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Religion's Relationship to Happiness, Civic Engagement and Health Around the World

In the U.S. and other countries, participation in a congregation is a key factor

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Religion's Relationship to Happiness, Civic Engagement and Health Around the World

In the U.S. and other countries, participation in a congregation is a key factor

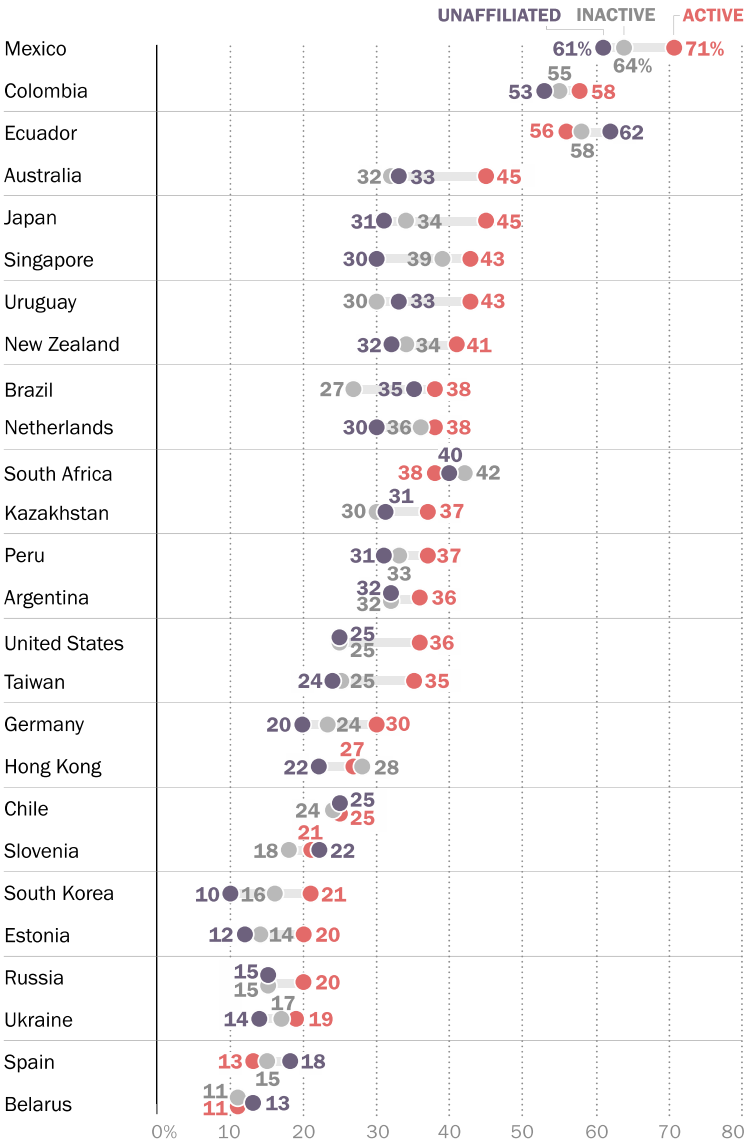
People who are active in religious congregations tend to be happier and more civically engaged than either religiously unaffiliated adults or inactive members of religious groups, according to a new Pew Research Center analysis of survey data from the United States and more than two dozen other countries.

Religiously active people also tend to smoke and drink less, but they are *not* healthier in terms of exercise frequency and rates of obesity. Nor, in most countries, are highly religious people more likely to rate themselves as being in very good overall health – though the U.S. is among the possible exceptions.

Many previous studies have found positive associations between religion and health in the United States. Researchers

Actively religious people tend to be happier

% who say they are "very happy," among those who are religiously ...



Note: The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: Data for United States from Pew Research Center's 2012 Gender and Generations survey. Data for all other countries from World Values Survey, 2010-2014.
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have shown, for example, that Americans who regularly attend religious services tend to live longer.[1] Other studies have focused on narrower health benefits, such as how religion may help breast cancer patients cope with stress. On the other hand, there are also studies that have not found a robust relationship between religion and better health in the U.S., and even some studies that have shown *negative* relationships, such as higher rates of obesity among highly religious Americans. (For more on previous studies of religion and health, see sidebar, page 25.)

Taking a broad, international approach to this complicated topic, Pew Research Center researchers set out to determine whether religion has clearly positive, negative or mixed associations with **eight different indicators** of individual and societal well-being available from international surveys conducted over the past decade. Specifically, this report examines survey respondents' self-assessed levels of happiness, as well as five measures of individual health and two measures of civic participation.[2]

By dividing people into three categories, the study also seeks to isolate whether religious *affiliation* or religious *participation* – or both, or neither – is associated with happiness, health and civic engagement. The three categories are: "Actively religious," made up of people who identify with a religious group and say they attend services at least once a month (sometimes called "actives"); "inactively religious," defined as those who claim a religious identity but attend services less often (also called "inactives"); and "religiously unaffiliated," people who do not identify with any organized religion (sometimes called "nones").[3]

This analysis finds that in the U.S. and many other countries around the world, *regular participation in a religious community* clearly is linked with higher levels of happiness and civic engagement (specifically, voting in elections and joining community groups or other voluntary organizations). This may suggest that societies with declining levels of religious engagement, like the U.S., could be at risk for declines in personal and societal well-being. But the analysis finds comparatively little evidence that religious *affiliation,* by itself, is associated with a greater likelihood of personal happiness or civic involvement.

[1] Idler, Ellen, John Blevins, Mimi Kiser, and Carol Hogue. 2017. "Religion, a social determinant of mortality? A 10-year follow-up of the Health and Retirement Study." PLoS One.

[2] Pew Research Center chose these particular indicators because of their availability in comprehensive, cross-national survey datasets. There are many other ways one could measure health and well-being – e.g., by looking at rates of depression or suicide, incidence of cancer, and mortality – but individual-level cross-national survey data representing general adult populations on these measures are not available in conjunction with measures of religious affiliation and practice.

[3] While some religiously unaffiliated people do report attending religious services regularly, they are relatively small in number. As a result, the broad patterns described in this report would not change substantially if these churchgoing "nones" were moved to the "actively religious" category.

Moreover, there is a mixed picture on the five health measures. In the U.S. and elsewhere, actively religious people are less likely than others to engage in certain behaviors that are sometimes viewed as sinful, such as smoking tobacco and drinking alcohol. But religious activity does not have a clear association with how often people exercise or whether they are obese. And, after adjusting for differences in age, education, income and other factors, there is no statistical link between being actively religious and being in better self-reported overall health in any of the 26 countries and territories studied except Taiwan, Mexico and the United States.[4]

In the U.S., religion tied to some measures of health, happiness and civic engagement

% of U.S. adults who say they _____ among those who are religiously ...

Note: Frequent drinking is defined as drinking several times per week. The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Sources: Happiness data for United States from Pew Research Center's 2012 Gender and Generations survey. Data on drinking, smoking, obesity and exercise come from the International Social Survey Programme's 2011 Health and Health Care module. Data on civic engagement and health come from 2010-2014 World Values Surveys.
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Even in the U.S., the strength of the linkage between religion and health varies, depending on measures and datasets used. For example, in some years, the General Social Survey has shown that religiously affiliated people who go to church or other religious services at least once a month are particularly likely to

[4] In Taiwan, the apparent relationship between being actively religious and having very good self-rated health seems to be heavily influenced by followers of Yiguandao. Although about 4% of Taiwanese adults in the WVS identify with Yiguandao, the group makes up a much larger share (13%) of the actively religious, and among the actively religious Yiguandao in Taiwan, roughly two-thirds say their health is very good. Vegetarianism is emphasized in Yiguandao, which may help explain why the group's followers tend to rate their health highly.

report that they are in excellent overall health, while in other recent years this has not been the case. (See sidebar on the United States, page 17.)

The exact nature of the connections between religious participation, happiness, civic engagement and health remains unclear and needs further study. While the data presented in this report indicate that there are links between religious activity and certain measures of well-being in many countries, the numbers do not *prove* that going to religious services is directly responsible for improving people's lives. Rather, it could be that certain kinds of people tend to be active in multiple types of activities (secular as well as religious), many of which may provide physical or psychological benefits.[5] Moreover, such people may be more active partly because they are happier and healthier, rather than the other way around. (For more information about what may be causing these links, see sidebar, page 12.)

Whatever the explanation may be, more than one-third of actively religious U.S. adults (36%) describe themselves as very happy, compared with just a quarter of both inactive and unaffiliated Americans. Across 25 other countries for which data are available, actives report being happier than the unaffiliated by a statistically significant margin in almost half (12 countries), and happier than inactively religious adults in roughly one-third (nine) of the countries.

The gaps are often striking: In Australia, for example, 45% of actively religious adults say they are very happy, compared with 32% of inactives and 33% of the unaffiliated. And there is no country in which the data show that actives are significantly *less* happy than others (though in many countries, there is not much of a difference between the actives and everyone else).

When it comes to measuring civic participation, the results again follow a pattern: On balance, people who are actively religious are also more likely to be active in voluntary and community groups. This dovetails with previous studies in the United States.[6]

[5] Numerous studies have shown that a person's social involvement affects their mental and physical health. Engaging in one's community and spending time with family and friends, for example, has been credited with lowering rates of depression, heart disease and overall mortality. See, for example, Thoits, Peggy A. 2011. "Mechanisms Linking Social Ties and Support to Physical and Mental Health." Journal of Health and Social Behavior.

[6] For example, a 2011 Pew Research Center survey found that 41% of U.S. adults said they were active in church groups or other religious or spiritual organizations, and the people who fell into that category were more likely than other Americans to participate in nearly every other kind of community group or voluntary organization, ranging from charities to sports leagues, hobby clubs, professional associations, youth activities and performing arts groups. See "The Civic and Community Engagement of Religiously Active Americans."

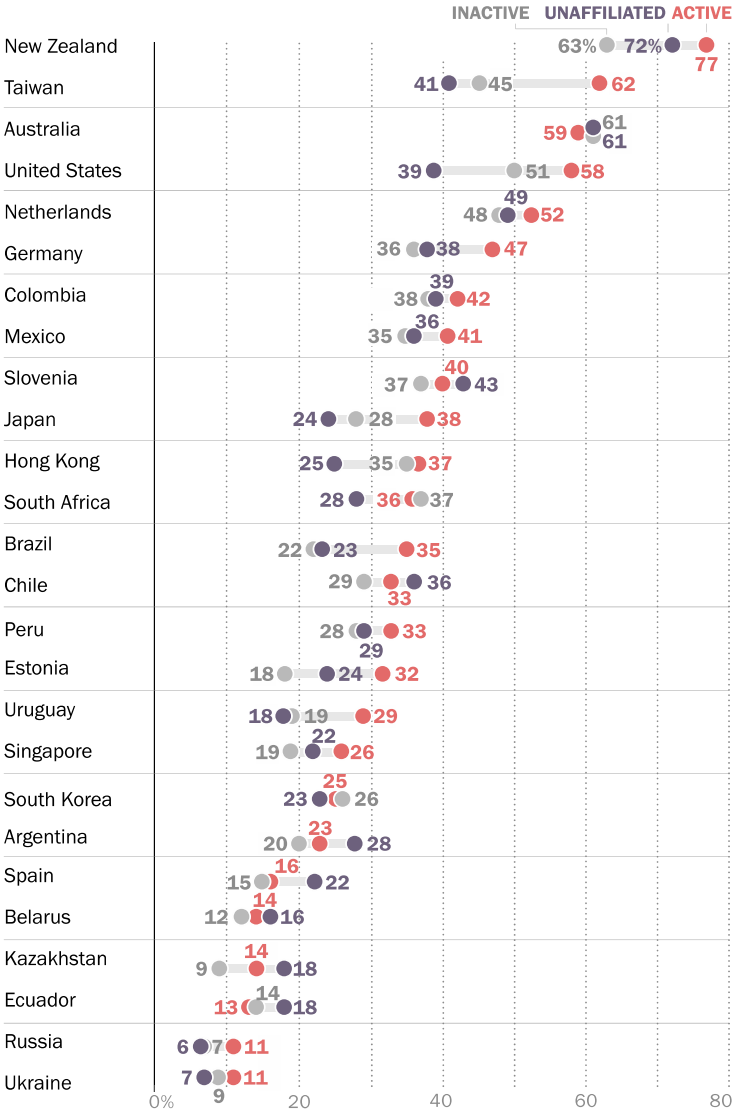
In the U.S., 58% of actively religious adults say they are also active in at least one other (nonreligious) kind of voluntary organization, including charity groups, sports clubs or labor unions. Only about half of all inactively religious adults (51%) and fewer than half of the unaffiliated (39%) say the same.[7]

A similar pattern appears in many other countries for which data are available: Actively religious adults tend to be more involved in voluntary organizations. In 11 out of 25 countries analyzed outside of the U.S., actives are more likely than inactives to join community groups. And in seven of the countries, actively religious adults are more likely than those who are religiously unaffiliated to belong to voluntary organizations.

In addition, a higher percentage of actively religious adults in the United States (69%) say they always vote in

Actively religious people more likely to engage in other types of groups

% who say they are active in at least one nonreligious organization, among those who are religiously ...



Note: Types of organizations include sport or recreational; art, music or educational; labor union, political party or environmental; professional association; humanitarian or charitable; consumer; self-help group; other organizations. The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: 2010-2014 World Values Surveys.
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[7] The late U.S. sociologist Gerhard Lenski argued that religious congregations operate as "training grounds" for secular civic activity.

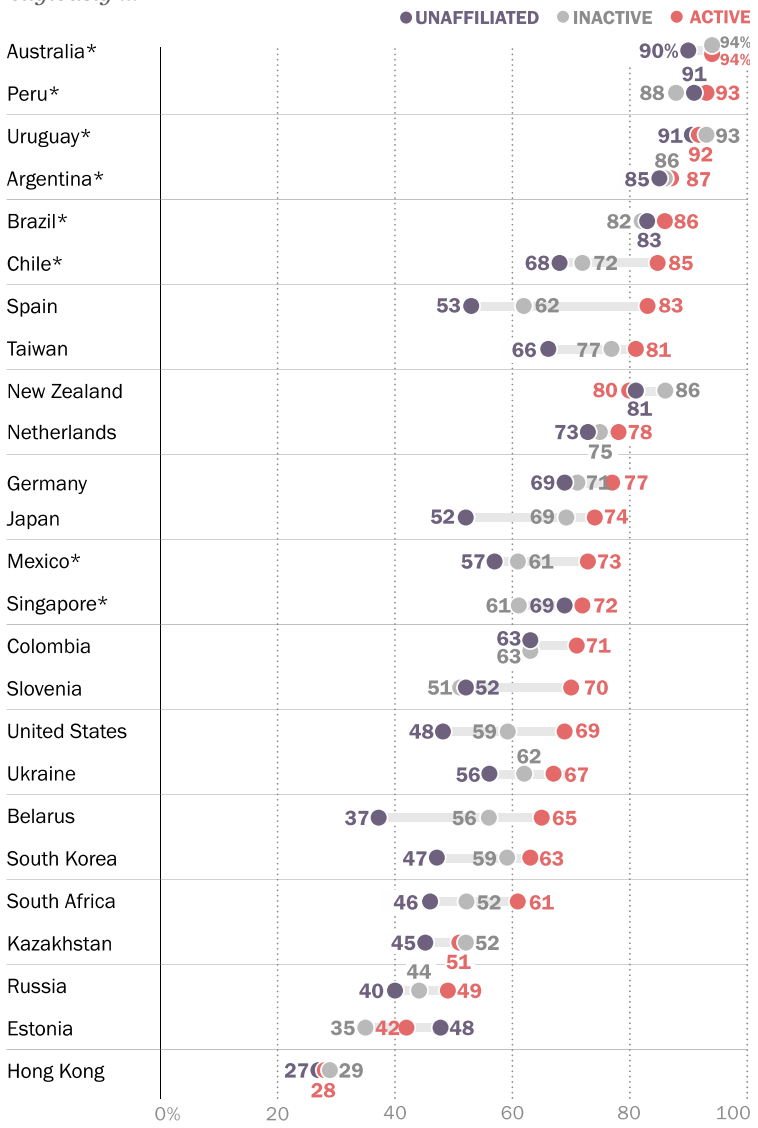
national elections than do either inactives (59%) or the unaffiliated (48%).

Outside of the U.S., actively religious adults are more likely than "nones" to report voting in national elections in half the countries (12 out of 24) for which data on this measure are available; in the remaining countries, there is not much of a difference. Actives also are more likely than their inactive compatriots to say they vote in nine out of 24 countries, while the opposite is not true in any country for which data are available.[8]

These are among the key findings of a new analysis of data from cross-national surveys conducted since 2010 by Pew Research Center and two other organizations: the World Values Survey Association and the International Social Survey Programme. This report focuses on countries with sufficiently large populations of people who are actively religious, inactively religious and religiously unaffiliated to

On balance, actively religious are more likely to vote

% who say they always vote in national elections, among those who are religiously ...



* Countries where voting is mandatory. Chile abandoned compulsory voting in 2012, but the first national election affected by the change did not take place until after these data were collected.
Note: The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: 2010-2014 World Values Surveys.
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[8] In Argentina, Australia, Brazil, Chile, Peru and Uruguay, voting in national elections was compulsory for most or all eligible citizens at the time the surveys were conducted, which helps explain the high turnout in these countries. Chile abandoned compulsory voting in 2012, but the first

allow researchers to compare all three groups using the same survey data. As a result, the analysis cannot be truly global: 26 countries surveyed by the WVS are used to measure self-rated health, happiness and voluntary group participation; 25 countries, also surveyed by the WVS, are included for voting; and 19 countries surveyed by the ISSP are used to examine smoking, drinking alcohol, obesity and exercise. A Pew Research Center survey provides U.S. estimates for self-rated happiness. The countries analyzed are mostly Christian-majority nations in Europe and the Americas (because these countries tend to have substantial unaffiliated populations), though the analysis also includes a few African and Asian countries and territories, such as South Africa, South Korea and Japan.

An additional reason this study relies heavily on data from Christian-majority countries is that regular attendance at religious services – a key measure in this study – is a more central practice in some world religions (such as Christianity, Islam and Judaism) than in others (such as Hinduism or Buddhism, in which there is less emphasis on communal worship).

national election affected by the change did not take place until after these data were collected. In Mexico, voting is also compulsory but the law is not enforced, according to the Institute for Democracy and Electoral Assistance (IDEA). Singapore also has compulsory voting, and although IDEA estimates Singapore's voter turnout at more than 90%, the share of voters captured by the WVS may be lower because about a third of Singapore's population consists of foreign nationals who are not eligible to vote. The gaps in voter turnout vary slightly if the eight countries with mandatory voting requirements are excluded from the analysis: In the remaining 17 countries, actives are more likely than the unaffiliated to vote in 11 countries, and more likely than inactives to vote in six countries.

Sidebar: Social activity, religion and the happiness dividend

While in many countries religious activity seems to be connected with certain benefits, such as higher levels of happiness, it is unclear whether there is a direct, causal connection and, if so, exactly how it works.

Prior research suggests that one factor may be particularly important: The social connections that come with regular participation in group events, such as weekly worship services, Bible study groups, Sabbath dinners and Ramadan iftars.[9] In an effort to understand why religion is related to happiness, Chaeyoon Lim of the University of Wisconsin-Madison and Robert Putnam of Harvard University examined data from a representative sample of American adults surveyed in 2006 and recontacted in 2007. The researchers found that religious participation had a strong impact on happiness among highly religious people with many friends in their congregations, but not among those with few friends in their congregations.[10]

The friendship networks fostered by religious communities create an asset that Putnam and other scholars call "social capital" – which not only makes people happier by giving them a sense of purpose and belonging, but also makes it easier for them to find jobs and build wealth. In other words, those who frequently attend a house of worship may have more people they can rely on for information and help during both good and bad times. Indeed, a range of social scientific research corroborates the idea that social support is pivotal to other aspects of well-being. For instance, one study found that religion indirectly boosts self-reported health because highly religious people had more social capital.[11] Congregation-based relationships may help parishioners cope with stress and reinforce positive health behaviors.[12]

Similarly, research that examines the association between religion and mortality points to religious service participation as the key aspect of religion that promotes longevity. For instance, sociologist Jibum Kim and colleagues have found that regular service attendance is associated with reduced risk of mortality, while strength of religious affiliation, prayer, and religious beliefs have no effect.[13] This association between service attendance and mortality is presumably due to the healthy behaviors and lack of risky behaviors among regular churchgoers.[14]

Although social activity seems to be a key driver of well-being among religiously active people, there is plenty of research to suggest that other factors play a role, too. Some researchers argue that virtues promoted by religion, such as compassion, forgiveness and helping others, may improve happiness and even physical health if they are

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[9] Ellison, Christopher G., and Jeffrey S. Levin. 1998. "The Religion-Health Connection: Evidence, Theory, and Future Directions." Health Education & Behavior.
[10] Lim, Chaeyoon, and Robert D. Putnam. 2010. "Religion, Social Networks, and Life Satisfaction." American Sociological Review.
[11] Yeary, Karen Hye-cheon Kim, Songthip Ounpraseuth, Page Moore, Zoran Bursac, and Paul Greene. 2012. "Religion, Social Capital, and Health." Review of Religious Research.
[12] In sub-Saharan Africa (SSA), congregations play a vital role in spreading information about AIDS and helping people living with HIV and AIDS, argue sociologists Jenny Trinitapoli and Alexander Weinreb in the conclusion to their 2012 book "Religion and AIDS in Africa," which is based on extensive fieldwork and quantitative analysis: "Religious institutions provide spaces where people can intentionally hang out; where they can talk, watch, and listen; where they can go to learn but also have influence. Religious institutions, in other words, are spaces in which social learning, cultural innovation, and cultural transmission take place. Of course, this insight is not specific to AIDS; congregational spaces facilitate discussion and learning about dozens of other issues as well. But the case of AIDS illustrates these processes in tangible ways. In the SSA context it would be hard to overstate the importance of religious spaces for the dissemination of relevant information and the constitution of new strategies for HIV prevention and AIDS mitigation."
[13] Kim, Jibum, Tom W. Smith, and Jeong-han Kang. 2015. "Religious Affiliation, Religious Service Attendance, and Mortality." Journal of Religion and Health.
[14] Gillum, R. F., Dana E. King, Thomas O. Obisesan, and Harold G. Koenig. 2008. "Frequency of Attendance at Religious Services and Mortality in a U.S. National Cohort." Annals of Epidemiology.

practiced by parishioners. Religion may benefit psychological well-being because it encourages supernatural beliefs that can help people deal with stress.[15] Social psychologists identify "stress buffering" mechanisms, such as a perceived connection with the divine, as key ways people may deal with difficult life events.[16] And religious meaning may help people manage suffering, both in their lives and in the lives of those around them.[17] This appears to be particularly important for older people, who tend to experience suffering on a more regular basis.[18]

Other researchers argue that religion can more directly lead to better health by proscribing risky behaviors and promoting healthy ones.[19] Many religions discourage members from excessive alcohol and drug use, for example.[20] Some religions, such as the Seventh-day Adventist Church and certain schools of Buddhism and Hinduism, encourage specific behaviors that may have health benefits, such as a vegetarian diet, regular exercise and meditation.[21]

Finally, it could also be that religious activity is associated with greater well-being simply because happier, healthier people have more inclination and ability to be active in their communities, including religious groups. People who are unhappy and struggling physically or financially generally may be more isolated and less able to engage in social activities.

All of these explanations are not mutually exclusive: While it may be the case that happier and healthier people tend to be more involved in social groups of all kinds – secular as well as religious – it may also be true that individuals reap well-being benefits from the social connections they build in religious congregations and other aspects of religious involvement.

[15] Koenig, Harold G., Dana E. King, and Verna Benner Carson. 2012. "Handbook of Religion and Health, Second Edition."
[16] Schieman, Scott, Alex Bierman, and Christopher G. Ellison. 2013. "Religion and Mental Health." In Carol S. Aneshensel, Jo C. Phelan, and Alex Bierman, eds. "Handbook of the Sociology of Mental Health, Second Edition."
[17] For example, see Park, Crystal L. 2005. "Religion as a Meaning-Making Framework in Coping with Life Stress." Journal of Social Issues.
[18] Krause, Neal. 2003. "Religious Meaning and Subjective Well-Being in Late-Life." The Journals of Gerontology: Series B. Also see Krause, Neal, and Elena Bastida. 2011. "Religion, Suffering, and Self-rated Health among Older Mexican Americans." The Journals of Gerontology: Series B.
[19] Koenig, Harold G., Dana E. King, and Verna Benner Carson. 2012. "Handbook of Religion and Health, Second Edition."
[20] Gorsuch, Richard L. 1995. "Religious Aspects of Substance Abuse and Recovery." Journal of Social Issues.
[21] For example, among Seventh-day Adventists in California, vegetarians were found to have lower risks of colon and prostate cancer, diabetes, hypertension and arthritis than non-vegetarians. See Fraser, Gary E. 1999. "Associations between diet and cancer, ischemic heart disease, and all-cause mortality in non-Hispanic white California Seventh-day Adventists." American Journal of Clinical Nutrition.

Actively religious people have some healthier behaviors, but not better self-rated health

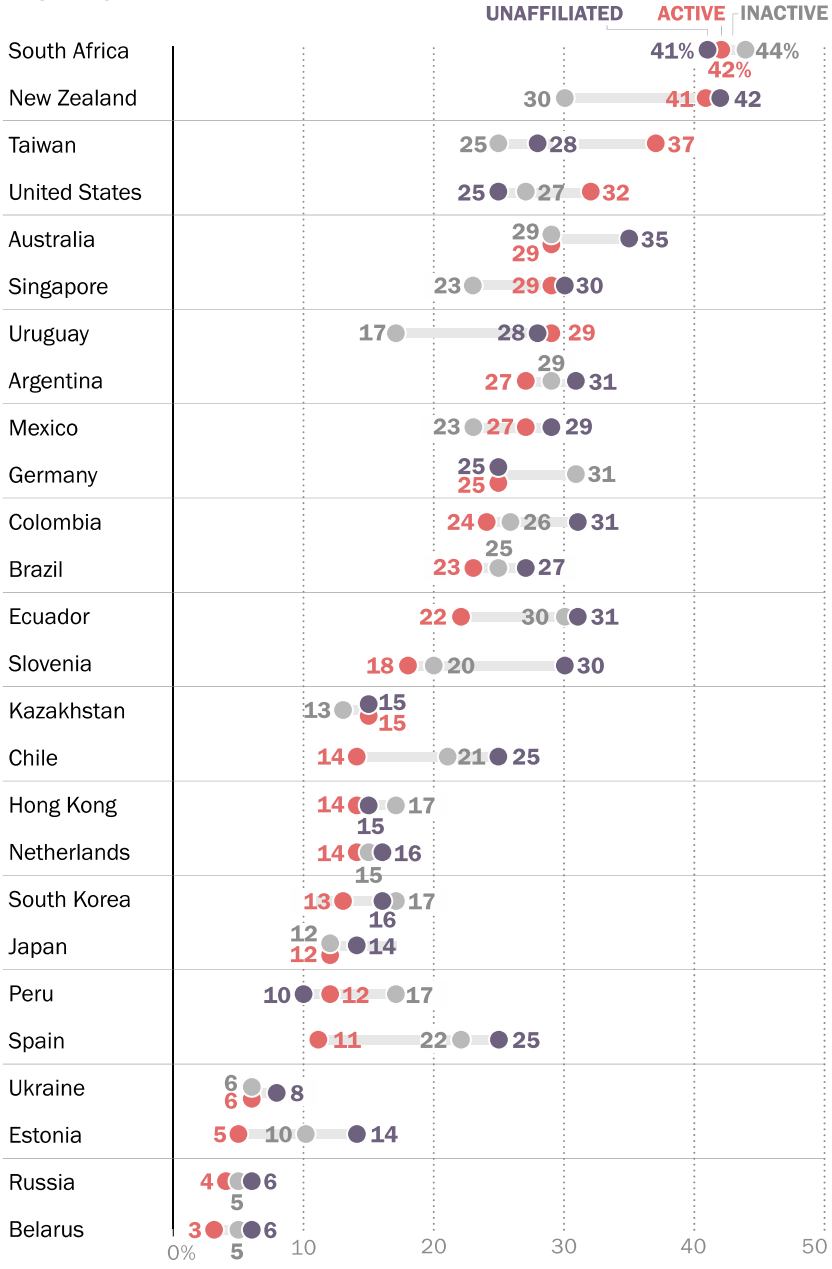
When it comes to self-assessments of health, there is no clear pattern to indicate that either identifying with a religion or regularly attending religious services makes a significant difference in an international context.

In half of the countries analyzed, including South Africa, Germany and South Korea, there is not much of a difference between any two of the three groups, whether one compares actives with inactives, actives with "nones," actives with the two latter groups combined, or inactives with the unaffiliated.

The U.S., however, is a notable exception as the only country in which the actively religious are more likely than the unaffiliated – by a statistically significant margin – to say they are in very good health: 32% of actively religious Americans say they are in very good health, compared with 25% of the unaffiliated. A similar share of inactives (27%)

No clear relationships between self-rated health, religious activity, affiliation in general populations

% who say they are in "very good health," among those who are religiously ...



Note: The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: 2010-2014 World Values Surveys.
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say they are in very good health, but from a statistical standpoint, this figure does not differ significantly from either of the others.

Actively religious Americans are more likely than the unaffiliated to report very good health even after advanced statistical analysis controlling for age, education and other demographic factors. This positive relationship between religious participation and self-rated health in the U.S. is often – but not always – found in other nationally representative survey datasets. (For more about variations in U.S. self-rated health data results, see sidebar on page 17.)

What is self-rated health?

The measure of overall health in this report comes from the World Values Survey, which asked respondents: "All in all, how would you describe your state of health these days?" Survey-takers can respond, "very good," "good," "fair" or "poor."

Asking people to assess their own health may seem like an imperfect method, but past research has shown that self-rated health responses are generally reliable proxies for overall physical well-being. In fact, according to one study, responses to this seemingly simple question can be used to accurately predict physical fitness, the number of times someone will visit the doctor in the coming year, and overall longevity.

Of course, people lack complete knowledge of their bodies and may consider themselves to be healthy even when hidden dangers, such as early-stage cancer or high blood pressure, go unnoticed and untreated. Nevertheless, on average, people's self-assessments of their own health seem to be valid and reliable summaries of overall health.

In most of the remaining 25 countries, there are no statistically significant differences between the actively religious and the unaffiliated. Where there is a gap, the actively religious are *less* likely to say they are in very good health. And comparisons between the actively religious and the inactives are murky: In 17 countries out of 25, there is not much of a difference between the two groups, while in four countries actives are more likely to report better health, and in four countries the inactives are healthier. (For detailed tables showing all countries, see Appendix B.)

When comparing the actively religious to a combined population of inactives and the unaffiliated outside of the U.S., actives are healthier only in Taiwan, while the opposite is true in five countries: Slovenia, Estonia, Chile, Ecuador and Spain.

However, these differences are mostly erased after taking into account age and other demographic characteristics. Actively religious people tend to be older, and therefore more vulnerable to the diseases and injuries that disproportionately affect older adults. When controlling for age and

other factors, actively religious people in 23 out of the 25 countries are about as likely as others to say they are in very good health. (For the details of this analysis, see page 33.) In the remaining two countries – Mexico and Taiwan – actives are more likely than others to say they are in very good health, as is also true in the U.S.

Sidebar: Religion's links to health in the U.S. are not always clear

Although the data presented in this report suggest that Americans who regularly attend worship services are more likely to say they are in better health – and academic studies often find links between religious activity and, say, stress or longevity – the connection between overall self-rated health and religion in the U.S. does not always show up in national surveys.

A Pew Research Center analysis of nationally representative datasets finds that in most surveys, there is no significant difference among actively religious Americans, the inactively religious and the unaffiliated in the share who choose the most positive option provided to describe their health ("very good" or "excellent," depending on the survey).[22] In fact, whether the actively religious are statistically distinct depends on who they are compared against, how self-rated health is measured and which datasets are used.

In preparing this report, Pew Research Center examined the relationship between religion and self-rated health in 30 U.S. datasets, including the 2011 World Values Survey, 28 waves of the General Social Survey conducted between 1972 and 2016 and a 2013 Pew Research Center survey on radical life extension. Cross-national analysis of self-rated health in this report is based on WVS data because it provides a comparable measure across a wide number of countries.

Actively religious Americans report better health in some, but not all, surveys

Of 30 datasets, number in which the actively religious are more likely to report top health than _____ with …

	No demographic controls	Controls for demographic differences
Inactively religious	11	10
No significant difference	19	20
Religiously unaffiliated	3	4
No significant difference	27	26
Inactive & unaffiliated combined	11	12
No significant difference	19	18

Note: In none of the 30 datasets are the other groups significantly more likely than the actively religious to report top health. Controls for demographic differences are marital status, age, education, income and gender. The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group. In the World Values Survey, the top category for health is "very good" rather than "excellent."
Source: 1972-2016 General Social Surveys, 2013 Pew Research Center survey and 2010-2014 World Values Surveys.
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The U.S. results are muddy, with some datasets surfacing statistically significant relationships and others showing no connection between religion and self-rated health. However, when statistically significant evidence on the link between religion and health is found, it always reveals a positive association. In other words, there is no dataset in which the actively religious are significantly *less* likely to report top health than the inactively religious, the unaffiliated or both of the latter groups combined.

[22] In the World Values Survey, the top category for self-rated health is "very good." In the other datasets, the top category is "excellent." In addition to measuring self-rated health by separating respondents who chose the top health category from everyone else, researchers also created a second framework to test how an alternate demarcation might affect the outcome. Instead of comparing respondents who chose the *top* health category to *everyone else,* researchers examined the differences between respondents who chose the *top two* health categories ("very good" and "good" in the WVS) and respondents in the *bottom two* groups (those who chose "fair" and "poor"). The result underscores the finding that data choice affects the outcome: Drawing the comparison line in the middle as opposed to near the top resulted in fewer datasets in which active religion was tied to better health, but in the case of the 2013 Pew Research Center survey, active religion was associated with better health compared with inactives in *only* this framework.

In 11 of the 30 datasets, when comparing the actively religious against a combined population of inactive and unaffiliated Americans, actively religious Americans are more likely to report top levels of health than all other Americans.[23] This includes the 2011 World Values Survey analyzed in this report.

When dividing the population into three groups of religious engagement instead of just two, a more nuanced picture emerges: The actively religious are more likely than the inactive to report top health in 11 of the 30 datasets and more likely than the unaffiliated to do so in just three of the 30 datasets.[24] While it may seem insignificant that the active are more likely to report top health than "nones" in just 10% of datasets, it is striking that the unaffiliated never topped the actively religious, despite apparent demographic advantages. Since the demographic composition of each of these groups varies in ways that might affect health – "nones," for example, tend to be younger, and therefore would be expected to be healthier if everything else were equal – all comparisons were repeated after controlling for demographic characteristics such as gender and age. The patterns were largely the same.[25]

These results indicate that the relationship between active religion and self-rated health is not strong enough to consistently emerge across these U.S. surveys.[26] However, the fact there is a significant positive relationship in some surveys, and never a negative relationship, suggests a tendency for actively religious Americans to rate their own health more positively than their compatriots.

[23] The datasets are the 2011 World Values Survey and the GSS waves from 1973, 1982, 1984, 1989, 1993, 1998, 2000, 2002, 2006 and 2010.
[24] The datasets in which the actively religious are more likely than the inactive to report top health are the 2013 Pew Research Center survey and GSS waves from 1973, 1982, 1985, 1989, 1991, 1993, 1998, 2000, 2002 and 2006. The datasets in which the actively religious are more likely than the unaffiliated to report top health are the 2011 World Values Survey and the 1993 and 2010 waves of the General Social Survey.
[25] Controls for demographic differences were implemented using logistic regression and dummy variables for marital status, age, education, income and gender. See Methodology for details.
[26] The apparent inconsistency of this pattern across these surveys, which generally have between 1,500 and 2,500 respondents, may be because this effect is so modest that detecting it consistently would require larger samples or a closer examination of more specific demographic and health features that may affect the outcome.

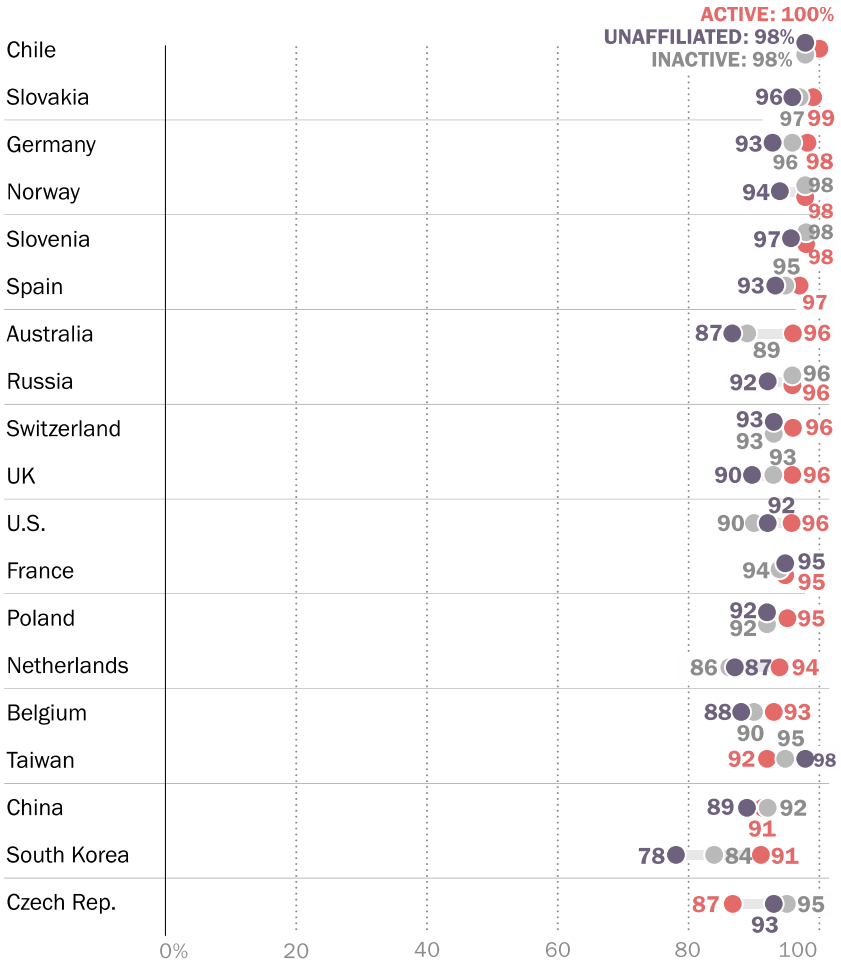
Drinking, smoking, exercise and obesity

By four other measures related to health, results are mixed. The International Social Survey Programme's 2011 Health and Health Care module asked respondents how often they smoke, drink alcohol and exercise, and it also collected height and weight data, from which Pew Research Center analysts calculated body mass index (BMI). While actively religious people in many countries are less likely than others to say they drink frequently or ever smoke, they are *not* more likely to exercise regularly or to have a BMI of less than 30.[27]

In nine out of 19 countries with available data, including the U.S., UK and Australia, actively religious people are less likely than the unaffiliated to say they drink several times per week.[28] In nine countries, there is no statistically significant difference between the groups. Actives are also

In many countries, actively religious most likely to abstain from frequent drinking

*% who say they drink **less than** several times per week, among those who are religiously ...*



Note: The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: International Social Survey Programme's 2011 Health and Health Care module. "Religion's Relationship to Happiness, Civic Engagement and Health Around the World"

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[27] While safe levels of alcohol consumption are debated among medical professionals, drinking "several times a week" is a metric that aims to capture potentially harmful levels of alcohol consumption. The U.S. National Institutes of Health defines obesity as having a BMI of 30 or greater.

[28] Some religions strongly discourage alcohol use among adherents, while others, including Islam and Mormonism, ban it (although Muslims and Mormons make up a small share of the population among countries included in this report). In many communities, there may also be social pressure to avoid both drinking and smoking.

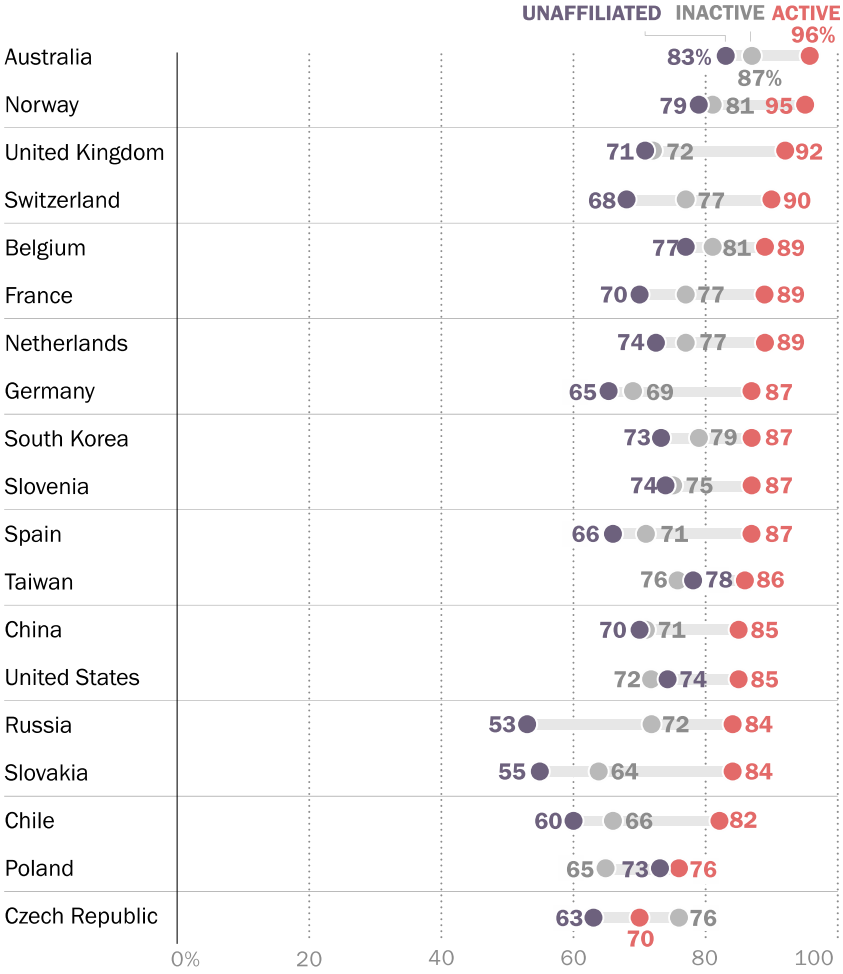
less likely than inactives to say they drink several times a week in nine countries, and again, there is no significant difference in nine countries. Only in Taiwan are actives more likely than the unaffiliated to drink frequently, and only in the Czech Republic are actives more likely than inactives to drink several times a week.

In 15 out of 19 countries, there is no statistically significant difference on this measure between inactives and "nones." When these two groups are combined for comparison with the actively religious, actives are less likely than everyone else to drink frequently in 11 out of 19 countries, while the opposite is not true anywhere. But other factors (beyond religious participation) partially explain this pattern: Statistical models controlling for gender and other demographic characteristics show that actively religious people drink less in eight countries, while they drink *more* only in the Czech Republic (see page 33).

Religion's link to health is clearer when it comes to smoking: Actively religious adults are less likely than the unaffiliated to say they ever smoke in 17 out of 19 countries, including the U.S., Russia and Germany. In the remaining two countries (Poland and the Czech Republic) the differences are not statistically significant. Actives are also less likely than inactives to smoke in 18 out of 19 countries; the Czech Republic, which has an unaffiliated majority, is the only country where the difference is not statistically significant.

Actively religious less likely to smoke

*% who say they do **not** currently smoke, among those who are religiously ...*



Note: The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: International Social Survey Programme's 2011 Health and Health Care module. "Religion's Relationship to Happiness, Civic Engagement and Health Around the World"

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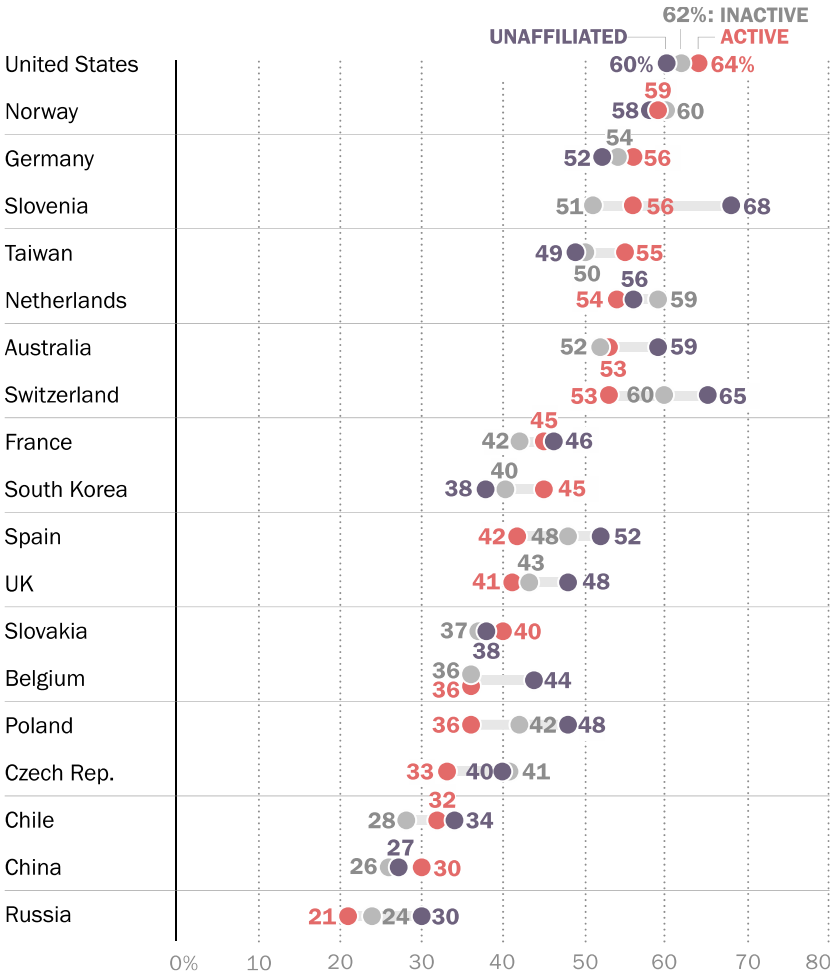
While smoking and drinking are two important measures of healthy behavior, there are many others – including some that do not seem positively connected to religious engagement. Take, for instance, exercise – a behavior doctors overwhelmingly recommend as part of a healthy lifestyle.

If anything, people who are *not* actively religious are more likely to say they exercise several times per week. Actives are less likely than the unaffiliated to exercise in five out of 19 countries, including Poland, Slovenia and Switzerland. Only in South Korea are actives more likely to exercise than "nones," while in the remaining 13 countries, including the U.S., differences are not significant. Comparing actives with inactives produces a difference in only one of the 19 countries, Spain, where inactives are more likely to exercise several times a week.

Actively religious are not usually more physically active

% who say they exercise at least several times per week, among those who are religiously ...



Note: The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: International Social Survey Programme's 2011 Health and Health Care module. "Religion's Relationship to Happiness, Civic Engagement and Health Around the World"

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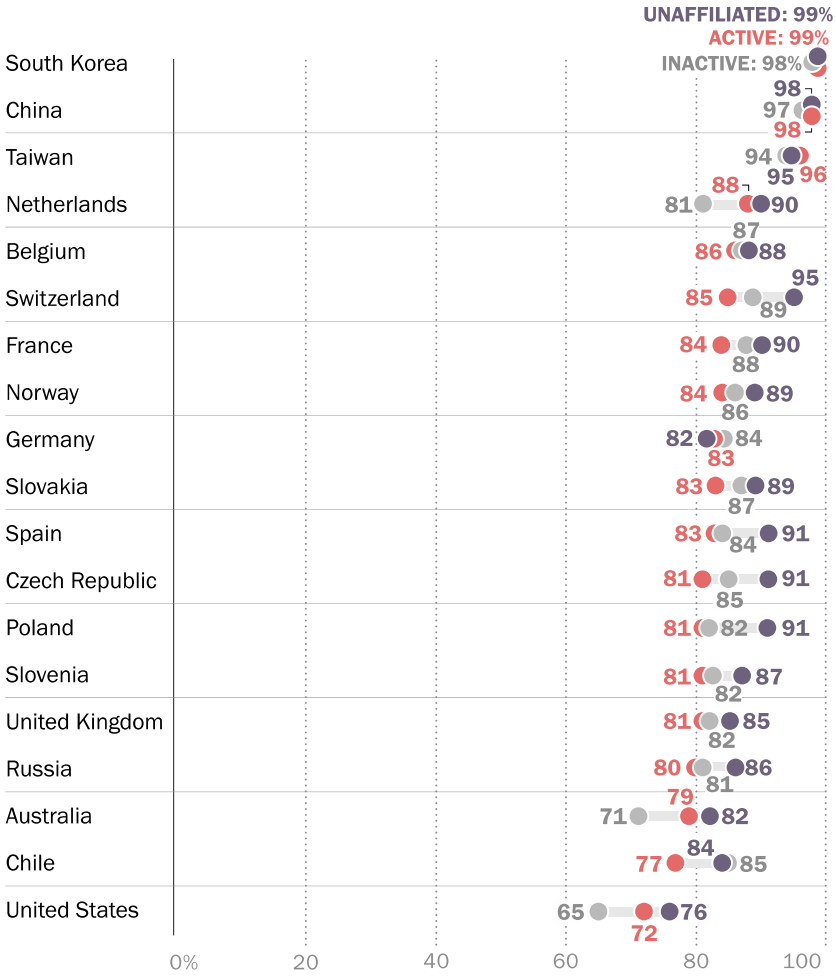
The picture is similar when examining obesity (body mass index calculated to be 30 or higher based on reported height and weight).[29] Actively religious people are more likely than the unaffiliated to be obese in five out of 19 countries (the Czech Republic, Poland, Switzerland, Spain and France), while in the remaining 14 countries, including the U.S., the differences are not statistically significant.

However, the U.S. stands out as an exception when comparing the obesity of the actively religious and the inactively religious: Religiously active Americans are less likely to have a BMI of at least 30 than are those who are affiliated but inactive. In Chile, on the other hand, actives are *more* likely than inactives to be obese, while in the remaining 17 countries, there is no significant gap.

No advantage for actively religious people when measuring obesity

*% who are **not** obese (BMI<30), among those who are religiously …*



Note: The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: International Social Survey Programme, 2011 Health and Health Care Module. "Religion's Relationship to Happiness, Civic Engagement and Health Around the World"

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Overall, there is a mixed relationship between religion and health. While the actively religious are less likely to smoke and drink in some countries, they are not healthier when it comes to exercise and weight. And on

[29] Body mass index (BMI) is an indirect and crude estimate of obesity. If survey respondents are conservative in reporting their weight, this may make corresponding estimates of obesity conservative. See Rothman, K.J. 2008. "BMI-related errors in the measurement of obesity." International Journal of Obesity.

average, across more than two dozen countries, actively religious adults are not more likely to report being in very good health.

Sidebar: Religion and health – a complicated history

The relationship between religion and health has occupied researchers for over a century. In 1897, the sociologist Émile Durkheim argued that a nation's suicide rate was largely dependent on the religious practices of its population and posited that Protestants, for example, suffered greater emotional health problems than Catholics because Protestantism did not promote adequate levels of social integration.[30]

In the decades that followed, the potentially harmful effects of religion were brought to the public's attention, in part due to the popular writings of secular intellectuals including Sigmund Freud and Friedrich Nietzsche. Freud, in his 1927 book "Future of an Illusion," compared religion to a childhood neurosis, while Nietzsche famously described Christianity as a "sickness."[31] Even in the second half of the 20th century, some influential psychologists continued to follow Freud's lead by defining religion as a neurosis that should be cured by psychotherapy.[32]

Recently, scholars have applied more scientific rigor to their research on religion, and many of the studies that have been published in the past 30 years have found that religious people tend to live longer, get sick less often and are better able to cope with stress.[33] One study of adults in Texas, for example, found that regular service attendance is positively associated with a variety of healthy behaviors such as doctor visits, taking vitamins, and refraining from unhealthy behaviors such as alcohol and tobacco use.[34] Another paper concluded that people whose obituaries referenced religion tended to have lived longer than those whose obituaries made no mention of religion.[35]

In the comprehensive "Handbook of Religion and Health," Duke University professor Harold G. Koenig and co-authors summarize 21st-century findings from the rapidly expanding field of religion and health research. According to their analysis, religion is positively associated with life satisfaction, happiness and morale in 175 of 224 studies (78%). Furthermore, religion is positively associated with self-rated health in 27 of 48 studies (56%), with lower rates of coronary heart disease in 12 of 19 studies (63%) and with fewer signs of psychoticism ("characterized by risk taking and lack of responsibility") in 16 of 19 studies (84%).[36]

Of course, this also means that a substantial number of studies have found no clear association, or have even concluded that religion is associated with *worse* health outcomes. For example, several studies have found that religious people tend to have a higher body mass index (BMI).[37] Northwestern University cardiologist Matthew Feinstein and his colleagues, in an analysis of an unusually large sample of 5,500 Americans, concluded that

[30] According to Durkheim, Protestant societies have too little integration, which leads to greater rates of suicide. In contrast, he believed Catholic societies had the right amount of social integration and social control, and thus lower rates of suicide.
[31] Nietzsche, Friedrich. 1895. "The Antichrist."
[32] For instance, Albert Ellis' 1980 book, "Case Against Religion: A Psychotherapist's View and the Case Against Religiosity."
[33] Koenig, Harold G. 2012. "Religion, Spirituality, and Health: The Research and Clinical Implications." ISRN Psychiatry. See also VanderWeele, Tyler. 2017. "Religion and Health: A Synthesis." In Balboni, Michael, and John Peteet, eds. "Spirituality and Religion within the Culture of Medicine: From Evidence to Practice."
[34] Hill, Terrence D., Amy M. Burdette, Christopher G. Ellison, and Marc A. Musick. 2006. "Religious attendance and health behaviors of Texas adults." Preventative Medicine.
[35] Wallace, Laura E., Rebecca Anthony, Christian M. End, and Baldwin M. Way. 2018. "Does Religion Stave Off the Grave? Religious Affiliation in One's Obituary and Longevity." Social Psychology and Personality Science.
[36] Koenig, Harold G., Dana E. King, and Verna Benner Carson. 2012. "Handbook of Religion and Health, Second Edition."
[37] Koenig, Harold G., Dana E. King, and Verna Benner Carson. 2012. "Handbook of Religion and Health, Second Edition."

both religious service attendance and regular spiritual experiences are associated with higher rates of obesity.[38] Other studies suggest that people who view humans as sinful and participate in religious communities that emphasize human sinfulness are more likely to suffer from anxiety and depression.[39]

And, just as some religions seem to contribute to positive health outcomes because they discourage alcohol and tobacco consumption, other religions may lead to poor physical health outcomes due to certain behavioral proscriptions. For example, Jehovah's Witnesses oppose blood transfusions, and some religious groups, including certain Amish and Orthodox Jewish communities, discourage immunizations, as Koenig and his colleagues point out.

Regardless of the specific outcomes reported by the many studies on this topic, it is worth noting that many attempts to link health and religion result in null findings, and that the research often has serious methodological limitations. Since most of the studies have been conducted in the U.S., Canada and Western Europe, it is difficult to reach sweeping conclusions about the impact of religion on health on a truly global level.[40]

In addition, much of the research available relies on small samples – and research with larger numbers of respondents often uses samples that are not representative of the broader population. [41] This includes studies of only older adults, only women or men, clergy, members of specific denominations, or people in specific regions of a nation.[42] There also has been a disproportionate focus on mental health; far fewer research projects have looked at the relationship between religion and physical health.

Perhaps most importantly, most of this research (including this cross-national study) has used data collected at a single point in time (rather than longitudinal data).[43] Associations between religion and health based on cross-sectional research may represent the effects of religion on health – or the effects of health on religion. When people find themselves suddenly ill, for instance, they may adopt a habit of regular prayer even if they were not previously religious. Some research indicates that this kind of "crisis religiosity" can produce a statistical association between poor health and prayer.[44]

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[38] Feinstein, Mathew, Kiang Liu, Hongyan Ning, George Fitchett, and Donald M. Lloyd-Jones. 2010. "Burden of Cardiovascular Risk Factors, Subclinical Atherosclerosis, and Incident Cardiovascular Events Across Dimensions of Religiosity: The Multi-Ethnic Study of Atherosclerosis (MESA)." Circulation.

[39] See, for instance, Ellison, Christopher G., Amy M. Burdette, and Terrence D. Hill. 2009. "Blessed Assurance: Religion, Anxiety, and Tranquility among U.S. Adults." Social Science Research. Also see Schwadel, Philip, and Christina D. Falci. 2012. "Interactive Effects of Church Attendance and Religious Tradition on Depressive Symptoms and Positive Affect." Society and Mental Health.

[40] Koenig, Harold G., Dana E. King, and Verna Benner Carson. 2012. "Handbook of Religion and Health, Second Edition."

[41] For example, one of the largest samples consistently used in research on religion and health, Nurses' Health Study II, is a sample of registered nurses in the U.S.

[42] Ellison, Christopher G., Wei Zhang, Neal Krause, and John P. Marcum. 2009. "Does Negative Interaction in the Church Increase Psychological Distress? Longitudinal Findings from the Presbyterian Panel Survey." Sociology of Religion. Also see Hill, Terrence D., Amy M. Burdette, Christopher G. Ellison, and Marc A. Musick. 2006. "Religious attendance and health behaviors of Texas adults." Preventative Medicine. Also see McFarland, Michael J. 2009. "Religion and Mental Health Among Older Adults: Do the Effects of Religious Involvement Vary by Gender?" The Journals of Gerontology: Series B. Also see Meisenhelder, Janice Bell, and John P. Marcum. 2004. "Responses of Clergy to 9/11: Posttraumatic Stress, Coping, and Religious Outcomes." Journal for the Scientific Study of Religion. Also see Vaillant, George, Janice Templeton, Monika Ardelt, and Stephanie E. Meyer. 2008. "The Natural History of Male Mental Health: Health and Religious Involvement." Social Science & Medicine.

[43] Koenig, Harold G., Dana E. King, and Verna Benner Carson. 2012. "Handbook of Religion and Health, Second Edition."

[44] Ahrenfeldt, Linda Juel, Sören Möller, Karen Andersen-Ranberg, Astrid Roll Vitved, Rune Lindahl-Jacobsen, and Niels Christian Hvidt. 2017. "Religiousness and health in Europe." European Journal of Epidemiology.

Indeed, the reliance on cross-sectional data limits researchers' ability to speak definitively to the *causal* effects of religion on health and well-being. For example, physical barriers may prevent some sick people from participating in formal religious activities such as service attendance.[45] If sick people cannot make it to church, then church attenders appear to be relatively healthy when looking only at cross-sectional data. Similarly, some research points to reverse causal effects when it comes to the association between religion and mental health. For instance, people who have depressive episodes are relatively likely to scale back their religious participation, which could mistakenly suggest a positive association between religion and mental health.[46]

Consequently, even when research does establish a positive association between religion and health, it is not clear that religion *causes* the beneficial health outcome.

[45] McCullough, Michael E., William T. Hoyt, David B. Larson, Harold G. Koenig, and Carl E. Thoresen. 2000. "Religious involvement and mortality: A meta-analytic review." Health Psychology.
[46] Maselko, Joanna, R. David Hayward, Alexandra Hanlon, Stephen Buka, and Keith Meador. 2012. "Religious Service Attendance and Major Depression: A Case of Reverse Causality?" American Journal of Epidemiology.

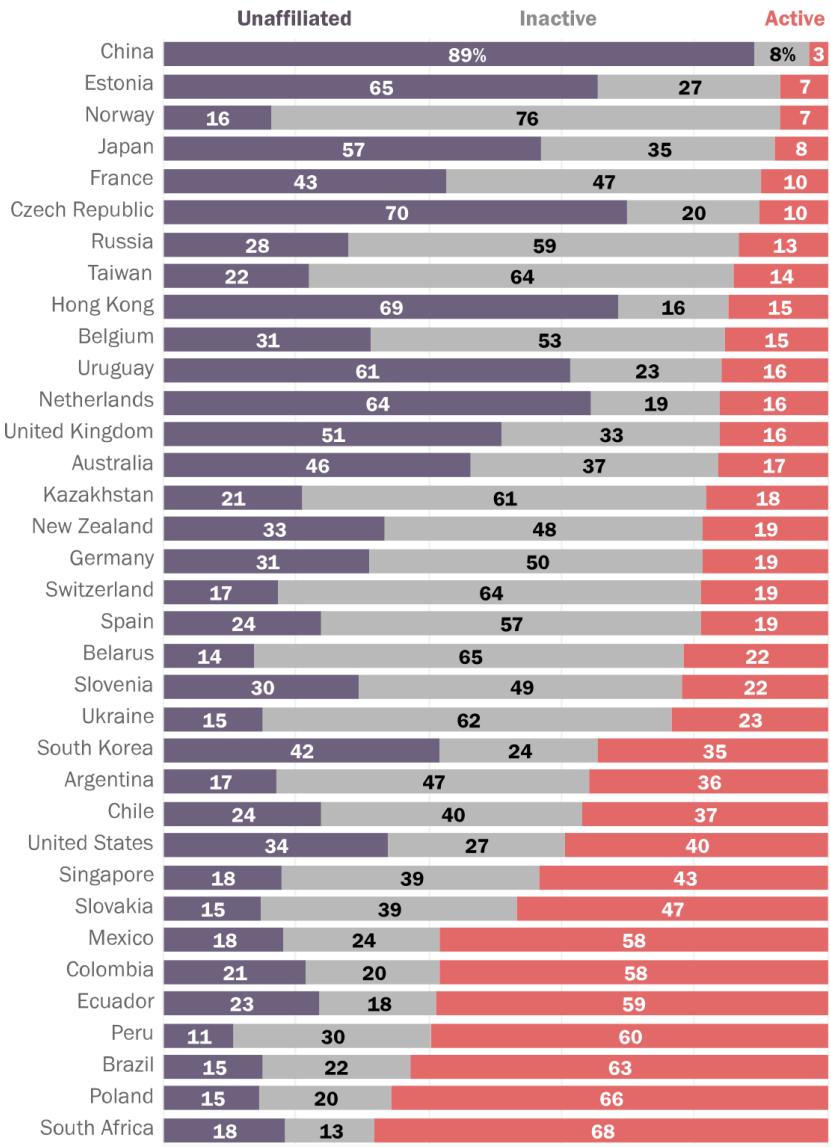
Infrequent attenders and 'nones' differ modestly on some measures

The findings in this report suggest that regular religious *participation* is tied to individual and societal well-being – that is, people who have a religious affiliation *and* attend worship services at least once a month tend to fare better on some (but not all) measures of happiness, health and civic participation. As a result, this report has mainly focused on differences between actively religious people and others.

Yet in 28 of the 35 countries studied across datasets analyzed in this report, the actively religious are a minority of the adult population: Especially in Europe, but also in some countries in the Asia-Pacific region, levels of affiliation are declining and regular attendance at religious services is relatively rare. In many economically advanced countries, the share of "nones" has been rapidly increasing,

In many countries, a minority of the population is actively religious

% who are religiously ...



Note: The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: 2010-2014 World Values Surveys and the International Social Survey Programme's 2011 Health and Health Care module.
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while the share of inactively religious people has declined.[47]

How will societies change in the future if the inactively religious share of the population continues to shrink and the religiously unaffiliated percentage grows? The answer is uncertain for many reasons, including the possibility that the beliefs and behaviors of people in these groups may change. But there could be clues in the current data, which suggest that any differences between religiously inactive and unaffiliated people on key measures of well-being are relatively modest.

For example, in 24 out of 26 countries analyzed, inactives and the unaffiliated are about equally likely to describe themselves as "very happy." Likewise, the drinking habits of inactives and the unaffiliated are similar in 15 out of 19 countries. These patterns remain intact after adjusting for demographic characteristics such as age, gender and education.

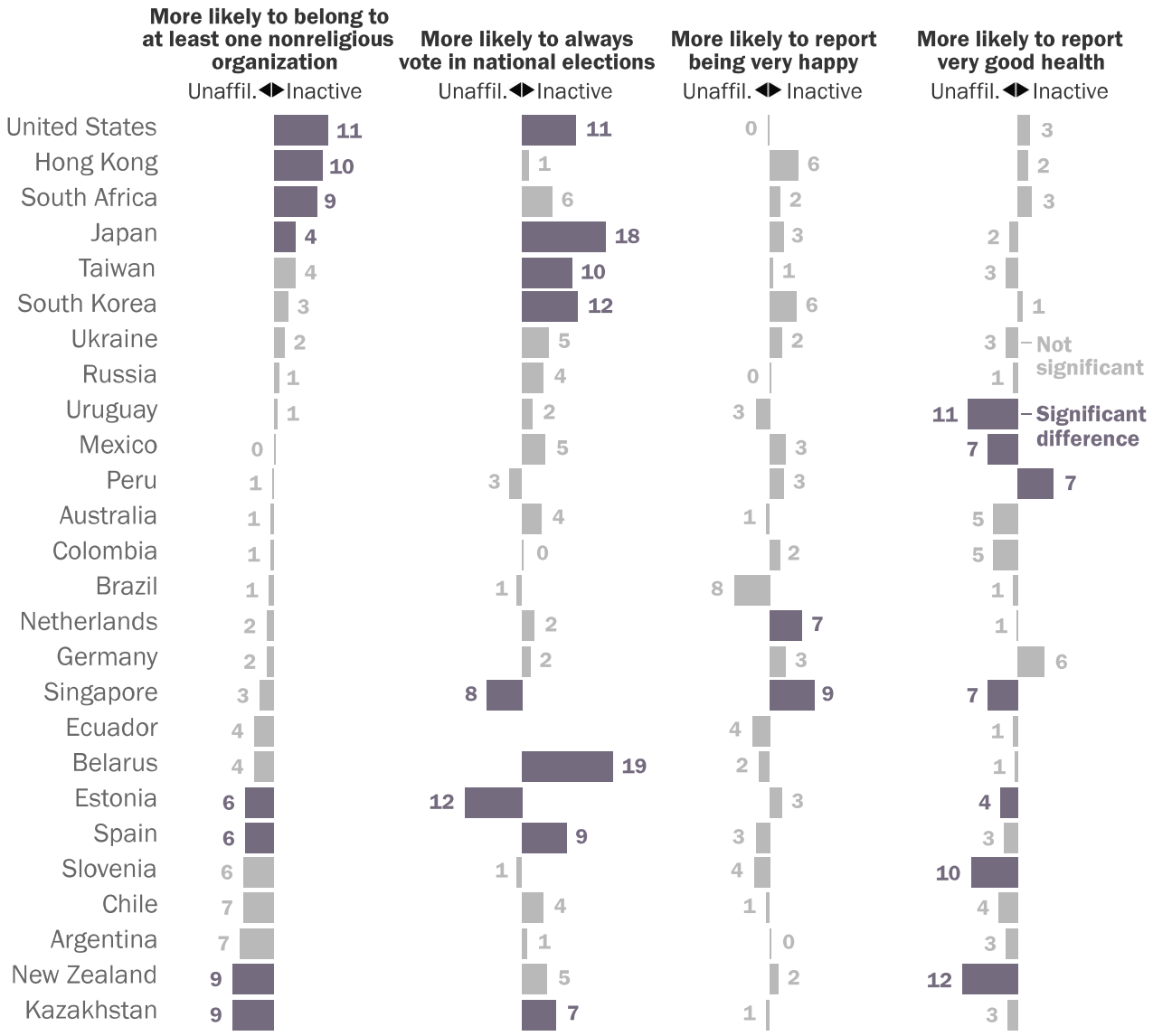
There is also little difference in overall self-rated health between inactively religious and unaffiliated people in 19 of 26 countries. Although "nones" report better self-rated health in six countries, these gaps mostly disappear after the data are adjusted for demographic characteristics such as age and gender. After controls, New Zealand and Uruguay are the only countries in which "nones" are more likely than inactives to report very good health, while inactives come out ahead on this measure only in Peru.

Again, there are no broad patterns favoring the inactively religious or the unaffiliated when it comes to civic engagement. Before controls, the inactively religious are more likely than "nones" to participate in voluntary (nonreligious) organizations in four of 26 countries, while the opposite is true in four countries. After controls, the inactively religious are more likely to join a group in four places (Hong Kong, Japan, South Africa and the United States), while the same is true for the unaffiliated in two countries (Estonia and Kazakhstan).[48]

[47] See Voas, David. 2009. "The Rise and Fall of Fuzzy Fidelity in Europe." European Sociological Review. Also see Brauer, Simon. 2018. "The Surprisingly Predictable Decline of Religion in the United States." Journal for the Scientfic Study of Religion.
[48] Differences in counts of countries showing a statistically significant relationship before and after controls reflect net change.

Few differences between inactively religious and unaffiliated in well-being, civic engagement

Percentage-point difference between the inactively religious and the religiously unaffiliated



Note: Differences are calculated based on unrounded values. The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: 2010-2014 World Values Surveys.
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Inactives do tend to have healthier smoking habits: They are less likely than "nones" to smoke in seven of 19 countries before taking demographic traits into account. In the remaining countries, there is no difference between the groups.[49]

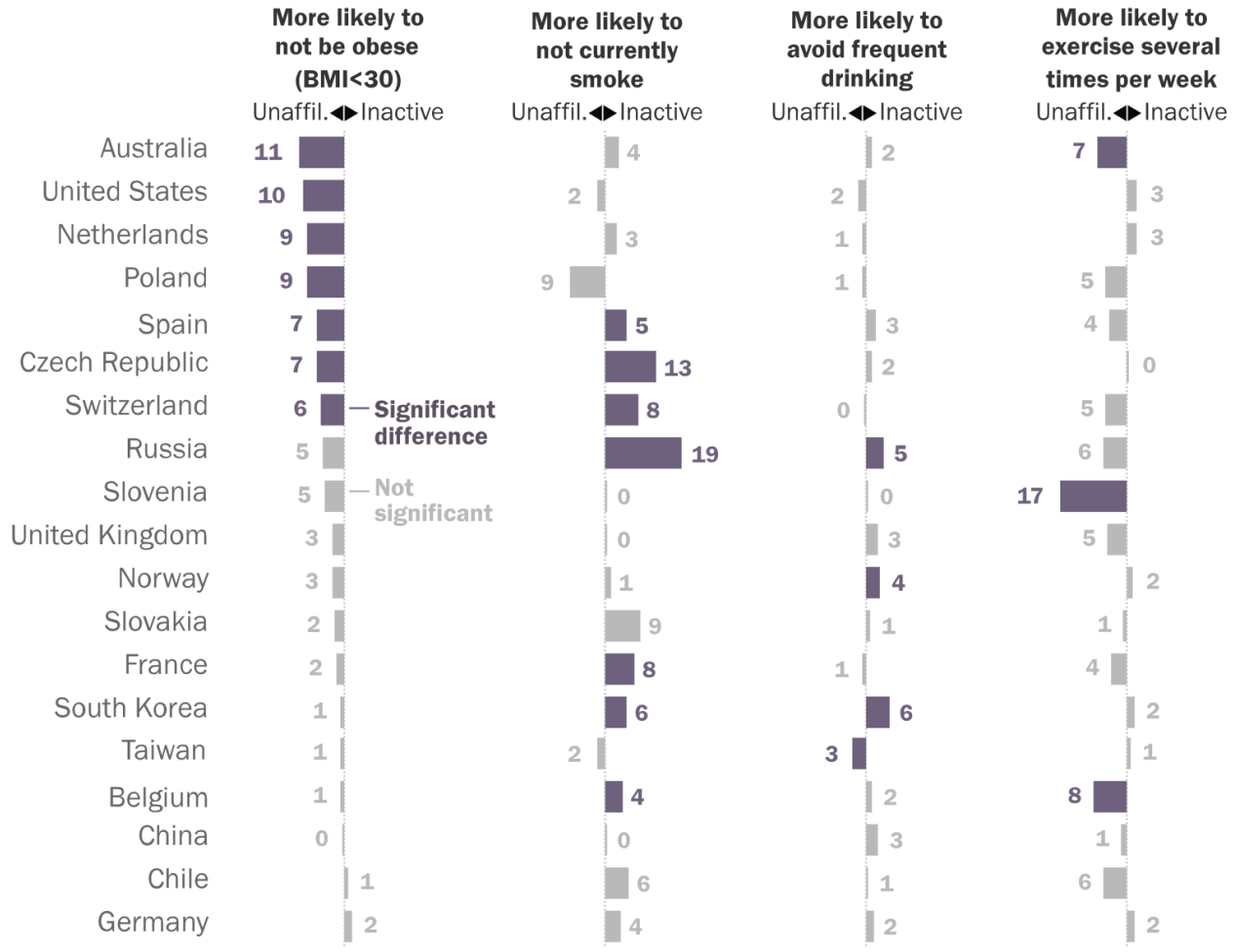
At the same time, "nones" sometimes seem slightly healthier on the measures of obesity and exercise. "Nones" are less likely to be obese in seven of 19 countries, including the U.S., while in the remaining countries, there is no significant difference. (After demographic controls, "nones" are less likely than the inactively religious to be obese in four countries: Australia, the Netherlands, Switzerland and the United States.) "Nones" are also more likely to exercise frequently in three of 19 countries, while in the remaining countries, differences between the two groups are not significant.[50]

Overall, the results of this analysis suggest that the differences between the inactively religious and the unaffiliated fit less of a clear pattern than the differences between the actively religious and everyone else. When there are well-being differences between the actively religious and all others, they almost always favor the actively religious; gaps between the inactively religious and the unaffiliated are more modest, and sometimes go in both directions. Therefore, it may be that the future size of actively religious populations will be more consequential for the outcomes considered in this report, and that the relative shares of the inactively religious and the unaffiliated in the remaining population will matter less.

[49] After controls, the inactives are less likely than "nones" to smoke in six countries. Notably, the effect of religious affiliation on smoking behavior is strongest among women.
[50] After adjusting for demographic characteristics, "nones" are more likely to exercise frequently in France and Slovenia.

Unaffiliated less likely to be obese than the inactively religious, but in some countries more likely to smoke

Percentage-point difference between the inactively religious and the religiously unaffiliated



Note: Differences are calculated based on unrounded values. Frequent drinking is defined as consuming alcohol several times per week or more. The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: International Social Survey Programme's 2011 Health and Health Care module.
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What are the relationships between religion and well-being after considering factors such as age, gender, marital status, income and education?

Compared with their less religious counterparts, the actively religious tend to be older, slightly less educated, and more likely to be female and married. Such differences raise the question: Are people happier, more civically engaged, or less likely to smoke and drink because of their religious activity, or because of these other demographic traits?

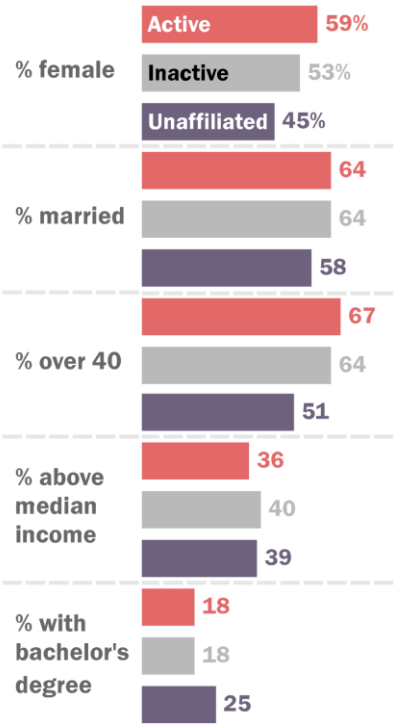
To test for the independent effect of religion, Pew Research Center analysts constructed statistical models that evaluate the association of religious activity with eight measures of individual and societal well-being after controlling for age, gender, education, income and marital status (see Methodology for details).

The table below shows the predicted effects of each factor in a pooled analysis of all countries in the datasets (26 countries for the World Values Survey measures and 19 countries for the items measured in the ISSP).[51] In general, across all the countries analyzed, being actively religious is associated with a greater likelihood of being very happy, belonging to a nonreligious organization, always voting, drinking infrequently and not smoking. In this pooled analysis, the actively religious are *not* more likely to report very good health, nor do they have better outcomes with regard to obesity and exercise. These findings are broadly in line with results presented earlier in the report.

That said, other demographic factors also have close links to well-being. For example, in the regression analysis, being over 40 reduces the chance that one will report being very happy or in very good health and increases the likelihood of always voting. Men are more likely to be smokers and drinkers. Having above-median income and being married or cohabiting are associated with greater happiness.

Actively religious tend to be older, female

Composition of the median country, by religious status



Note: Median values calculated from 35 countries. The actively religious are those who identify with a religion and attend religious services at least once per month. Inactives are those who identify with a religion and attend less often. Unaffiliated are those who do not identify with a religious group.
Source: 2010-2014 World Values Surveys and the International Social Survey Programme's 2011 Health and Health Care module.
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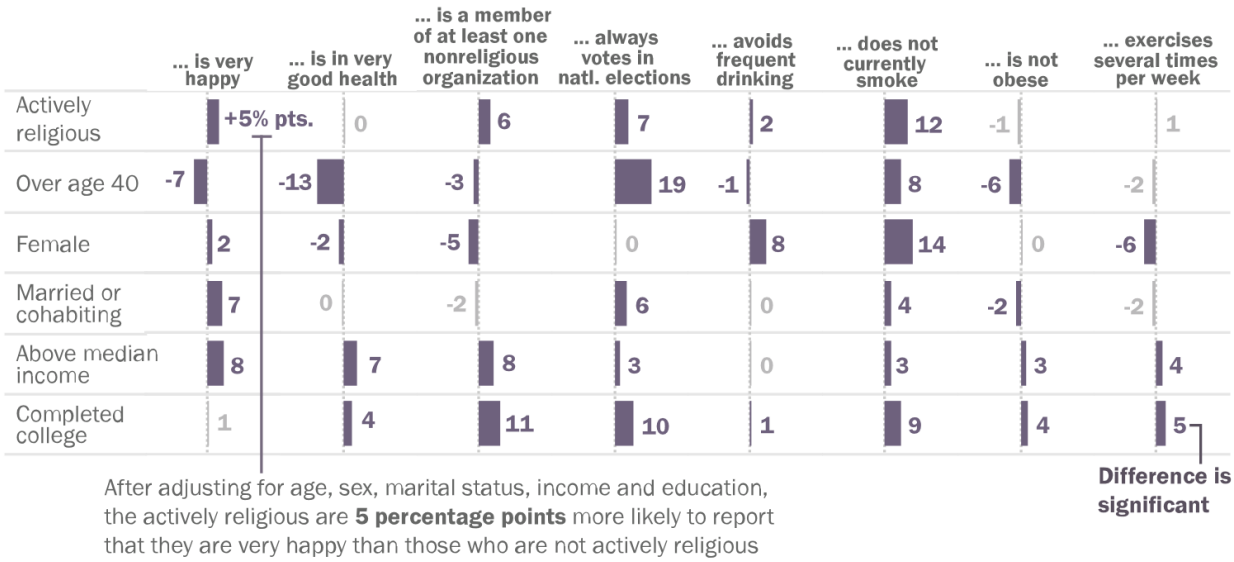
[51] Voting data for Ecuador are not available; just 25 countries are included in this measure.

Completing college increases the chance of belonging to a nonreligious organization and always voting.

Regression results in analysis pooling all countries together

Percentage-point increase in probability of a respondent who is _____ being someone who ...



Note: The number shown is the percentage-point difference in the predicted probability for the actively religious and the rest of the population. All predicted probabilities assume the other covariates are fixed at their means for the entire pooled sample. Purple shading indicates statistical significance. The actively religious are those who identify with a religion and attend religious services at least once per month. Predicted probabilities computed using logistic regression. See Appendix A for details.
Source: 2010-2014 World Values Surveys and the International Social Survey Programme's 2011 Health and Health Care module. "Religion's Relationship to Happiness, Civic Engagement and Health Around the World"

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Pew Research Center analysts also compared the number of countries in which being actively religious is tied to well-being advantages, both before and after introducing demographic controls (see Appendix C for regression results for each country).

Generally speaking, the country-level patterns shown earlier in this report that connect religious activity and well-being persist after controlling for demographic factors, particularly when it comes to the measures of happiness and civic participation. In 13 out of 26 countries, both before and after controls, the actively religious are happier than everyone else (that is, the combined population of the inactively religious and the unaffiliated). In the remaining countries, there is not much of a difference between the two groups.

Similarly, whenever there is a difference on voting, the actively religious vote more often – in 13 countries prior to controls and 12 countries after controls. And after factoring in the demographic characteristics of each group, the number of countries in which the actively religious are more likely to join voluntary groups rises from 12 to 14.

The distinctive behaviors of the actively religious generally persist even after controlling for their demographic characteristics

Number of countries in which being actively religious (or not) has a significant positive relationship with each measure of well-being, before and after controlling for age, gender, education, marital status and income

	With no controls			With demographic controls			
	Actively religious	Everyone else	No difference	Actively religious	Everyone else	No difference	Total countries
Don't smoke	18	0	1	16	0	3	19
Always vote	13	0	12	12	0	13	25
Very happy	13	0	13	13	0	13	26
Active in a group*	12	0	14	14	0	12	26
Drink infrequently	11	0	8	8	1	10	19
Very good health	2	5	19	3	0	23	26
Exercise regularly	1	2	16	1	0	18	19
Not obese	0	6	13	0	0	19	19

* "Active in a group" refers to regular activity in a nonreligious organization such as sport or recreational; art, music or educational; labor union, political party or environmental; professional association; humanitarian or charitable; consumer; self-help group; other organizations.
Note: The actively religious are those who identify with a religion and attend religious services at least once per month.
Source: 2010-2014 World Values Surveys and the International Social Survey Programme's 2011 Health and Health Care module.
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The smoking pattern also remains similar: Before controls, the actively religious are less likely than everyone else to smoke in 18 out of 19 countries; after controls, the outcome remains statistically significant in 16 of the 19 countries. And in almost all the countries analyzed, there is no connection between religious participation and frequency of exercise whether demographic characteristics are taken into account or not.

The links between religion and self-rated health, obesity and drinking, however, do seem more dependent on demographic factors, such as age and gender.

The advantage less-religious people sometimes have on measures of self-rated health and obesity in the unadjusted analysis is erased when the demographic traits of each group are considered. For instance, with no controls, the actively religious are less likely than everyone else to report very good health in five countries (Spain, Ecuador, Chile, Estonia and Slovenia), and only more likely to do so in two countries (the U.S. and Taiwan). After taking into account the compositional

characteristics of each group, however, no countries remain in which the actively religious are less likely to be very healthy, and a third country in which religious participation is associated with better health emerges (Mexico).

By the same token, before controls, the actively religious are more likely to be obese in six countries (the Czech Republic, Chile, Slovakia, Switzerland, Poland and France). But this relationship is eliminated after controlling for demographic factors.

Meanwhile, the healthier drinking behaviors of actively religious people are not as pronounced when controlling for other factors: The number of countries in which the actively religious are significantly less likely to drink frequently drops from 11 before controls to eight after controls. In one country, the Czech Republic, actives are *more* likely to drink frequently when controlling for demographic factors.

While results from the regression analysis do not perfectly mirror the unadjusted findings, they bolster the conclusion that when there are differences between groups, they tend to favor religiously active people. On some outcomes, such as happiness, civic participation and smoking, these positive links appear in a similar number of countries both before and after taking into account personal characteristics. On other measures, such as self-rated health and obesity, "everyone else" initially seems at an advantage, but once the data are adjusted for demographic characteristics, this advantage fades away.

Appendix A: Methodology

This appendix provides an overview of the data sources and analytic approaches used in the report.

The general population data underlying this study were sourced from three survey datasets: The World Values Survey (WVS) Wave 6 (2010-2014), the International Social Survey Programme (ISSP) 2011 Health and Health Care Module, and one 2012 Pew Research Center survey of U.S. adults on gender and generations. The Pew Research Center survey provides U.S. estimates for self-rated happiness (and an additional 2013 Pew Research Center survey provides data on self-rated health for the sidebar on the U.S.) while the WVS and ISSP provide international comparisons. Pew Research Center chose these survey datasets because they are well-established sources of data that include the relevant measures for this report. The WVS and ISSP contribute different measures: The WVS contains measures of self-rated health, happiness, voting and membership in secular voluntary organizations, while the ISSP contains measures of smoking, drinking alcohol, obesity and exercise.

The World Values Survey is an international network of survey researchers headquartered in Stockholm, Sweden. The WVS, which has been conducted since 1981, includes nationally representative survey data for about 100 countries worldwide. In each participating country, members of the World Values Survey Association field a survey and share the data with the network. Two years later, those data are made publicly available. When this report was written, the sixth wave of the WVS was the most current dataset available to the public. The WVS Wave 6 survey data were collected between 2010 and 2014.

The International Social Survey Programme is an international research collaboration that places a common core of survey questions on nationally representative surveys in 45 countries. For instance, in the United States, the ISSP data are sourced from the General Social Survey, a periodic survey of the American public conducted by NORC at the University of Chicago. In each country, survey organizations place translations of the same set of questionnaire items on their survey ballots. The data are then compiled and made available online for download. In 2011, the ISSP included a special module on health and health care. The health characteristic data for this report (smoking, drinking, exercise and BMI) were sourced from this module.

When calculating estimates for each country listed in this report, Pew Research Center only included countries with at least 100 survey respondents in each of three categories: the actively religious, inactively religious and religiously unaffiliated. For this reason, many countries in the World Values Survey or ISSP are not included in this report.

Data sources by country

Country	Are in very good health	Are very happy	Belong to at least one nonreligious organization	Vote in national elections	Avoid frequent drinking	Do not currently smoke	Are not obese (BMI<30)	Exercise several times per week
Argentina	WVS	WVS	WVS	WVS				
Australia	WVS	WVS	WVS	WVS	ISSP	ISSP	ISSP	ISSP
Belarus	WVS	WVS	WVS	WVS				
Belgium					ISSP	ISSP	ISSP	ISSP
Brazil	WVS	WVS	WVS	WVS				
Chile	WVS	WVS	WVS	WVS	ISSP	ISSP	ISSP	ISSP
China					ISSP	ISSP	ISSP	ISSP
Colombia	WVS	WVS	WVS	WVS				
Czech Republic					ISSP	ISSP	ISSP	ISSP
Ecuador	WVS	WVS	WVS					
Estonia	WVS	WVS	WVS	WVS				
France					ISSP	ISSP	ISSP	ISSP
Germany	WVS	WVS	WVS	WVS	ISSP	ISSP	ISSP	ISSP
Hong Kong	WVS	WVS	WVS	WVS				
Japan	WVS	WVS	WVS	WVS				
Kazakhstan	WVS	WVS	WVS	WVS				
Mexico	WVS	WVS	WVS	WVS				
Netherlands	WVS	WVS	WVS	WVS	ISSP	ISSP	ISSP	ISSP
New Zealand	WVS	WVS	WVS	WVS				
Norway					ISSP	ISSP	ISSP	ISSP
Peru	WVS	WVS	WVS	WVS				
Poland					ISSP	ISSP	ISSP	ISSP
Russia	WVS	WVS	WVS	WVS	ISSP	ISSP	ISSP	ISSP
Singapore	WVS	WVS	WVS	WVS				
Slovakia					ISSP	ISSP	ISSP	ISSP
Slovenia	WVS	WVS	WVS	WVS	ISSP	ISSP	ISSP	ISSP
South Africa	WVS	WVS	WVS	WVS				
South Korea	WVS	WVS	WVS	WVS	ISSP	ISSP	ISSP	ISSP
Spain	WVS	WVS	WVS	WVS	ISSP	ISSP	ISSP	ISSP
Switzerland					ISSP	ISSP	ISSP	ISSP
Taiwan	WVS	WVS	WVS	WVS	ISSP	ISSP	ISSP	ISSP
Ukraine	WVS	WVS	WVS	WVS				
United Kingdom					ISSP	ISSP	ISSP	ISSP
United States	WVS	Pew	WVS	WVS	ISSP	ISSP	ISSP	ISSP
Uruguay	WVS	WVS	WVS	WVS				

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When estimating the shares of the population that are actively religious, inactively religious and religiously unaffiliated, researchers compared estimates from the WVS and ISSP to other nationally representative data, including survey data collected by Pew Research Center. In most cases, the various sources of data produced similar estimates. However, in three cases, the estimates were different enough that researchers excluded countries from the analyses. In the World Values Survey, about 10% of respondents in Nigeria, Rwanda and the Philippines are religiously unaffiliated, and about half of these respondents attend religious services at least monthly. Such estimates are markedly different from those obtained by other nationally representative surveys of these countries, and the reasons for the discrepancies are not clear. Therefore, Nigeria, Rwanda and the Philippines are excluded from the analyses in this report.

Methods

When comparing the actively religious, inactively religious and religiously unaffiliated, this report presents as statistically significant those differences for which the null hypothesis of no differences between the groups can be rejected with a 95% level of confidence. All differences at the country level have been tested for statistical significance, and the country-level differences mentioned in the text of this report are statistically significant unless noted otherwise.

Actively religious, inactively religious and religiously unaffiliated

One objective of this analysis was to determine the extent to which religious *identity* versus religious *involvement* is linked to well-being. Prior research suggests that active participation in the social life of a religious community – rather than self-identification alone – predicts many of the benefits attributed to religion, such as health and happiness. For this reason, researchers chose to parse the survey respondents into three categories: actively religious, inactively religious and religiously unaffiliated. Throughout the report, the actively religious are those who identify with a religion and attend religious services at least once per month (similar patterns were observed when the threshold of weekly attendance was used). The *in*actively religious are those who identify with a religion but attend less than once per month. And the religiously unaffiliated are those who do not identify with a religion.

It is important to note that in the survey data used in this report, respondents chose their level of religious attendance from a short list of options. Rather than reporting exactly how many times they had attended worship within some time interval, respondents placed themselves into categories such as weekly, monthly, a few times a year or never. Monthly attendance was chosen as the marker for active religious involvement because it separates occasional attenders from regular attenders.

There are some religiously unaffiliated survey respondents who report that they attend religious services monthly or more. They are counted as unaffiliated and grouped with the rest of the unaffiliated who attend infrequently or never. However, unaffiliated people who attend monthly or more are rare – not numerous enough to substantively alter the patterns reported in this analysis. In other words, if the "nones" who attend monthly were included as "actively religious," the broad patterns described in this report would not change.

Only in two countries in this analysis are there more than 100 unaffiliated respondents in the sample who attend religious services at least monthly. In Ecuador, 124 of the 282 unaffiliated respondents report that they attend monthly or more, and in South Africa, 145 of the 542 unaffiliated respondents report this level of religious attendance. And although they attend more frequently than their counterparts, the "nones" who attend services at least monthly in these countries are not clearly distinct in terms of their well-being. In South Africa and Ecuador, high-attending "nones" do not differ significantly from other "nones" in their likelihood of saying they are very happy or very healthy. In South Africa (but not Ecuador), high-attending "nones" are more likely to be active in at least one nonreligious organization.

Regression analyses

The regression analyses in this report were estimated using logistic regressions on data from either the World Values Surveys (WVS) or the International Social Survey Programme (ISSP), depending on the measure. The results shown in the data visualizations of Appendix C and the pooled regression analysis in the body of the report are percentage-point differences in the predicted probabilities between the actively religious and the rest of the population (the unaffiliated plus the inactively religious). The predicted probabilities assume all other covariates are fixed at their means for a given level of analysis (where the mean represents either the average for all the survey respondents from all countries pooled together in the pooled analysis, or the average for survey respondents from a particular country for the country-specific analysis). The following paragraphs provide more detail.

Dependent variables

For most of the well-being measures shown in the report (e.g., health, happiness, smoking), researchers dichotomized an ordinal variable. For instance, researchers recoded the ISSP measure of smoking from an ordered seven-category variable to a binary measure where 1 codes for not smoking any amount, and 0 codes for all other valid responses. In each case, researchers cut the ordinal variable at thresholds that correspond roughly to desirable health outcomes. For example, our binary measure of smoking indicates when the respondent totally abstains from smoking, but the variable for drinking codes for avoidance of "frequent" (several times per week or more)

drinking rather than total abstinence, which may have a less pronounced effect on health.[52] The only dependent variable that was originally continuous was our measure of body mass index (BMI), which we calculated using data on the respondents' height and weight from the ISSP.[53] Our obesity measure indicates when the respondent has a body mass index above 30 – the level defined as obesity by the World Health Organization and the U.S. Centers for Disease Control and Prevention.

Independent variables

All the predictors in the regression models were dichotomized to simplify the presentation of results. The indicators of age (younger or older than 40) and sex (male or female) can be straightforwardly understood and interpreted.[54] The other indicators are described below.

Actively religious. The focal predictor in the regression models is whether the respondent is actively religious (i.e., identifies with a religion and attends religious services at least monthly). Rather than make three separate comparisons between the actively religious, inactive and unaffiliated, the regressions simply compare the actively religious to the rest of the population. This is the case for all of the regression models displayed graphically in the report. However, an entirely separate set of regression models compare the inactive and unaffiliated. Those models omit the actively religious from the sample and test whether religious affiliation (in the absence of regular attendance) contributes to well-being. These alternate models are sometimes referenced in the text of the report.

Above median income. The WVS and the ISSP provide income data differently from one another. The WVS provides income data transformed into 10 groups, which are presumed to represent country-specific income deciles. Although these deciles have been criticized for misrepresenting country-level income distributions, this analysis is constrained by the measures that are available in the data.[55] Respondents are classified as above-median earners if they fall above the fifth decile. The ISSP provides untransformed income categories specific to each country. Respondents are considered to earn above the median income if they fall into a category that is higher than the median value for all the survey respondents in their country.

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[52] O'Keefe, James H., Salman K. Bhatti, Ata Bajwa, James J. DiNicolantonio, and Carl J. Lavie. 2014. "Alcohol and Cardiovascular Health: The Dose Makes the Poison…or the Remedy." Mayo Clinic Proceedings.
[53] Body mass index is a ratio of weight in kilograms to the square of height in meters. BMI is an expedient but imperfect predictor of body fat. For more information, see the Centers for Disease Control and Prevention's "About Adult BMI" page.
[54] Sensitivity analyses using different cutoffs for age yielded substantively similar patterns.
[55] Donnelly, Michael J., and Grigore Pop-Eleches. 2016. "Income Measures in Cross-National Surveys: Problems and Solutions." Population Science Research and Methods.

Completed college or tertiary education. The education categories differ between the WVS and ISSP. For regressions using the WVS data, this indicator codes for whether the respondent has completed "university-level education, with degree." For regressions using the ISSP data, this indicator codes for whether the respondent has completed "lower-level tertiary" education or higher.

Married or cohabiting. The WVS indicates whether respondents are married (versus cohabiting or separated); in contrast, the ISSP indicates only if the respondent has a "steady partner," and, if so, whether the respondent lives with their partner. For regressions on the WVS data, "married or cohabiting" indicates whether the respondent is married or cohabiting (but not widowed or separated). For regressions using the ISSP data, "married" codes for whether the respondent is in a partnership and also lives with their partner.

In some cases, variables are omitted from the regression models because data are unavailable. Specifically, data on marital status are unavailable in the United Kingdom. In Appendix C (which displays separate regression results for each country), the marriage variable is dropped for the row marked "United Kingdom." And in the pooled regression model (marked "all countries"), the UK does not contribute to the point estimates because of listwise deletion of cases. Additionally, in the regression models predicting drinking behavior in Chile, the gender variable is omitted because of its collinearity with drinking (after dropping the cases with missing data on the other covariates, there are no remaining women in the Chile sample who drink frequently). Finally, in the regression models estimating the differences between the inactive and unaffiliated, the gender variable is omitted in Chile and Slovakia, and the education predictor is omitted for Slovakia, all due to collinearity with other variables.

Predicted probabilities, significance tests and weighting

The results shown in the data visualizations are differences in the marginal effects at the mean (MEM) between the actively religious and the rest of the population. To compute the MEMs, we first estimated regression models and used the prediction equations from the models to estimate the shares of the actively religious (and the rest of the population) who fall into the category of interest (e.g., those who do not smoke). The marginal effect calculations assume that all the control variables are fixed at their means. In regression analyses that include all of the countries pooled together, covariates are fixed at their grand means (i.e., the mean for all the respondents in the dataset with valid responses). For regression analyses using data from just one country (as in Appendix C), covariates are fixed at their mean for that particular country. Researchers then subtracted the predicted value for the combined inactive and unaffiliated populations from the actively religious population to obtain a percentage-point difference. As a robustness check, we

also calculated average marginal effects (AMEs) and marginal effects assuming covariates fixed at 0 and recomputed the percentage-point differences. The results from the alternative calculations were nearly identical to those computed using MEMs.

For the regression results on page 34 and in Appendix C, each estimate for the predicted influence of a variable is attached to a significance test. The data visualizations indicate when the p-value corresponding to a predicted value is less than 0.05. These significance tests were calculated as part of the marginal effect calculations. Each significance test is based on robust standard errors that account for within-country clustering among the pooled WVS or ISSP respondents.

All descriptive statistics and point estimates from regression models were calculated using the standard post-stratification weights provided with the WVS and ISSP (post-stratification weights are not available for some WVS countries). However, for the regression models, researchers reweighted the data to assume equal representation from each country because, for instance, the ISSP contains more than 3,000 respondents from Belgium, but only 936 from the United Kingdom. To avoid overrepresenting the patterns in Belgium or underrepresenting those from the UK, we divided the standard post-stratification weights by the total number of respondents in each country, which we then multiplied by 1,000 to assume 1,000 respondents per country in the regressions.

Appendix B: Detailed tables showing overall figures by country and measure

% who report that they are very happy

Source: World Values Survey, 2010-2014 except United States, Pew Research Center 2012 Gender and Generations survey

				Is difference significant between:		
Country	**Unaffiliated**	**Inactive**	**Active**	**Unaffiliated and Inactive**	**Unaffiliated and Active**	**Inactive and Active**
Argentina	32%	32%	36%	N	N	N
Australia	33	32	45	N	Y	Y
Belarus	13	11	11	N	N	N
Brazil	35	27	38	N	N	Y
Chile	25	24	25	N	N	N
Colombia	53	55	58	N	N	N
Ecuador	62	58	56	N	N	N
Estonia	12	14	20	N	Y	N
Germany	20	24	30	N	Y	N
Hong Kong	22	28	27	N	N	N
Japan	31	34	45	N	Y	Y
Kazakhstan	31	30	37	N	N	Y
Mexico	61	64	71	N	Y	Y
Netherlands	30	36	38	Y	Y	N
New Zealand	32	34	41	N	N	N
Peru	31	33	37	N	N	N
Russia	15	15	20	N	Y	Y
Singapore	30	39	43	Y	Y	N
Slovenia	22	18	21	N	N	N
South Africa	40	42	38	N	N	N
South Korea	10	16	21	N	Y	N
Spain	18	15	13	N	N	N
Taiwan	24	25	35	N	Y	Y
Ukraine	14	17	19	N	N	N
United States	25	25	36	N	Y	Y
Uruguay	33	30	43	N	Y	Y

Appendix B: Detailed tables showing overall figures by country and measure (continued)

% who report that they are in very good health

Source: World Values Survey, 2010-2014

				Is difference significant between:		
Country	**Unaffiliated**	**Inactive**	**Active**	**Unaffiliated and Inactive**	**Unaffiliated and Active**	**Inactive and Active**
Argentina	31%	29%	27%	N	N	N
Australia	35	29	29	N	N	N
Belarus	6	5	3	N	N	N
Brazil	27	25	23	N	N	N
Chile	25	21	14	N	Y	Y
Colombia	31	26	24	N	Y	N
Ecuador	31	30	22	N	Y	Y
Estonia	14	10	5	Y	Y	N
Germany	25	31	25	N	N	N
Hong Kong	15	17	14	N	N	N
Japan	14	12	12	N	N	N
Kazakhstan	15	13	15	N	N	N
Mexico	29	23	27	Y	N	N
Netherlands	16	15	14	N	N	N
New Zealand	42	30	41	Y	N	Y
Peru	10	17	12	Y	N	Y
Russia	6	5	4	N	N	N
Singapore	30	23	29	Y	N	Y
Slovenia	30	20	18	Y	Y	N
South Africa	41	44	42	N	N	N
South Korea	16	17	13	N	N	N
Spain	25	22	11	N	Y	Y
Taiwan	28	25	37	N	N	Y
Ukraine	8	6	6	N	N	N
United States	25	27	32	N	Y	N
Uruguay	28	17	29	Y	N	Y

Appendix B: Detailed tables showing overall figures by country and measure (continued)

% who belong to at least one nonreligious organization

Source: World Values Surveys, 2010-2014

				Is difference significant between:		
Country	**Unaffiliated**	**Inactive**	**Active**	**Unaffiliated and Inactive**	**Unaffiliated and Active**	**Inactive and Active**
Argentina	28%	20%	23%	N	N	N
Australia	61	61	59	N	N	N
Belarus	16	12	14	N	N	N
Brazil	23	22	35	N	Y	Y
Chile	36	29	33	N	N	N
Colombia	39	38	42	N	N	N
Ecuador	18	14	13	N	N	N
Estonia	24	18	32	Y	N	Y
Germany	38	36	47	N	N	Y
Hong Kong	25	35	37	Y	Y	N
Japan	24	28	38	Y	Y	Y
Kazakhstan	18	9	14	Y	N	Y
Mexico	36	35	41	N	N	Y
Netherlands	49	48	52	N	N	N
New Zealand	72	63	77	Y	N	Y
Peru	29	28	33	N	N	N
Russia	6	7	11	N	Y	Y
Singapore	22	19	26	N	N	Y
Slovenia	43	37	40	N	N	N
South Africa	28	37	36	Y	Y	N
South Korea	23	26	25	N	N	N
Spain	22	15	16	Y	N	N
Taiwan	41	45	62	N	Y	Y
Ukraine	7	9	11	N	N	N
United States	39	51	58	Y	Y	Y
Uruguay	18	19	29	N	Y	Y

Appendix B: Detailed tables showing overall figures by country and measure (continued)

% who say they always vote in national elections

Source: World Values Surveys, 2010-2014

				Is difference significant between:		
Country	**Unaffiliated**	**Inactive**	**Active**	**Unaffiliated and Inactive**	**Unaffiliated and Active**	**Inactive and Active**
Argentina*	85%	86%	87%	N	N	N
Australia*	90	94	94	N	N	N
Belarus	37	56	65	Y	Y	Y
Brazil*	83	82	86	N	N	N
Chile*	68	72	85	N	Y	Y
Colombia	63	63	71	N	Y	Y
Estonia	48	35	42	Y	N	N
Germany	69	71	77	N	N	N
Hong Kong	27	29	28	N	N	N
Japan	52	69	74	Y	Y	N
Kazakhstan	45	52	51	Y	N	N
Mexico*	57	61	73	N	Y	Y
Netherlands	73	75	78	N	N	N
New Zealand	81	86	80	N	N	N
Peru*	91	88	93	N	N	Y
Russia	40	44	49	N	Y	N
Singapore*	69	61	72	Y	N	Y
Slovenia	52	51	70	N	Y	Y
South Africa	46	52	61	N	Y	Y
South Korea	47	59	63	Y	Y	N
Spain	53	62	83	Y	Y	Y
Taiwan	66	77	81	Y	Y	N
Ukraine	56	62	67	N	Y	N
United States	48	59	69	Y	Y	Y
Uruguay*	91	93	92	N	N	N

Note: Asterisks indicate countries with mandatory voting

Appendix B: Detailed tables showing overall figures by country and measure (continued)

% who drink less than several times per week

Source: International Social Survey Programme, 2011 Health and Healthcare module

				Is difference significant between:		
Country	**Unaffiliated**	**Inactive**	**Active**	**Unaffiliated and Inactive**	**Unaffiliated and Active**	**Inactive and Active**
Australia	87%	89%	96%	N	Y	Y
Belgium	88	90	93	N	Y	N
Chile	98	98	100	N	N	Y
China	89	92	91	N	N	N
Czech Republic	93	95	87	N	N	Y
France	95	94	95	N	N	N
Germany	93	96	98	N	Y	Y
Netherlands	87	86	94	N	Y	Y
Norway	94	98	98	Y	Y	N
Poland	92	92	95	N	N	N
Russia	92	96	96	Y	N	N
Slovakia	96	97	99	N	N	Y
Slovenia	97	98	98	N	N	N
South Korea	78	84	91	Y	Y	Y
Spain	93	95	97	N	Y	Y
Switzerland	93	93	96	N	N	Y
Taiwan	98	95	92	Y	Y	N
United Kingdom	90	93	96	N	Y	N
United States	92	90	96	N	Y	Y

Appendix B: Detailed tables showing overall figures by country and measure (continued)

% who do not currently smoke

Source: International Social Survey Programme, 2011 Health and Healthcare module

				Is difference significant between:		
Country	**Unaffiliated**	**Inactive**	**Active**	**Unaffiliated and Inactive**	**Unaffiliated and Active**	**Inactive and Active**
Australia	83%	87%	96%	N	Y	Y
Belgium	77	81	89	Y	Y	Y
Chile	60	66	82	N	Y	Y
China	70	71	85	N	Y	Y
Czech Republic	63	76	70	Y	N	N
France	70	77	89	Y	Y	Y
Germany	65	69	87	N	Y	Y
Netherlands	74	77	89	N	Y	Y
Norway	79	81	95	N	Y	Y
Poland	73	65	76	N	N	Y
Russia	53	72	84	Y	Y	Y
Slovakia	55	64	84	N	Y	Y
Slovenia	74	75	87	N	Y	Y
South Korea	73	79	87	Y	Y	Y
Spain	66	71	87	Y	Y	Y
Switzerland	68	77	90	Y	Y	Y
Taiwan	78	76	86	N	Y	Y
United Kingdom	71	72	92	N	Y	Y
United States	74	72	85	N	Y	Y

Appendix B: Detailed tables showing overall figures by country and measure (continued)

% who are not obese (BMI<30)

Source: International Social Survey Programme, 2011 Health and Healthcare module

				Is difference significant between:		
Country	**Unaffiliated**	**Inactive**	**Active**	**Unaffiliated and Inactive**	**Unaffiliated and Active**	**Inactive and Active**
Australia	82%	71%	79%	Y	N	N
Belgium	88	87	86	N	N	N
Chile	84	85	77	N	N	Y
China	98	97	98	N	N	N
Czech Republic	91	85	81	Y	Y	N
France	90	88	84	N	Y	N
Germany	82	84	83	N	N	N
Netherlands	90	81	88	Y	N	N
Norway	89	86	84	N	N	N
Poland	91	82	81	Y	Y	N
Russia	86	81	80	N	N	N
Slovakia	89	87	83	N	N	N
Slovenia	87	82	81	N	N	N
South Korea	99	98	99	N	N	N
Spain	91	84	83	Y	Y	N
Switzerland	95	89	85	Y	Y	N
Taiwan	95	94	96	N	N	N
United Kingdom	85	82	81	N	N	N
United States	76	65	72	Y	N	Y

Appendix B: Detailed tables showing overall figures by country and measure (continued)

% who exercise several times per week

Source: International Social Survey Programme, 2011 Health and Healthcare module

				Is difference significant between:		
Country	**Unaffiliated**	**Inactive**	**Active**	**Unaffiliated and Inactive**	**Unaffiliated and Active**	**Inactive and Active**
Australia	59%	52%	53%	Y	N	N
Belgium	44	36	36	Y	Y	N
Chile	34	28	32	N	N	N
China	27	26	30	N	N	N
Czech Republic	40	41	33	N	N	N
France	46	42	45	N	N	N
Germany	52	54	56	N	N	N
Netherlands	56	59	54	N	N	N
Norway	58	60	59	N	N	N
Poland	48	42	36	N	Y	N
Russia	30	24	21	N	N	N
Slovakia	38	37	40	N	N	N
Slovenia	68	51	56	Y	Y	N
South Korea	38	40	45	N	Y	N
Spain	52	48	42	N	Y	Y
Switzerland	65	60	53	N	Y	N
Taiwan	49	50	55	N	N	N
United Kingdom	48	43	41	N	N	N
United States	60	62	64	N	N	N

Appendix C: Regression model results by country

% point change in the outcome for respondents who ...

Country	Variable	Are very happy (WVS)	Are in very good health (WVS)	Belong to at least one nonreligious organization (WVS)	Always vote in national elections (WVS)	Avoid frequent drinking (ISSP)	Do not currently smoke (ISSP)	Are not obese (ISSP)	Exercise several times per week (ISSP)
All	Actively religious	5	0	6	7	2	12	-1	1
	Over age 40	-7	-13	-3	19	-1	8	-6	-2
	Female	2	-2	-5	0	8	14	0	-6
	Married or cohabiting	7	0	-2	6	0	4	-2	-2
	Above median income	8	7	8	3	0	3	3	4
	Completed college	1	4	11	10	1	9	4	5
Argentina	Actively religious	4	1	3	1				
	Over age 40	-7	-18	-2	1				
	Female	2	-2	-8	0				
	Married or cohabiting	4	-3	-5	4				
	Above median income	11	11	4	2				
	Completed college	2	-2	27	2				
Australia	Actively religious	16	-1	-9	2	6	10	1	2
	Over age 40	-1	-7	1	10	-5	6	-8	-9
	Female	8	6	3	-2	10	4	-5	-5
	Married or cohabiting	11	2	-2	1	-1	4	-4	-8
	Above median income	13	18	7	1	-1	3	-1	0
	Completed college	4	9	18	6	4	8	12	3
Belarus	Actively religious	0	-1	2	9				
	Over age 40	-4	-7	-8	22				
	Female	3	0	1	5				
	Married or cohabiting	1	0	-3	2				
	Above median income	10	2	8	10				
	Completed college	-1	0	3	1				
Belgium	Actively religious					2	10	1	-3
	Over age 40					-6	6	-6	-1
	Female					9	6	2	-14
	Married or cohabiting					0	4	-3	-5
	Above median income					1	5	4	5
	Completed college					-1	7	4	4
Brazil	Actively religious	8	0	12	3				
	Over age 40	-6	-15	4	2				
	Female	-2	-7	-4	3				
	Married or cohabiting	10	0	5	8				
	Above median income	7	4	0	0				
	Completed college	0	9	17	5				
Chile	Actively religious	3	-3	10	7	1	15	-7	-2
	Over age 40	-7	-17	-14	40	1	16	-9	-9
	Female	-4	-4	-15	-2		4	-1	-11
	Married or cohabiting	1	-4	-10	13	1	5	-7	1
	Above median income	4	3	5	3	0	-4	1	3
	Completed college	8	4	6	3	1	-2	6	18

Note: Results obtained via logistic regression modeling. Each parameter estimate assumes all other covariates are fixed at their country-level means except for the row for "all countries," in which case parameter estimates are fixed at their global mean (i.e. the mean for all the respondents across all countries in the pooled dataset). Data from the United Kingdom are not included in the "all" model because marriage data are not available. The "female" coefficient for the "avoid frequent drinking" model in Chile is excluded because all females in the sample report drinking infrequently. See Appendix A for more details about regression models.
Source: Estimates for self-rated health and happiness, voluntary organization membership and voting are from the World Values Surveys, 2010-2014. Estimates for all other outcomes are from the International Social Survey Programme's 2011 Health and Health Care module. "Religion's Relationship to Happiness, Civic Engagement and Health Around the World"

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Appendix C: Regression model results by country (continued)

% point change in the outcome for respondents who ...

Note: Results obtained via logistic regression modeling. Each parameter estimate assumes all other covariates are fixed at their country-level means except for the row for "all countries," in which case parameter estimates are fixed at their global mean (i.e. the mean for all the respondents across all countries in the pooled dataset). See Appendix A for more details about regression models.
Source: Estimates for self-rated health and happiness, voluntary organization membership and voting are from the World Values Surveys, 2010-2014. Estimates for all other outcomes are from the International Social Survey Programme's 2011 Health and Health Care module. "Religion's Relationship to Happiness, Civic Engagement and Health Around the World"

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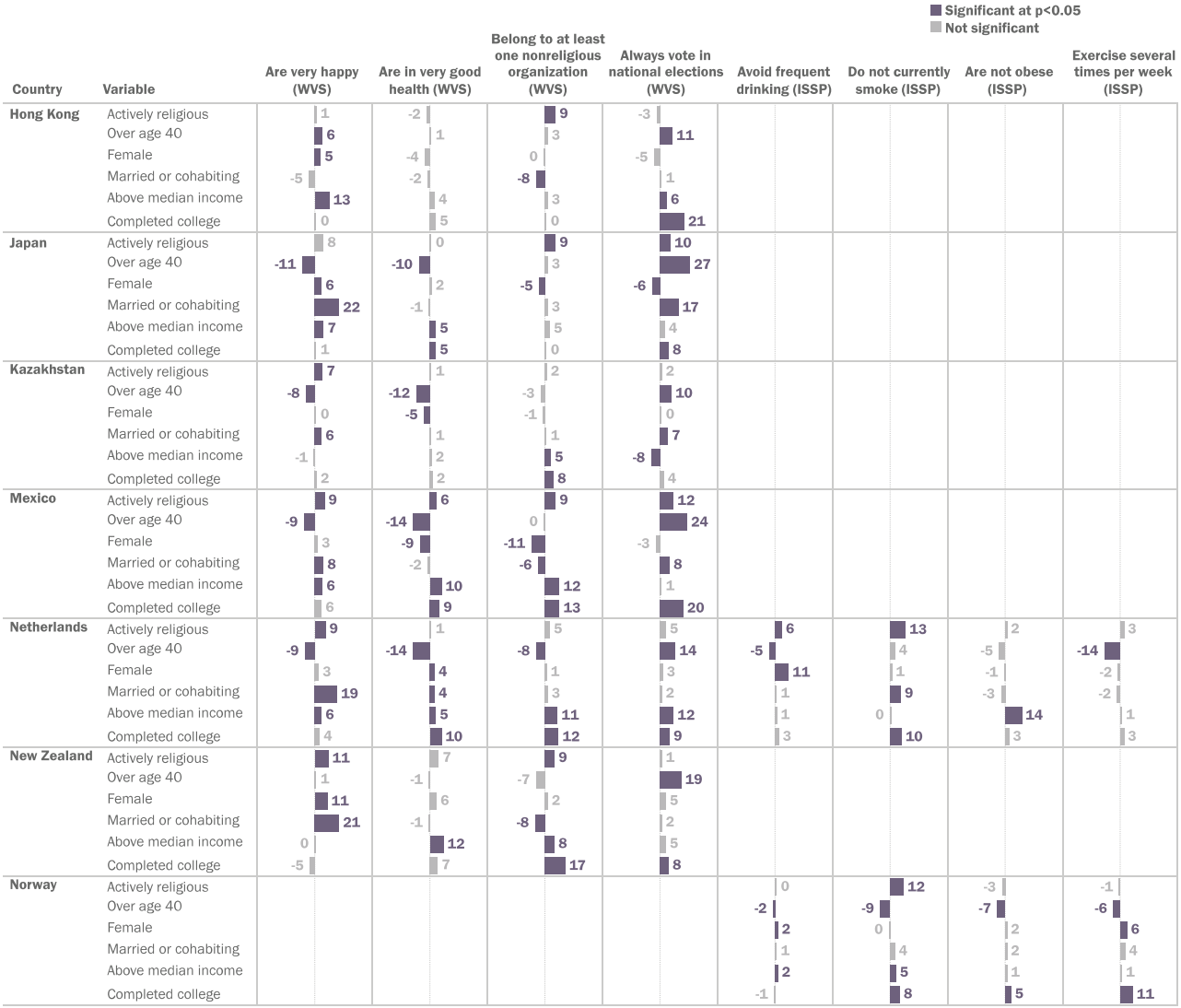
Appendix C: Regression model results by country (continued)

% point change in the outcome for respondents who ...



Note: Results obtained via logistic regression modeling. Each parameter estimate assumes all other covariates are fixed at their country-level means except for the row for "all countries," in which case parameter estimates are fixed at their global mean (i.e. the mean for all the respondents across all countries in the pooled dataset). See Appendix A for more details about regression models.
Source: Estimates for self-rated health and happiness, voluntary organization membership and voting are from the World Values Surveys, 2010-2014. Estimates for all other outcomes are from the International Social Survey Programme's 2011 Health and Health Care module. "Religion's Relationship to Happiness, Civic Engagement and Health Around the World"

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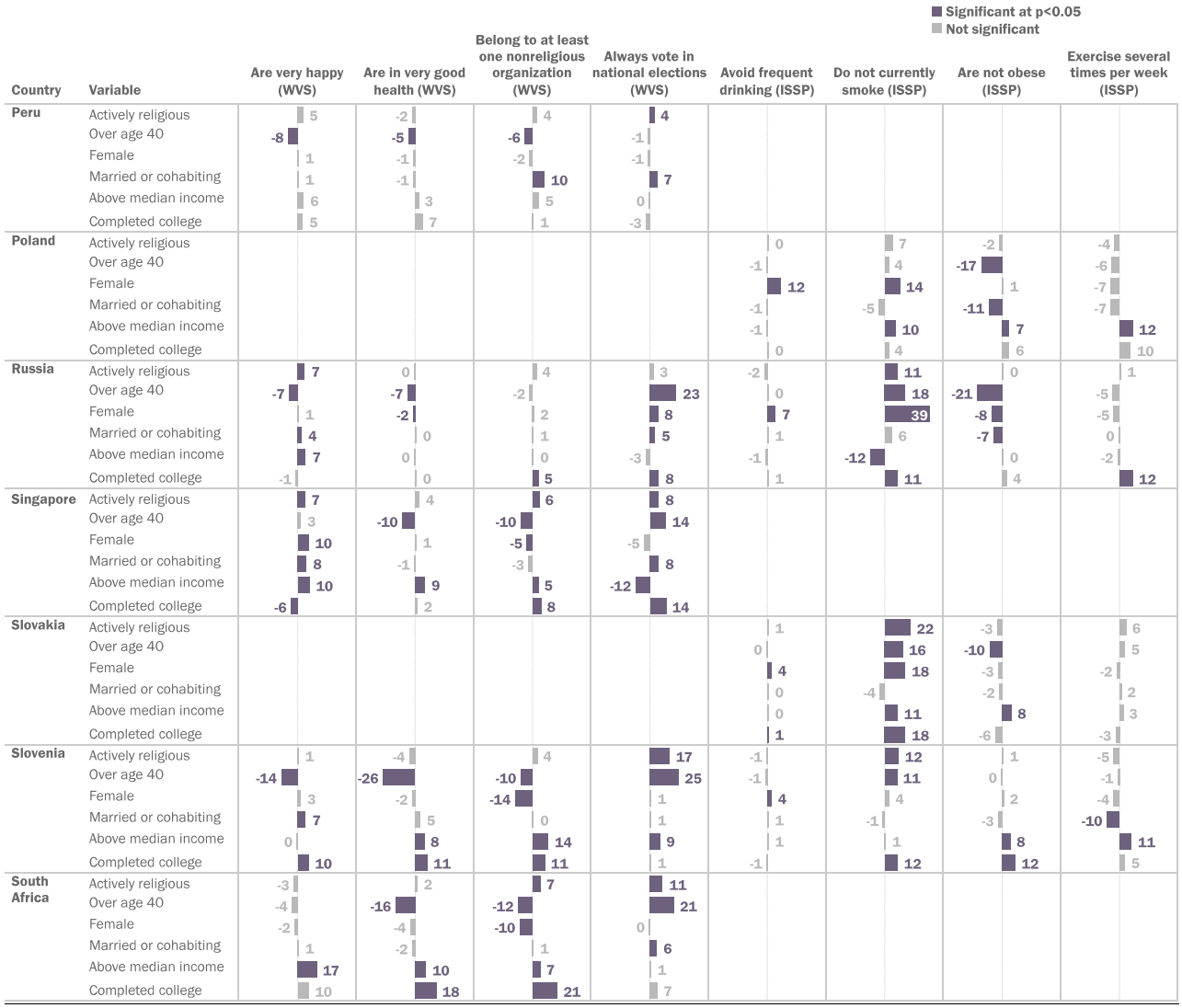
Appendix C: Regression model results by country (continued)

% point change in the outcome for respondents who ...



Note: Results obtained via logistic regression modeling. Each parameter estimate assumes all other covariates are fixed at their country-level means except for the row for "all countries," in which case parameter estimates are fixed at their global mean (i.e. the mean for all the respondents across all countries in the pooled dataset). See Appendix A for more details about regression models.
Source: Estimates for self-rated health and happiness, voluntary organization membership and voting are from the World Values Surveys, 2010-2014. Estimates for all other outcomes are from the International Social Survey Programme's 2011 Health and Health Care module. "Religion's Relationship to Happiness, Civic Engagement and Health Around the World"

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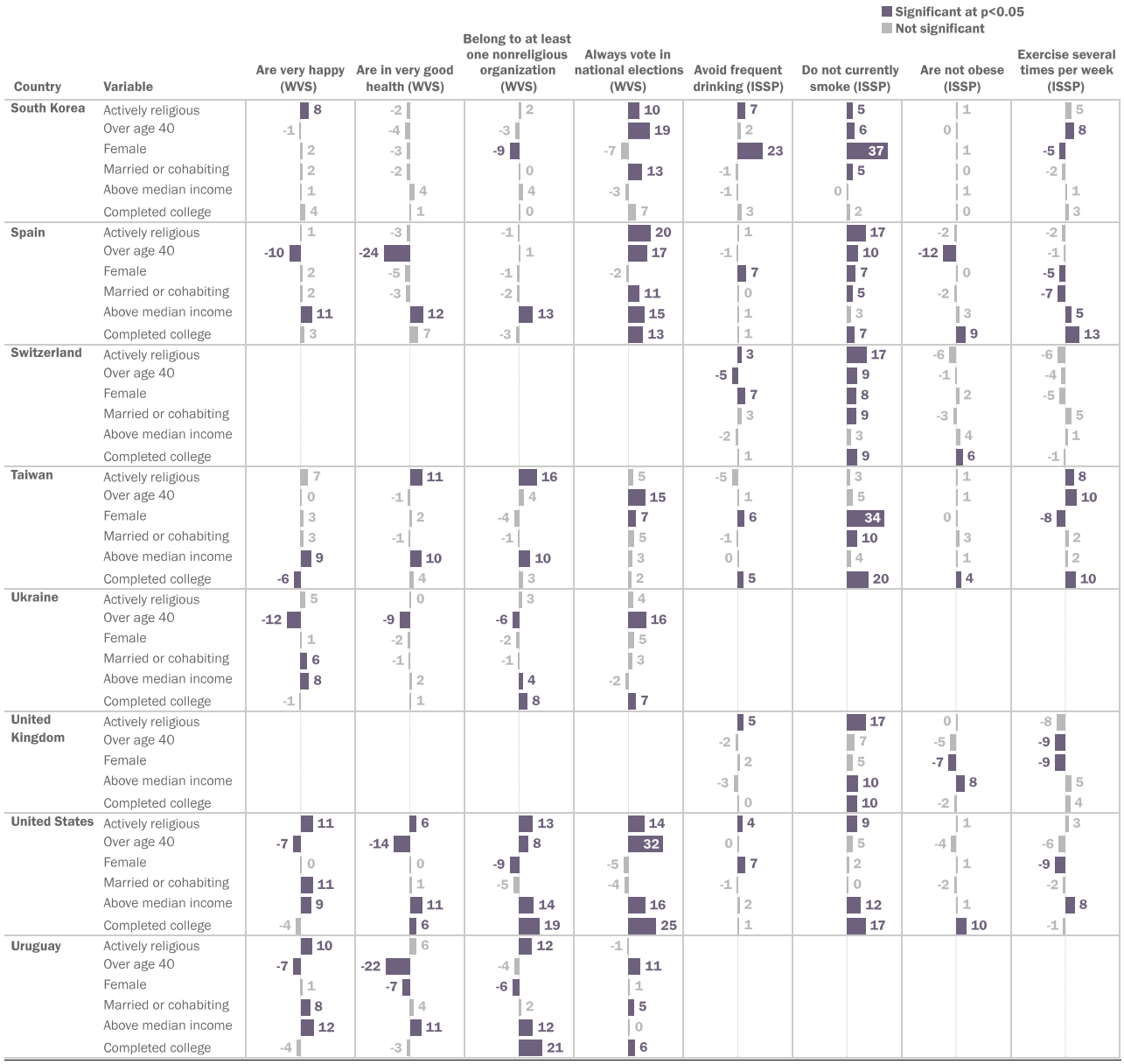
Appendix C: Regression model results by country (continued)

% point change in the outcome for respondents who ...



Country	Variable	Are very happy (WVS)	Are in very good health (WVS)	Belong to at least one nonreligious organization (WVS)	Always vote in national elections (WVS)	Avoid frequent drinking (ISSP)	Do not currently smoke (ISSP)	Are not obese (ISSP)	Exercise several times per week (ISSP)
South Korea	Actively religious	8	-2	2	10	7	5	1	5
	Over age 40	-1	-4	-3	19	2	6	0	8
	Female	2	-3	-9	-7	23	37	1	-5
	Married or cohabiting	2	-2	0	13	-1	5	0	-2
	Above median income	1	4	4	-3	-1	0	1	1
	Completed college	4	1	0	7	3	2	0	3
Spain	Actively religious	1	-3	-1	20	1	17	-2	-2
	Over age 40	-10	-24	1	17	-1	10	-12	-1
	Female	2	-5	-1	-2	7	7	0	-5
	Married or cohabiting	2	-3	-2	11	0	5	-2	-7
	Above median income	11	12	13	15	1	3	3	5
	Completed college	3	7	-3	13	1	7	9	13
Switzerland	Actively religious					3	17	-6	-6
	Over age 40					-5	9	-1	-4
	Female					7	8	2	-5
	Married or cohabiting					3	9	-3	5
	Above median income					-2	3	4	1
	Completed college					1	9	6	-1
Taiwan	Actively religious	7	11	16	5	-5	3	1	8
	Over age 40	0	-1	4	15	1	5	1	10
	Female	3	2	-4	7	6	34	0	-8
	Married or cohabiting	3	-1	-1	5	-1	10	3	2
	Above median income	9	10	10	3	0	4	1	2
	Completed college	-6	4	3	2	5	20	4	10
Ukraine	Actively religious	5	0	3	4				
	Over age 40	-12	-9	-6	16				
	Female	1	-2	-2	5				
	Married or cohabiting	6	-1	-1	3				
	Above median income	8	2	4	-2				
	Completed college	-1	1	8	7				
United Kingdom	Actively religious					5	17	0	-8
	Over age 40					-2	7	-5	-9
	Female					2	5	-7	-9
	Above median income					-3	10	8	5
	Completed college					0	10	-2	4
United States	Actively religious	11	6	13	14	4	9	1	3
	Over age 40	-7	-14	8	32	0	5	-4	-6
	Female	0	0	-9	-5	7	2	1	-9
	Married or cohabiting	11	1	-5	-4	-1	0	-2	-2
	Above median income	9	11	14	16	2	12	1	8
	Completed college	-4	6	19	25	1	17	10	-1
Uruguay	Actively religious	10	6	12	-1				
	Over age 40	-7	-22	-4	11				
	Female	1	-7	-6	1				
	Married or cohabiting	8	4	2	5				
	Above median income	12	11	12	0				
	Completed college	-4	-3	21	6				

Note: Results obtained via logistic regression modeling. Each parameter estimate assumes all other covariates are fixed at their country-level means except for the row for "all countries," in which case parameter estimates are fixed at their global mean (i.e. the mean for all the respondents across all countries in the pooled dataset). Marital status is unavailable for the UK sample. See Appendix A for more details about regression models.
Source: Estimates for self-rated health and happiness, voluntary organization membership and voting are from the World Values Surveys, 2010-2014. Estimates for all other outcomes are from the International Social Survey Programme's 2011 Health and Health Care module. "Religion's Relationship to Happiness, Civic Engagement and Health Around the World"

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