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RESEARCH ARTICLE

Are Men's Happiness and Life Satisfaction Linked to Why Men Die Earlier Than Women? A Panel Study from 1981 to 2020 in 102 Countries

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Abstract

The motivation for happiness research rather than GDP is becoming important to the role of many governments across the globe. When people are asked to list the key characteristics of a good life, they are more likely to include happiness, health, living well and longer. This study investigates whether factors that predict men's happiness and life satisfaction explain why men die earlier than women. The present research analyses data (*N*=426,452; 51.90% females) collected by the World Value Survey from 1981 to 2020 in 102 countries, and from six continents. A multilevel random-effects regression analysis was conducted in which individuals were nested by countries. We investigated variations across nations, country-level of development, and geographical regions. Men were slightly less happy and less satisfied with their lives compared to women. State of health, household's financial satisfaction, freedom of choice, family importance, and being married were positively associated with happiness/life satisfaction. In contrast, being men, being in a low-income household, or being unemployed were negatively associated with happiness/life satisfaction. Unemployed men and men who were living in Africa or the Middle East regions were less satisfied with their lives compared to women. The excess mortality burden on men is due to a mix of biological, behavioural, and social factors. Happy people may live longer because of the underlying factors such as health status, household financial satisfaction, and social connections. Policies targeting men's health and social connections are needed.

Keywords: Men's happiness, gender difference, life satisfaction, die earlier, well-being, health status

In recent years, the motivation for happiness research rather than Gross Domestic Product (GDP) is becoming important to the role of many governments across the globe (Dolan & Metcalfe, 2012; Stiglitz, Sen, & Fitoussi, 2009). When people are asked to list the key characteristics of a good life, they are more likely to include happiness, health, living well and living longer and better. However, little is known as to whether men's happiness and life satisfaction explain why men die earlier than women. Factors such as biological, behavioural, and social have been listed as contributors to men's early death. On average, women live longer than men. The gender gap between men and women is obvious among the elderly. It is not hard to notice that in nursing homes, women are the majority compared to men. Previous studies suggest that sex differences in lifetime exist worldwide, with women living around 4 to 10 years longer than men (Regan & Partridge, 2013). Across the globe, for example, we will see that 57% of the ages 65 and older are female. By age 85, the percentage of women increases to 67%. The average lifespan is around 5 years longer for women than men in the U.S. In the UK, for example, from 1980 to 2010, we have seen a reduction in the gap between male and female life expectancy from 6 to 4.1 years (Regan & Partridge,

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2013). The reduction of this gap has largely been attributed to a change in people's behaviours such as smoking and drinking, and improvement in safety measures in the workplace (Regan & Partridge, 2013). Across the globe, previous studies have suggested many reasons why the ratio of men to women (which is roughly equal in young adulthood) starts to favour women over time. Amongst the most popular factors, research suggests biological factors (e.g. Testosterone effect, Chronic disease), behavioural factors (e.g. Overestimate risks, Drug use, Hand hygiene), and social factors (e.g. Seeking support, Helping habits; generosity, Suicidal, Social connections). These factors are interconnected and presented in table 1. The men's happiness research is not included in table 1 as it is discussed below in this paper.

Table 1. Selected studies investigating on factors that may explain why men die earlier than women: suggests biological, behavioural, and social factors

Factors	Topic investigated	Authors and year	Findings
Biological factors	Testosterone effect; lipoprotein cholesterol	(Daghlas & Gill; Fellman, 1983; Reed & Meggs, 2017; Volman et al., 2016).	Women have biological advantages that let them live longer. For example, Estrogen effect versus Testosterone effect. Estrogen benefits women because it lowers low-density lipoprotein cholesterol (or LDL, what you may know as "bad" cholesterol) and increases high-density lipoprotein cholesterol (or HDL, the "good" cholesterol), which reduces cardiovascular risk (Daghlas & Gill). On the other hand, Testosterone increases blood levels of the bad cholesterol "LDL" and decreases levels of good cholesterol "HDL". This puts men at greater risk of hypertension, heart disease, and stroke. A study examining the effect of prenatal testosterone and aggression on sporting choice found that individuals involved in sport exhibited significantly greater levels of prenatal testosterone (Reed & Meggs, 2017). Testosterone puts men at risk biologically, but it also puts men at risk behaviourally (Volman et al., 2016). Men are riskier drivers and more likely to be involved in motor racing, boxing, and other difficult competitions which may increase aggressiveness, and, result in a higher death rate from accidents and homicide. Men tend to have more dangerous jobs than women such as military combat, firefighting, and working at construction sites. Men tend to be larger than women (Fellman, 1983). Across many species, larger animals tend to die younger than smaller ones. Although the magnitude of this effect is uncertain in humans, it may work against male longevity. Men, on average, are about 15 percent to 20 percent larger than women.
	Chronic disease	(Peters et al., 2021)	Some researchers may argue that men and women have different types of chronic diseases. Women have more arthritis, which does not kill, even if disabling. In contrast, men are at higher risk of chronic diseases that are leading killers. Heart disease starts 10 years earlier in men than women. A study looking at the trends in recurrent coronary heart disease (CHD) after myocardial infarction (MI) among US women and men between 2008 and 2017 found that the rates of recurrent MI, recurrent CHD events, heart failure hospitalization, and mortality in the first year after an MI declined considerably between 2008 and 2017 in both men and women, with proportionally greater reductions for women than men (Peters et al., 2021).
Behavioural factors	Overestimate risks	(Bergdahl, 2005; Bramness, Skurtveit, Morland, & Engeland, 2012; Pravossoudovitch, Martha, Cury, & Granie, 2015).	Women are more likely to overestimate risks, while men usually underestimate them. This has been observed regardless of the context. These include examples ranging from crossing a road to the perception of risk of accident, volcano, smoking, taking the drug, or a terrorist attack (Bramness et al., 2012). Among drivers, men more commonly break the rules. Men are more likely to be involved in car accidents because of their greater risk-taking, underestimation of risk, sensation-

			seeking, and tendency to be more impulsive (Bergdahl, 2005; Pravossoudovitch et al., 2015).
	Drug use	(Cook, Shank, Bruno, Turner, & Mann, 2017; Greenfield, Back, Lawson, & Brady, 2010).	Gender differences have been reported in substance use where men were 2.2 times more likely to abuse drugs than women, and 1.9 times more likely to have drug dependence. Men are responsible for four out of every five cases of driving under the influence of a drug or alcohol (Cook et al., 2017; Greenfield et al., 2010)
	Hand hygiene	(Berry, Mitteer, & Fournier, 2015; Glabska, Skolmowska, & Guzek, 2020; Johnson, Sholcosky, Gabello, Ragni, & Ogonosky, 2003).	The hand hygiene behaviours: men's hand-washing rates were substantially lower than women. This may include frequency of washing hands, washing hands with soap, or in the absence/presence of the sign. For example, 97% of the women and 35% of the men observed washed their hands in the presence of the sign (Berry et al., 2015; Glabska et al., 2020) (Johnson et al., 2003).
Social factors	Seeking support	(Griffiths et al., 2015; Zhu, Brescoll, Newman, & Uhlmann, 2015).	Women are more likely to seek health support than men. As a result, women will get early diagnosis and avoid the worse than men. Previous research found that the association between self-stigma of seeking psychological help and increased likelihood of being undiagnosed was significantly stronger for males than for females (Griffiths et al., 2015). The masculinity unhealthy effects may play a role in this tendency to see unhealthy and risky behaviours as masculine, and seeing health care use and health-promoting behaviours as feminine (Zhu et al., 2015). Also, women are close to health services because of their maternity and menstrual cycle. During pregnancy, women are more likely to have their blood, sugar level, blood pressure, and urine checked. Thus, women will not only learn how to better communicate their problems, but their visits to health services will also help the process of diagnosis.
	Helping habits; generosity	(Mackay, Egli, Booker, & Prendergast, 2019; Nickrand & Brock, 2017)	More than half of married couples in the United States say sharing household chores is “very important” to a successful marriage. But when it comes to grocery shopping and cooking, women are the ones who usually do the work. Meal planning, grocery shopping, meal preparations, and eating meals have been used as "Culinary Grief Therapy” for people who have lost their loved ones (Nickrand & Brock, 2017). Cooking and serving foods are beneficial to people’s well-being. Research suggests that acts of giving and kindness can help improve your mental wellbeing by creating positive feelings and a sense of reward, giving you a feeling of purpose and self-worth, and helping you connect with other people (Mackay et al., 2019). Most married men rely heavily on their wives when it comes to cooking, eating, dressing and male-ups. And as soon as their wives become unwell and unavailable, men are more likely to die in silence, feel alone, and have nothing to eat.
	Suicidal	(Griffiths et al., 2015; Rice, Kealy, Oliffe, Treeby, & Ogrodniczuk, 2020; Siegel & Rothman, 2016)	Men are more likely to commit suicide than women (Siegel & Rothman, 2016). This is true despite the fact that depression is considered more common among women and women make more (non-fatal) suicide attempts. Some attribute this to the tendency for men to avoid seeking care for depression and the cultural norms that discourage men from seeking help for mental illness (Griffiths et al., 2015).
	Social connections	(Leigh-Hunt et al., 2017; Webber, Huxley, & Harris, 2011).	Men tend to have fewer social connections than women. Social isolation and loneliness have been associated with ill health. People with fewer and weaker social connections (which tends to include men more often than women) tend to have higher death rates (Leigh-Hunt et al., 2017).

Men's and Women's Happiness Research

In previous studies, certain aspects of happiness and life satisfaction measures have been found as reliable and related to more both objective and subjective measures of well-being, such as, on the one hand, those relating to brain activity, personality, the frequency of smiles and on the other hand, job satisfaction, healthier social connections and better self-rated physical health (Arslan, 2021; Ermis-Mert, 2020; Senf & Liau, 2013; van Reekum et al., 2007). Several studies have highlighted gender differences between women and men's happiness. For example, a study looking at the factors affecting working women's and men's overall happiness found a correlation between job satisfaction and income satisfaction for both genders, but slightly stronger for women (Ermis-Mert, 2020). The British Household Panel Survey (1996–2007) reported that the average levels of life satisfaction are similar for men and women but job satisfaction matters much more to men than to women (Della Giusta, Jewell, & Kambhampati, 2011). Older Taiwanese men were found to be more concerned with their present employment situations and more likely to recall their midlife work experiences (Wu & Tsay, 2018).

Marriage and family connections have been explored to whether these factors can explain the gender differences between men's and women's happiness. Previous studies reported that women are more resilient than men when are both facing a divorce. The longitudinal data from the Korean Labor and Income Panel Study (1998 - 2008) found that significant gender differences: Men remain on a higher happiness level throughout the marriage, while women return to their baseline happiness within only two years. Consequently, men suffer more from divorce and the death of a spouse (Rudolf & Kang, 2015). Moreover, research in Japan showed that high levels of happiness in men were significantly correlated with living with a spouse, occupation, enough sleep, leading a normal life, and regular check-ups; while low levels of happiness were significantly correlated with smoking and having two or more diseases. In women, low levels of happiness were significantly correlated with caring for a family member (Moriyama, Tamiya, Kawachi, & Miyairi, 2018). For those who have never-married, women's life satisfaction was influenced by emotional loneliness and availability of attachment relationships, and on the other hand, men's life satisfaction was predicted by self-esteem and availability of social integration (Cockrum & White, 1985).

The way men eat and self-report their physical health have been investigated to explore the link with their happiness. Previous studies have suggested a positive link between fruit and vegetable intake and happiness in the oldest-old men (Jyvakorpi, Urtamo, Pitkala, & Strandberg, 2018). In the United States, a study using the National Survey of American Life found a positive link between happiness and self-rated physical health. African American men who were happy reported better physical health than those who reported not being happy (Mwinnyaa, Porch, Bowie, & Thorpe, 2018).

Relationships and social connections have been reported to be crucial to men's and women's happiness research, such as the Harvard Study of Adult Development, which is one of the world's longest studies of adult life (Mitchell, 2004). In this study, scientists began tracking the health of 724 men for nearly 80 years. Year after year, scientists visited participants, checked their medical records, scanned their brains, and asked them questions about their work, social connections, and health conditions such as any illnesses, blood sugar, cholesterol level. The longitudinal study aimed to reveal clues to leading healthy and happy lives. Since 1938, the study still continues to investigate the lives of children of Harvard sophomores' men and Boston poor neighbourhood boys. The Harvard Study of Adult Development found that the role of genetics and long-lived ancestors proved less important to longevity than the level of satisfaction with relationships in midlife, now recognized as a good predictor of healthy aging (Mitchell, 2004; Waldinger & Schulz, 2016). For example, previous studies found that more time spent with others was positively associated with greater happiness, and daily links between time spent with one's partner and happiness were strongly moderated by marital satisfaction (Waldinger & Schulz, 2010). Researchers found that women who felt securely attached to their partners were less depressed and happier in their relationships two-and-a-half years later, and also had better memory functions than those with frequent marital conflicts. The people who were the most satisfied in their relationships at age 50 were the healthiest at age 80 (Mitchell, 2004). The Harvard Study of Adult Development highlighted the importance of shifting emphasis from measuring economic production to measuring people's well-being (Fitoussi & Stiglitz, 2013; Rojas, 2011).

However, the studies on which these conclusions are based suffer limitations in three key respects. First, the majority of studies looking at the reasons why men die earlier than women are conducted in developed nations because these countries have the financial resources to conduct research, and participants are accessible in contrast

to developing nations with poorer infrastructure. This is problematic in terms of representativeness for the purpose of global decision-making to improve health and achieve equity in health for all people worldwide. Second, the terms happiness and life satisfaction have been used interchangeably to assess subjective well-being (SWB), but there is strong evidence to suggest that these terms are not synonymous. Happiness is more closely associated with emotions, feelings, or moods; in contrast, life satisfaction is concerned with people's judgments about life-as-a-whole, which might include evaluations of their work or personal relationships. Previous studies on measuring subjective well-being suggest that all aspects of SWB should be measured separately to develop a more comprehensive measure of people's quality of life and to allow a better understanding of its determinants (Dardha & Rogge, 2020; Goodman, Disabato, Kashdan, & Kauffman, 2018; Ngamaba, 2017). Third, indicators of happiness and life satisfaction amongst men and women may have different salience across countries. Based on the limited data available at the time these studies were conducted, some findings could be interpreted differently and we desperately need robust findings to improve global health.

This study will fill the gap by investigating whether factors that predict men's happiness and life satisfaction explain why men die earlier than women.

This study looks at whether:

- the happiness and life satisfaction are different between men and women across nations;
- there are important factors associated with their happiness and life satisfaction, and whether
- these important factors explain why men die earlier than women.

Method

Sources of data

The present research analyses data collected by the World Value Survey (WVS) from 1981 to 2020. The WVS, in collaboration with the European Values Study (EVS), provide evidence on what people want out of life and what they believe in. To monitor these value changes, the WVS/EVS have carried out seven different survey waves from 1981 to 2020 in 102 countries from different continents.

The WVS survey waves (1981-2020) is used because it is up-to-date and includes a representative sample of nations and participants, recruited using Stratified Random Sampling (for more details about WVS surveys, please visit https://www.worldvaluessurvey.org/WVSContents.jsp).

Sample

The total sample size was 426,452 respondents (51.90 % females) from 102 countries. With an average of 1,440 respondents, ranging from 240 to 4078 individuals, participants of each country were interviewed face-to-face by a local field organisation and supervised by WVS's academic researchers. Respondent ages range from 13 to 103 years, with a mean of 41 years and a standard deviation of 16.22.

Data collected by the WVS was checked for missing data and although more than 95% of cases were complete. Given that many explanatory variables were used in the multivariate model, the final number of respondents decreased from 426.452 to 340,683.

Statistical analysis

Correlations among variables were tested prior to multilevel analysis because multivariate techniques might throw up spurious statistically significant associations (Kraha, Turner, Nimon, Zientek, & Henson, 2012). There was no evidence of multicollinearity among the measured variables.

Stata 17 software was used for a cross-sectional multilevel study in which individuals were nested by countries. Multilevel analysis is an appropriate approach for this study because it considers the social contexts as well as the individual respondents. Both fixed effects and random effects have been used in previous studies to analyse this kind of data (Huang, 2020). However, in this study random-effects has been selected because of the assumption that differences across entities are random and have some influence on happiness and life satisfaction (Bell & Jones, 2015). The Hausman test suggests that it is safe to use random effects (Prob>chi2 = 0.096 > 0.05).

A multilevel random-effects regression analysis [Stata commands: xtreg, i.year of the survey and i(country where the survey took place)] was used because WVS executed seven different surveys from 1981 to 2020. The

multilevel analysis methodology allows studying effects that vary by entity and estimates group level averages. This is important because the regular regression could ignore the average variation between entities (Bell & Jones, 2015; Stawski, 2013).

Before running the multilevel random-effects regression analysis, the one-way analysis of variance (ANOVA) was used to determine whether there are any significant differences between the means of happiness and life satisfaction by gender across nations (Prob>chi2 = 0.001 > 0.05, Prob>chi2 = 0.002 > 0.05, respectively).

Three steps were taken in the analysis: First, a descriptive statistic of dependent variables (happiness and life satisfaction) and explanatory variables were presented (Tab 2). Second, a cross-national multilevel analysis was conducted to test whether the explanatory variables were associated in a similar way with each dependent variable (i.e. happiness and life satisfaction) (Tab 3 and 4). To explore variations across nations, countries were grouped into three levels of development (high-, middle-, and low-income countries) and into eight geographical regions (Western Europe, Eastern Europe, North America, Latin-south America, Asia, Africa, Middle East, and Australia). Finally, after controlling for covariates, the rules of thumb for effect sizes were applied to ascertain which of the explanatory variable has a greater effect on happiness and life satisfaction and whether the association varies between men and women.

The variables were scaled so that higher values reflected more of the positive characteristics. This study used $p < .001$, $p < .01$, and $p < .05$ as the level of significance and we emphasised the interpretation of the results using the rules of thumb for effect sizes (Cohen, 1992). Thus, $r \leq .10$ was used as a "small" effect size, $r > .10$ and $\leq .30$ as a "medium" effect size, and $r > .30$ as a "large" effect size.

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Results

Descriptive Results

The survey measures and descriptive statistics are presented in Table 2. Table 2 provides an overview of the descriptive statistics used later in the multilevel regression analysis. The average levels of happiness (on a scale of 1–4) was M =3.07 (SD =0.74) and of life satisfaction (on a scale of 1–10) was M =6.69 (SD =2.41) suggesting that the SWB of people across the globe was above the midpoint of the scale. However, the average levels of happiness and life satisfaction varied between men and women. Men were slightly less happy (M =3.07, SD = 0.74) and less satisfied with their lives (M =6.66, SD =2.41) compared to women happiness (M =3.08, SD =0.74) and life satisfaction (M =6.70, SD =2.42).

The average levels of other factors such as state of health, freedom of choice, household's financial satisfaction, importance of family, friends, leisure, work and God were above the midpoint of the scale. However, trust in others was below the midpoint (M =0.25, SD =0.43). On a scale of 0 to 1, if 0= Need to be very careful and 1= Most people can be trusted, both men and women were more careful (M = 0.24, SD =0.44; M= 0.25, SD =0.43, respectively).

Multilevel Modelling Analysis Results

Table 3 presents the results of the multilevel regression analysis investigating potential predictors of happiness. The table is organised so that the left part presents the multilevel analysis results of happiness for men and the right part presents the multilevel analysis results of happiness for women (see Table 3). Table 4 presents the results of the multilevel regression analysis investigating potential predictors of life satisfaction. The table is organised so that the left part presents the multilevel analysis results of life satisfaction for men and the right part presents the multilevel analysis results of life satisfaction for women (see Table 4).

The most significant factors driving happiness and life satisfaction include state of health, freedom of choice, household's financial satisfaction, trust in others, the importance of family, friends, leisure, and God, and being married (see table 3 and table 4). Being in low household income and being unemployed were negatively associated with happiness. The importance of work and other factors such as country level of development or country geographical regions were not significant.

Table 2. Descriptive Statistics and Measures

Variable	Partic. N	Mean	SD	Men	SD	Women	SD	Min	Max	Description & measurement
Happiness	417,862	3.07	.74	3.07	.74	3.08	.74	1	4	Taking all things together, would you say you are: 1=Not at all happy; 2=Not very happy; 3=Quite happy; and 4=Very happy.
Life satisfaction	420,669	6.69	2.41	6.66	2.41	6.70	2.42	1	10	All things considered, how satisfied are you with your life as a whole these days? On a scale of 1 to 10 if 1=dissatisfied and 10=satisfied.
State of health	414,574	3.81	.88	3.87	.87	3.75	.89	1	5	All in all, how would you describe your state of health these days? If 1=very poor, 2=poor, 3=fair, 4=good, and 5=very good.
Freedom of choice	405,390	6.91	2.39	6.98	2.38	6.83	2.41	1	10	How much freedom of choice and control you feel you have over the way your life turns out, where 1 "none at all" and 10 "a great deal".
Financial satisfaction	411,461	5.75	2.57	5.77	2.54	5.71	2.59	1	10	How satisfied are you with the financial situation of your household? If '1' completely dissatisfied, and '10' completely satisfied.
Trust others	409,115	.25	.43	.26	.44	.25	.43	0	1	Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" 0= Need to be very careful; 1= Most people can be trusted.
Family important	404,975	3.89	.35	3.87	.38	3.90	.33	1	4	Indicate how important family is in your life; if 1=not at all important, 2=not very, 3=rather important and 4=very important
Friends important	403,495	3.29	.74	3.30	.73	3.27	.75	1	4	Indicate how important friends are in your life; if 1=not at all important, 2=not very, 3=rather important and 4=very important
Leisure important	401,003	3.09	.82	3.09	.83	3.09	.82	1	4	Indicate how important leisure time is in your life; if 1=not at all important, 2=not very, 3=rather important and 4=very important
Work important	400,586	3.52	.73	3.59	.69	3.47	.77	1	4	Indicate how important work is in your life; if 1=not at all important, 2=not very, 3=rather important and 4=very important
God important	402,066	7.70	3.02	7.45	3.15	7.92	2.88	1	10	Indicate how important God is in your life; if 1=not at all important, and 10=very important
Dummy variables		Mean	SD							
Gender: Men (N=202,817)	426,452	.47	.49					0	1	Gender: 1= Male and 2= Female. We created a dummy variable, 1= men and 0 = otherwise.

Women (N= 218,817)	426,452	.51	.49	0	1	Gender: 1= Male and 2= Female. We created a dummy variable, 1= women and 0 = otherwise
Age group: 50 and over	426,452	.29	.45	0	1	Participants were asked to give their age groups: 15-29; 30-49, and 50 and over. Dummy variable, 1= 50 and over and 0 = otherwise.
Marital status: married	426,452	.63	.48	0	1	Participants were asked their marital status: married, living together, divorced, separated, widowed, single. Dummy variable, 1= married and 0 = otherwise.
Education: elementary level	426,452	.21	.41	0	1	Highest educational attainment level: Participants were asked to indicate their highest educational attainment level: from elementary, secondary to degree level. Dummy variable, 1= elementary level and 0 = otherwise.
Income scales: low household income	426,452	.30	.46	0	1	"We would like to know in what group your household is, counting all wages, salaries, pensions and other incomes that comes in". if 1= lowest income group, 2= middle-income group, and 3= highest income group in the country Dummy variable, 1 = low-income scale and 0 = otherwise.
Employment: unemployed	426,452	.08	.28	0	1	Employment status Full time, Part time, Self-employed, Retired, Housewife, a Student, Unemployed or part of some other employment category. Dummy variable, 1= Unemployed and 0 = otherwise.
High income countries	426,452	.34	.47	0	1	The World Bank classification of countries, based on GNI per capita in current USD, 2020. Dummy variable, 1= high income countries and 0 = otherwise.
Middle income countries	426,452	.57	.49	0	1	The World Bank classification of countries, based on GNI per capita in current USD, 2020. Dummy variable, 1= middle income countries and 0 = otherwise.
Low-income countries	426,452	.06	.24	0	1	The World Bank classification of countries, based on GNI per capita in current USD, 2020. Dummy variable, 1= low income countries and 0 = otherwise.

Western Europe	426,452	.08	.28	0	1	Countries were grouped by geographical regions, Dummy variable, 1= Western Europe region and 0 = otherwise.
Eastern Europe	426,452	.19	.39	0	1	Countries were grouped by geographical regions, Dummy variable, 1= Eastern Europe and 0 = otherwise.
North America	426,452	.04	.21	0	1	Countries were grouped by geographical regions, Dummy variable, 1= North America and 0 = otherwise.
Latin-South American	426,452	.16	.36	0	1	Countries were grouped by geographical regions, Dummy variable, 1= Latin and south America and 0 = otherwise.
Asia	426,452	.19	.39	0	1	Countries were grouped by geographical regions, Dummy variable, 1= Asia and 0 = otherwise.
Africa	426,452	.14	.35	0	1	Countries were grouped by geographical regions, Dummy variable, 1= Africa and 0 = otherwise.
Middle East	426,452	.10	.31	0	1	Countries were grouped by geographical regions, Dummy variable, 1= Middle-East and 0 = otherwise.
Australia region	426,452	.02	.16	0	1	Countries were grouped by geographical regions, Dummy variable, 1= Australia and NZ and 0 = otherwise.

Source: https://www.worldvaluessurvey.org/wvs.jsp

Nevertheless, when the rules of thumb for effect sizes were applied some factors seem to have 'small' effect sizes ($R \leq 0.10$).

In terms of happiness only two factors were above the 'small' effect size: state of health and being married showed a 'medium' effect size and were positively associated with happiness; for Men (B= 0.224, $p < 0.001$; B= 0.107, $p < 0.001$, respectively); for women (B= 0.228, $p < 0.001$; B= 0.116, $p < 0.001$, respectively) (see Table 3). In contrast, being in a low-income household, or being unemployed were negatively associated with happiness, with a small effect size.

Table 3. Results of the multilevel regression analysis (b) investigating the association between potentials predictors and happiness. Men's happiness alongside Women's happiness

	Men			Women		
Happiness	Coefficient	*SE*	*p>z*	Coefficient	*SE*	*p>z*
Health state	.224***	.002	0.000	.228***	.001	0.000
Freedom of choice	.026***	.001	0.000	.029***	.001	0.000
Financial Satisfaction	.057***	.001	0.000	.053***	.001	0.000
Trust in others	.045***	.003	0.000	.032***	.003	0.000
Family important	.096***	.004	0.000	.107***	.004	0.000
Friends important	.033***	.002	0.000	.046***	.002	0.000
Leisure important	.031***	.002	0.000	.038***	.002	0.000
Work important	.004ns	.002	0.054	.001ns	.002	0.711
God important	.010***	.001	0.000	.010ns	.001	0.000
Age group: over 50s	.017***	.003	0.000	.003ns	.003	0.340
Marital status: married	.107***	.003	0.000	.116***	.003	0.000
Elementary education	-.002ns	.004	0.549	.007ns	.004	0.072
Low-income household	-.040***	.003	0.000	-.040***	.003	0.000
Employment: Unemployed	-.061***	.005	0.000	-.046***	.005	0.000
High income countries	.006ns	.072	0.932	.064ns	.070	0.359
Middle-income countries	-.035ns	.074	0.638	.026ns	.072	0.717
Low-income countries	.024ns	.096	0.797	.060ns	.093	0.514
Western Europe	.039ns	.094	0.673	.031ns	.091	0.733
Eastern Europe	-.088ns	.085	0.300	-.099ns	.083	0.231
North America	.050ns	.144	0.728	.018ns	.140	0.896
Latin-south America	.154ns	.099	0.121	.123ns	.096	0.202
Asia	.077ns	.098	0.431	.080ns	.095	0.399
Africa	-.038ns	.102	0.706	-.027ns	.099	0.784
Middle-east	-.132ns	.100	0.185	-.088ns	.097	0.361
Australia	.019ns	.144	0.893	.027ns	.140	0.844
Intercept	.915***	.065	0.000	.759***	.063	0.000
Rho	.062			.060		
R-sq overall	0.235			0.253		
N	164,548			175,905		

Note: Level of significance: $p < 0.001$; $p < 0.01$; $p < 0.05$. ns= non-significant

With regard to life satisfaction, many factors showed a 'medium' or 'large' effect sizes. State of health and household's financial satisfaction were positively associated with life satisfaction; for men (B= 0.393, $p < 0.001$; B= 0.383, $p < 0.001$, respectively); for women (B= 0.407, $p < 0.001$; B= 0.365, $p < 0.001$, respectively). Also, with medium effect sizes, these three factors were positively link with life satisfaction: freedom of choice, family important, and being married; for men (B= 0.200, $p < 0.001$; B= 0.174, $p < 0.001$; B= 0.172, $p < 0.001$, respectively); for women (B= 0.207, $p < 0.001$; B= 0.187, $p < 0.001$; B= 0.196, $p < 0.001$, respectively). In contrast, being unemployed was negatively associated with life satisfaction; for men and women (B= -0.180, $p < 0.001$, B= -0.149, $p<0.001$, respectively). Participants in Latin and south America region were more satisfied with lives, both men and women (B= 0.433, $p < 0.01$; B= 0.437, $p < 0.01$, respectively), in contrast to those who were in Africa and Middle

east regions, for men (B= -0.558, p <0.01; B= -0.495, p <0.05, respectively), for women (B= -0.496, p <0.01), (see Table 4).

Table 4. Results of the multilevel regression analysis (b) investigating the association between potentials predictors and life satisfaction. Men's life satisfaction alongside Women's life satisfaction

	Men			Women		
Life satisfaction	Coefficient	*SE*	*p>z*	Coefficient	*SE*	*p>z*
Health state	.393***	.005	0.000	.407***	.005	0.000
Freedom of choice	.200***	.002	0.000	.207***	.001	0.000
Financial Satisfaction	.383***	.002	0.000	.365***	.001	0.000
Trust in others	.080***	.010	0.000	.075***	.010	0.000
Family important	.174***	.012	0.000	.187***	.013	0.000
Friends important	.038***	.006	0.000	.054***	.006	0.000
Leisure important	.042***	.005	0.000	.048***	.005	0.000
Work important	.005ns	.007	0.404	-.003ns	.006	0.564
God important	.0407***	.001	0.000	.043***	.001	0.000
Age group: over 50s	.090***	.010	0.000	.079***	.010	0.000
Marital status: married	.172***	.009	0.000	.196***	.009	0.000
Elementary education	.006ns	.012	0.611	.026*	.011	0.023
Low-income household	-.091***	.010	0.000	-.088***	.010	0.000
Employment: Unemployed	-.180***	.015	0.000	-.149***	.016	0.000
High income countries	.016ns	.131	0.901	.084ns	.128	0.511
Middle-income countries	-.207ns	.134	0.125	-.131ns	.131	0.316
Low-income countries	-.354*	.173	0.041	-.243ns	.169	0.149
Western Europe	.186*	.170	0.275	.191ns	.165	0.249
Eastern Europe	-.242ns	.155	0.117	-.213ns	.150	0.157
North America	-.004ns	.259	0.988	-.003ns	.252	0.988
Latin-south America	.423**	.180	0.019	.437**	.175	0.013
Asia	.061ns	.178ns	0.729	.082ns	.173	0.633
Africa	-.558**	.185	0.003	-.496**	.180	0.006
Middle-east	-.495**	.181	0.006	-.281ns	.176	0.112
Australia	.010ns	.260	0.969	.062ns	.253	0.806
Intercept	.294***	.141	0.036	.081ns	.139	0.559
Rho	.025			.023		
R-sq overall	0.419			0.416		
N	165,214			176,487		

Note: Level of significance: $p < 0.001$; $p < 0.01$; $p < 0.05$. ns= non-significant

Discussion

This study investigated whether factors that predict men's happiness and life satisfaction explain why men die earlier than women. This study found that men were slightly less happy and slightly less satisfied with their lives than women. In excluding factors that had "small" effect sizes, this study found that state of health and being married were positively associated with happiness for men and women. However, women had a slightly higher coefficient than men. Many factors were positively associated with life satisfaction. These included state of health, freedom of choice, household's financial satisfaction, family importance, being married, and living in the Latin-south American region. We found a similar trend as women's coefficients were slightly higher than men's coefficients. In contrast, being unemployed, and living in Africa or Middle East regions were negatively linked with life satisfaction. Unemployed men and men who were living in Africa or Middle East regions were more affected than women.

Happy people live longer as mortality has been linked to happiness and life satisfaction (Diener & Chan, 2011; Lacruz, Emeny, Baumert, & Ladwig, 2011). To improve men's happiness and life satisfaction, it is important to improve some determinants factors highlighted in this study.

In terms of the state of health, this study found that health status was strongly associated with both happiness and life satisfaction. Healthier people are happier and more satisfied with their lives. Good health is associated with greater well-being, while setbacks in health have negative effects on happiness and life satisfaction. For example, people who have painful chronic conditions and those who have become seriously disabled have permanently lower levels of happiness compared to their counterparts who are not disabled (Headey, 2010). In line with previous studies, the multilevel analysis showed a positive association between health status, happiness, and life satisfaction even after controlling for several factors (Miret et al., 2014; Ngamaba, Panagioti, & Armitage, 2017). Moreover, a systematic review found a positive association between health status and happiness and life satisfaction (Ngamaba et al., 2017). However, the association was significantly stronger: when subjective well-being (SWB) was operationalised as life satisfaction as opposed to happiness, and among studies conducted in developing countries than it was in developed countries because of the impact health may have on people in real need (Ngamaba et al., 2017). Traditionally, governments have assessed citizens' well-being using GDP per capita. Nevertheless, in line with previous studies, findings suggest that policy targeting the improvement in health status is likely to be more effective for improving well-being than increasing the income per se (Miret et al., 2014; Ngamaba et al., 2017).

Alongside health status, the household's financial satisfaction was another significant driver of happiness and life satisfaction. The results relating to financial satisfaction suggest that income not only allows individuals to purchase goods and services, but it also goes hand-in-hand with happiness and life satisfaction (Howell & Howell, 2008). Being satisfied with your household's financial situation has been reported as a determinant of happiness and life satisfaction across nations and religions (Ngamaba, Armitage, Panagioti, & Hodkinson, 2020; Ngamaba & Soni, 2018).

In terms of freedom of choice and control over life, this study found a positive association between freedom of choice and happiness/life satisfaction. Previous studies have suggested that the extent to which a society allows free choice has a major impact on happiness. Most nations are promoting emancipative values and a link has been established between freedom of choice and happiness (Inglehart, Foa, Peterson, & Welzel, 2008). Emancipative values such as freedom of choice, gender equality, and tolerance have been linked with Maslow's hierarchy of needs and human development theory (Inglehart et al., 2008). On the other hand, political instability in countries such as Yemen, Ukraine, Palestine, Iraq, Tunisia, and Egypt not only affect the prosperity of these countries but restricts emancipative values and negatively affects people's life satisfaction.

Previous studies suggest a positive association between social connections and happiness/life satisfaction because people greatly value the quality of their social connections (Arslan & Coşkun, 2023; Buhagiar et al., 2021; Waldinger & Schulz, 2010). This study reports a positive relationship between happiness/life satisfaction and shows the importance of family and being married. On the other hand, the unemployed were less happy and less satisfied with their lives. The importance of social relationships on happiness/life satisfaction seems to be important across countries. For example, a study conducted across nations found that affection, communication, frequency of contacts, and mutual support have a higher weight in family satisfaction than socioeconomic variables, such as income, social class, or education (Millan & Esteinou, 2021). Previous studies found that more time spent with others was positively associated with greater happiness, and daily links between happiness and time spent with one's partner were strongly moderated by marital satisfaction (Waldinger & Schulz, 2010). Researchers found that women who felt securely attached to their partners were less depressed and happier in their relationships two-and-a-half years later, and also had better memory functions than those with frequent marital conflicts. Moreover, a previous longitudinal study found that the people who were the most satisfied in their relationships at age 50 were the healthiest at age 80 (Mitchell, 2004). The Harvard Study of Adult Development highlighted the importance of social connections and shifting emphasis from measuring economic production to measuring people's well-being (Fitoussi & Stiglitz, 2013; Mitchell, 2004).

Many researchers have noticed that men have various underlying factors that lead them to die earlier than women. These factors included behavioural and social factors. It has been found that men struggle more than women with seeking social help and support (Griffiths et al., 2015; Mackay et al., 2019). Our findings suggest that those who were more socially connected were happier and more satisfied with their lives than those were not socially connected. Women are socially connected than men and they are more likely to show acts of kindness and seek help than men (Mackay et al., 2019). This may explain why unemployed people were less satisfied with their lives

because employment increase social connections. Moreover, we found that unemployed men were in worse condition than unemployed women because job satisfaction matters much more to men than to women (Della Giusta et al., 2011).

Those who lived in low-income countries, Africa, or Middle East regions were less satisfied with their lives. In contrast, those in the Latin-south America region were more satisfied with their lives. Most African and Middle East countries are affected by war, poverty, and economic instability. As highlighted previously, most of these countries are struggling to promote emancipative values that may negatively impact people's happiness and life satisfaction (Inglehart et al., 2008). The Latin-south American region scored higher in happiness and life satisfaction compared to Africa and the Middle-East regions, However researchers are still investigating this (Inglehart et al., 2008).

This study found that men were less happy and less satisfied with their lives compared to women. Some previous studies have reported that happy people live longer. For example, higher mortality rates have been associated with low life satisfaction (Lacruz et al., 2011). Participants with higher life satisfaction were less likely to die early because of the underlying causes such as social network integration and/or self-rated health. Another study found that high subjective wellbeing (such as life satisfaction, absence of negative emotions, optimism, and positive emotions) caused better health and longevity. Happiness has been defined as positive feelings that predict longevity and health beyond negative feelings (Diener & Chan, 2011).

This study has strengths. It is the first to use updated WVS panel data (1981 – 2020) to investigate why men die earlier than women by exploring their happiness, life satisfaction and factors that predict their happiness and life satisfaction. This study highlighted the importance of testing psychosocial interventions that will help to improve men's well-being and achieve equity in men's health across the globe. Nevertheless, this study has the following limitations. First, when the rules of thumb for effect sizes were applied, the positive association between happiness/life satisfaction and several factors appear to be trivial because of their "small" effect sizes. However, there may be circumstances (that were not measured in this study) under which these factors may powerfully affect people's happiness/life satisfaction. Second, the World Value Survey does have its limitations, such as the small sample size for each country and the number of surveys per country. Some countries such as Argentina, Iraq have been surveyed 7 times versus Italy, Zambia, and Kuwait with only one survey. Finally, the present research was cross-sectional and further study is needed to investigate the causal relationships.

Conclusion

This study found that men are slightly less happy and slightly less satisfied with their lives compared to women. Being unemployed men and men living in Africa or Middle East regions were negatively linked with life satisfaction. On average, men die earlier than women. The excess mortality burden on men is due to a mix of biological, behavioural, and social factors. Happy people may live longer because of underlying factors such as health status, household financial satisfaction, and social connections. Across the globe, it is time to add interventions to improve happiness/life satisfaction to the list of public health measures. Policies targeting men's happiness, unemployment, health and social connections are needed because the years lived by a happy person are more valued and enjoyable.

Compliance with Ethical Standards

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Contributors

KHN prepared the data for the analysis. KHN did the data analysis with advice from KNB who also supported KHN in the interpretation of the results. KHN, KNB, FBI, PKM carried out the final check from the introduction to results and discussion. KHN takes responsibility for the integrity of the data and the accuracy of the data analysis. All authors reviewed the manuscript and contributed to its final draft. All authors approved the final version of the manuscript.

Declaration of interests

We declare no competing interests.

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Compliance of ethical standard statement

Access to secondary data was used in accordance with the requirements of the data source World Value Survey https://www.worldvaluessurvey.org/WVSContents.jsp

Informed consent

is not required because the authors used secondary data collected by World Value Survey.

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Appendix 1. WVS surveys from 1981 to 2020. Country code, country name, wave surveys 1 to 7 and total of participants.

Code	Country name	1981-1984	1989 - 1993	1994 - 1998	1999 - 2004	2005 - 2009	2010 - 2014	2017 - 2020	Total
8	Albania	0	0	999	1,000	0	0	0	1,999
12	Algeria	0	0	0	1,282	0	1,200	0	2,482
20	Andorra	0	0	0	0	1,003	0	1,004	2,007
31	Azerbaijan	0	0	2,002	0	0	1,002	0	3,004
32	Argentina	1,005	1,002	1,079	1,280	1,002	1,030	1,003	7,401
36	Australia	1,228	0	2,048	0	1,421	1,477	1,813	7,987
50	Bangladesh	0	0	1,525	1,500	0	0	1,200	4,225
51	Armenia	0	0	2,000	0	0	1,100	0	3,100
68	Bolivia	0	0	0	0	0	0	2,067	2,067
70	Bosnia Herzegovina	0	0	1,200	1,200	0	0	0	2,400
76	Brazil	0	1,782	1,143	0	1,500	1,486	1,762	7,673
100	Bulgaria	0	0	1,072	0	1,001	0	0	2,073
104	Myanmar	0	0	0	0	0	0	1,200	1,200
112	Belarus	0	1,015	2,092	0	0	1,535	0	4,642
124	Canada	1,254	1,730	0	1,931	2,164	0	0	7,079
152	Chile	0	1,500	1,000	1,200	1,000	1,000	1,000	6,700
156	China	0	1,000	1,500	1,000	1,991	2,300	3,036	10,827
158	Taiwan ROC	0	0	780	0	1,227	1,238	1,223	4,468
170	Colombia	0	0	6,025	0	3,025	1,512	1,520	12,082
191	Croatia	0	0	1,196	0	0	0	0	1,196
196	Cyprus	0	0	0	0	1,050	1,000	1,000	3,050
203	Czech Rep.	0	924	1,147	0	0	0	0	2,071
214	Dominican Rep.	0	0	417	0	0	0	0	417
218	Ecuador	0	0	0	0	0	1,202	1,200	2,402
222	El Salvador	0	0	1,254	0	0	0	0	1,254
231	Ethiopia	0	0	0	0	1,500	0	1,230	2,730
233	Estonia	0	0	1,021	0	0	1,533	0	2,554
246	Finland	1,003	0	987	0	1,014	0	0	3,004
250	France	0	0	0	0	1,001	0	0	1,001
268	Georgia	0	0	2,008	0	1,500	1,202	0	4,710
275	Palestine	0	0	0	0	0	1,000	0	1,000
276	Germany	0	0	2,026	0	2,064	2,046	1,528	7,664
288	Ghana	0	0	0	0	1,534	1,552	0	3,086
300	Greece	0	0	0	0	0	0	1,200	1,200
320	Guatemala	0	0	0	0	1,000	0	1,203	2,203
332	Haiti	0	0	0	0	0	1,996	0	1,996
344	Hong Kong SAR	0	0	0	0	1,252	1,000	2,075	4,327
348	Hungary	1,464	0	650	0	1,007	0	0	3,121
356	India	0	2,500	2,040	2,002	2,001	4,078	0	12,621
360	Indonesia	0	0	0	1,000	2,015	0	3,200	6,215
364	Iran	0	0	0	2,532	2,667	0	1,499	6,698
368	Iraq	0	0	0	2,325	2,701	1,200	1,200	7,426
376	Israel	0	0	0	1,199	0	0	0	1,199
380	Italy	0	0	0	0	1,012	0	0	1,012
392	Japan	1,204	1,011	1,054	1,362	1,096	2,443	1,353	9,523
398	Kazakhstan	0	0	0	0	0	1,500	1,276	2,776
400	Jordan	0	0	0	1,223	1,200	1,200	1,203	4,826
410	South Korea	970	1,251	1,249	1,200	1,200	1,200	1,245	8,315
414	Kuwait	0	0	0	0	0	1,303	0	1,303
417	Kyrgyzstan	0	0	0	1,043	0	1,500	1,200	3,743
422	Lebanon	0	0	0	0	0	1,200	1,200	2,400
428	Latvia	0	0	1,200	0	0	0	0	1,200
434	Libya	0	0	0	0	0	2,131	0	2,131
440	Lithuania	0	0	1,009	0	0	0	0	1,009
446	Macau SAR	0	0	0	0	0	0	1,023	1,023

458	Malaysia	0	0	0	0	1,201	1,300	1,313	3,814
466	Mali	0	0	0	0	1,534	0	0	1,534
484	Mexico	1,837	1,531	1,510	1,535	1,560	2,000	1,739	11,712
498	Moldova	0	0	984	1,008	1,046	0	0	3,038
499	Montenegro	0	0	240	1,060	0	0	0	1,300
504	Morocco	0	0	0	1,251	1,200	1,200	0	3,651
528	Netherlands	0	0	0	0	1,050	1,902	0	2,952
554	New Zealand	0	0	1,201	0	954	841	1,057	4,053
558	Nicaragua	0	0	0	0	0	0	1,200	1,200
566	Nigeria	0	1,001	1,996	2,022	0	1,759	1,237	8,015
578	Norway	0	0	1,127	0	1,025	0	0	2,152
586	Pakistan	0	0	733	2,000	0	1,200	1,995	5,928
604	Peru	0	0	1,211	1,501	1,500	1,210	1,400	6,822
608	Philippines	0	0	1,200	1,200	0	1,200	1,200	4,800
616	Poland	0	938	1,153	0	1,000	966	0	4,057
620	Portugal	0	0	0	0	0	0	1,215	1,215
630	Puerto Rico	0	0	1,164	720	0	0	1,127	3,011
634	Qatar	0	0	0	0	0	1,060	0	1,060
642	Romania	0	0	1,239	0	1,776	1,503	1,257	5,775
643	Russia	0	1,961	2,040	0	2,033	2,500	1,810	10,344
646	Rwanda	0	0	0	0	1,507	1,527	0	3,034
682	Saudi Arabia	0	0	0	1,502	0	0	0	1,502
688	Serbia	0	0	1,280	1,200	1,220	0	1,046	4,746
702	Singapore	0	0	0	1,512	0	1,972	0	3,484
703	Slovakia	0	466	1,095	0	0	0	0	1,561
704	Vietnam	0	0	0	1,000	1,495	0	1,200	3,695
705	Slovenia	0	0	1,007	0	1,037	1,069	0	3,113
710	South Africa	1,596	2,736	2,935	3,000	2,988	3,531	0	16,786
716	Zimbabwe	0	0	0	1,002	0	1,500	1,215	3,717
724	Spain	0	1,510	1,211	1,209	1,200	1,189	0	6,319
752	Sweden	954	0	1,009	1,015	1,003	1,206	0	5,187
756	Switzerland	0	1,400	1,212	0	1,241	0	0	3,853
762	Tajikistan	0	0	0	0	0	0	1,200	1,200
764	Thailand	0	0	0	0	1,534	1,200	1,500	4,234
780	Trinidad and Tobago	0	0	0	0	1,002	999	0	2,001
788	Tunisia	0	0	0	0	0	1,205	1,208	2,413
792	Turkey	0	1,030	1,907	3,401	1,346	1,605	2,415	11,704
800	Uganda	0	0	0	1,002	0	0	0	1,002
804	Ukraine	0	0	2,811	0	1,000	1,500	1,289	6,600
807	North Macedonia	0	0	995	1,055	0	0	0	2,050
818	Egypt	0	0	0	3,000	3,051	1,523	1,200	8,774
826	United Kingdom	0	0	1,093	0	1,041	0	0	2,134
834	Tanzania	0	0	0	1,171	0	0	0	1,171
840	United States	2,325	1,839	1,542	1,200	1,249	2,232	2,596	12,983
854	Burkina Faso	0	0	0	0	1,534	0	0	1,534
858	Uruguay	0	0	1,000	0	1,000	1,000	0	3,000
860	Uzbekistan	0	0	0	0	0	1,500	0	1,500
862	Venezuela	0	0	1,200	1,200	0	0	0	2,400
887	Yemen	0	0	0	0	0	1,000	0	1,000
894	Zambia	0	0	0	0	1,500	0	0	1,500
Total		14,840	28,127	77,818	60,045	83,975	89,565	72,082	426,452

Data source: World Value Survey https://www.worldvaluessurvey.org/WVSEVSjoint2017.jsp

Appendix 2. Difference in happiness and life satisfaction between men and women Wave 7 (2017-2020), only few countries (random selection).

		Hap				Life S.			
		Male		Female		Male		Female	
Code	Country name	Hap 1-4	SD	Hap 1-4	SD	LS 1-10	SD	LS 1-10	SD
32	Argentına	3.19	0.64	3.17	0.64	7.60	1.75	7.79	1.71
484	Mexıco	3.50	0.66	3.49	0.66	8.17	2.03	8.10	2.09
840	Usa	3.09	0.63	3.14	0.63	7.22	1.84	7.21	1.98
344	Hong Kong	2.88	0.60	2.90	0.59	6.59	1.78	6.68	1.82
156	Chına	3.10	0.64	3.18	0.62	7.35	2.04	7.46	2.04
392	Japan	3.10	0.64	3.28	0.58	6.56	1.95	6.91	1.88
104	Myanmar	3.19	0.70	3.15	0.75	7.06	2.58	7.33	2.60
360	Indonesıa	3.30	0.63	3.42	0.61	7.37	2.53	7.70	2.31
554	New Zealand	3.21	0.57	3.30	0.58	7.39	1.93	7.66	1.89
36	Australıa	3.16	0.61	3.25	0.60	7.42	1.78	7.59	1.72
368	Iraq	2.72	0.86	2.85	0.84	4.51	1.94	4.41	1.86
586	Pakıstan	3.36	0.72	3.32	0.74	7.77	2.40	7.55	2.40
788	Tunısıa	2.87	0.69	2.89	0.68	5.52	2.56	5.51	2.43
716	Zımbabwe	2.52	0.96	2.54	0.96	4.95	3.25	4.94	3.39
566	Nıgerıa	3.11	0.97	3.10	1.01	5.65	2.70	5.58	2.70
643	Russıa	2.99	0.59	2.97	0.59	6.71	2.05	6.42	2.07
578	Norway*	3.29	0.51	3.36	0.51	7.92	1.40	7.98	1.60
826	UK*	3.37	0.67	3.47	0.63	7.44	1.70	7.65	1.57
620	Portugal	3.06	0.55	2.94	0.64	7.35	1.63	7.20	1.72
276	Germany	3.15	0.63	3.15	.062	7.63	1.68	7.83	1.67

*No data was available for the last 2 waves (2010-2014, 2017-2020); thus, we used wave 5 (2005-2009). *Data source:* World Value Survey https://www.worldvaluessurvey.org/WVSEVSjoint2017.jsp