wellcome

The role of science in mental health

Insights from the Wellcome Global Monitor

2020

GALLUP

Acknowledgements

The Wellcome Global Monitor Project team at Wellcome:
Lara Clements, Philomena Gibbons, Ethan Greenwood, Charlie Gorman, Matthew Hickman, Natalie Idehen, Imran Khan, Kate Martin, Melissa Paramasivan, Pri Perera, Catherine Sebastian, Beck Smith and Miranda Wolpert.

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Cover image:

Hayleigh Longman, UK

Josh hugs his little brother, Tanny. This image was taken a few days after the UK government eased lockdown restrictions.

Executive summary

Wellcome envisions a world in which no one is held back by mental health problems. Our efforts towards improving mental health around the world includes using science to understand which approaches for alleviating mental health issues work, for whom, how and why. The answers to these questions could contribute to the development of next-generation treatments to help those with mental health problems – specifically, anxiety or depression – all over the world.

The Wellcome Global Monitor aimed to find out how important mental health is to people across the globe and their views on science's role in addressing mental health problems. It also provides an insight into the actions people with anxiety or depression take to feel better. Many of the most commonly reported methods do not yet have a robust evidence base, suggesting there are ripe areas of research for mental health scientists as they work to develop the next generation of treatments.

What we did

We set out to use the 2020 Wellcome Global Monitor to explore the following:

1. Global perceptions of the importance of mental health for overall wellbeing.
2. Global perceptions of the role of science in understanding mental health and finding solutions to anxiety and depression.
3. The different approaches people across the world with anxiety or depression use to manage their anxiety or depression and the perceived helpfulness of those approaches.

We were clear from the start that this survey was not intended to be an epidemiological study or a study of the efficacy of different approaches people use to treat their anxiety or depression. Detailed definitions or independent assessments were not provided; rather, to differentiate anxiety or depression that interfered with functioning from the normal ups and downs of life, the survey asked people about 'extreme' states, defined as being 'so anxious or depressed that you could not continue your regular daily activities as you normally would for two weeks or longer'.

In partnership with Gallup, the second wave of the Wellcome Global Monitor was conducted between 4 August 2020 and 18 February 2021 via telephone interviews with nationally representative samples in 113 countries and territories.

What we learned

1. The vast majority of people (92%) viewed mental health as being equally important to overall wellbeing as physical health, if not more so. People from low- and lower-middle-income countries were more likely than those in higher-income countries to assign greater importance to mental health (58% compared with 28%), but there were no notable differences across age and education groups within countries (see Chapter 1).
2. A greater proportion of people saw science as more relevant to explaining how the human body works (46%) than how feelings and emotions work (27%). People were also more likely to say that science can treat infectious diseases or cancer (53% and 49%) rather than anxiety or depression (31%). There were no notable differences in these views across age and education groups or between low-, upper-middle- and high-income countries (see Chapter 1).
3. Around one in five people (19%) said that they had, at some point, experienced anxiety or depression. This proportion varied significantly by global region, from 9% in East Asia to 33% in Latin America; the results also varied by gender and other demographic characteristics (see Chapter 2).
4. Among those who had personally experienced anxiety or depression, the three most-endorsed methods for feeling better were talking to friends or family, improving healthy lifestyle behaviours and spending time in nature/the outdoors. These were also the approaches people said they found to be the most helpful. Talking to a mental health professional and taking prescribed medication were approaches less commonly used (see Chapter 3).

Introduction

Why study mental health?

Wellcome conducted the first Global Monitor – the largest-ever study of public attitudes to science and health – in 2018. The first wave covered topics such as whether people trust science, scientists and information about health, and attitudes towards the safety and efficacy of vaccines – a focus which has since proved to be incredibly forward-thinking.

In 2020, a central focus of the Global Monitor was the role of science in mental health.

Mental health problems are holding back people of all ages in all parts of the world. The two most common mental health problems, anxiety and depression, affect over 400 million people worldwide. And by 2030, mental health issues are predicted to be the leading cause of global mortality and morbidity[1]. Yet progress towards improving mental health around the world is lagging behind other areas of health.

In 2020, Wellcome launched its commitment to prioritise funding science that would help address mental health problems, with an initial focus on anxiety and depression in youth, to advance its vision of a world in which no one is held back by mental health problems.

By focusing on mental health – specifically, anxiety and depression – as part of the 2020 Wellcome Global Monitor report, Wellcome is seeking to help illuminate how the world views mental health science and to share insights into what scientists need to prioritise globally if new solutions are to be found.

Importantly, world views on health, mental health and science were in flux when the data were collected due to the pandemic. It is impossible to say how much or in what ways COVID-19 may have impacted the results, given that 2020 was the first time mental health-related questions were asked as part of the Global Monitor. Some findings, such as people's likelihood of reporting spending time outdoors in response to anxiety or depression, may be particularly sensitive to the restrictions imposed during lockdowns in many places. However, as questions about specific experiences were framed historically, we believe that the results reflect people's long-term attitudes and experiences. For example, respondents were asked whether they had ever experienced anxiety or depression and what approaches to feeling better they had used at that time. Nonetheless, it is possible that the pandemic increased people's likelihood of saying they have experienced anxiety or depression.

Finally, the mental health questions on which this report is based were not the only questions included in the 2020 Global Monitor. Additional question sets in the survey update results from the 2018 Monitor on public views of science and health, including opinions about trust in the scientific and healthcare communities. The 2020 Monitor also included several questions on public perceptions of climate change and the COVID-19 pandemic, which will be explored in a future report.

We hope the 2020 Wellcome Global Monitor provides some interesting insights and sparks new conversations. The data are freely available, and we encourage people to explore them and hypothesise as they see fit. To access the datasets and tables that contain the mental health results by country and demographic group, visit https://wellcome.org/reports/wellcome-global-monitor-mental-health/2020.

Endnotes

1 World Health Assembly, 65. (2012). Global burden of mental disorders and the need for a comprehensive, coordinated response from health and social sectors at the country level: Report by the Secretariat. World Health Organization. https://apps.who.int/iris/handle/10665/78898

Methodology

The following section provides a brief overview of the methods used to develop and implement the 2020 Wellcome Global Monitor. For a complete discussion of the research methodology, see the Methodology report.

Questionnaire development

The 2020 Wellcome Global Monitor questionnaire was developed using a careful research and design process that included:

- interviews with leading researchers and senior Wellcome stakeholders
- cognitive testing in 10 countries to ensure questions could be understood across countries and by various demographic groups
- pilot tests in 10 countries

The questionnaire was then translated into the major conversational languages of each country and checked by an independent third party for quality assurance.

Sampling and data collection

The COVID-19 pandemic meant that significant changes were required to Gallup's methods of using face-to-face and phone surveys for global data collection, resulting in all 2020 Wellcome Global Monitor interviews being conducted entirely via telephone in only 113 countries rather than in over 140, as in 2018 (in 34 countries by phone and in 110 face to face).

The samples from each country are nationally representative of the resident population aged 15 and older with access to a phone (either landline or mobile); however, the inability to conduct in-person interviews reduced population coverage in many low-income countries (see the 'Research limitations' box).

Data weighting

Gallup used available demographic information from each country to calculate a set of weights for each respondent, helping ensure that the overall sample reflected subgroups in a population. Gallup made weighting adjustments based on gender, age and (where reliable data were available) education or socioeconomic status. In many countries where interviewing was conducted via telephone for the first time, additional demographic factors such as employment status, urban compared with rural residence and region were included to help account for the inability to reach people without access to a phone.

Gallup then calculated a margin of sampling error and study design effects for each country to account for the influence of data weighting. For more information on design effects and sampling error and to see a list of the relevant figures, please see the 'Country dataset details' box in the Methodology report.

Research limitations

The Gallup World Poll has been run by Gallup survey specialists and statisticians in collaboration with local in-country partners for over 15 years. This structure ensures that the same survey approach and methodology are applied consistently in all countries, with training provided by Gallup Regional Directors to ensure that local partners apply best-practice survey methodology.

Even so, certain methodological choices sometimes impact country-level results. Gallup has found that applying a consistent methodology across all countries reduces this impact, and testing shows that the survey data and results are robust and reliable. Nevertheless, it is important to highlight some methodological choices that could impact the national representativeness of the sample and the interpretation of the data. (More detail can be found in the Methodology report).

The main limitations of the Wellcome Global Monitor are:

- The survey asked people about anxiety and depression, defined as being so extreme that they impacted their ability to function as they normally would for two weeks or more – a definition drawn from the World Health Organization (WHO). However, no more detail was offered about what was meant by anxiety or depression, which may have implications for the interpretation of the results.
- This survey is not an epidemiological study, and the focus is not on mental health disorders but on people's self-reported feelings of anxiety or depression as defined in the survey. Additionally, some people may have felt uncomfortable saying they had personally experienced anxiety or depression and therefore did not give an answer.
- Decisions relating to the exclusion of certain regions in some countries due to factors such as political unrest, conflict or remoteness.
- Decisions relating to which languages were used to field the survey in countries with tens, hundreds or even thousands of languages. To mitigate this effect, Gallup generally surveys in languages that are spoken by 5% or more of the population in each country. This decision could also be associated with specific social norms and interpretations of certain words among some groups and may sometimes be relevant for the translation of the terms 'anxiety' and 'depression'.
- The decision to survey people aged 15 years or older and the exclusion of institutionalised segments of the population.
- It is also important to note that lack of random assignment and independent assessment of outcomes means we cannot draw conclusions about the efficacy of different approaches for managing anxiety or depression.

Effects of COVID-19 on data collection

In 2020, COVID-19 and the associated transition from face-to-face to phone surveys for approximately 82 countries complicated data collection. As a result, the 2020 Wellcome Global Monitor included fewer countries than previous waves (113 rather than 144 countries). The exclusive reliance on phone interviews may also have skewed responses in some lower-middle-income countries towards urban and higher-income residents. Although for most of the countries in which face-to-face interviews were previously used but in which telephone interviews had to be used in this study, the coverage error is not expected to be greater than 10%, Gallup estimates that the size of the coverage error – i.e., the percentage of a target population who could not be reached – may be higher than 20% in a small number of countries such as Ethiopia, Venezuela and Zambia. To help adjust for these coverage deficits, Gallup used an expanded set of demographic variables when calculating weights for the data collected in these countries. Please see the Methodology report for further details.

Readers should be aware of these limitations when drawing conclusions, particularly with regard to cross-national comparisons.

Views on mental health and the role of science in understanding and addressing problems

Friendship Bench
Brent Stirton, Zimbabwe

Elizabeth Mapaire is a volunteer in the Zaka area. Here she talks to Sophia Nyamuwngi, who had been feeling suicidal after her husband left her. Elizabeth referred her to a more experienced counsellor, and talked to her again later about potential support measures.

Brent Stirton / Wellcome Photography Prize 2021

Chapter 1: Views on mental health and the role of science in understanding and addressing problems

A central focus of this study is learning about the extent to which people believe science can help us understand and alleviate anxiety and depression. This chapter looks at the following questions to explore how people think and feel about science and mental health:

1. Thinking about a person's overall health, do you think mental health is more important, as important, or less important than physical health for a person's wellbeing?
2. In your opinion, how much do you think science can explain each of the following? A lot, some, not much, or not at all?
3. In general, how much do you think science helps us treat the following health problems? Does it help a lot, some, not much, or not at all?

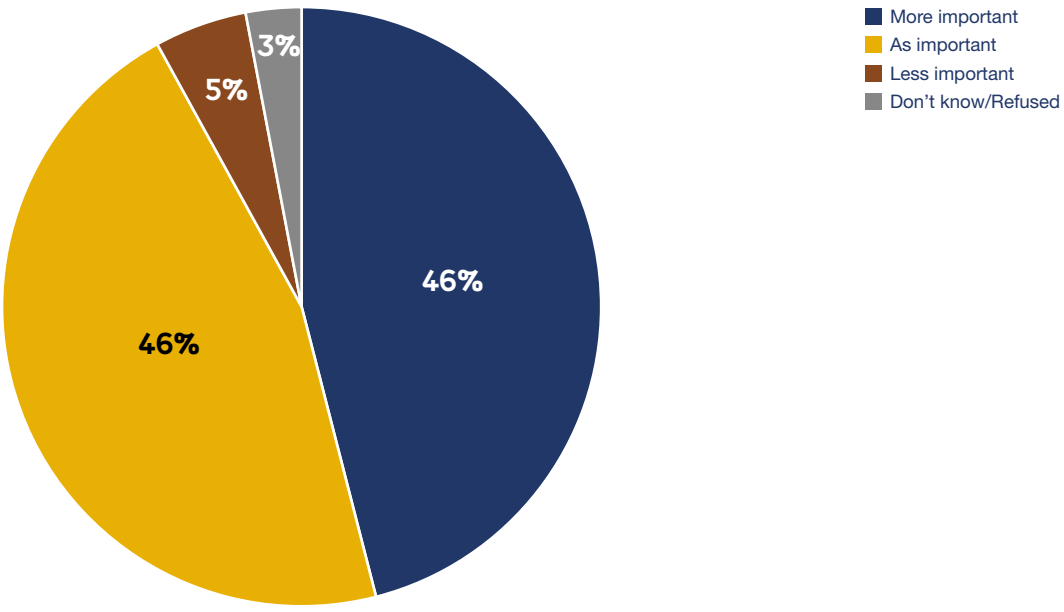
Worldwide, 92% of people said mental health is as important as physical health or more important than physical health for overall wellbeing.

The study reveals a general consensus on the importance of mental health, as shown in Chart 1.1, with 46% of people worldwide saying it is just as important as physical health and another 46% ranking it as more important to overall wellbeing. Relatively few (5%) said mental health is less important than physical health.

Chart 1.1: Perceived importance of mental health compared to physical health, global results

Percentage of people who answered that mental health is 'more important', 'as important' or 'less important'.

Thinking about a person's overall health, do you think mental health is more important, as important, or less important than physical health for a person's wellbeing?



People who have experienced anxiety or depression (defined as being 'so anxious or depressed that you could not continue your regular daily activities as you normally would for two weeks or longer' for this report) were more likely than those who have not to say mental health is more important than physical health – 53% compared with 44%.

Surprisingly, country income level had a greater effect on people's views on this subject than their own lived experience of mental health issues. Overall, people in the world's poorest regions were among the most likely to assign greater importance to mental health. This opinion was most prevalent in Sub-Saharan Africa, where 73% said mental health is more important than physical health. By contrast, less than a third of people in three high-income regions said mental health is more important: Western Europe (26%), Northern America (28%) and Australia/ New Zealand (31%).

Most people in low-income countries said mental health is more important than physical health.

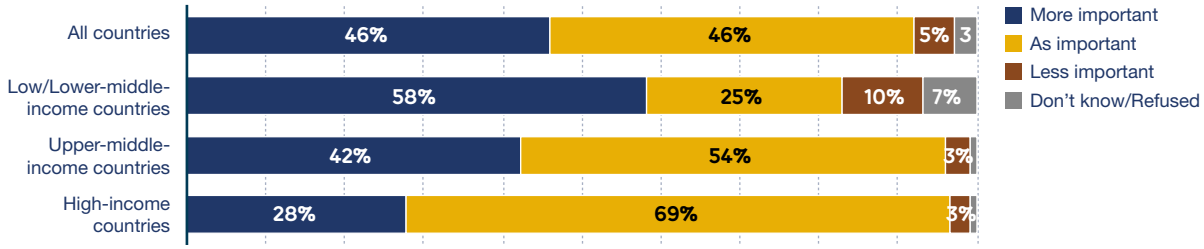
Chart 1.2 illustrates that in low- and lower-middle-income countries, most people (58%) view mental health as more important than physical health to a person's overall wellbeing, whereas in high-income countries and areas, only 28% said mental health is more important. The results from upper-middle-income countries show that 42% of people place greater importance on mental health.

Fifty-eight per cent of people in low-income countries said mental health is more important than physical health to overall wellbeing, compared with 28% of people in high-income countries.

Chart 1.2: Perceived importance of mental compared with physical health, by country income group

Percentage of people who answered that mental health is 'more important', 'as important' or 'less important'.

Thinking about a person's overall health, do you think mental health is more important, as important, or less important than physical health for a person's wellbeing?



Note: Due to rounding, percentages may sum to 100% ± 1%.

Country-level results further demonstrate the strength of this relationship. Chart 1.3 plots the percentage of people who said mental health is more important than physical health against their country's per capita GDP. Views of mental health as more important declined steadily as country income levels rose*, and people became more likely to put mental health and physical health on an equal footing.

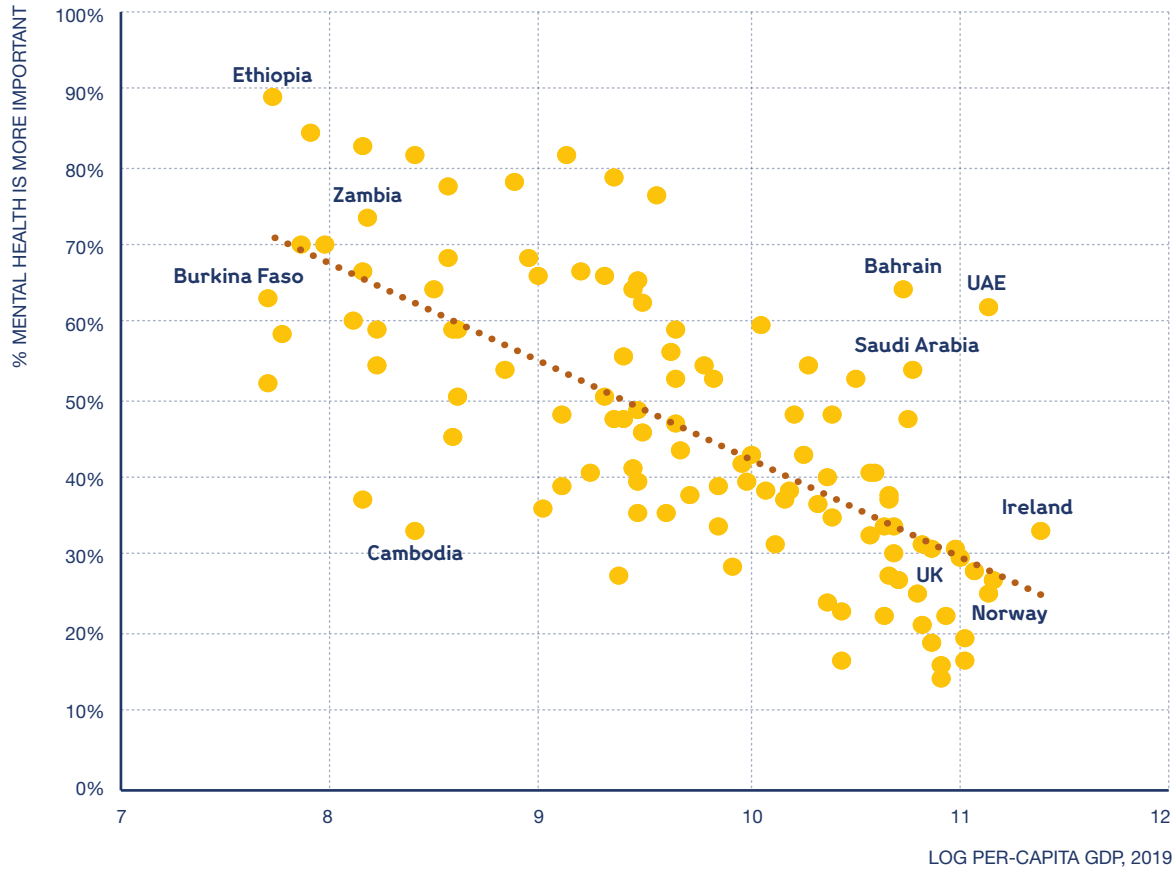
Chart 1.3 also identifies outlier countries that do not follow this trend. For example, people in several Arab Gulf countries (Bahrain, Saudi Arabia and the United Arab Emirates) were more likely to prioritise mental health than their countries' high-income levels would predict.

Views of mental health as more important than physical health declined as a country's GDP rose.

Chart 1.3: Scatterplot exploring the relationship between the perceived importance of mental compared with physical health and country/area GDP

Percentage of people who answered that mental health is 'more important'.

Thinking about a person's overall health, do you think mental health is more important, as important, or less important than physical health for a person's wellbeing?



R = 0.7. People were most likely to say mental health is more important than physical health in low-income countries like Ethiopia (88%) and Tanzania (84%) and least likely to do so in high-income countries like Sweden (16%) and Belgium (14%).

Views on the importance of mental health also differed according to residents' income within many countries.

Country-level differences were mirrored within many countries and areas, with low-income residents more likely than those with higher incomes to prioritise mental health over physical health. In Brazil, for example, 72% of those in the lowest 20% of the country's income distribution said mental health is more important than physical health compared with 43% of those in the highest 20%. In the US, people in the lowest income group were more than twice as likely as those in the highest group to say mental health is more important than physical health – 45% compared with 19%, respectively (see the Methodology report for more detail).

While many people prioritise mental health over physical health, fewer think science can explain emotions or that science can have as much impact on the mental aspects of health and wellbeing as on the physical aspects.

Less than one-third of people worldwide think science can do 'a lot' to explain emotions or treat anxiety or depression.

Chart 1.4 shows that while 46% of people worldwide said science can explain a lot about how the human body works, only 27% said the same about science's ability to explain feelings and emotions. Views on mental and physical health become more similar, however, when broadened to include the opinion that science can explain at least 'some' of how feelings and emotions work, with 64% having this view globally compared to 76% saying the same about the ability of science to explain the human body.

Chart 1.4: Belief that science can explain how feelings/emotions and the human body work, global results

Percentage of people who answered 'a lot', 'some', 'not much' or 'not at all'.

In your opinion, how much do you think science can explain each of the following? A lot, some, not much, or not at all?

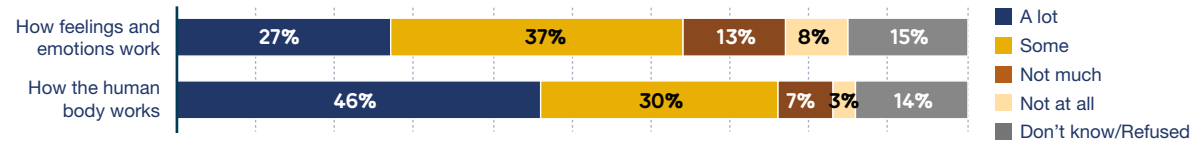
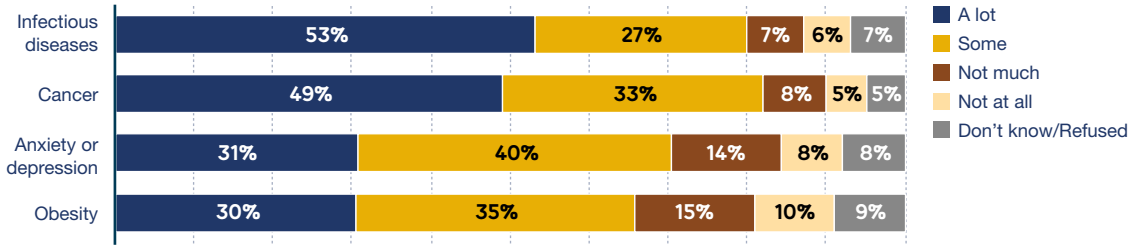


Chart 1.5 reveals that about three in 10 people worldwide (31%) said science does a lot to help treat anxiety and depression, which is similar to the percentage of people who believe that science is able to explain a lot about feelings and emotions. People were more likely to believe science can do a lot to help treat infectious diseases (53%) and cancer (49%).

Chart 1.5: Perceptions of how much science helps treat health problems, global results

Percentage of people who answered 'a lot', 'some', 'not much' or 'not at all'.

In general, how much do you think science helps us treat the following health problems? Does it help a lot, some, not much, or not at all?



These figures varied somewhat across global regions and demographic groups, but in virtually all groups, people were more likely to say science helps treat infectious diseases and cancer than to say it helps treat anxiety and depression. However, the perception that science can be at least somewhat helpful in addressing mental health issues was broadly held across countries and among individuals in different groups within countries, and there was remarkably little variation by age, demographic status or geography.

Experience of anxiety or depression

Untangling
Jameisha Prescod, UK

The isolation of lockdown exacerbated London film maker Jameisha Prescod's depression, as she spent most of her time in the concentrated chaos of this room. "It's where I work a full-time job, eat, sleep, catch up with friends and most importantly cry." Before long, she felt like she was "drowning in the clutter". For escape, she turned to knitting, which helps to soothe her mind. It may not be a cure, but it does at least put "everything else on pause" for a while.

Jameisha Prescod / Wellcome Photography Prize 2021

Chapter 2: Experience of anxiety or depression

There are varying estimates of the numbers of people in different populations across the world who experience mental health problems. This chapter considers responses to the following questions:

1. Have you ever been so anxious or depressed that you could not continue your regular daily activities as you normally would for two weeks or longer?
2. Just your best guess, about how old were you when you first felt [anxiety or depression]?
3. Have you felt this way more than once?

Worldwide, about one in five people (19%) said they have experienced anxiety or depression (defined as being 'so anxious or depressed that you could not continue your regular daily activities as you normally would for two weeks or longer').

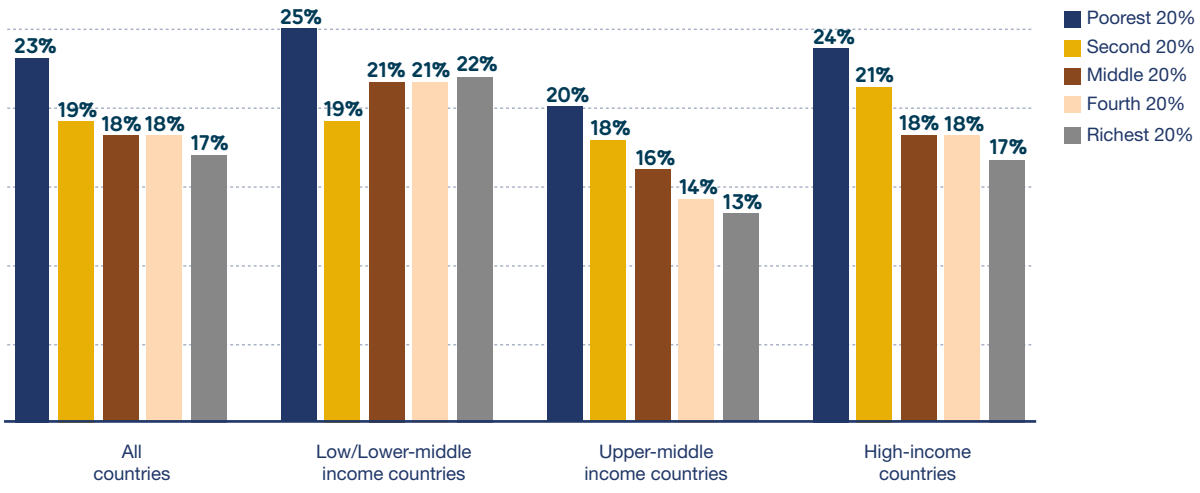
Rates of anxiety or depression varied by income

Chart 2.1 identifies the modest rate differences by income level between and within countries, with people in lower-income brackets reporting somewhat higher rates of anxiety or depression. Globally, 23% of people in the bottom fifth of their country's income distribution said they have experienced anxiety or depression, compared with 17% of those in the top fifth. This pattern was more consistent in upper-middle- and high-income countries and areas than in lower-middle-income countries.

Chart 2.1: Experience of anxiety or depression, by country income group and intercountry income quintile

Percentage of people who answered 'yes'.

Have you ever been so anxious or depressed that you could not continue your regular daily activities as you normally would for two weeks or longer?



The prevalence of anxiety or depression was broadly consistent across regions.

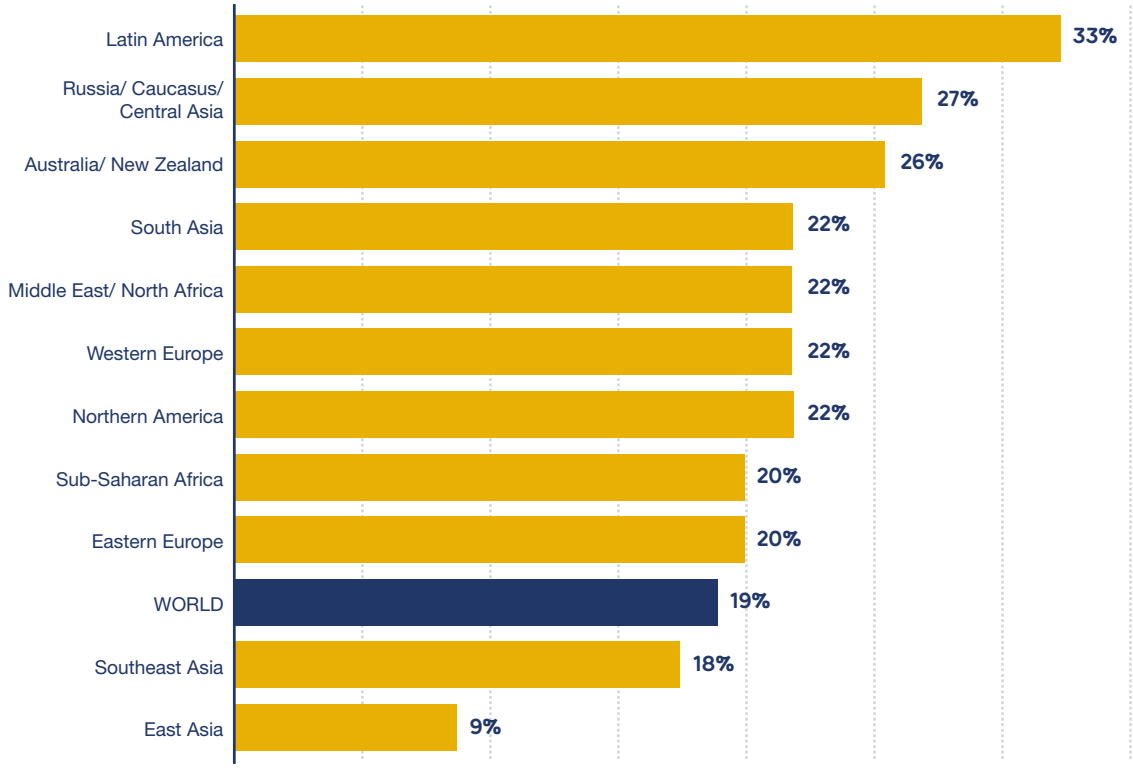
Chart 2.2 reveals that the proportion of people who said they have experienced anxiety or depression was relatively consistent across most global regions, ranging from 18% to 27% in all regions except Latin America and East Asia. Results in these outlier regions probably reflect actual differences in anxiety or depression but may also be subject to sociocultural effects that make people more or less likely to discuss such conditions.

- In Latin America, one in three people (33%) said they have been so anxious or depressed they could not continue their regular daily activities for two weeks or longer. Gallup's global research has consistently shown that Latin Americans are more likely than people in other regions to say they have experienced both positive and negative emotions for much of the previous day[2].
- In East Asia, about one in 11 people (9%) said they have been so anxious or depressed they could not continue their regular daily activities for two weeks or longer – easily the lowest percentage among the 11 global regions surveyed. Recent studies have shown that high levels of stigma concerning depression remain in China, which may reduce respondents' willingness to admit to having experienced it[3,4].

Chart 2.2: Experience of anxiety or depression, by region

Percentage of people who answered 'yes'.

Have you ever been so anxious or depressed that you could not continue your regular daily activities as you normally would for two weeks or longer?



Demographic differences in experiences of anxiety or depression varied worldwide.

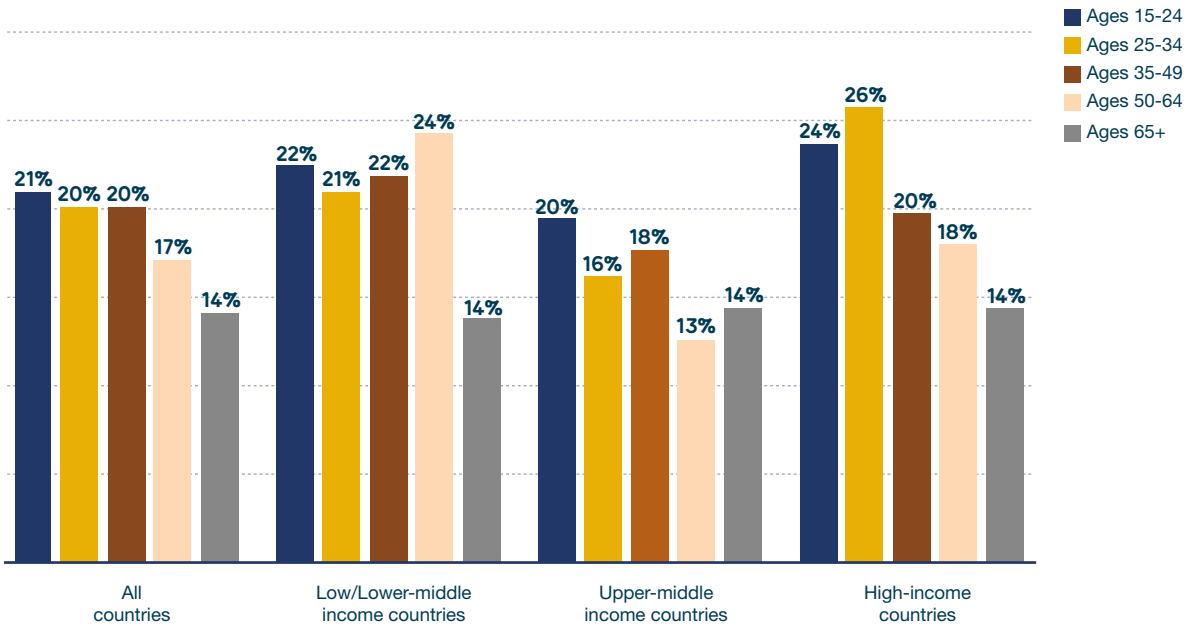
Age

At the global level, the likelihood of having experienced anxiety or depression decreased with age. Chart 2.3 demonstrates that people in older age groups were somewhat less likely to say they have experienced anxiety or depression than younger people – 17% of people aged 50-64 and 14% of those over the age of 65, compared with 20% of people under 50. This finding is notable given that older people have had more time to have such experiences. Young adults in high-income countries were particularly likely to say they have experienced anxiety and depression, including 24% of those aged 15-24 and 26% of those aged 25-34, compared with 18% of those aged 35 and older.

Chart 2.3: Experience of anxiety or depression, by country income group and age group

Percentage of people who answered 'yes'.

Have you ever been so anxious or depressed that you could not continue your regular daily activities as you normally would for two weeks or longer?



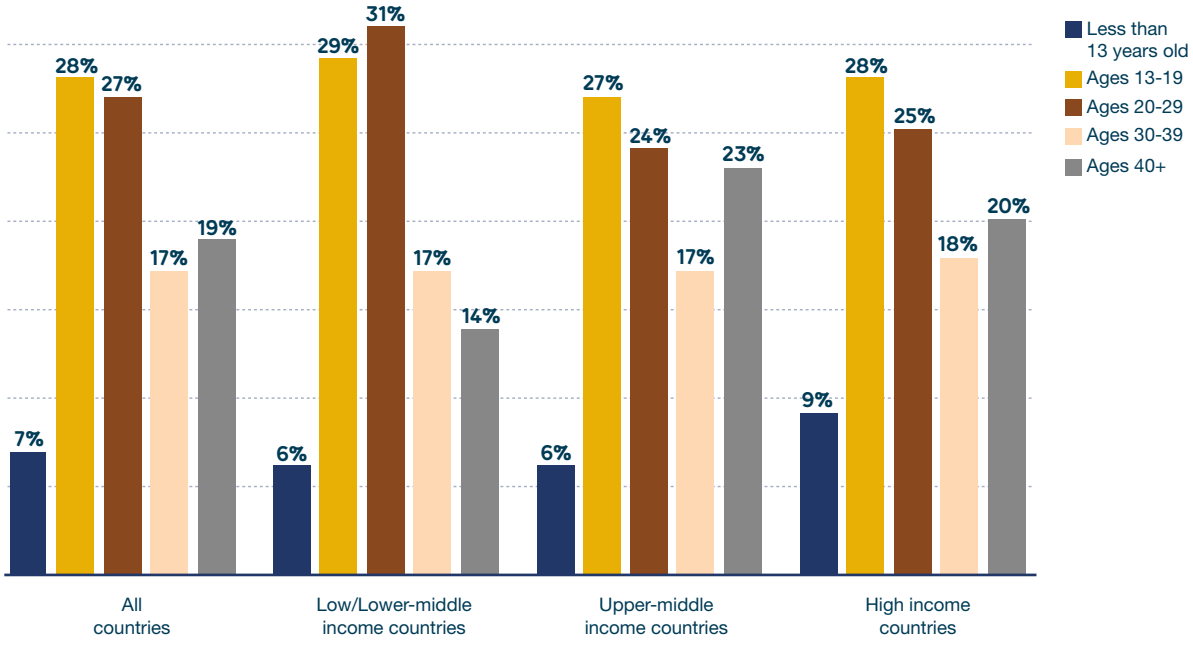
Most people who have experienced anxiety or depression have had more than one episode.

Almost three quarters (73%) of people who have experienced anxiety or depression said they have felt this way more than once in their lives. Chart 2.4 shows the different ages at which people first encountered these mental health experiences. The majority had their first experience before turning 30 (though figures for older age groups are limited because many people have not yet reached those ages). These findings were consistent across all country income groups.

Chart 2.4:
Age at which people first experienced anxiety or depression, by country income group and age group

Percentage among people who said they have experienced anxiety or depression.

Just your best guess, about how old were you when you first felt [anxiety or depression]?



Gender

Despite prior research indicating that women in many countries are more likely than men to suffer from anxiety or depression[5], this survey finds only a slight difference at the global level: 20% of women said they have experienced anxiety or depression, compared with 18% of men. However, these global figures are heavily influenced by the results from the world's two largest countries, China and India, where similar levels of women and men were likely to say they have had these issues (9% of women compared with 8% of men in China, and 23% of women compared with 22% of men in India).

At the country level, women were significantly more likely than men to say they have experienced anxiety or depression in 39 of the 113 countries and areas surveyed, while men were more likely to respond this way in only six such areas. Table 2.1 lists countries with at least a 10-percentage-point gender gap.

Table 2.1: Country-level gender gaps regarding experiencing anxiety or depression*

Percentage of people who answered 'yes'.

Have you ever been so anxious or depressed that you could not continue your regular daily activities as you normally would for two weeks or longer?

Countries where women were more likely than men to have experienced anxiety or depression				Countries where men were more likely than women to have experienced anxiety or depression			
	Women	Men	Difference		Men	Women	Difference
Portugal	35%	17%	18 pts	Tanzania	34%	20%	14 pts
Chile	46%	28%	18 pts	Saudi Arabia	35%	23%	12 pts
Poland	29%	12%	17 pts	Bangladesh	26%	14%	12 pts
Greece	41%	27%	14 pts	Malaysia	25%	14%	11 pts
El Salvador	44%	31%	13 pts	Congo Brazzaville	31%	21%	10 pts
Costa Rica	39%	27%	12 pts				
United States	27%	15%	12 pts				
Colombia	36%	24%	12 pts				
Argentina	41%	30%	11 pts				
Uruguay	28%	17%	11 pts				
Ecuador	48%	37%	11 pts				

* Results among countries with a gender gap of at least 10 percentage points.

Endnotes

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3. Yang, F., Yang, B. X., Stone, T. E., Wang, X. Q., Zhou, Y., Zhang, J., & Jiao, S. F. (2020). Stigma towards depression in a community-based sample in China. Comprehensive Psychiatry, 97, 152152. https://www.sciencedirect.com/science/article/pii/S0010440X19300756
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How people manage anxiety or depression

1. Spray paint to paint on K's block of flats **2.** RF lawbook to aid political activism **3.** Medical glue to heal scars and glue glitter **4.** To clean make-up brushes **5.** Swimsuit to go ice-hole diving **6.** To play video games **7.** To fix computers **8.** Mood stabilizer to control mood swings **9.** To self-harm **10.** To treat headaches **11.** A Goddess figure to carry around

Mental Health Kit

Sebastian Mar, Moscow, Russia, 2019

Ksusha has bipolar disorder. She works as a computer technician at a liberal political party. Her hobbies are ice-hole diving and artistic makeup.

Sebastian Mar / Wellcome Photography Prize 2020

Chapter 3: How people manage anxiety or depression

Global statistics on the availability of mental health services tend to focus on facilities and personnel specialising in clinical methods. However, people the world over use a much broader range of approaches to manage or address their anxiety or depression (defined as being 'so anxious or depressed that you could not continue your regular daily activities as you normally would for two weeks or longer'). This chapter takes a closer look at what people worldwide do to help themselves feel better by focusing on the following question:

1. When you were feeling so anxious or depressed, did you ever do any of the following to make yourself feel better?
   a. Talk to friends or family
   b. Improve healthy lifestyle behaviours, such as exercise, sleep and diet
   c. Spend time in nature/the outdoors
   d. Make a major change in your personal relationships
   e. Make a major change in your work situation
   f. Take medication as prescribed by a healthcare professional
   g. Talk to a mental health professional
   h. Engage in religious or spiritual activities, or talk to a religious leader

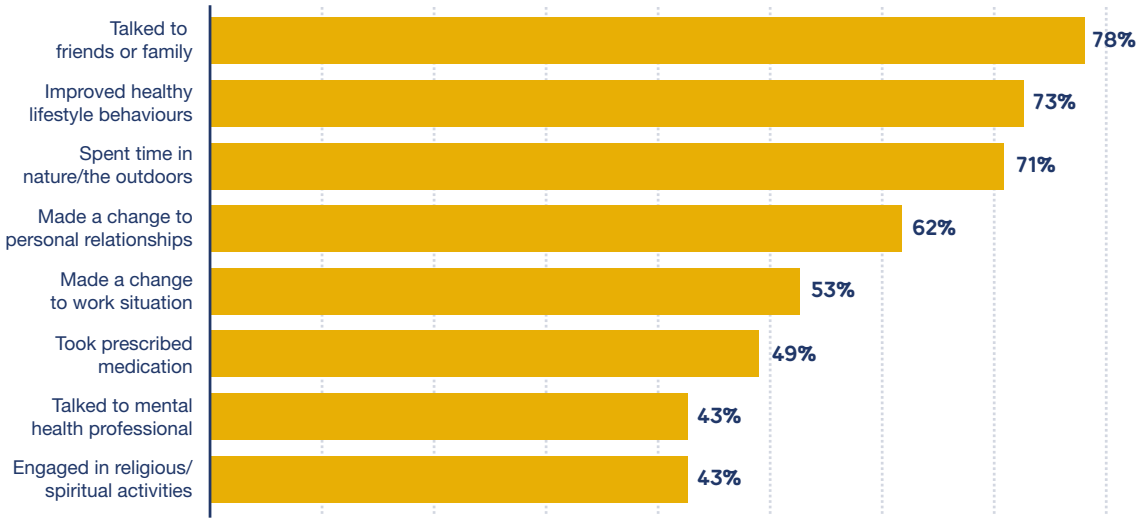
One of the eight approaches described in the survey was talking to friends and family, and most people said they did this to help deal with their anxiety or depression.

Worldwide, 78% of people who said they have experienced anxiety or depression also said that they talked to family and friends to make them feel better, as shown in Chart 3.1. Improving healthy lifestyle behaviours and spending time outdoors were also chosen by more than 70% of people around the world.

Chart 3.1: Approaches taken to alleviate anxiety or depression, global results

Percentage of people who answered 'yes'.

When you were feeling so anxious or depressed, did you ever do any of the following to make yourself feel better?

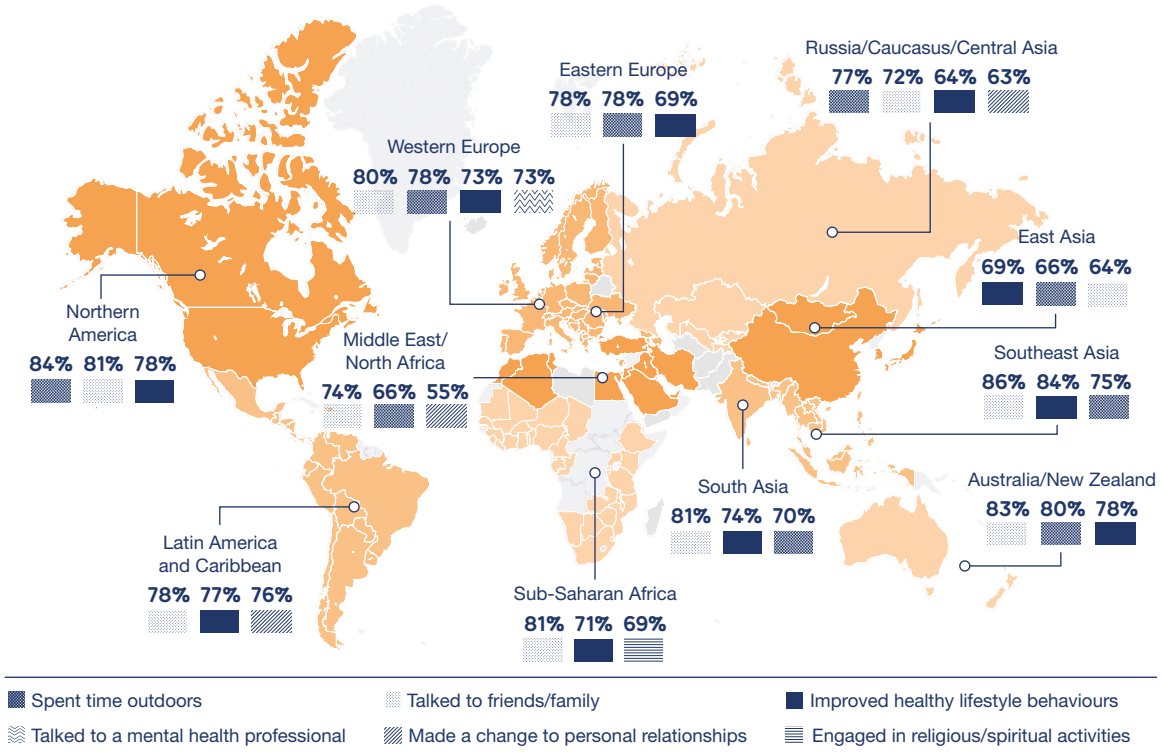


As shown in Figure 3.1, the top two global-level responses – talking to friends or family and improving healthy lifestyle behaviours – were also among the top three responses in every region. Notably, Sub-Saharan Africa and Latin America were the only regions where spending time outdoors was not among the top three responses. In Sub-Saharan Africa, it was replaced by engaging in spiritual or religious activities; in Latin America, people were more likely to say they made a change to their personal relationships.

Figure 3.1: Map showing the most common approaches taken to alleviate anxiety or depression, by region*

Percentage of people who answered 'yes'.

When you were feeling so anxious or depressed, did you ever do any of the following to make yourself feel better?



Note: No surveying took place in the countries shown in grey

As shown in Figure 3.1 and Table 3.1, at the global level, talking to a mental health professional, taking medication and engaging in religious or spiritual activities were the least-cited methods for feeling better. People in low-income countries and areas were among those most likely to choose religious or spiritual activities, and those in high-income countries were among the most likely to choose taking medication and talking to a mental health professional.

*See Appendix A for complete results by region — Table A.2.

Table 3.1: Approaches taken to alleviate anxiety or depression, by country income group

Percentage of people who answered 'yes'.

When you were feeling so anxious or depressed, did you ever do any of the following to make yourself feel better?

	Low-/Lower-middle-income countries	Upper-middle-income countries	High-income countries
Talked to friends or family	81%	74%	79%
Improved healthy lifestyle behaviours	73%	72%	73%
Spent time in nature/the outdoors	67%	72%	78%
Made a change to personal relationships	62%	65%	58%
Made a change to work situation	59%	49%	50%
Took prescribed medication	49%	41%	64%
Talked to a mental health professional	36%	38%	67%
Engaged in religious/spiritual activities	49%	41%	34%

Regional and country-level differences demonstrate how economic and cultural conditions can influence which actions people take to make themselves feel better:

- People who have experienced anxiety or depression in Sub-Saharan Africa were least likely to say they spent time outdoors or in nature to feel better, at 56%. However, this finding could be the result of people generally spending much of their time outdoors – agriculture is the largest economic sector in the region, employing more than half the region's workers[6].
- People in the US who have experienced anxiety or depression were among the most likely in any high-income country or area to say they engaged in spiritual or religious activities, at 56%. Notably, the US is an outlier among high-income countries because of its high level of religiosity. In 2020, 60% of Americans said religion was important in their daily lives, compared with an average of 37% across the other 39 high-income countries surveyed. A 2018 Pew survey found that Americans were also more likely than adults in other wealthy Western democracies to say they attend weekly religious services and pray daily[7]. Two-thirds of Americans who said religion was important in their daily lives (68%) engaged in religious or spiritual activities to alleviate anxiety or depression, compared with 38% of those who said religion was not important in their daily lives.
- The proportion who tried improving healthy lifestyle behaviours was lowest in the Middle East/North Africa, at 55%. Previous research has identified sedentary behaviour as a serious public health issue in this region: a 2020 meta-analysis found that only about half of the adults in the region (51%) got enough physical activity to avoid risk factors for obesity – well below recent global estimates of 72.5% to 77%[8]. The hot climate across the Arabian Peninsula and the Arab Gulf region limits outdoor physical activity to the winter months, and indoor fitness facilities are rare, particularly in lower-income countries[9].

Approaches to alleviating anxiety or depression differed by gender and education level in some regions.

As with differences in the likelihood of having experienced anxiety or depression, demographic differences in the actions people with anxiety or depression took to feel better were more pronounced in certain regions and countries than at the global level.

Gender

Similar proportions of men and women around the world tried most of the eight approaches listed in the survey to alleviate anxiety or depression*. However, the regional results show notable gender differences:

- In several regions, women were more likely than men to say they had talked to a mental health professional; these include Northern America (78% of women compared with 61% of men), Latin America (52% compared with 37%), Eastern Europe (49% compared with 37%), Russia/Caucasus/Central Asia (29% compared with 18%) and Australia/New Zealand (79% compared with 71%). In some cases, these gaps probably reflect gender norms that discourage help-seeking behaviour among men[10,11]. Prior studies have found that though men are at greater risk of suicide globally, they are less likely to seek mental health support[12].
- Women were also more likely than men in several of these same regions – including Australia/New Zealand, Eastern Europe, Latin America and Russia/Caucasus/Central Asia – to say they took prescribed medication when they experienced anxiety or depression. However, the gender gap for this method was much smaller in Northern America (69% of women compared with 65% of men) than for talking to a mental health professional.
- Men in Northern America were more likely than women to say they improved healthy lifestyle behaviours in response to anxiety or depression – 88% compared with 72%, respectively. The reverse was true in East Asia, where 76% of women said they took this approach, compared with 63% of men.

Education

Globally, people with varying education levels who have experienced anxiety or depression were all likely to have tried most approaches to feeling better. There was one important exception: people with a lower education level were less likely to have spoken with a mental health professional, largely reflecting the difference between low-income and middle-income countries (where average education levels are lower) and high-income countries, as seen in Table 3.1.

However, people's likelihood of taking prescribed medication was relatively consistent by education level, even though this approach was also more common in high-income countries. Worldwide, 52% of those with a primary level of education or lower (0-8 years) said they took prescribed medication to feel better, compared with 47% of those with a secondary education (9-15 years) and 49% of those with a post-secondary education (16+ years). The global percentage for people with no more than a primary education was relatively high largely because in middle-income and low-income countries, people in the groups with the lowest level of education were most likely to say they took prescription medication to feel better.

Most people tried a mix of approaches to alleviate anxiety or depression.

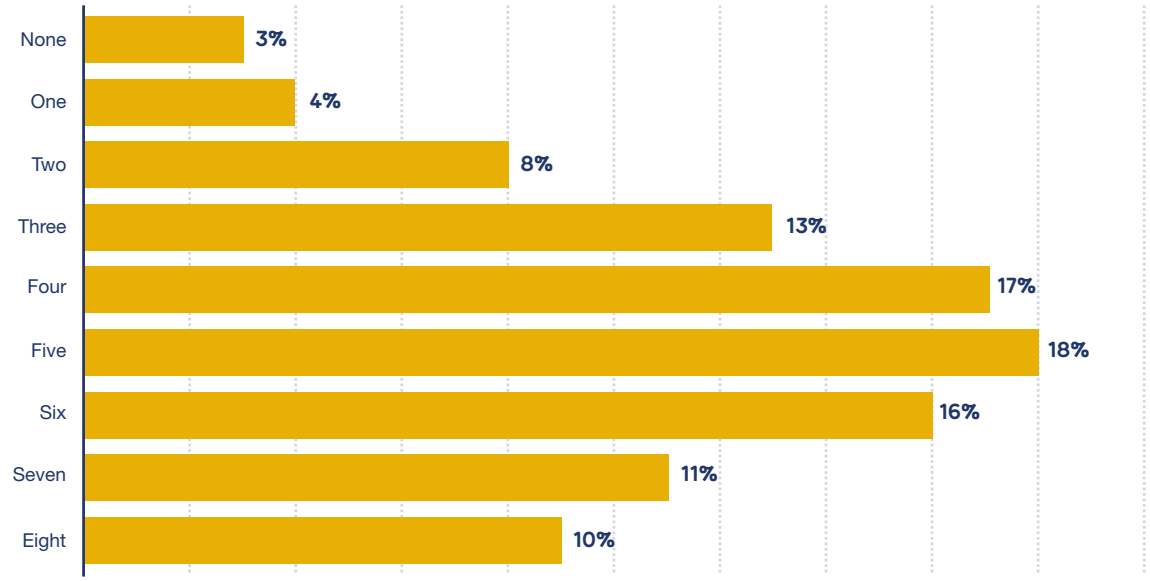
The vast majority of people who have experienced anxiety or depression tried a number of different ways to make themselves feel better. Chart 3.2 shows that 85% said they had tried at least three of the eight actions listed in the survey, compared with 3% who said they had not tried any and 4% who had tried just one. Ten per cent reported taking all eight approaches.

*The only exception is that men were somewhat more likely than women to make a change to their work situation, but this largely reflects higher formal participation in the workforce among men in many countries.

Chart 3.2:
Number of approaches people took to alleviate anxiety or depression, global results

Percentage of people who answered 'yes'.

When you were feeling so anxious or depressed, did you ever do any of the following to make yourself feel better?



On average, people who have experienced anxiety or depression had tried 4.7 of the eight actions listed in the survey to make themselves feel better. This figure varied little between country income groups, but there were notable differences in some regions of the world. For example, people in Northern America had taken 5.6 of the actions on average, compared with fewer than four among those in East Asia (3.9) and the Middle East/North Africa (3.7).

Several of the countries with the lowest averages are in the Middle East/North Africa region, including Lebanon (2.8), Egypt (3.2), Jordan (3.2), Morocco (3.4), Saudi Arabia (3.5) and Iraq (3.6). As previously noted (see p. 22), people in this region who have experienced anxiety or depression were less likely than those in other regions to try improving healthy lifestyle behaviours. They were also among the least likely in the world to say they talked to a mental health professional (25%), made a change to their work situation (28%)* or took prescribed medication (33%).

The most common combinations of approaches people took to feel better fell into three 'clusters'.

Some of the actions people who have experienced anxiety or depression took to feel better are commonly associated with one another. A deeper analysis reveals these patterns and identifies the most common sets of approaches people selected.

Findings concerning the specific combinations of commonly used approaches are based on analytical modelling and statistical clustering techniques. See Appendix A for a complete discussion of the cluster analysis and outcomes.

*This finding is due in part to the low level of women's formal participation in the workforce in much of the Middle East and North Africa. Twenty per cent of the women from this region who took part in the survey and who have experienced anxiety or depression said they had made a change to their work situation, compared with 36% of men.

Three primary types of clusters (i.e., large groups of people who used the same specific combination of methods) emerged from the global results – and most regional ones – and are shown in Table 3.2:

Cluster 1, holistic combination
The most widespread cluster comprises a broad combination of approaches, including talking to a mental health professional, improving healthy lifestyle behaviours, spending time outdoors, talking to friends or family, taking prescribed medication and making a change to personal relationships. About 35% of those who have experienced anxiety or depression worldwide used this holistic strategy, but it was most common in high-income regions, including Australia/New Zealand (61%), Northern America (59%) and Western Europe (56%).

Cluster 2, lifestyle changes
The second cluster, used by about 28% of people worldwide who have experienced anxiety or depression, specifically excludes talking to a mental health professional and taking prescribed medication. Rather, it includes a subset of actions from the first cluster that do not require professional input – improving healthy lifestyle behaviours, spending time outdoors and talking to friends or family. This cluster was most commonly used in Southeast Asia (44%), the Russia/Caucasus/Central Asia region (40%) and Latin America (33%).

Cluster 3, primary support from friends or family
The third cluster leans primarily on one approach: talking to friends or family. Most people who used this cluster (60%) have sought social support in this way, while 41% said they have made a change to their personal relationships. No other approach was taken by more than one-third of people who used this strategy. About 20% of those worldwide who have experienced anxiety or depression fall into this cluster, but it was most common in the Middle East/North Africa (36%), East Asia (28%) and Sub-Saharan Africa (27%).

Table 3.2: Primary clusters of approaches to alleviating anxiety or depression, global results

Percentage of people within each cluster who answered 'yes'.

When you were feeling so anxious or depressed, did you ever do any of the following to make yourself feel better?

	Cluster 1 holistic combination	**Cluster 2** lifestyle changes	**Cluster 3** primary support from friends or family
Talked to a mental health professional	100%	0%	0%
Engaged in religious/spiritual activities	58%	39%	25%
Talked to friends or family	89%	81%	60%
Took prescribed medication	81%	32%	0%
Improved healthy lifestyle behaviours	94%	100%	28%
Made a change to work situation	71%	57%	32%
Made a change to personal relationships	81%	67%	41%
Spent time in nature/the outdoors	91%	100%	32%

Further analysis sheds light on how other factors influenced people's approaches to feeling better

The above analysis makes it clear that the actions people took to alleviate anxiety or depression were not randomly distributed or independent from each other. Additional analyses were conducted to further explore how other factors impacted the use of each of the eight approaches listed in the survey. The factors with the strongest effects were as follows:

Region

There were wide regional disparities related to country income level for some approaches (as shown in Table 3.1), including:

- Talking to a mental health professional was most likely in Northern America and Europe and least likely in Sub-Saharan Africa.
- Engaging in religious/spiritual activities was most likely in Sub-Saharan Africa and the Middle East/North Africa and least likely in Europe.

Gender

Most approaches had weaker gender-related effects, with two exceptions:

- Men were much more likely than women to report that they had made a change to their work situation, largely reflecting higher rates of formal employment among men in most regions.
- Women were more likely than men to have talked to a mental health professional.

Age at which people first experienced anxiety or depression

- Those who first experienced these conditions at younger ages were more likely to say they had talked to a mental health professional.
- Those who were older when they first experienced these conditions were more likely to say they had talked to friends or family.

Location

- People living in small towns or rural areas were less likely than those living in urban areas or city suburbs to say they had improved healthy lifestyle behaviours.

Education

- People with higher education levels were more likely to say they had talked to a mental health professional.
- People with lower education levels were more likely to say they had taken prescribed medication.

Within-country income

- People in the top 40% (top two quintiles) of their country's income distribution were more likely than those with lower incomes to say they had talked to a mental health professional.

Use of other forms of help

The following approaches were most commonly associated with one another:

- talking to a mental health professional and taking prescribed medication.
- improving healthy lifestyle behaviours and talking to friends or family.
- making a change to a work situation and making a change to personal relationships.
- spending time in nature/the outdoors and improving healthy lifestyle behaviours.

The findings in this section are based on a series of multivariate regression models in which people's likelihood to have taken each approach acts as the dependent variable. See Appendix A for a complete discussion of the analysis and outcomes.

Endnotes

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Perceived helpfulness of approaches to alleviating anxiety or depression

Birds of a Feather Flock Together
Rebekah Williams, UK

A collage featuring Nadeem Perera (L) and Ollie Olanipekun (R), who founded Flock Together in 2020 in response to stresses caused by the pandemic and racial injustice in society. The world of birdwatching, like so many others, is overwhelmingly white.

Rebekah Williams / Wellcome Photography Prize 2021

Chapter 4: Perceived helpfulness of approaches to alleviating anxiety or depression

Beyond measuring the prevalence of different approaches to alleviating anxiety or depression (i.e. being 'so anxious or depressed that you could not continue your regular daily activities as you normally would for two weeks or longer'), this chapter provides insights into which methods people found most helpful by examining the question:

Did you find the following very helpful, somewhat helpful, or not helpful in making you feel better?

a. Talking to friends or family
b. Improving healthy lifestyle behaviours, such as exercise, sleep and diet
c. Spending time in nature/the outdoors
d. Making a major change in your personal relationships
e. Making a major change in your work situation
f. Taking medication as prescribed by a healthcare professional
g. Talking to a mental health professional
h. Engaging in religious or spiritual activities, or talking to a religious leader

These results provide an opportunity to study the perceived effectiveness of each approach among different types of people in different geographic, economic and cultural circumstances and to learn more about the conditions in which specific approaches are most likely to be effective.

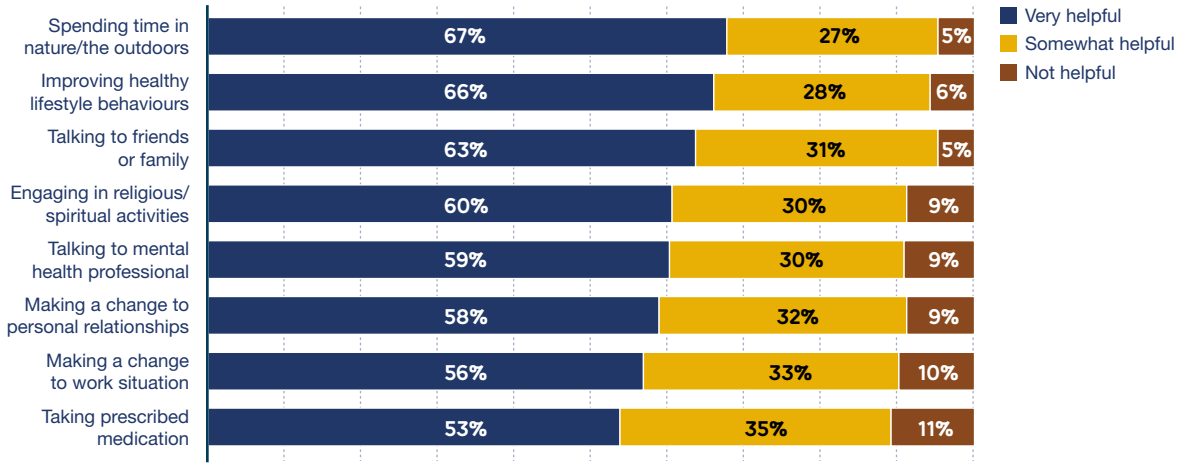
The most common approaches used to alleviate anxiety or depression worldwide were also the most likely to be considered 'very helpful'.

People who have experienced anxiety or depression and taken at least two of the eight actions listed in the survey were asked how helpful they had found the methods they had tried to be. As Chart 4.1 shows, for each of the eight, more than half who had tried an approach (53%-67%) found it helpful, and relatively few (11% or less) said it was not helpful. It is important to recognise that these are the subjective assessments of people who used each approach rather than clinical evaluations of their effectiveness. Moreover, caution is needed when drawing any inferences from a comparison of the reported helpfulness of different approaches since the comparison is not like for like. The same people didn't use all the approaches, and the reported satisfaction could be influenced as much by the expectations of the different people using them as by the experience of using the approach itself.

Chart 4.1:
Reported helpfulness of actions taken to alleviate anxiety or depression, global results

Percentage of people who answered ‘very helpful’, ‘somewhat helpful’ or ‘not helpful’ among those who had tried two or more approaches.

Did you find the following very helpful, somewhat helpful, or not helpful in making you feel better?



Note: Due to rounding, percentages may sum to 100% ± 1%.

Notably, the most common actions taken worldwide were also the most likely to be considered very helpful by those who have taken them: spending time in nature, improving healthy lifestyle behaviours and talking to friends or family.

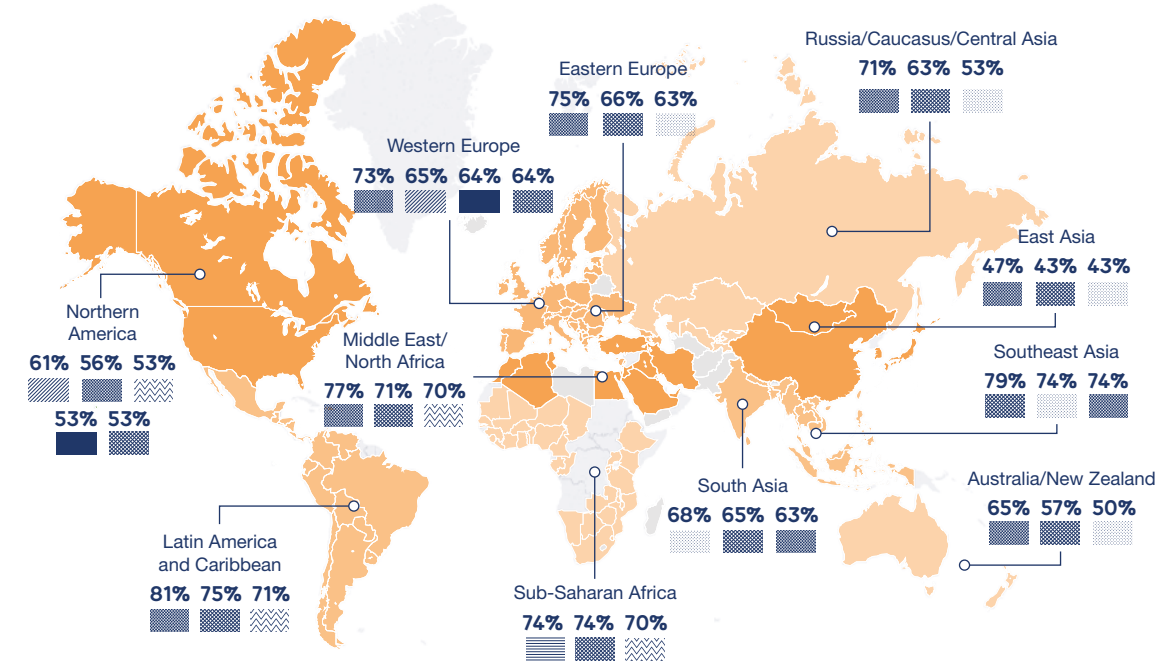
Views on how helpful people found different approaches varied by region.

As shown in Figure 4.1, the likelihood of those who have experienced anxiety or depression saying the action they took to feel better was helpful varied between regions. Overall, people who had experienced such conditions in Sub-Saharan Africa and Southeast Asia were particularly likely to say most approaches were very helpful, while those in East Asia, Northern America and Australia/New Zealand were among the least likely to respond this way. In East Asia (predominantly China), none of the actions listed in the survey were deemed very helpful by the majority of those who have experienced anxiety or depression.

Figure 4.1: Map showing the approaches people found most helpful for alleviating anxiety or depression, by region*

Percentage of people who answered 'very helpful' among those who had tried two or more approaches.

Did you find the following very helpful, somewhat helpful, or not helpful in making you feel better?



Note: No surveying took place in the countries shown in grey

It is worth highlighting that the proportion who found talking to a mental health professional very helpful ranged from highs of 71% in Latin America and Southeast Asia and 70% in Sub-Saharan Africa to a low of 39% in East Asia. The latter figure is due primarily to results from China, where 35% responded this way – though percentages from Hong Kong (25%) and Taiwan (33%) were also among the lowest in the world.

*See Appendix A for complete results by region – Table A.4.

Gender differences in views on the helpfulness of religious or spiritual activities existed in several regions.

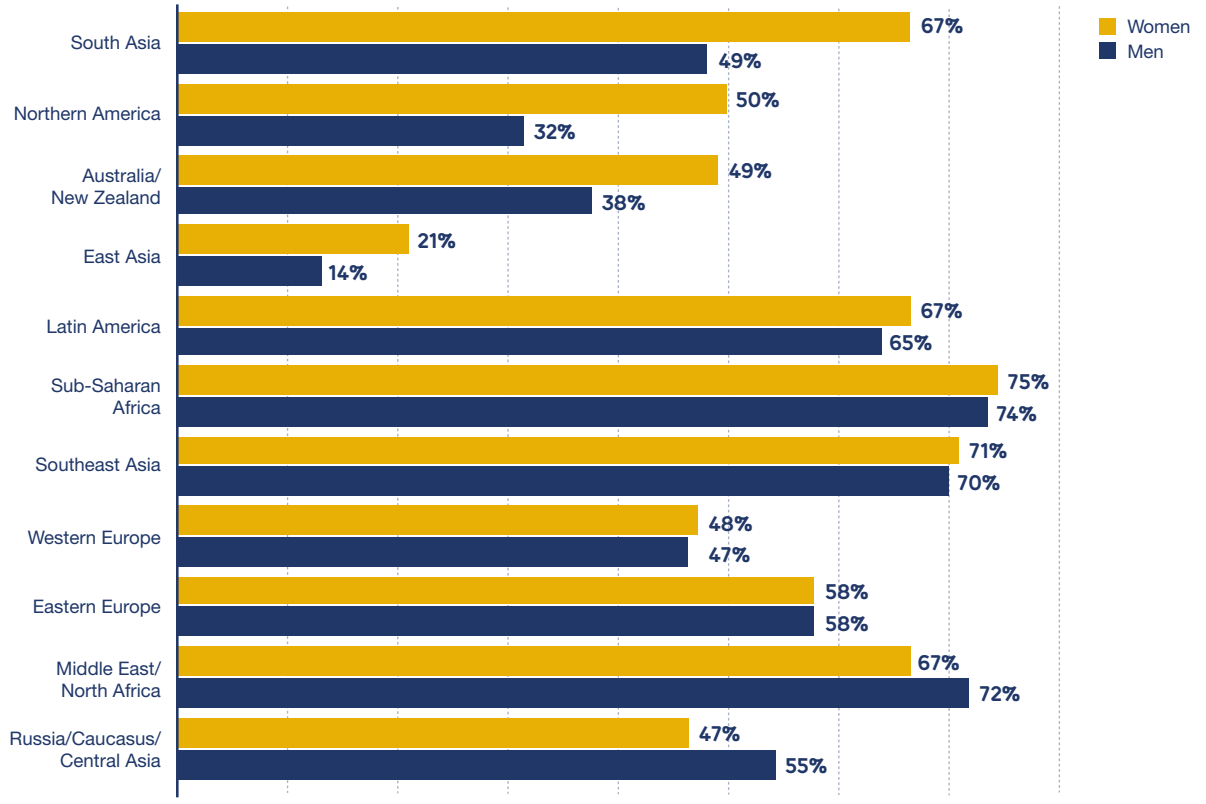
At the global level, there were no significant differences between men and women regarding their likelihood of using any one approach to feel better, and, similarly, there were few gender differences concerning the perceived helpfulness of each action. The one exception was that women worldwide were somewhat more likely than men to say that engaging in religious or spiritual activities was very helpful – 64% compared with 56%.

More notable gender differences again emerged by region, as illustrated in Chart 4.2:

Chart 4.2: Perceived helpfulness of engaging in religious or spiritual activities to alleviate anxiety or depression, by gender and region

Percentage of people who answered 'very helpful'.

Did you find [engaging in religious or spiritual activities] very helpful, somewhat helpful, or not helpful in making you feel better?



- Women in South Asia (predominantly India), Northern America and Australia/New Zealand who have experienced anxiety or depression were considerably more likely than men to say they had found engaging in spiritual or religious activities very helpful.
- Women were significantly more likely than men to say they had found talking to a mental health professional very helpful in Northern America (57% compared with 43%, respectively) and Australia/New Zealand (55% compared with 40%).
- Women in four regions – East Asia (predominantly China), Northern America, Eastern Europe and Russia/Caucasus/Central Asia – were more likely than men to say they had found spending time in nature very helpful.

A closer look at what predicts perceived helpfulness

As with the analysis of approaches to feeling better, deeper analysis helps untangle the effects of various demographic and geographic variables on the perceived helpfulness of each action. The following factors best predict whether those who have experienced anxiety or depression found a given approach very helpful when controlling for other variables:

Region

- People in Sub-Saharan Africa and the Middle East/North Africa were most likely to say engaging in religious/spiritual activities was helpful.
- Spending time in nature/the outdoors was most likely to be considered helpful in Latin America and the Middle East/North Africa.

Gender

- Men were less likely than women to find engaging in religious/spiritual activities very helpful.

Age

- People aged 50 and older were more likely to consider taking prescribed medication and spending time in nature/the outdoors to be helpful.

Age at which people first experienced anxiety or depression

- Those who were older when they first experienced these conditions were more likely to say talking to friends or family was very helpful.

Location

- Making a change to personal relationships was more likely to be seen as very helpful by those living in city suburbs than those living in city centres or rural areas.
- People in rural areas were more likely than those living in urban areas to consider talking to friends or family as very helpful.

Education

- The perceived helpfulness of improving healthy lifestyle behaviours and talking to a mental health professional increased with education.

Within-country income

- People in their country's top income quintiles were more likely to consider making a change to their work situation to be very helpful. This within-country income difference is present in low-, middle- and high-income countries.

Commonly paired approaches

The following approaches were most commonly associated with one another:

- talking to a mental health professional and taking prescribed medication.
- engaging in religious/spiritual activities and talking to friends or family.
- talking to friends or family and making a change to one's personal relationships.
- spending time in nature/the outdoors and improving healthy lifestyle behaviours.
- making a change to one's work situation and making a change to one's personal relationships.

Findings concerning how external factors influence the perceived helpfulness of an approach are based on a series of multivariate regression models that used people's likelihood of saying they found each action 'very helpful' as the dependent variable. See Appendix A for a complete discussion of the analysis and outcomes.

Conclusion

The Covid-19 Anxiety Project
Hayleigh Longman, UK

A self-portrait of Hayleigh in her mum's bedroom. May 2020.

Self Portrait from the Wellcome Photography Prize 2020 commission series "The Covid-19 Anxiety Project".

Conclusion

As noted on page 6, it is important to be aware of limitations when reviewing the data in this report. International survey results may be influenced by translation choices, difficulty reaching certain sub-populations, cultural influences that affect how people respond to certain questions or question types, and other country-level issues. COVID-19 added further complications in 2020 by forcing a change from face-to-face to telephone-only interviewing in many countries and areas, thereby increasing the coverage error in places where not everyone has access to phones. Readers should be aware of these limitations when drawing conclusions, particularly with regard to cross-national comparisons.

Nonetheless, the Global Monitor data offer robust findings that present challenges for the global mental health community.

- More than nine in 10 people worldwide (92%) said mental health is as important as physical health for overall wellbeing, with almost half (46%) saying it is more important. People in lower-income countries were particularly likely to feel mental health is more important than physical health, highlighting the need for broader access to low-cost, evidence-based mental health treatments in low-income regions.
- However, science's critical role in studying and alleviating mental health issues seems unclear to much of the global population. Less than one-third of people around the world said science can explain a lot about how feelings and emotions work (27%) or can do a lot to help treat anxiety or depression (31%). By contrast, about half said science can do a lot to help treat infectious diseases (53%) or cancer (49%).
- Nineteen per cent of people worldwide said they have experienced anxiety or depression that kept them from continuing their regular daily activities for two weeks or longer. This figure was relatively consistent in all but two global regions – Latin America (where the rate was higher) and East Asia (where the rate was lower) – but there were significant differences among demographic groups within countries. Younger people and those on the low end of their country's income distribution were more likely to have experienced anxiety or depression, especially in middle-income and high-income countries.
- More than seven in 10 people who have experienced anxiety or depression had tried one of the three following approaches to feeling better: 1) talking to friends or family (78%), 2) improving healthy lifestyle behaviours (73%), or 3) spending time in nature/the outdoors (71%). Two clinical approaches were less common, largely because they are skewed towards high-income regions: taking prescribed medication (49%) and talking to a mental health professional (43%). Engaging in religious/spiritual activities was also less prevalent worldwide, at 43%; this method was most common in lower-middle-income countries.
- The most common actions people took to alleviate anxiety or depression were also those most likely to be described as 'very helpful' by those who had taken them. More than six in 10 people who had tried spending time in nature (67%), improving healthy lifestyle behaviours (66%) and talking to friends or family (63%) found the particular method they had tried very helpful for making them feel better; for each method, no more than 11% said the approach was not helpful.
- On average, people who have experienced anxiety or depression had tried 4.7 of the eight actions listed in the survey to make themselves feel better. Eighty-five per cent said they had tried at least three of the eight actions listed in the survey, 3% said they had not tried any and 4% said they had tried just one. Ten per cent reported taking all eight approaches.

Perhaps the most important point to take away from this research is the pervasive disconnect between the high level of importance given to progressing solutions to mental health problems and the low belief in the power of science to help find those solutions for how the world views mental health science. Though an overwhelming majority worldwide said mental health is an important issue, most were less convinced that scientific research can address it. This critical finding implies that the scientific community has not effectively demonstrated how transformational science can be for mental health by clearly conveying the role it can play in systematically investigating what works to alleviate emotional distress and why. This disconnect may relate to the second take-away from this report that shows the variety of routes out of anxiety or depression people are trying. It may be that science needs to look more closely at the full range of actions people with anxiety or depression take to feel better. Wellcome aims to bridge this gap by providing mental health researchers and practitioners with the resources they need to study a broader range of interventions.

Ultimately, Wellcome believes that changing the global conversation about mental health will expand people's notion of what science can accomplish by driving progress towards a world in which no one is held back by mental health problems.

Appendices

A Different Cafe
Debdatta Chakraborty, India

The Sheroes Hangout café in Agra, Uttar Pradesh, India, has changed the lives of many female survivors of acid attacks. It gives jobs to women who would normally be expected to hide away because of social stigma, providing them with an income and a place where they can be accepted as themselves – as "courageous fighters who walk with scars".

Acid attacks can be psychologically as well as physically devastating, so the café does the invaluable job of creating a community hub that helps to build confidence and dignity, running activities and offering all kinds of support. Sheroes have had to close the café (and a second one in nearby Lucknow) during the pandemic, but they have continued the work online, running webinars on mental health as well as training and educational programmes.

"Here at Sheroes Café we witness some inspiring stories of our survivors who never gave up and chose to fight it all."

Appendix A: Statistical models

Analysis 1 (p.26): Predictors of different approaches to alleviating anxiety or depression

To further explore the factors associated with the actions people take to feel better, regression analyses were used to predict the likelihood that those who had experienced anxiety or depression had used each of the eight possible approaches. Complex Samples Logistic Regression in IBM SPSS was used to account for sampling and weighting (country and regional stratification plus weighting post-stratification). Approaches were binary coded as 1 = 'Yes' and 2 = Other responses. A separate model was estimated for each of the eight approaches, with region, age, gender, location, educational attainment, age at onset, income quintile and other approaches used as independent variables.

Table A.1 provides a summary of the eight models, including:

- the global prevalence of each approach.
- a summary of pseudo-R2 model fit statistics.*
- a corrected model F test that examines the overall fit of the model with the data (failure to reject the null hypothesis implies that the suggested model is not significantly suitable for the data).
- intercept (the expected mean value of the outcome when all predictors are equal to zero).
- significance tests (Wald F) for each independent variable in the model.

Overall, the pseudo-R^2 statistics show that our models have a moderate explanatory power, indicating that although our models capture important sources of variation, there is a lot of unmodelled variance that could be accounted for by other predictors not included in the models.

* For a discussion of pseudo R-squared measures see: https://www.ibm.com/docs/en/spss-statistics/23.0.0?topic=model-pseudo-r-squared-measures

Table A.1: Model summary (approaches used)

		Mental health professional	Religious/ spiritual activities	Talked to friends or family	Took prescribed medication	Healthy lifestyle behaviours	Change to work situation	Change to personal relationships	Nature/ the outdoors
% 'Yes'		43.4%	43.1%	78.0%	48.9%	72.7%	53.4%	62.5%	71.1%
Pseudo R2	Cox and Snell	0.291	0.181	0.126	0.241	0.161	0.199	0.210	0.147
	Nagelkerke	0.390	0.243	0.194	0.322	0.233	0.265	0.286	0.210
	McFadden	0.251	0.146	0.128	0.199	0.150	0.160	0.178	0.132
Wald F	(Corrected model)	26.54**	21.44**	9.96**	17.32**	15.08**	16.68**	20.72**	11.94**
	(Intercept)	13.73**	4.55*	31.83**	0.96	11.16**	1.03	1.32	15.24**
	Region	27.25**	72.13**	2.91**	11.54**	8.6**	15.01**	6.22**	17.46**
	Age groups	2.81*	1.27	3.48**	3.26*	0.88	0.28	1.39	2.32
	Gender	5.38*	0.17	2.27	1.46	0.3	29.61**	0.06	2.78
	Location	2.84*	0.99	2.04	0.86	4.12**	2.86*	1.11	0.89
	Education	7.26**	1.19	3.08*	4.53**	2.38	0.16	2.45	2.25
	Age at onset	3.8**	1.95	5.3**	2.31*	2.4*	3.76**	1.81	2.7*
	Income quintile	4.64**	0.22	1.03	0.8	1.13	0.85	0.28	0.19
	Talked to a mental health professional	NA	36.39**	5.7*	382.96**	16.96**	8.94**	16.82**	0.94
	Engaged in religious/ spiritual activities	37.64**	NA	21.77**	7.88**	3.26	8.51**	52.85**	15.64**
	Talked to friends/ family	5.33*	20.34**	NA	16.72**	28.36**	7.56**	26.88**	19.66**
	Took prescribed medication	382.53**	7.81**	16.26**	NA	2.97	4.1*	0.08	0.21
	Improved healthy lifestyle behaviours	16.58**	2.43	28.43**	2.75	NA	27.81**	33.95**	86.08**
	Made a change to work situation	8.19**	8.25**	8.01**	4.22*	28.76**	NA	154.97**	12.69**
	Made a change to personal relationships	17.33**	49.36**	28.16**	0.11	34.66**	152.92**	NA	25.95**
	Spent time in nature/ the outdoors	1.00	16.16**	22.85**	0.29	88.77**	12.96**	28.17**	NA

The relative strength of the predictors included in the models varied widely depending on the approach being analysed. To aid interpretation, Table A.2 shows the regression coefficients for those predictors with multiple levels. The reference category was the highest value for each variable, which means the DK/Refused category for most of them. The choice of a reference category is rather arbitrary, though, as it just sets the baseline. More important than the reference category is the relative position of different categories. For example, people in Northern America, compared to those in Central Asia, were the most likely to see a mental health professional; people aged 50+ were the most likely to see a mental health professional compared to those who answered 'DK/Refused'.

Table A.2:
Model coefficients (approaches used)

		Mental health professional	Religious/ spiritual activities	Talked to friends or family	Took prescribed medication	Healthy lifestyle behaviours	Change to work situation	Change to personal relationships	Nature/ the outdoors
Sample size		23,332	23,332	23,332	23,332	23,332	23,332	23,332	23,332
Region	East Asia & Pacific	1.304	0.473	0.235	-1.316	0.250	0.225	-0.123	-0.491
	Europe	1.933	-0.130	0.291	-0.892	-0.328	-0.181	-0.176	-0.027
	Latin America	1.531	1.193	0.061	-1.395	0.081	0.137	0.527	-0.521
	Middle East and North Africa	0.787	1.385	0.500	-1.402	-0.687	-0.801	0.064	-0.556
	Northern America	2.238	1.063	0.081	-0.775	-0.128	0.209	-0.360	0.089
	South Asia	1.502	0.960	0.555	-0.961	0.078	0.648	-0.306	-0.624
	Sub-Saharan Africa	0.628	2.256	0.525	-1.020	0.031	0.169	-0.006	-1.360
	Central Asia	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Age	15-24	-0.460	-0.550	1.456	-0.003	1.319	-0.451	0.198	-1.432
	25-34	-0.405	-0.273	1.469	0.222	1.333	-0.381	-0.004	-1.507
	35-49	-0.197	-0.326	1.060	0.415	1.293	-0.336	0.057	-1.354
	50+	0.068	-0.284	1.144	0.636	1.376	-0.355	-0.183	-1.250
	DK/Refused	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Location	A rural area or farm	0.200	-0.088	0.065	-0.517	-0.792	-0.649	0.793	-0.168
	A small town or village	0.246	-0.098	0.102	-0.516	-0.975	-0.871	0.857	-0.263
	A large city	0.388	-0.207	-0.213	-0.599	-0.644	-0.981	0.821	-0.381
	A suburb of a large city	0.667	-0.356	-0.176	-0.586	-0.629	-0.938	0.756	-0.446
	DK/RF	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Education	Up to 8 years	-0.837	0.241	0.128	0.334	-0.182	-0.124	-0.714	0.970
	9-15 years	-0.592	0.067	0.257	0.011	-0.246	-0.181	-0.454	1.151
	16 years or more	-0.288	0.008	0.544	-0.170	0.035	-0.158	-0.554	1.242
	DK/RF	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Age at onset	Less than 13 years	0.786	0.185	-0.359	0.207	0.121	-0.052	-0.062	0.894
	Ages 13-19	0.900	-0.129	-0.344	-0.315	0.683	0.272	0.198	0.271
	Ages 20-29	0.517	-0.314	-0.101	-0.364	0.607	0.516	0.321	0.397
	Ages 30-39	0.431	-0.013	0.511	-0.517	0.453	0.447	0.041	0.195
	Ages 40-49	0.327	-0.187	0.063	-0.254	0.701	0.034	-0.051	0.475
	DK/RF	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Income	Poorest 20%	-0.406	0.045	0.029	0.252	-0.266	-0.009	0.065	0.039
	Second 20%	-0.349	0.057	0.249	0.098	-0.180	0.171	0.105	0.001
	Middle 20%	-0.493	0.084	0.158	0.132	-0.075	-0.010	0.057	0.019
	Fourth 20%	0.020	-0.036	0.009	0.021	-0.246	0.124	-0.030	0.114
	Richest 20%	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference

Note: Coefficients are exponentiated odds ratios (logits).

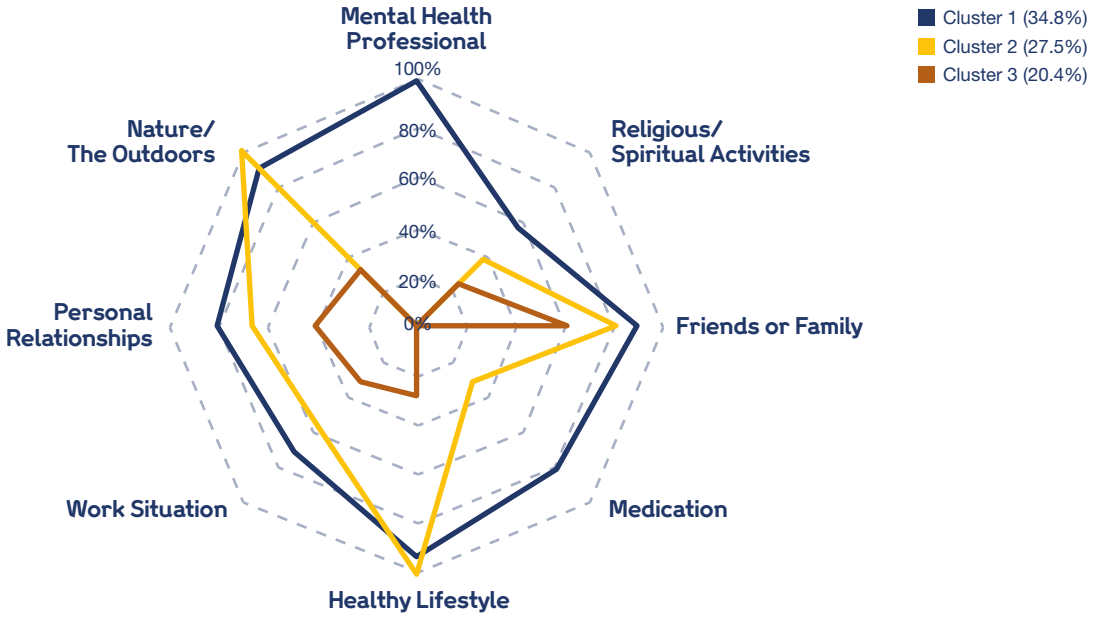
Analysis 2 (p.24–25): Global clusters of approaches to alleviating anxiety or depression

Most people with a history of anxiety or depression tried a variety of ways to feel better. Eight different approaches were probed in the questionnaire, which meant there were 256 combinations people could potentially have used. Clustering techniques were useful to determine homogeneous groups of people who used the same specific combinations. To identify internally homogeneous groups, all eight approaches were binary coded as 1 = 'Yes' and 0 = Other responses.

Preliminary analyses indicated that the variable 'talked to friends or family' was so broadly endorsed that it complicated the identification of more detailed clusters, so it was removed from the clustering exercise (though it was still used as an analytic variable to describe the resulting clusters – e.g., used in cross tabulations). The remaining seven variables were subjected to two-step cluster analysis (TSCA), a hybrid clustering algorithm that uses a distance measure to separate groups and then a probabilistic approach to choose the optimal subgroup model[13,14]. TSCA was implemented in IBM SPSS Statistics using maximum likelihood distance, number of clusters selected automatically using Akaike's Information Criterion with a maximum of 10 clusters, a noise parameter of 5, memory allocation = 1000, maximum branches = 10, maximum levels = 5 and initial threshold = 0. The analysis was run for the global sample and for each of the eight broad geopolitical regions.

Three major clusters emerged at the global level. The largest cluster, representing 34.8% of those with direct experience of anxiety or depression, comprised people who had tried all the possible approaches, including talking to a mental health professional and taking medication. The second largest cluster, representing 27.5% of those with direct experience of anxiety or depression, comprised those who had tried a variety of approaches, excluding talking to a mental health professional and mostly excluding taking prescribed medication. The smallest cluster, representing 20.4% of those with direct experience of anxiety or depression, included people who had not used any approach except for talking to friends or family. The remaining 17.3% would be categorised in a heterogeneous cluster including other diverse typologies.

Graphic A.1:
Clusters of approaches (global)



Note: Due to rounding, percentages may sum to 100% ± 1%.

Similar patterns emerged at the regional level. Most regions included a 'holistic' cluster, comprising an above-average use of all eight approaches; one or more 'intermediate' clusters, with varying use of different approaches but excluding taking prescribed medication and talking to a mental health professional; and an 'undertreated' cluster, comprising a below-average use of all eight approaches.

Endnotes

13. Gelbard, R., Goldman, O., & Spiegler, I. (2007). Investigating diversity of clustering methods: An empirical comparison. Data & Knowledge Engineering, 63, 155-166. doi: 10.1016/j.datak.2007.01.002
14. Kent, P., Jensen, R. K., and Kongsted, A. (2014). A comparison of three clustering methods for finding subgroups in MRI, SMS or clinical data: SPSS twostep cluster analysis, Latent Gold and SNOB. BMC Medical Research Methodology, 14, 113. doi: 10.1186/1471-2288-14-113

Analysis 3 (p.32): Predictors of the perceived helpfulness associated with approaches to alleviating anxiety or depression

To explore the factors associated with the perceived helpfulness of the approaches people who have experienced anxiety or depression used to feel better, regression analyses were conducted to calculate the likelihood of endorsing an approach as 'very helpful'. These analyses were performed among the sub-sample of people who reported having experienced anxiety or depression and having used at least one method in addition to the evaluated approach. Complex Samples Logistic Regression in IBM SPSS was used to account for sampling and weighting (country and regional stratification plus weighting post-stratification). Approaches were binary coded into 1 = 'Very helpful', 2 = Other responses. Since 'helpfulness' was only evaluated for those approaches used by the respondent, those who did not use an approach but still had direct experience of anxiety or depression were grouped in the 'Other' category in the helpfulness ratings*. A separate model was estimated for each of the eight approaches, with region, age, gender, location, educational attainment, age at onset, income quintile and the perceived helpfulness of the other approaches used as independent variables.

Table A.3 provides a summary of the eight models, including the global 'very helpful' rating for each approach and a summary of the pseudo-R^2 model fit statistics and significance tests (Wald F) for each independent variable in the model. Overall, the pseudo-R^2 statistics show that our models have a moderate explanatory power, indicating that although our models capture important sources of variation, there is an important amount of unmodelled variance that could be accounted for by additional predictors.

*Since only 10% of respondents used all eight approaches, we grouped non-users in the 'Other' category to maximise the sample used for analysis along with the number of strong predictors in the model.

Table A.3:
Model summary ('very helpful' approaches)

		Mental health professional	Religious/ spiritual activities	Talked to friends or family	Took prescribed medication	Healthy lifestyle behaviours	Change to work situation	Change to personal relationships	Nature/ the outdoors
% 'Yes'		59.4%	59.6%	63.0%	52.6%	65.7%	55.7%	58.1%	67.3%
Pseudo R2	Cox and Snell	0.245	0.231	0.177	0.210	0.234	0.230	0.274	0.223
	Nagelkerke	0.330	0.311	0.242	0.280	0.324	0.308	0.369	0.311
	McFadden	0.208	0.194	0.148	0.170	0.208	0.190	0.235	0.199
Wald F	(Corrected model)	8.64**	9.83**	9.32**	10.02**	11.31**	10.34**	17.34**	11.03**
	(Intercept)	2.51	0.02	14.53**	0.01	17.79**	7.26**	8.75**	46.8**
	Region	3.59**	10.36**	2.15*	5.89**	3.17**	1.19	5.26**	12.35**
	Age groups	0.27	0.89	1.06	2.41*	0.43	0.87	0.81	3.14*
	Gender	0.14	14.37**	0	0.27	2.45	0	0.14	0.6
	Location	0.89	2.18	2.41*	1.7	0.01	0.13	3.41**	0.16
	Education	2.99*	1.33	0.3	2.25	3.66*	2.4	0.35	2.12
	Age at onset	1.04	0.92	2.28*	2.28*	0.31	2.5*	0.48	0.52
	Income quintile	2.31	0.36	0.37	1.04	0.88	5.91**	0.54	1.36
	Talked to a mental health professional	NA	0.1	4.71*	81.63**	0.37	3.25	13.56**	7.4**
	Engaged in religious/ spiritual activities	3.92*	NA	16.7**	1.09	9.5**	10.32**	21.15**	5.68*
	Talked to friends/ family	18.48**	44.32**	NA	21.7**	19.44**	10.38**	80.92**	33.41**
	Took prescribed medication	63.85**	1.82	8.64**	NA	6.06*	2.69	0.19	0.01
	Improved healthy lifestyle behaviours	8.02**	11.14**	20.04**	4.15*	NA	21.58**	43.69**	73.68**
	Made a change to work situation	0.53	3.5	4.35*	4.97*	33.85**	NA	64.89**	6.79**
	Made a change to personal relationships	11.1**	14.53**	61.34**	0.77	42.45**	67.56**	NA	22.31**
	Spent time in nature/ the outdoors	14.85**	11.65**	32.48**	6.02*	80.12**	9.16**	24.26**	NA

The relative strength of the predictors included in the model varied widely depending on the approach being analysed. To aid interpretation, Table A.4 shows the regression coefficients for those predictors with multiple levels. For example, compared to Central Asia, people in Northern America were the most likely to report that talking to a mental health professional was 'very helpful'.

Table A.4:
Model coefficients ('very helpful' approaches)

		Mental health professional	Religious/ spiritual activities	Talked to friends or family	Took prescribed medication	Healthy lifestyle behaviours	Change to work situation	Change to personal relationships	Nature/ the outdoors
Sample size		10,118	9,998	18,501	11,002	17,020	11,983	14,591	17,207
Region	East Asia & Pacific	0.502	-0.553	-0.171	-0.395	-0.249	0.089	-0.453	-0.793
	Europe	0.742	-0.717	-0.085	-0.493	-0.316	0.449	0.252	-0.202
	Latin America	1.015	-0.296	-0.261	-0.153	-0.033	0.327	0.160	0.042
	Middle East and North Africa	0.368	0.434	0.060	-0.425	0.000	0.329	0.137	-0.070
	Northern America	0.560	-0.962	-0.691	-0.636	-0.942	0.165	0.015	-1.106
	South Asia	0.302	-0.610	0.128	-0.075	-0.269	0.089	-0.582	-0.801
	Sub-Saharan Africa	0.982	0.453	0.068	0.553	0.141	0.226	-0.200	-1.019
	Central Asia	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Age	15-24	-0.335	1.091	0.454	1.044	0.279	-0.934	-0.232	-2.014
	25-34	-0.523	1.330	0.414	1.235	0.430	-0.772	-0.412	-1.810
	35-49	-0.455	1.176	0.424	0.931	0.237	-0.956	-0.475	-1.782
	50+	-0.481	1.266	0.094	1.298	0.259	-0.943	-0.618	-1.362
	DK/Refused	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Location	A rural area or farm	-0.605	1.332	0.464	-0.703	-0.090	-0.032	0.180	-0.277
	A small town or village	-0.575	1.340	0.308	-0.283	-0.094	-0.108	0.470	-0.156
	A large city	-0.621	1.270	0.132	-0.509	-0.097	-0.031	0.636	-0.166
	A suburb of a large city	-0.874	1.547	-0.115	-0.391	-0.112	0.009	0.895	-0.158
	DK/RF	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Education	Up to 8 years	0.984	0.045	-0.246	1.266	1.334	0.531	0.075	-0.120
	9-15 years	1.252	0.159	-0.332	1.280	1.460	0.847	0.010	0.259
	16 years or more	1.426	-0.128	-0.379	1.148	1.564	0.837	0.143	0.102
	DK/RF	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Age at onset	Less than 13 years	0.655	0.559	-0.555	-0.941	-0.476	-1.204	0.029	0.203
	Ages 13-19	0.548	0.460	-0.376	-1.047	-0.360	-1.214	-0.104	0.365
	Ages 20-29	0.841	0.613	-0.259	-0.777	-0.453	-0.910	-0.031	0.451
	Ages 30-39	0.606	0.778	-0.252	-0.395	-0.342	-0.710	0.072	0.465
	Ages 40-49	0.813	0.590	0.235	-0.696	-0.338	-0.883	-0.213	0.254
	DK/RF	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Income	Poorest 20%	0.107	0.106	0.081	-0.063	-0.169	-0.462	0.092	-0.222
	Second 20%	-0.331	-0.099	-0.113	0.076	-0.226	-0.123	0.035	-0.228
	Middle 20%	-0.208	-0.119	-0.018	0.263	0.043	-0.792	-0.010	-0.388
	Fourth 20%	0.244	-0.002	0.037	-0.117	0.006	-0.071	0.216	-0.032
	Richest 20%	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference

Note: Coefficients are exponentiated odds ratios (logits).

Appendix B: Global regions and country income groups

The Wellcome Global Monitor mental health study includes representative surveys conducted in the following 113 countries and territories, which are categorised into the 11 global regions used for analysis. These regions have been consolidated somewhat from the 18-category set used in the 2018 report to make regional comparisons easier while still accounting for major geographic and cultural differences, as reflected in the data.

Latin America
Argentina
Bolivia
Brazil
Chile
Colombia
Costa Rica
Dominican Republic
Ecuador
El Salvador
Mexico
Nicaragua
Paraguay
Peru
Uruguay
Venezuela

East Asia
China
Hong Kong
Japan
Mongolia
South Korea
Taiwan

Southeast Asia
Cambodia
Indonesia
Laos
Malaysia
Myanmar
Philippines
Thailand
Vietnam

South Asia
Bangladesh
India
Nepal
Sri Lanka

Sub-Saharan Africa
Benin
Burkina Faso
Cameroon
Congo Brazzaville
Ethiopia
Gabon
Ghana
Guinea
Ivory Coast
Kenya
Mali
Mauritius
Namibia
Nigeria
Senegal
South Africa
Tanzania
Uganda
Zambia
Zimbabwe

Australia/New Zealand

Northern America
Canada
United States

Middle East/ North Africa
Algeria
Bahrain
Egypt
Iran
Iraq
Israel
Jordan
Lebanon
Morocco
Saudi Arabia
Tunisia
Turkey
United Arab Emirates

Western Europe
Austria
Belgium
Cyprus
Denmark
Finland
France
Germany
Greece
Ireland
Italy
Malta
Netherlands
Norway
Portugal
Spain
Sweden
Switzerland
United Kingdom

Eastern Europe
Albania
Bosnia Herzegovina
Bulgaria
Croatia
Czech Republic
Estonia
Hungary
Kosovo
Latvia
Lithuania
Macedonia
Moldova
Montenegro
Poland
Romania
Serbia
Slovakia
Slovenia
Ukraine

Russia/Caucasus/ Central Asia
Georgia
Kazakhstan
Kyrgyzstan
Russia
Tajikistan
Uzbekistan

The country income groups used in this report are based on the World Bank's classification of economies by average income. The low-income and lower-middle-income groups were combined for analysis.

Low-income/ Lower-middle income

Algeria
Bangladesh
Benin
Bolivia
Burkina Faso
Cambodia
Cameroon
Congo Brazzaville
Egypt
El Salvador
Ethiopia
Ghana
Guinea
India
Ivory Coast
Kenya
Kyrgyzstan
Laos
Mali
Moldova
Mongolia
Morocco
Myanmar
Nepal
Nicaragua
Nigeria
Philippines
Senegal
Sri Lanka
Tanzania
Tunisia
Uganda
Ukraine
Uzbekistan
Vietnam
Zambia
Zimbabwe

Upper-middle income

Albania
Argentina
Bosnia and Herzegovina
Brazil
Bulgaria
China
Colombia
Costa Rica
Dominican Republic
Ecuador
Gabon
Georgia
Indonesia
Iran
Iraq
Jordan
Kazakhstan
Kosovo
Lebanon
Malaysia
Mexico
Montenegro
Namibia
North Macedonia
Paraguay
Peru
Russia
Serbia
South Africa
Thailand
Turkey
Venezuela

High-income

Australia
Austria
Bahrain
Belgium
Canada
Chile
Croatia
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Greece
Hong Kong
Hungary
Ireland
Israel
Italy
Japan
Latvia
Lithuania
Malta
Mauritius
Netherlands
New Zealand
Norway
Poland
Portugal
Romania
Saudi Arabia
Slovakia
Slovenia
South Korea
Spain
Sweden
Switzerland
Taiwan
United Arab Emirates
United Kingdom
United States
Uruguay

Appendix C: Topics covered in Waves I and II of the Wellcome Global Monitor

Wellcome Global Monitor Repeating Items/Topics	
Trust in scientists/doctors	Religion and science
Trust in neighbours	Jobs and science
Trust in major institutions	Perceived knowledge of science
Inclusion of benefits of science	Confidence in hospitals

Wellcome Global Monitor Wave I (2018) Focus Areas	Wellcome Global Monitor Wave II (2020) Focus Areas
Trust in sources of information about health or medicine	Mental health (anxiety or depression*)
Attitudes towards vaccines	- Global perceptions of the importance of mental health for overall wellbeing
Recently sought information about health/science	- Global perceptions of the role of science in explaining feelings and emotions and how the body works
Would people like to learn more about health/science	- Global perceptions of the role of science in finding solutions to anxiety or depression
	- How people around the world who have experienced anxiety or depression manage these problems
	Use of social media and seeking health information on social media
	National leaders valuing science/scientists' opinions
	Impact of science on health and quality of the local envirnoment
	Climate change
	COVID-19

* Defined in the survey as 'extreme anxiety or depression', meaning a person being so anxious or so depressed that they could not continue with their regular daily activities as they normally would for two weeks or longer.

Appendix D: 2020 Wellcome Global Monitor mental health questions

(Please note this is not the complete set of Wellcome Global Monitor survey items; the rest will appear in the next report release.)

Mental health

MH1
Thinking about a person's overall health, do you think mental health is more important, as important, or less important than physical health for a person's wellbeing?

MH2
In your opinion, how much do you think science can explain each of the following? A lot, some, not much, or not at all? If you don't know, please just say so.

- How the human body works.
- How feelings and emotions work.

In this survey when I say 'extreme anxiety or depression' I mean a person being so anxious or depressed that they could not continue with their regular daily activities as they normally would for two weeks or longer.

MH3
In general, how much do you think science helps us treat the following health problems? Does it help a lot, some, not much, or not at all?

- Cancer.
- Extreme anxiety or depression.
- Infectious diseases, such as malaria.
- Obesity – being extremely overweight.

MH4
How important do you think it is for the national government in this country to fund research in each of the following areas of health? Is it extremely important, somewhat important, not too important, or not important at all?

- Cancer.
- Extreme anxiety or depression.

MH5
In general, if someone in your local community was experiencing extreme anxiety or depression, how comfortable do you think they would feel speaking about it with someone they know? Very comfortable, somewhat comfortable, or not at all comfortable?

MH6
Thinking about your close friends and family members, have any of them ever been so anxious or depressed that they could not continue with their regular daily activities as they normally would for two weeks or longer?

MH7
And what about you, personally? Have you ever been so anxious or depressed that you could not continue your regular daily activities as you normally would for two weeks or longer?

- Just your best guess, about how old were you when you first felt this way?
- Have you felt this way more than once?

MH8
When you were feeling so anxious or depressed, did you ever do any of the following to make yourself feel better?

- Talk to a mental health professional.
- Engage in religious or spiritual activities, or talk to a religious leader.
- Talk to friends or family.
- Take medication prescribed by a healthcare professional.
- Improve healthy lifestyle behaviors, such as exercise, sleep, and diet.
- Make a major change in your work situation.
- Make a major change in your personal relationships.
- Spend time in nature/the outdoors.

MH9
Did you find the following very helpful, somewhat helpful, or not helpful in making you feel better?

- Talking to a mental health professional.
- Engaging in religious or spiritual activities, or talk to a religious leader.
- Talking to friends or family.
- Taking medication prescribed by a healthcare professional.
- Improving healthy lifestyle behaviors, such as exercise, sleep, and diet.
- Making a major change in your work situation
- Making a major change in your personal relationships.
- Spending time in nature/the outdoors.

Wellcome supports science to solve the urgent health challenges facing everyone. We support discovery research into life, health and wellbeing, and we're taking on three worldwide health challenges: mental health, global heating and infectious diseases.

Wellcome Trust, 215 Euston Road, London NW1 2BE, United Kingdom
T +44 (0)20 7611 8888, E contact@wellcome.org, wellcome.org