)					
Increasing no. of people who finish HS	1.53* (1.27, 1.83)	2.11* (1.67, 2.68)	1.30* (1.10, 1.53)	1.23* (1.02, 1.47)	1.53* (1.25, 1.87)	1.76* (1.47, 2.11)	1.03* (0.82, 1.30)	1.37* (1.13, 1.66)	1.34* (1.09, 1.64)					
Improving social supports and social networks	1.24* (1.03, 1.49)	1.29* (1.01, 1.64)	1.40* (1.19, 1.66)	1.21* (1.01, 1.45)	1.26* (1.02, 1.54)	1.86* (1.55, 2.23)	1.31* (1.05, 1.65)	1.17* (0.96, 1.42)	1.47* (1.19, 1.82)					
Improving housing quality	1.08 (0.89, 1.31)	1.18 (0.92, 1.51)	1.77* (1.49, 2.11)	1.41* (1.17, 1.70)	1.74* (1.41, 2.14)	2.21* (1.84, 2.66)	1.55* (1.23, 1.96)	0.99 (0.81, 1.21)	1.47* (1.18, 1.82)					

Note. CI = confidence interval; HS = high school; OR = odds ratio. Each row shows results from a logistic regression in which responses that a given approach would be very effective at improving health (1) or not (0) are regressed on age, gender, education, race/ethnicity, income, self-rated health, and political views. Each regression controls for the other predictors. *P ≤ .05.

“Programs to encourage people to improve their personal health practices” was ranked sixth among liberals.

Table 4 shows the association between each demographic variable and each opinion item about an approach to improve health when we controlled for the other demographic variables. Each row represents a separate weighted logistic regression analysis in which a response that a given approach (e.g., reducing smoking) would be very effective at improving health (rated 8–10=1) or not (rated 0–7=0) was regressed on all the demographic dummy variables listed (age, gender, education, income, race/ethnicity, self-rated health, and political views). All the demographic and personal characteristics were associated with opinions about the types of approaches that would be very effective at improving health.

After we controlled for other predictors, reducing smoking was more likely to have been seen as a very effective approach to improving health by middle-aged adults (odds ratio [OR]=1.67; 95% confidence interval [CI]=1.27, 2.18), older adults (OR=1.80; 95% CI=1.25, 2.59), women (OR=1.26; 95% CI=0.99, 1.60), and racial/ethnic minorities (OR=1.59; 95% CI=1.21, 2.10), and less likely to be seen as a very effective approach by those with less education (OR=0.73; 95% CI=0.56, 0.93), those in fair/poor health (OR=0.73; 95% CI=0.53, 0.99), and moderates (OR=0.62; 95% CI=0.47, 0.99, compared with conservatives). As seen in Table 3, this finding is in the context of a rate of more than 80% agreement within every subgroup that programs to reduce smoking would be very effective at improving health.

Providing health insurance to more people was more likely to be endorsed as being a very effective way to improve health by women (OR=2.26; 95% CI=1.87, 2.74), those with less education (OR=1.43; 95% CI=1.15, 1.76), non-Whites (OR=2.06; 95% CI=1.65, 2.58), those in fair/poor health (OR=2.73; 95% CI=1.97, 3.80), and those who were moderate (OR=1.93; 95% CI=1.57, 2.38) or liberal (OR=4.28; 95% CI=3.28, 5.57). Agreement about the health effects of programs to encourage people to improve their personal health practices did not vary by subgroup as much as agreement about many of the other approaches did; however, older adults, those

with less education, and racial/ethnic minorities were more likely to endorse this approach as very effective at improving health.

As with the previous analyses, respondents who said that a range of social and economic approaches would be very effective at improving health were more likely to be older, women, less educated, non-White, in poor health, or liberal or moderate in political views, or to have lower income. These subgroups were more likely than were their counterparts to consistently endorse reducing pollution, reducing poverty, improving access to early childhood development programs (except no difference by age and education), reducing violence in communities, reducing unemployment, increasing the number of people who finish high school, improving social supports and social networks, and improving quality of housing (except no difference by age) as very effective ways to improve health.

DISCUSSION

Research consistently demonstrates that a range of social and economic factors—beyond medical care and individual behaviors—affects health, which suggests that many social and economic policies could be seen as health policies.^{11,13,14} Our national public opinion survey was designed to tell us whether US adults had a broad view on the range of determinants of health that was consistent with the research, and to tell us what intervention or policy approaches the public thought would be effective at improving health. In other words, we sought to determine whether the US public viewed social policy as health policy.

Some of our results confirm what public discourse and media content suggest^{25,40}: most of the US general public viewed personal health behaviors and access to affordable health care as very strong determinants of health. Although there were some differences across demographic groups, all groups generally reported a high level of belief that individual behavior and access to care are very important to health. Fewer respondents recognized broader social and economic determinants of health as having very strong effects on health. For example, less than half of the general population said that income, community safety, quality of housing,

education, one's job, where one lives, religiosity/spirituality, and race/ethnicity have very strong effects on health.

Moreover, people who were more likely to say that social and economic factors are very important to health were different in systematic ways from those who were less likely to attribute a strong health effect to those factors: such respondents were more likely to be older, female, liberal, or non-White, or to have less education, lower income, or fair/poor health. Although previous research suggests that political views are likely to be associated with opinions on the social determinants of health,^{41,42} our results demonstrated that political views are only one of many factors associated with opinions on the social determinants of health, even after we simultaneously controlled for these various factors.

Individuals with less education and lower income were much more likely than were individuals of higher socioeconomic status to say that a range of social and economic factors affect health, even after we controlled for political views and demographic factors. People with lower socioeconomic status, who are most negatively affected by uneven distribution of poor social and economic conditions, are less involved in political participation and voting, on average. Therefore, politicians may take longer to act on social and economic determinants of health if their constituents are not involved politically to make it clear how these factors affect their health and well-being. Moreover, healthy people of higher socioeconomic status (who are more likely to be politically active) were more likely to report that a person's health practices have a very strong effect on health, and this may result in politicians and the politically active promoting individual responsibility for personal health to the exclusion of simultaneous societal efforts to improve the social and economic contexts that can affect health and shape people's ability to make healthy lifestyle choices.

Approaches to Change

Perhaps it is the lens of experience that makes people of lower status in society believe that many social factors might affect health. If so, then perhaps recent calls to focus on

community capacity-building to translate research evidence into practice^{43,44} are well founded. Community capacity-building and other efforts to mobilize groups and communities of lower socioeconomic status, people with poor health, women, and older adults to mobilize politically may be effective ways to stimulate discourse concerning the social determinants of health and to increase awareness of and advocacy for social policies to improve health.

If the lens of experience leads lower-status individuals to recognize a broader set of determinants of health, this fact would also support recent calls for narrative approaches to contextualize the social determinants of health, such as communicating better how individual health behaviors are shaped by broader social and economic conditions in which we live, work, and play.^{40,45} Narrative approaches may be necessary to help more advantaged groups envision or sympathize with the realities of those in more disadvantaged situations, so they can more clearly understand how broader social structures and social factors indeed end up affecting individual health choices, behaviors, and opportunities. However, this approach should be used with caution: there is evidence that citing structural explanations for poor health without simultaneously recognizing the importance of individual behavior and responsibility may backfire.⁴¹ Our results show that all groups in society believe that individual health behaviors are important to health, so the current study provides further evidence that communications about the social determinants of health should be grounded in the widespread understanding that individual health behaviors are important too.

It is encouraging that almost 90% of adults now recognize that smoking has a very strong effect on health and that this recognition does not vary significantly by age, gender, political views, or health status. Programs to reduce smoking were ranked as very effective by the highest percentage of respondents, regardless of their education level, income level, or race. Knowledge about the health effects of smoking has only been established over the last few decades; thus, these results demonstrate how far the general public's knowledge has come in terms of understanding smoking as a strong cause of poor health and recognizing smoking intervention as an effective approach to improve health. We interpret this as an

encouraging sign that members of the public could similarly increase their knowledge over time about the many other social and economic factors that are strong determinants of health.

Particularly striking to us are the results regarding education. There is a wealth of evidence that education is strongly associated with health.^{2,8,9,46} Despite this evidence, less than half of respondents said that a person's level of education has a very strong effect on health. Similarly, less than half of US adults said that increasing the number of people who finish high school is a very effective approach to improve health. Even among liberals, only 49% listed this as a very effective approach to improve health. However, there was slightly more support for improving access to early childhood development programs, supported by 63% of the full sample and 70% of liberals.

Social Policy as Health Policy

It is unclear what metric one would use to judge whether US adults view social policy as health policy. In theory, believing that a particular approach would be effective at improving health is necessary but not sufficient for a person to then actively support that particular policy to improve health. Of course, the politics surrounding any particular policy means that a belief in "effectiveness" would not necessarily translate into actual political support. Therefore, a very high level of public support might be needed to mobilize the public and policymakers to move a social policy onto the policy agenda for improving health.

As a hypothetical exercise, let us assume that in order for a particular group to provide political support for implementation of a policy or program to improve health, at least two thirds of that group would need to believe that the approach in question would be very effective at improving health. On the basis of that assumption, our results would suggest that conservatives would only support approaches to reduce smoking. Moderates would support that approach as well as providing health insurance to more people. Liberals would support those approaches and would also support programs to encourage people to improve their personal health practices, approaches to reduce poverty, improving access

to early childhood development programs, and reducing pollution.

Our results show that even liberals would not have two-thirds support for approaches to reduce violence in communities, reduce unemployment, increase the number of people who finish high school, improve the quality of housing, or improve social supports and social networks as ways to improve health. Similarly, White people and people with more education and income would only support approaches to reduce smoking and provide health insurance to more people. Even those groups most likely to view social policy as health policy would only have a two-thirds majority to support about half of the approaches.

Numerous researchers, policymakers, and foundations are trying to garner support for initiatives to improve social and economic policies as a method to improve health.^{11,13,14,47} From their perspective, one could see the glass as either half full or half empty in terms of the general public's attitudes and beliefs about the determinants of health and effective strategies to improve health. Certainly, those who have the most to gain from improvements in social and economic policy—racial/ethnic minorities and those with lower income, less education, and fair/poor health—are more likely to believe that such policies would benefit health. Finding ways to mobilize these groups may be a fruitful direction for action, rather than only trying to sway the opinions of those who do not currently see social policy as health policy.

Limitations

We acknowledge a number of limitations to our study. Because our survey was phone-based, adults without a phone were not represented. As response rates by phone are never ideal, our results may not be generalizable to the general public, although we did address this issue as best we could by creating weights to adjust for uneven response rates and by oversampling in low-income and non-White areas to improve point estimates for lower socioeconomic status subgroups and minority racial/ethnic subgroups. Our survey contractor, the National Opinion Research Center, used state-of-the-art follow-up call-back protocols, so our results should be at least as reliable as most phone surveys conducted in the past few years.

Another limitation is that many of our variables were measured crudely, such as using dichotomous measures of education and income or splitting race/ethnicity into non-Hispanic White versus other. This approach allowed easier summary interpretation of these public opinion data, but it may mask nuances in trends among subgroups. It also means that the logistic regression odds ratio point estimates may be too large, because the controls were not all measured with precision.

Conclusions

Our national public opinion survey is the first to our knowledge to document the public's opinion about a range of determinants of health and views about policies that would address health and health disparities. Our findings with regard to national public opinion on the social determinants of health indicate that there is room to move public opinion to recognize a broader range of factors that affect health. Moreover, there is also room for growth in terms of public opinion on seeing a range of social and economic policies as being relevant to health.

However, it is not entirely clear how best to communicate with the public regarding the importance of social and economic determinants of health and the potential for considering social policy as health policy, and we encourage additional research in this area.^{41,45} Additional research is needed to evaluate not only how to best communicate evidence related to the social determinants of health but also how to effectively mobilize groups to advocate for social policy change to improve health. ■

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This article was accepted March 1, 2011.

Contributors

S.A. Robert and B.C. Booske both participated in conceptualizing and designing the study, supervising the data collection, conducting the analyses, and writing the article.

Acknowledgments

Support for this study was provided by a grant from the Robert Wood Johnson Foundation.

Human Participant Protection

This study protocol was approved by the University of Wisconsin–Madison Social and Behavioral Sciences institutional review board. Phone survey participants provided oral informed consent to participate.

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